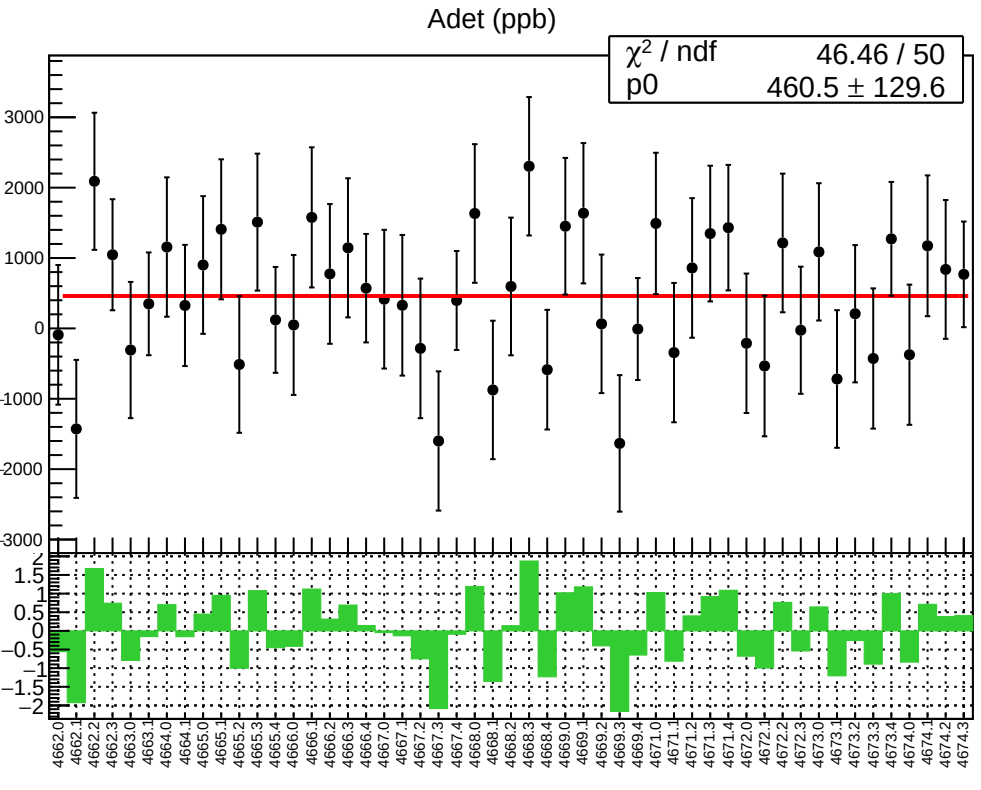
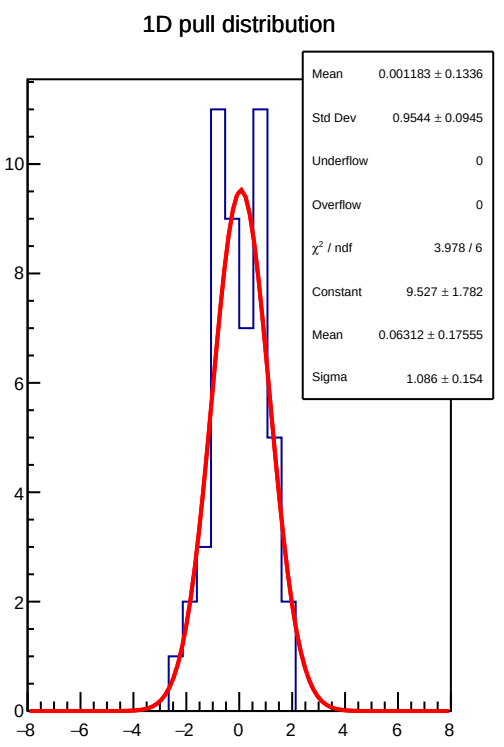
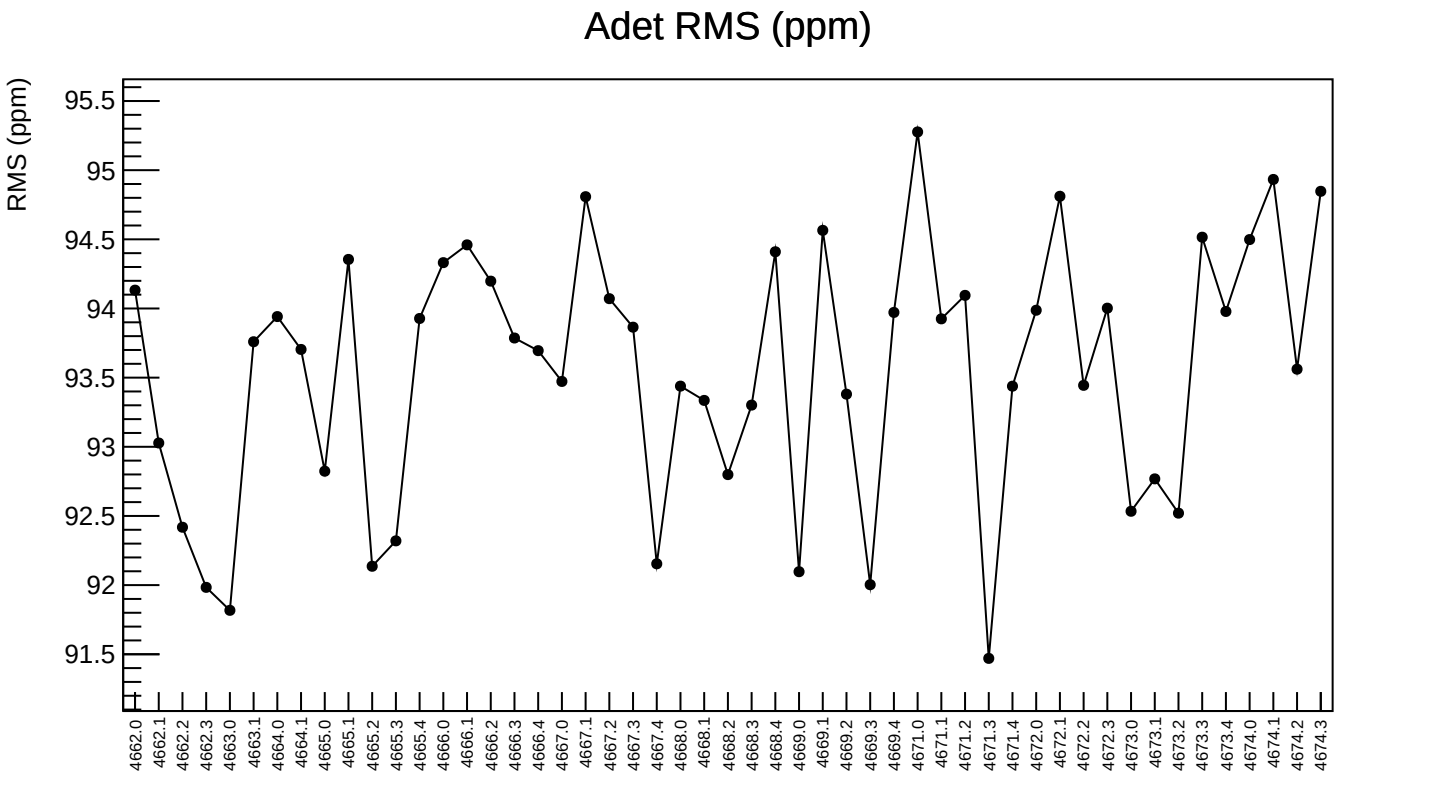
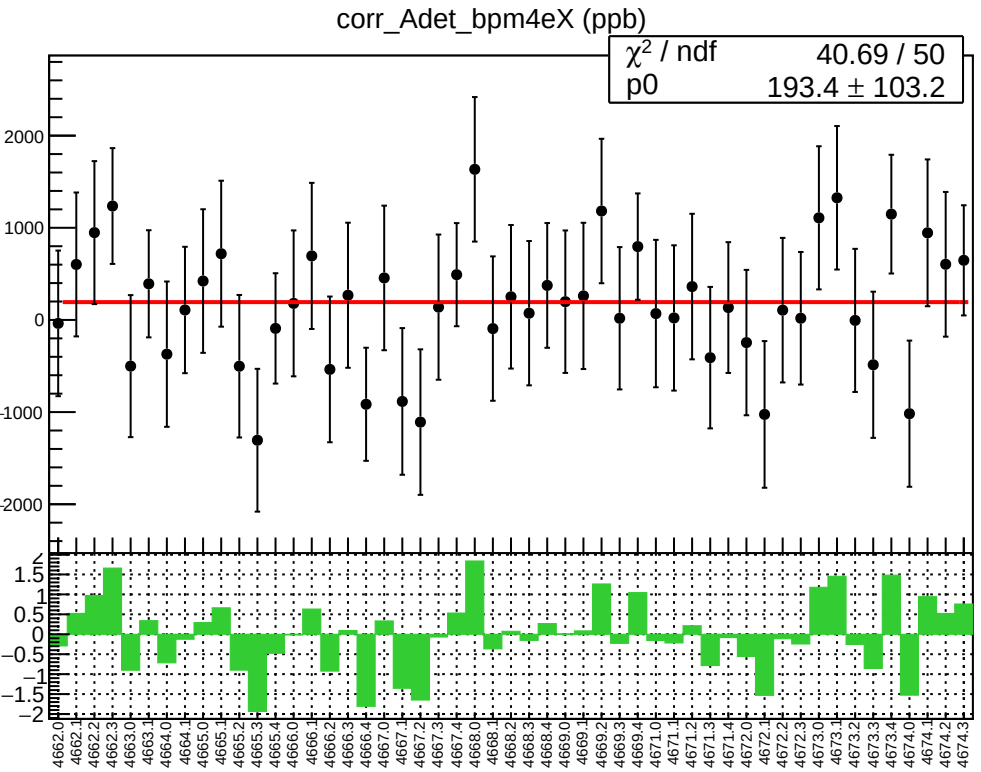
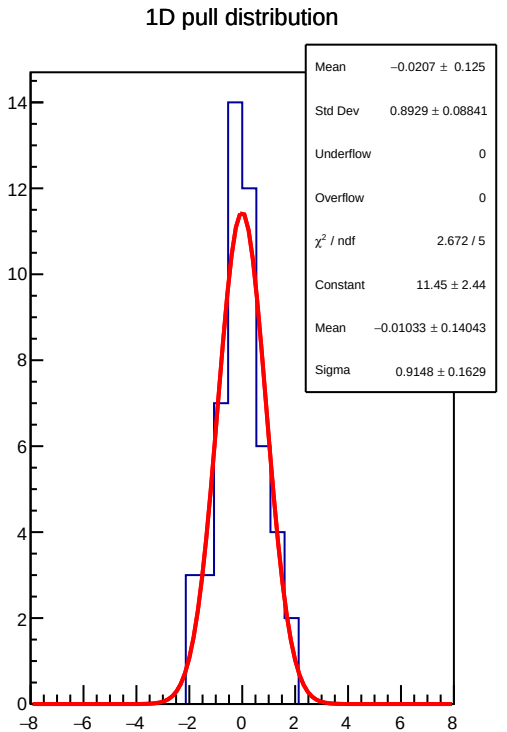
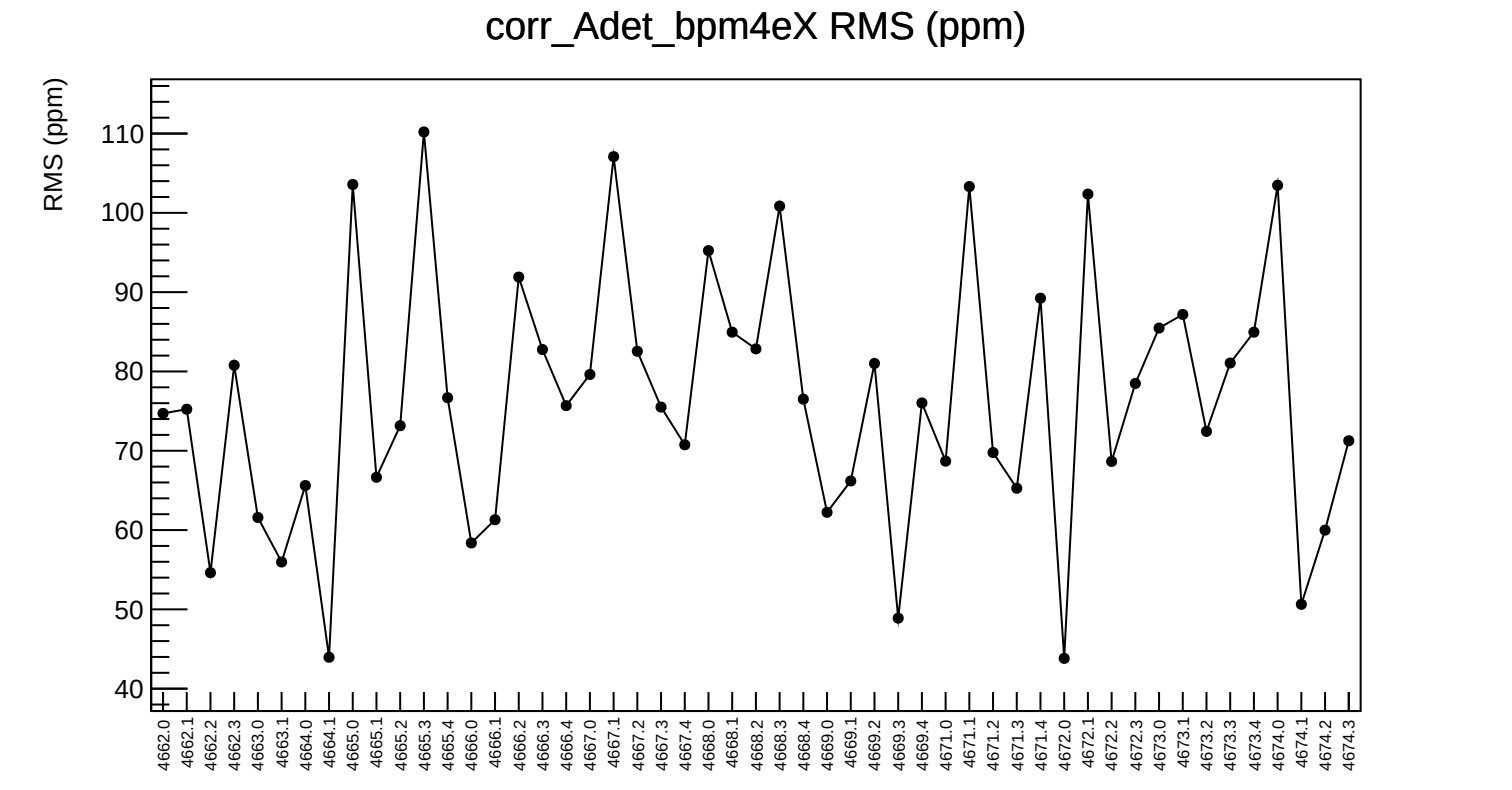

Adet (ppb)
χ² / ndf 46.46 / 50
p0 460.5 ± 129.6
3000
2000
1000
0
-1000
-2000
-3000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

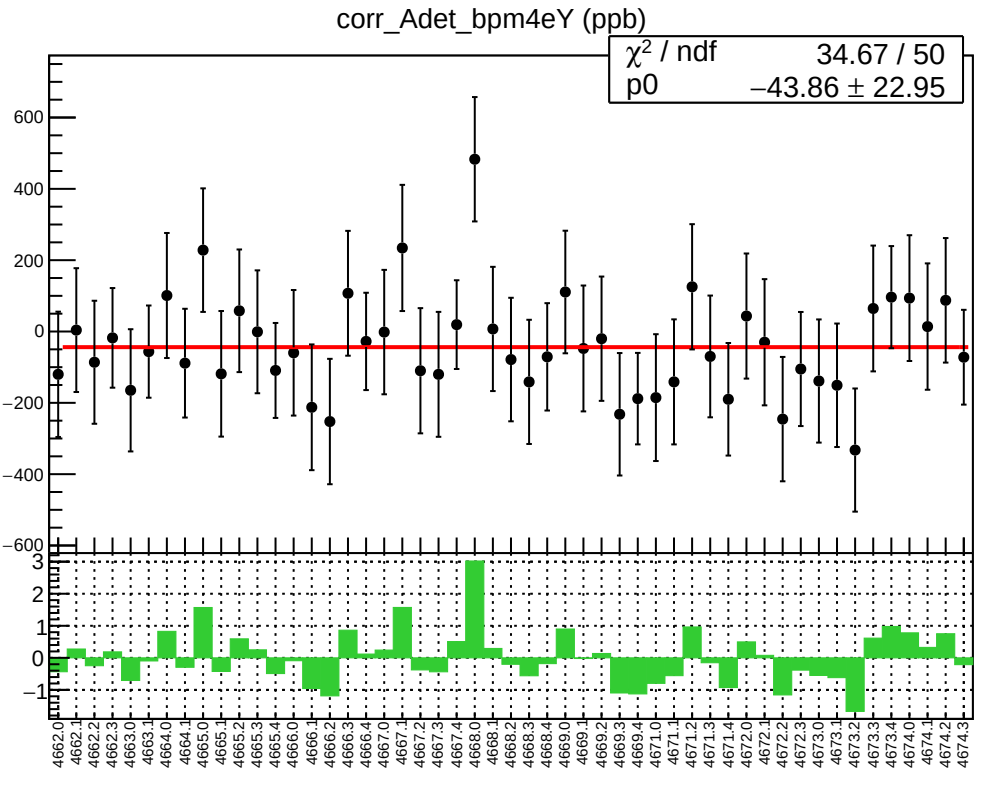

1D pull distribution
Mean 0.001183 ± 0.1336
Std Dev 0.9544 ± 0.0945
Underflow 0
Overflow 0
χ² / ndf 3.978 / 6
Constant 9.527 ± 1.782
Mean 0.06312 ± 0.17555
Sigma 1.086 ± 0.154
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

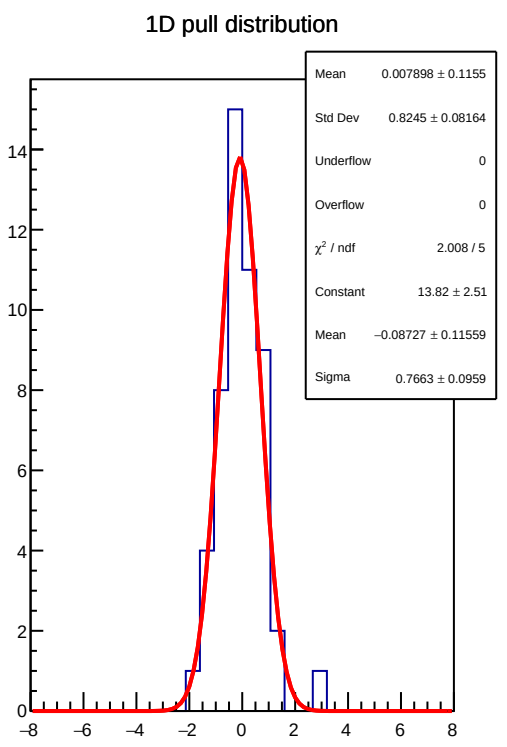

Adet RMS (ppm)
RMS (ppm)
95.5
95
94.5
94
93.5
93
92.5
92
91.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

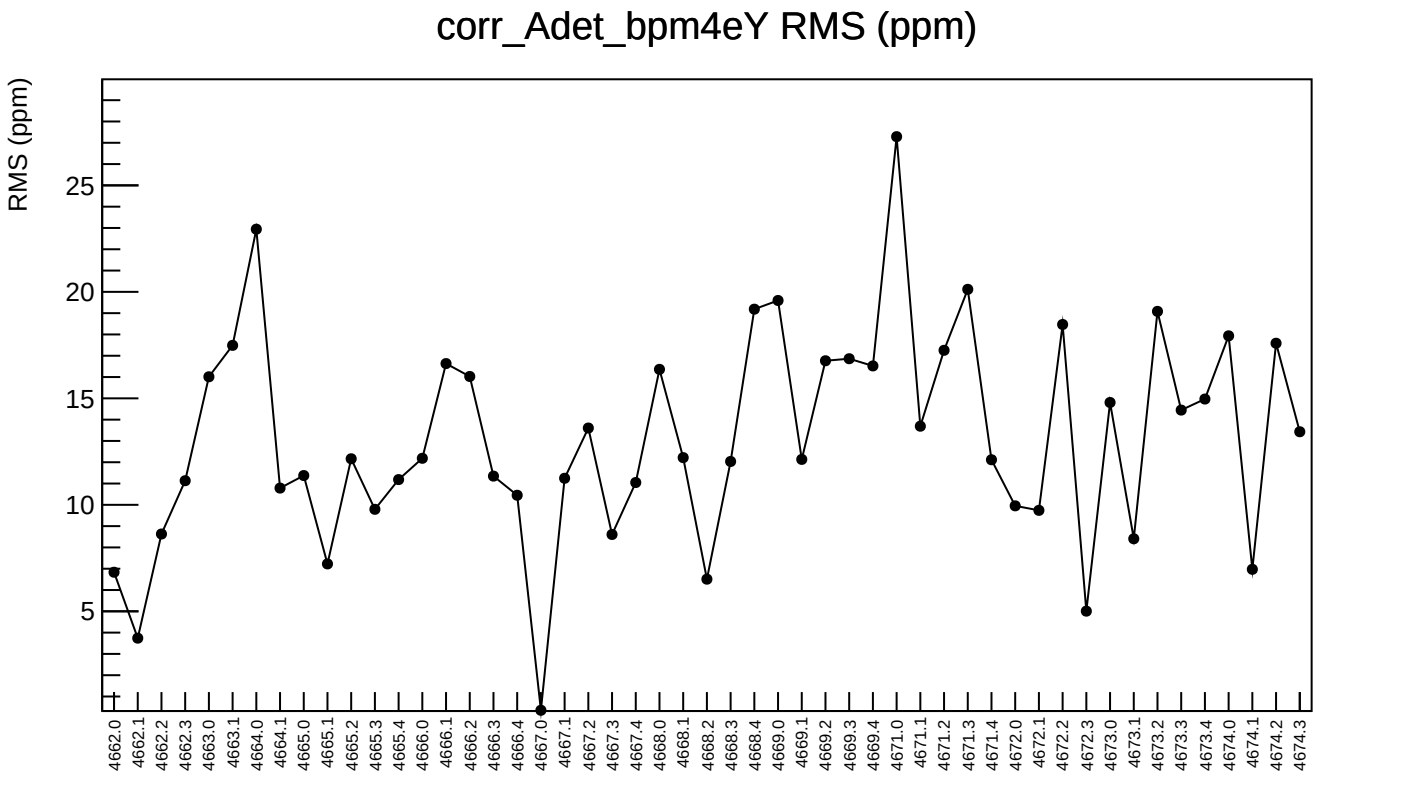

corr_Adet_bpm4eX (ppb)
χ² / ndf 40.69 / 50
p0 193.4 ± 103.2
2000
1000
0
-1000
-2000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

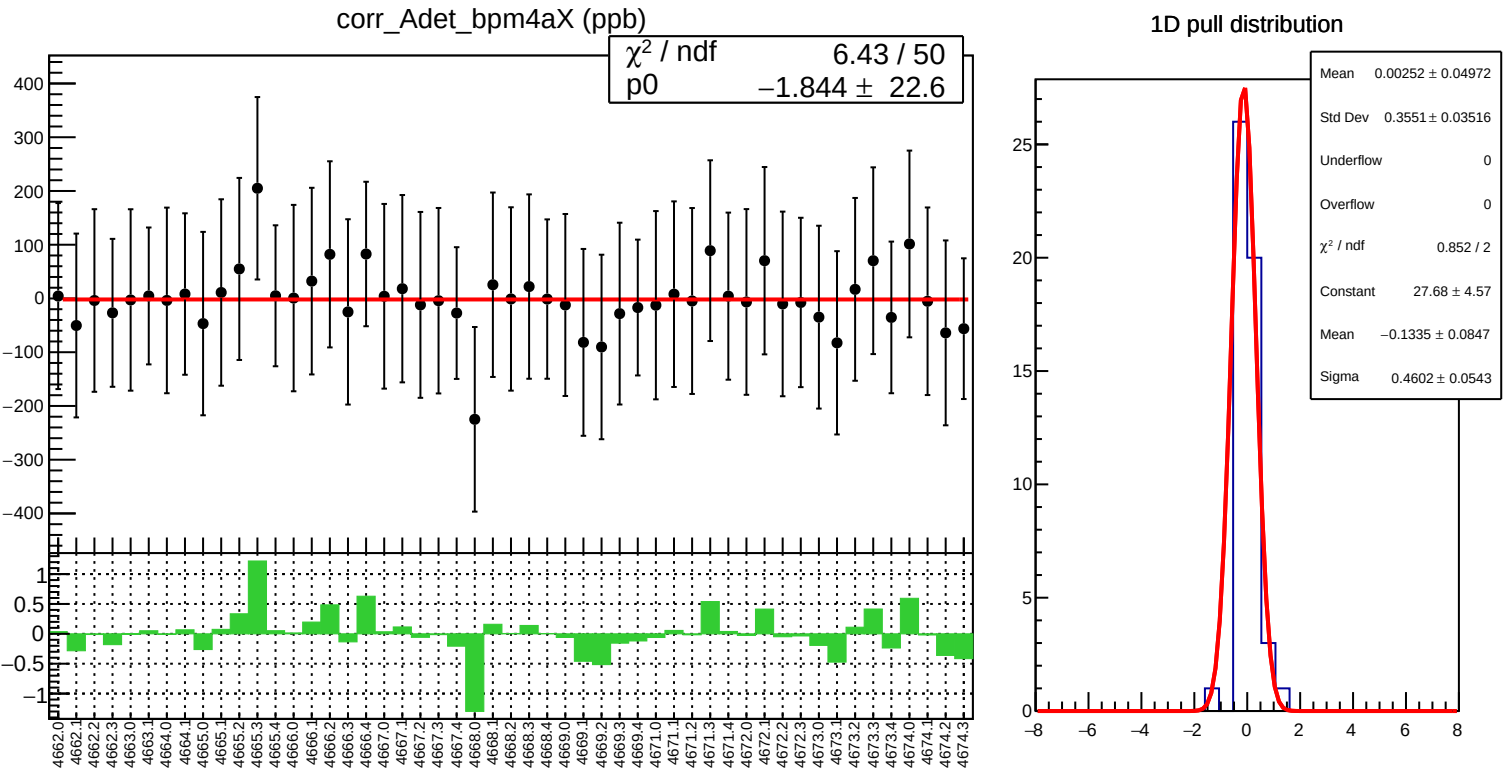

1D pull distribution
Mean −0.0207 ± 0.125
Std Dev 0.8929 ± 0.08841
Underflow 0
Overflow 0
χ² / ndf 2.672 / 5
Constant 11.45 ± 2.44
Mean −0.01033 ± 0.14043
Sigma 0.9148 ± 0.1629
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

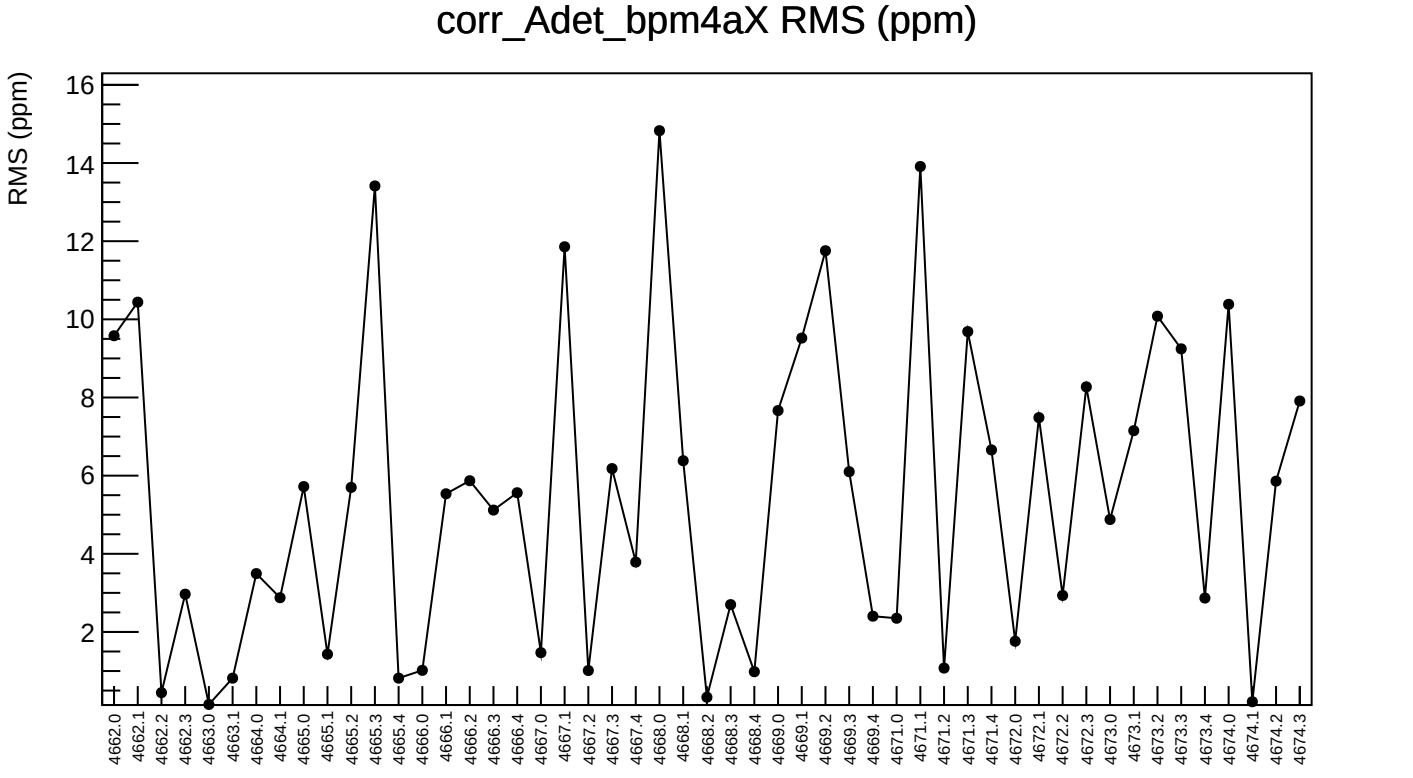

corr_Adet_bpm4eX RMS (ppm)
RMS (ppm)
110
100
90
80
70
60
50
40
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

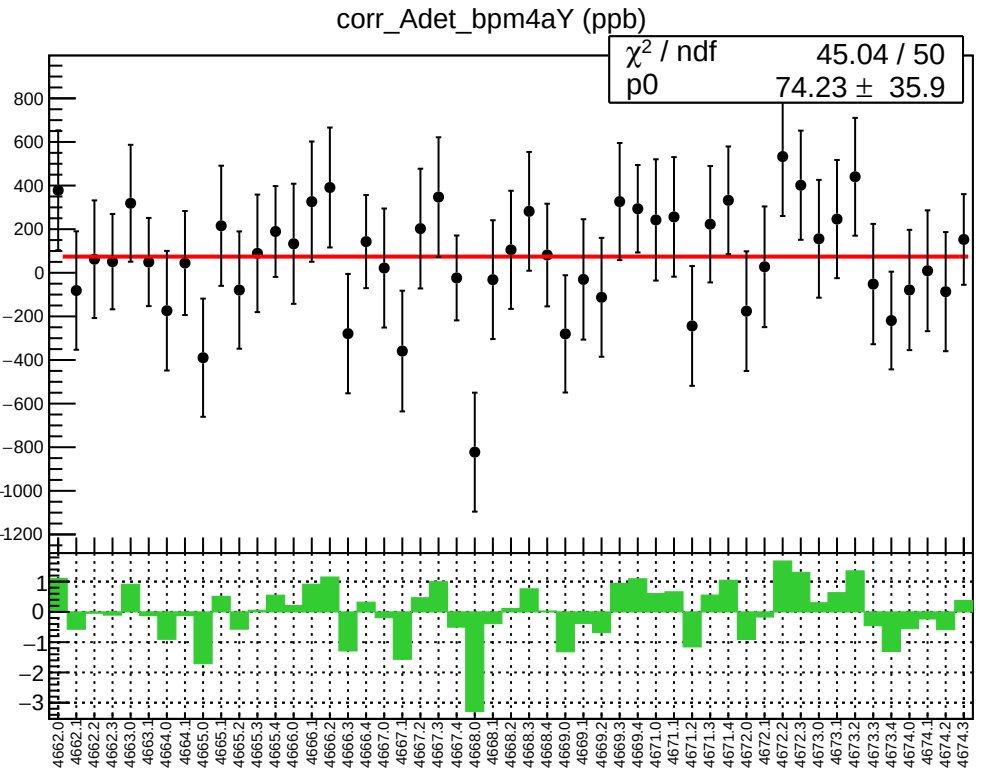

corr_Adet_bpm4eY (ppb)
χ² / ndf 34.67 / 50
p0 −43.86 ± 22.95
600
400
200
0
−200
−400
−600
3
2
1
0
−1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

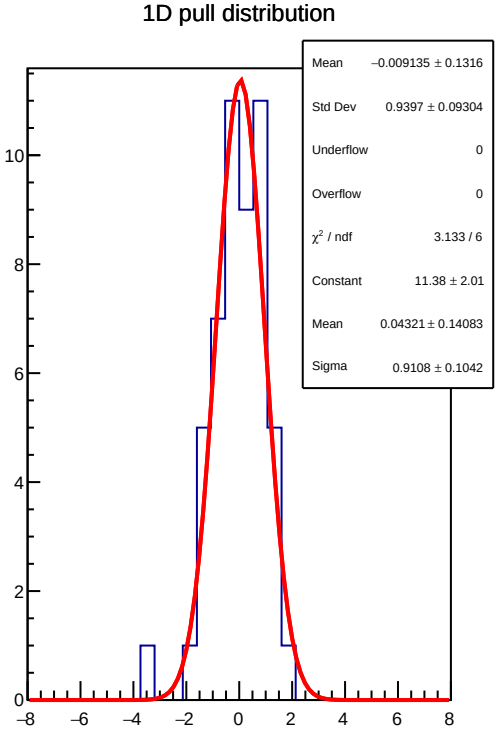

1D pull distribution
Mean 0.007898 ± 0.1155
Std Dev 0.8245 ± 0.08164
Underflow 0
Overflow 0
χ² / ndf 2.008 / 5
Constant 13.82 ± 2.51
Mean −0.08727 ± 0.11559
Sigma 0.7663 ± 0.0959
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

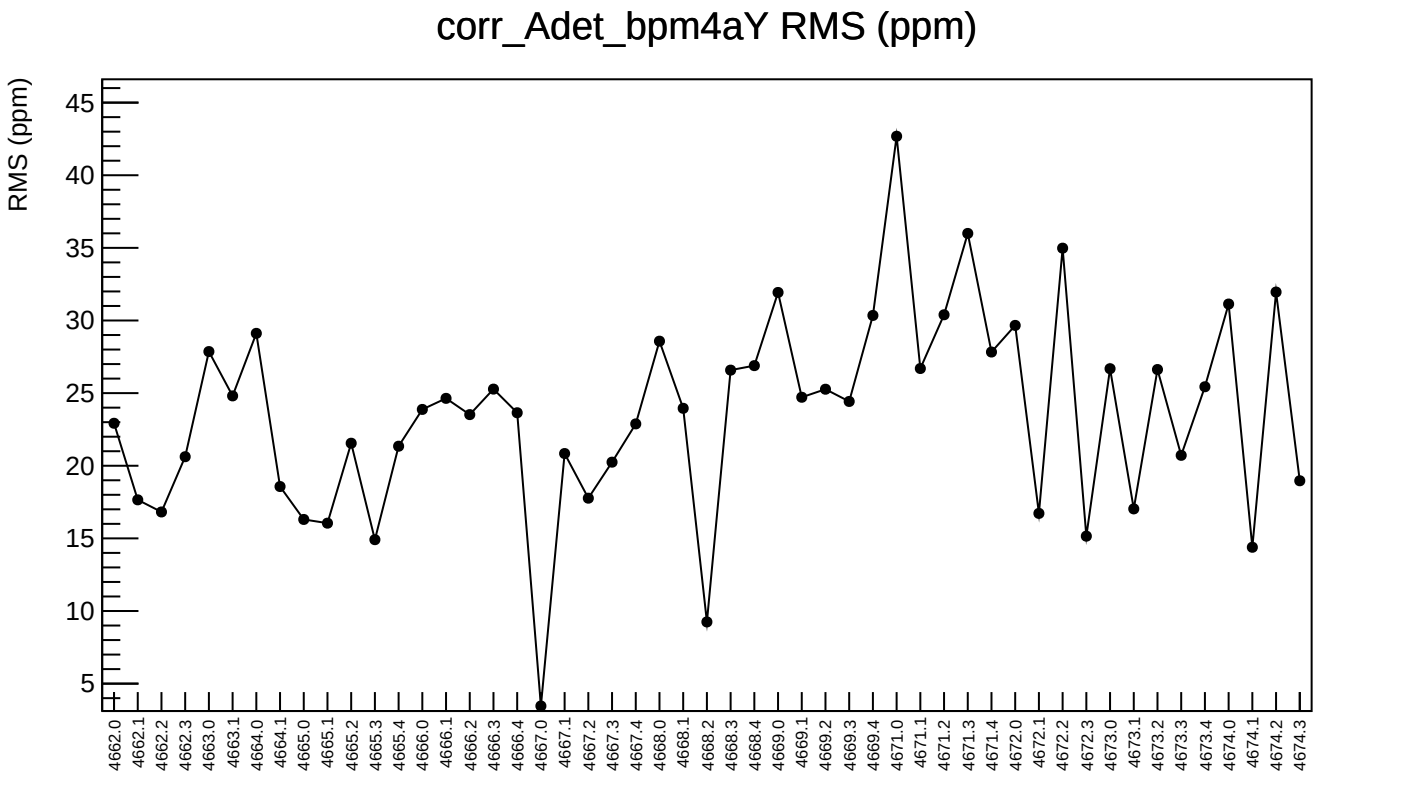

corr_Adet_bpm4eY RMS (ppm)
RMS (ppm)
25
20
15
10
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

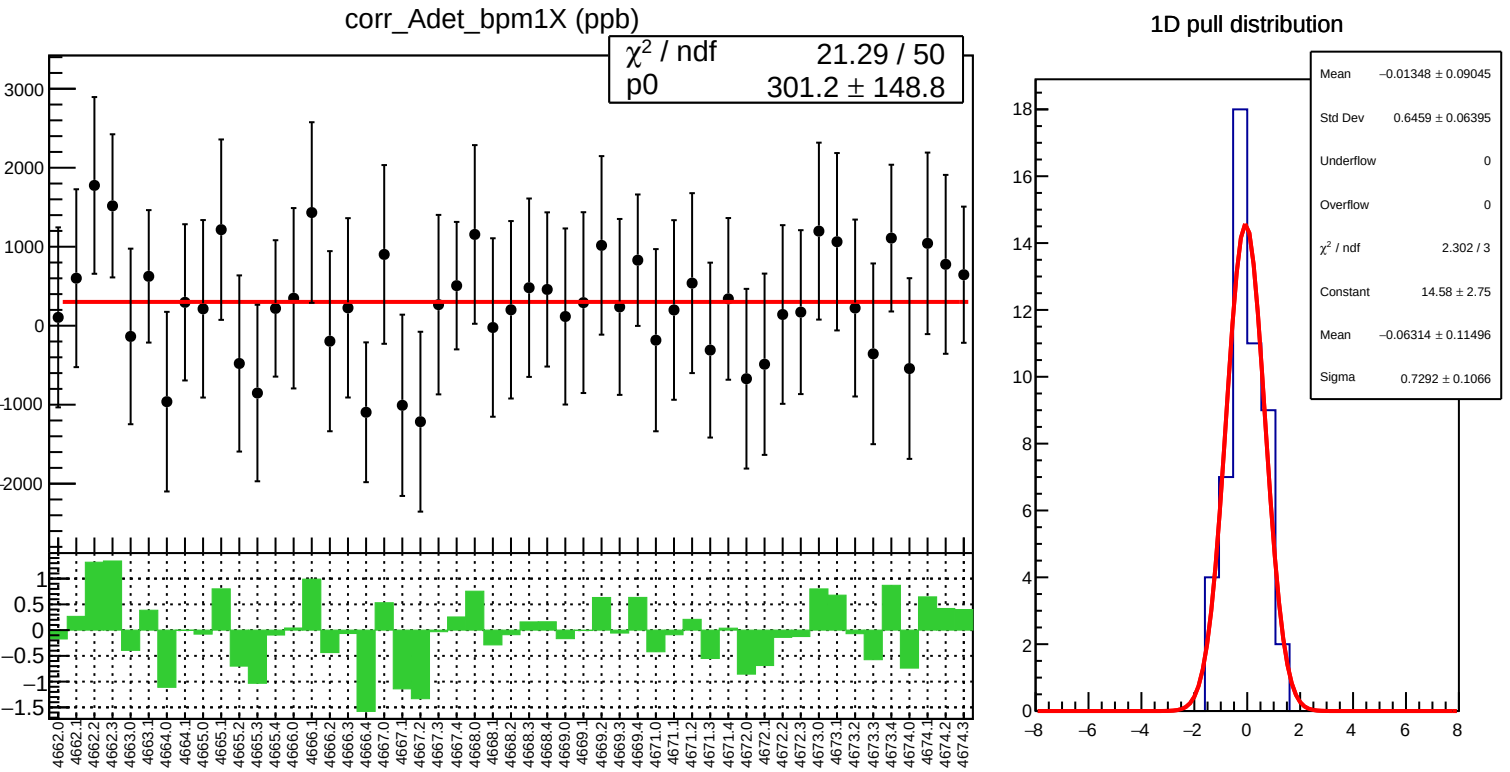

corr_Adet_bpm4aX (ppb)
χ² / ndf 6.43 / 50
p0 −1.844 ± 22.6
1D pull distribution
Mean 0.00252 ± 0.04972
Std Dev 0.3551 ± 0.03516
Underflow 0
Overflow 0
χ² / ndf 0.852 / 2
Constant 27.68 ± 4.57
Mean −0.1335 ± 0.0847
Sigma 0.4602 ± 0.0543

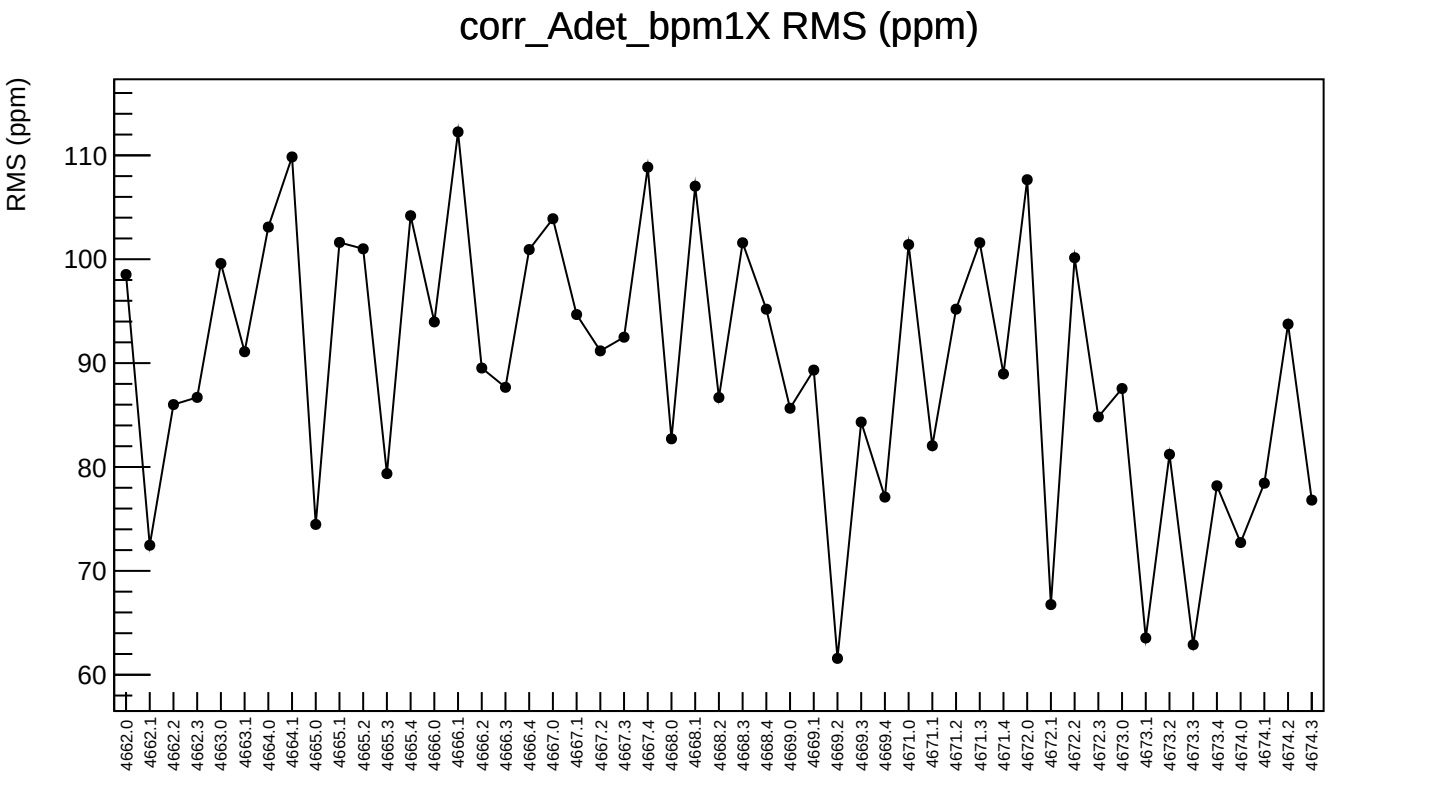

corr_Adet_bpm4aX RMS (ppm)
RMS (ppm)
16
14
12
10
8
6
4
2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

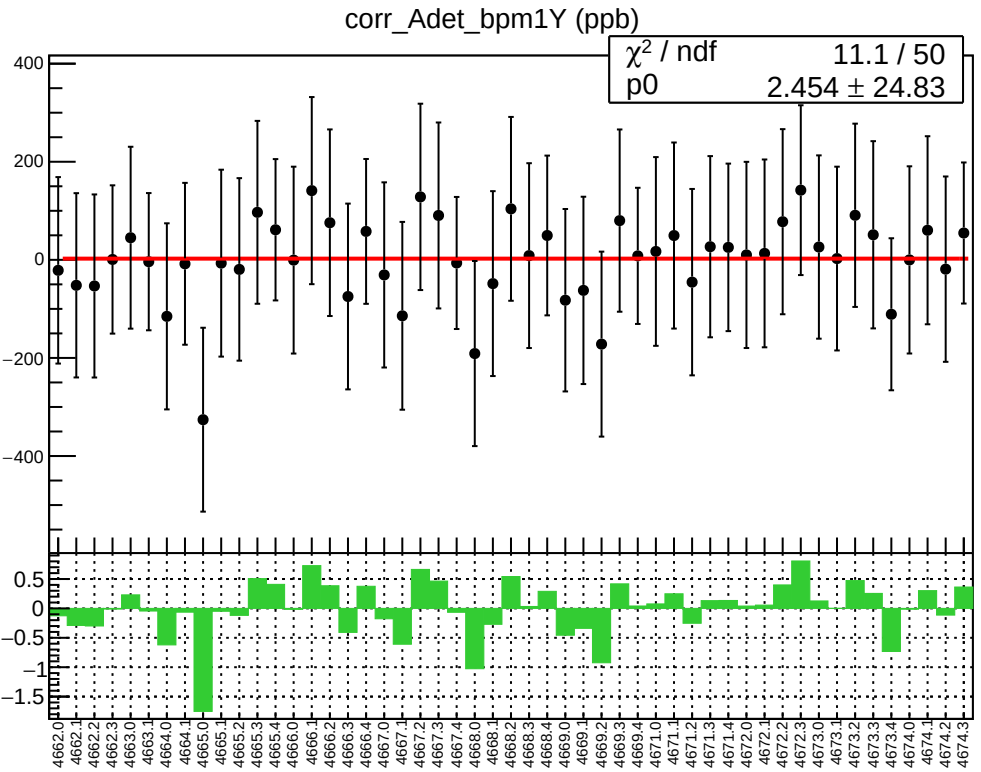

corr_Adet_bpm4aY (ppb)
χ² / ndf 45.04 / 50
p0 74.23 ± 35.9
800
600
400
200
0
−200
−400
−600
−800
−1000
−1200
1
0
−1
−2
−3
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

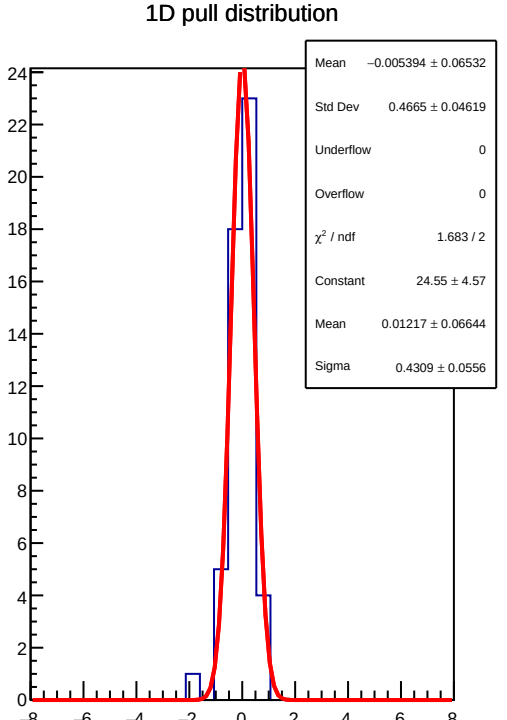

1D pull distribution
Mean −0.009135 ± 0.1316
Std Dev 0.9397 ± 0.09304
Underflow 0
Overflow 0
χ² / ndf 3.133 / 6
Constant 11.38 ± 2.01
Mean 0.04321 ± 0.14083
Sigma 0.9108 ± 0.1042
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

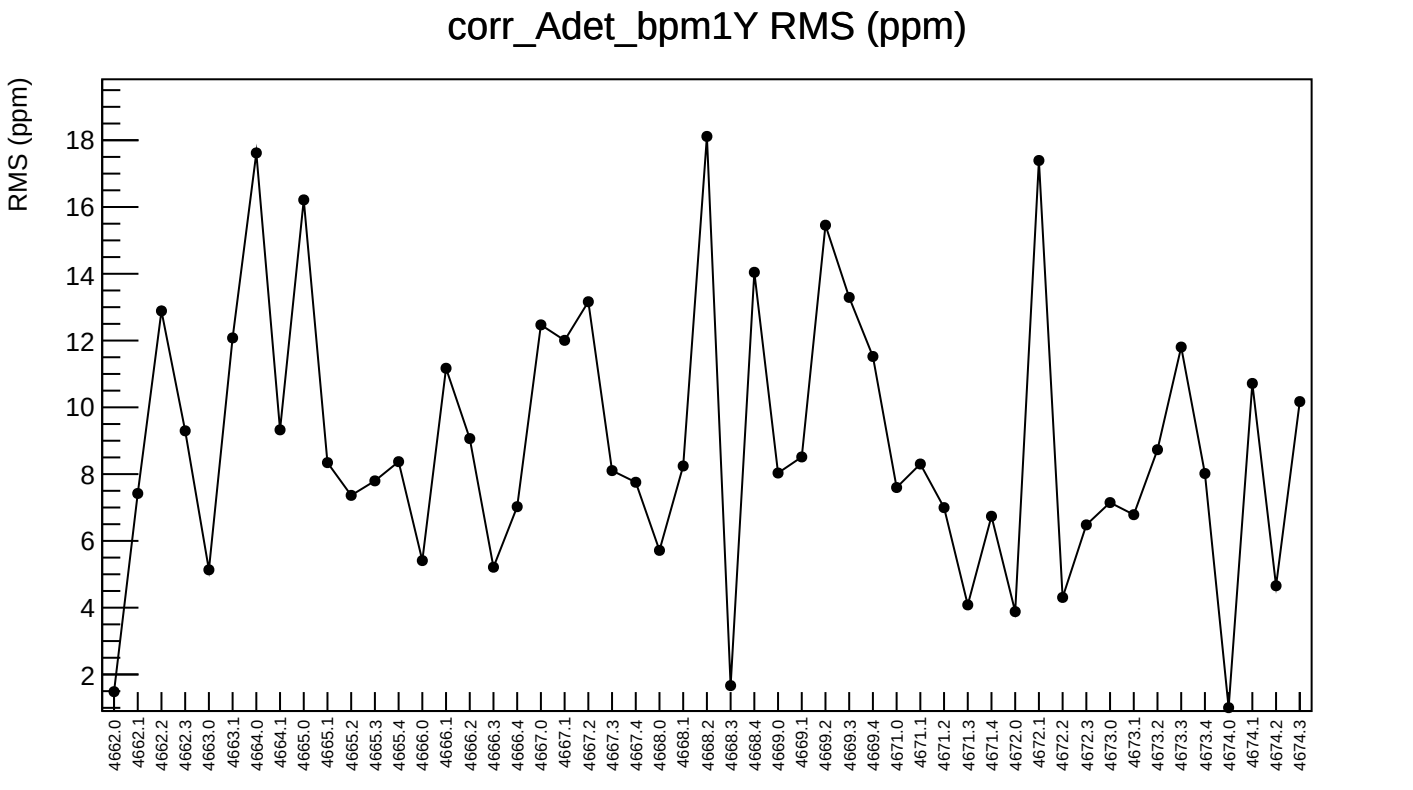

corr_Adet_bpm4aY RMS (ppm)
RMS (ppm)
45
40
35
30
25
20
15
10
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

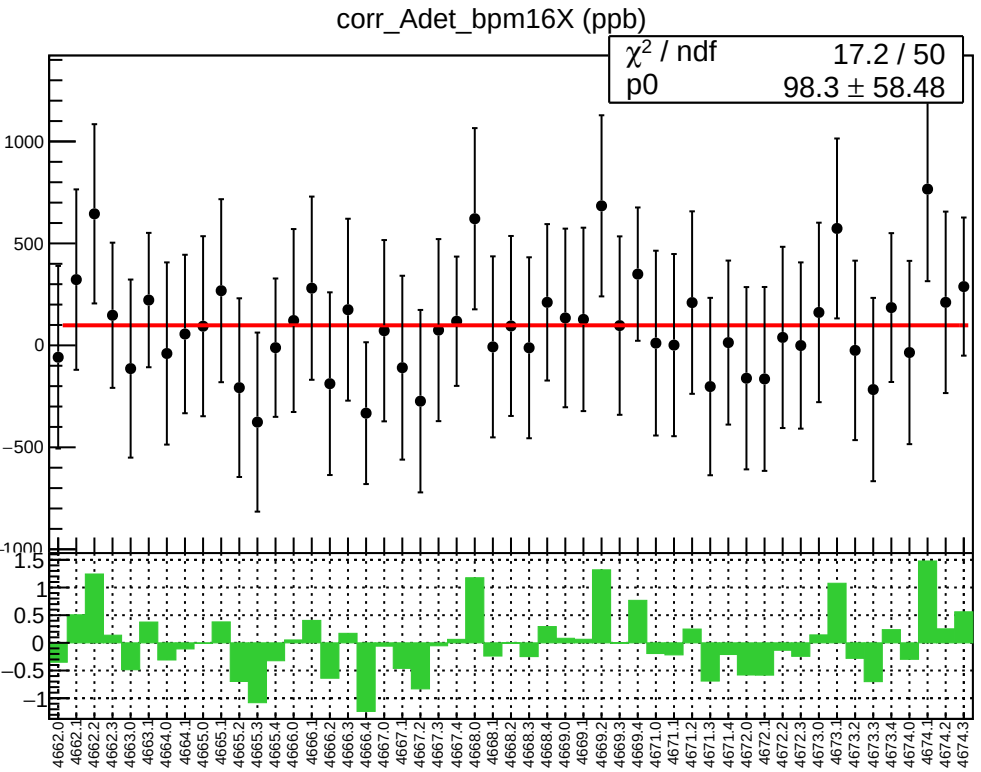

corr_Adet_bpm1X (ppb)
χ² / ndf 21.29 / 50
p0 301.2 ± 148.8
1D pull distribution
Mean −0.01348 ± 0.09045
Std Dev 0.6459 ± 0.06395
Underflow 0
Overflow 0
χ² / ndf 2.302 / 3
Constant 14.58 ± 2.75
Mean −0.06314 ± 0.11496
Sigma 0.7292 ± 0.1066

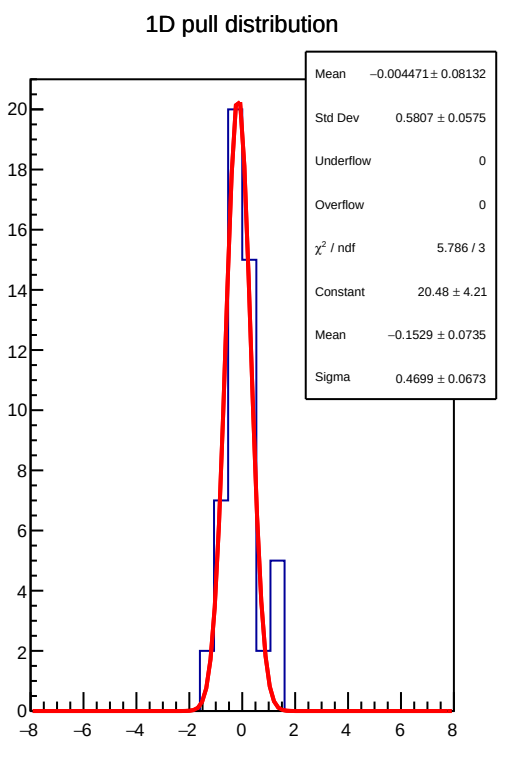

corr_Adet_bpm1X RMS (ppm)
RMS (ppm)
110
100
90
80
70
60
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

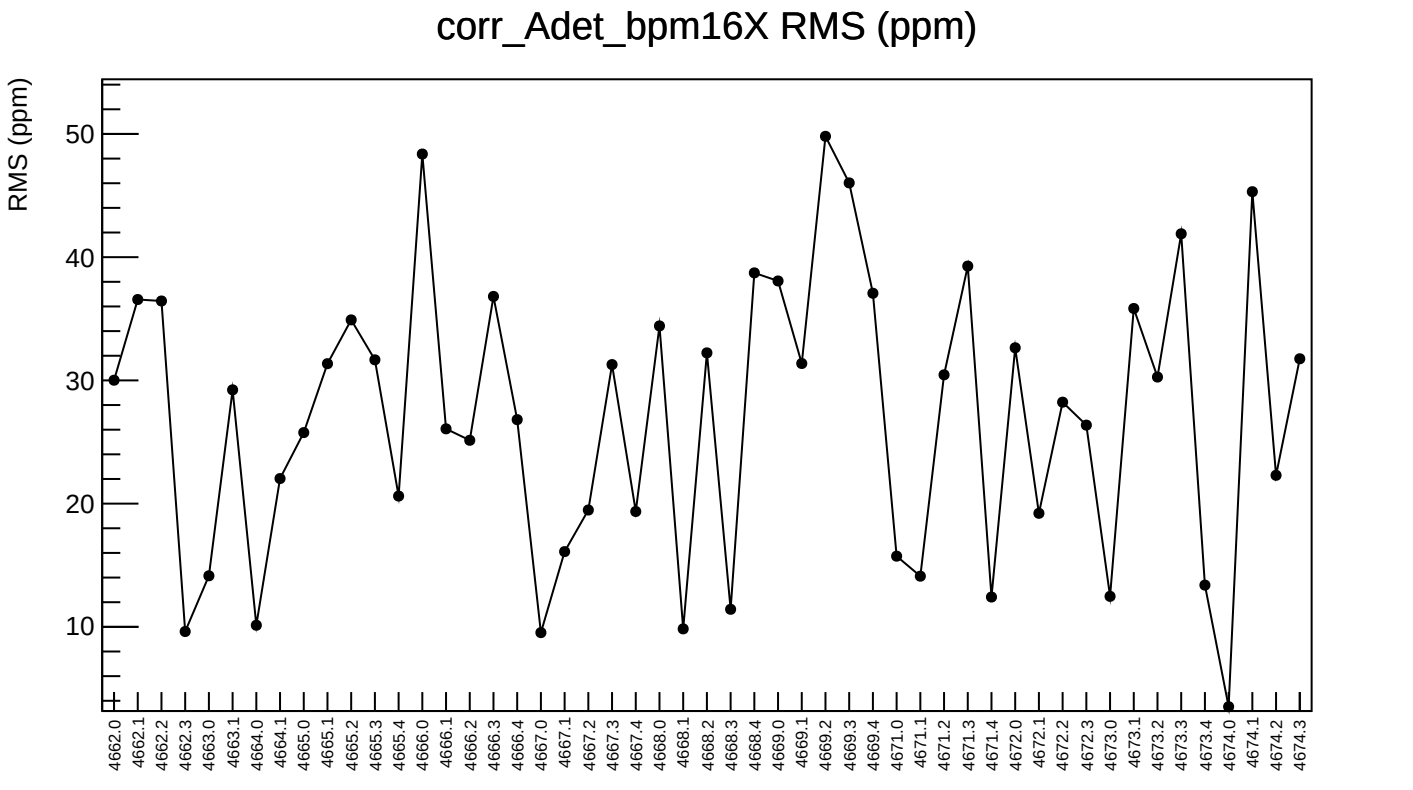

corr_Adet_bpm1Y (ppb)
χ² / ndf 11.1 / 50
p0 2.454 ± 24.83
400
200
0
−200
−400
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

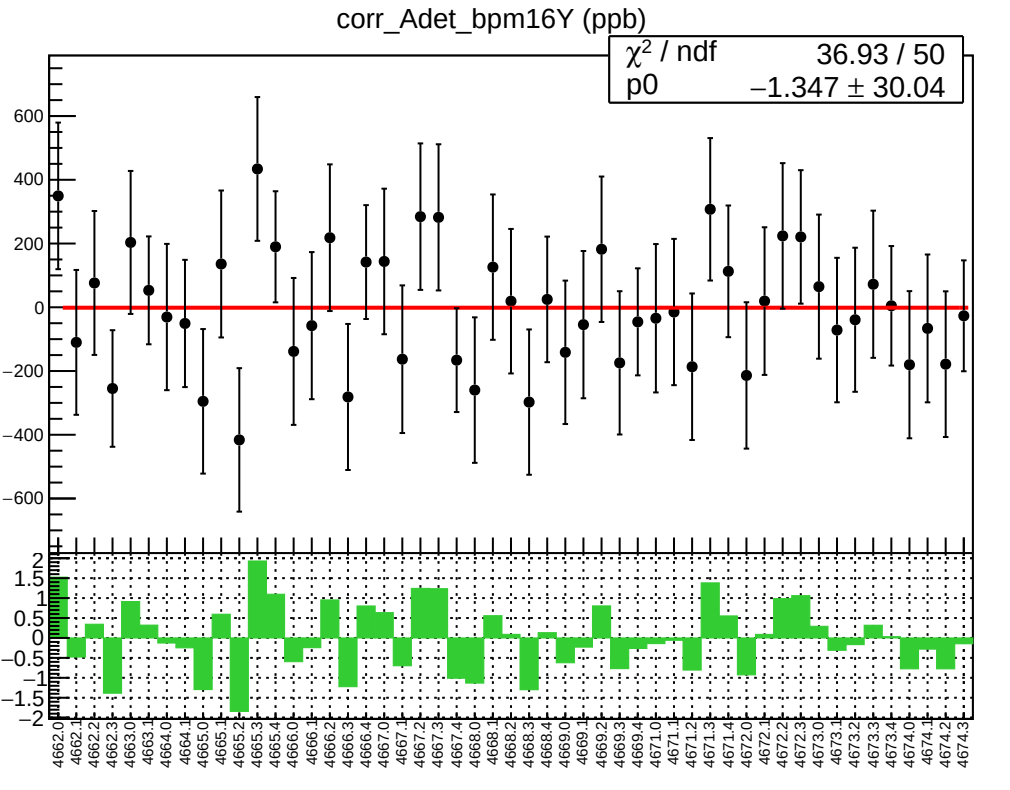

1D pull distribution
Mean −0.005394 ± 0.06532
Std Dev 0.4665 ± 0.04619
Underflow 0
Overflow 0
χ² / ndf 1.683 / 2
Constant 24.55 ± 4.57
Mean 0.01217 ± 0.06644
Sigma 0.4309 ± 0.0556
24
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

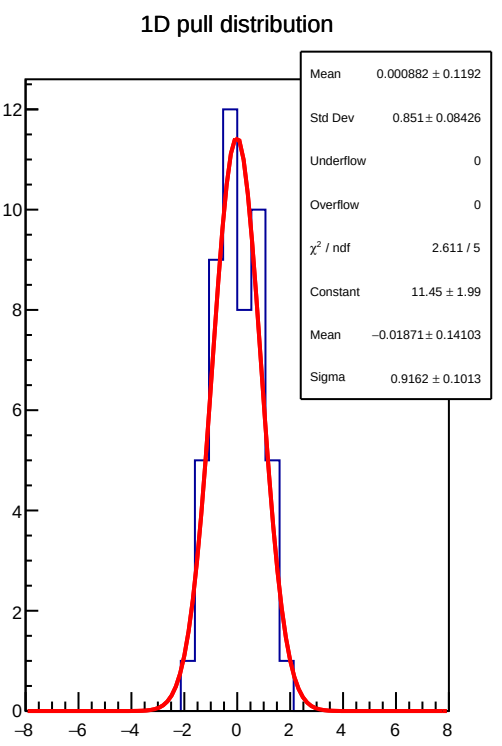

corr_Adet_bpm1Y RMS (ppm)
RMS (ppm)
2
4
6
8
10
12
14
16
18
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

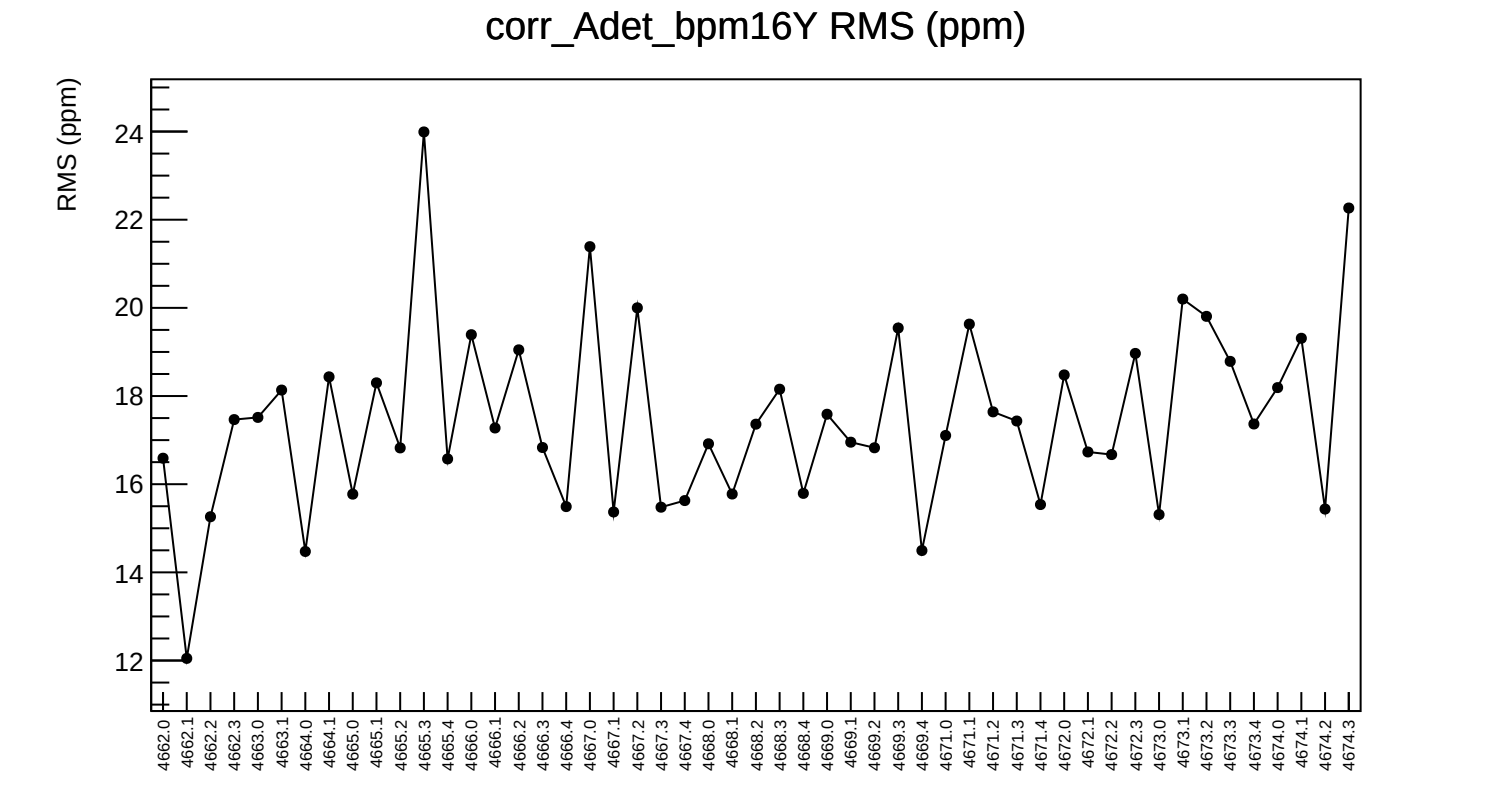

corr_Adet_bpm16X (ppb)
χ² / ndf 17.2 / 50
p0 98.3 ± 58.48
1000
500
0
−500
−1000
1.5
1
0.5
0
−0.5
−1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

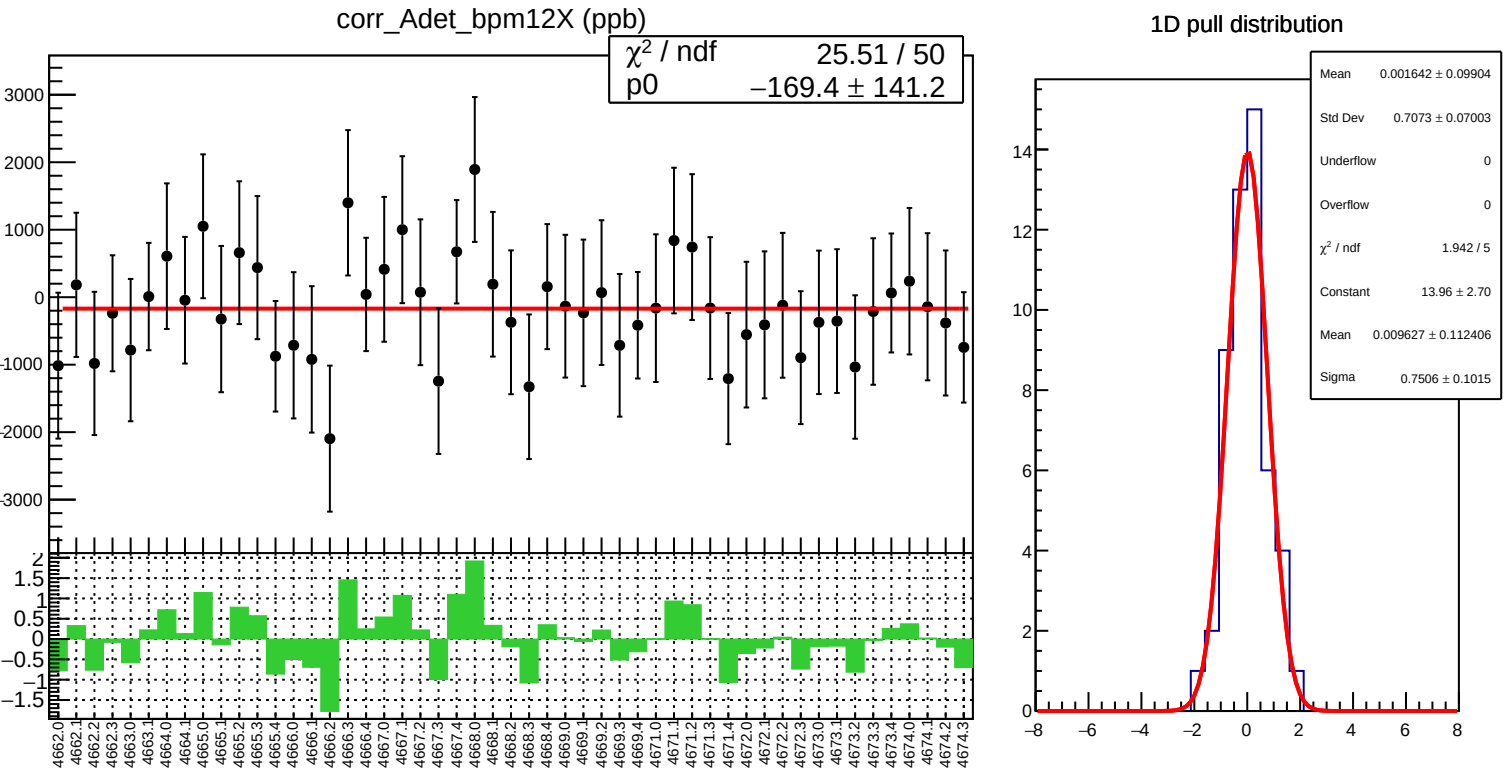

1D pull distribution
Mean −0.004471 ± 0.08132
Std Dev 0.5807 ± 0.0575
Underflow 0
Overflow 0
χ² / ndf 5.786 / 3
Constant 20.48 ± 4.21
Mean −0.1529 ± 0.0735
Sigma 0.4699 ± 0.0673
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

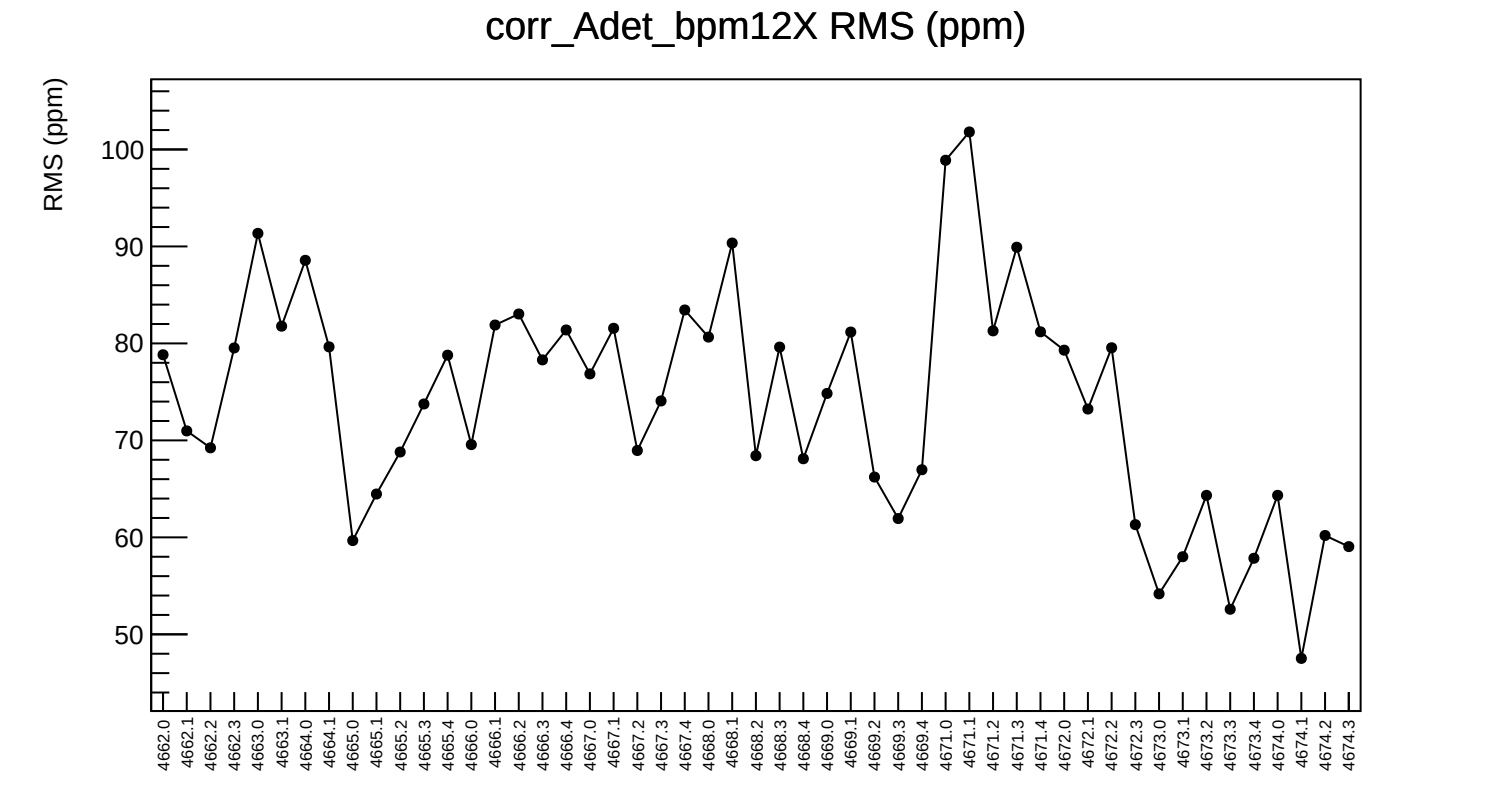

corr_Adet_bpm16X RMS (ppm)
RMS (ppm)
50
40
30
20
10
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

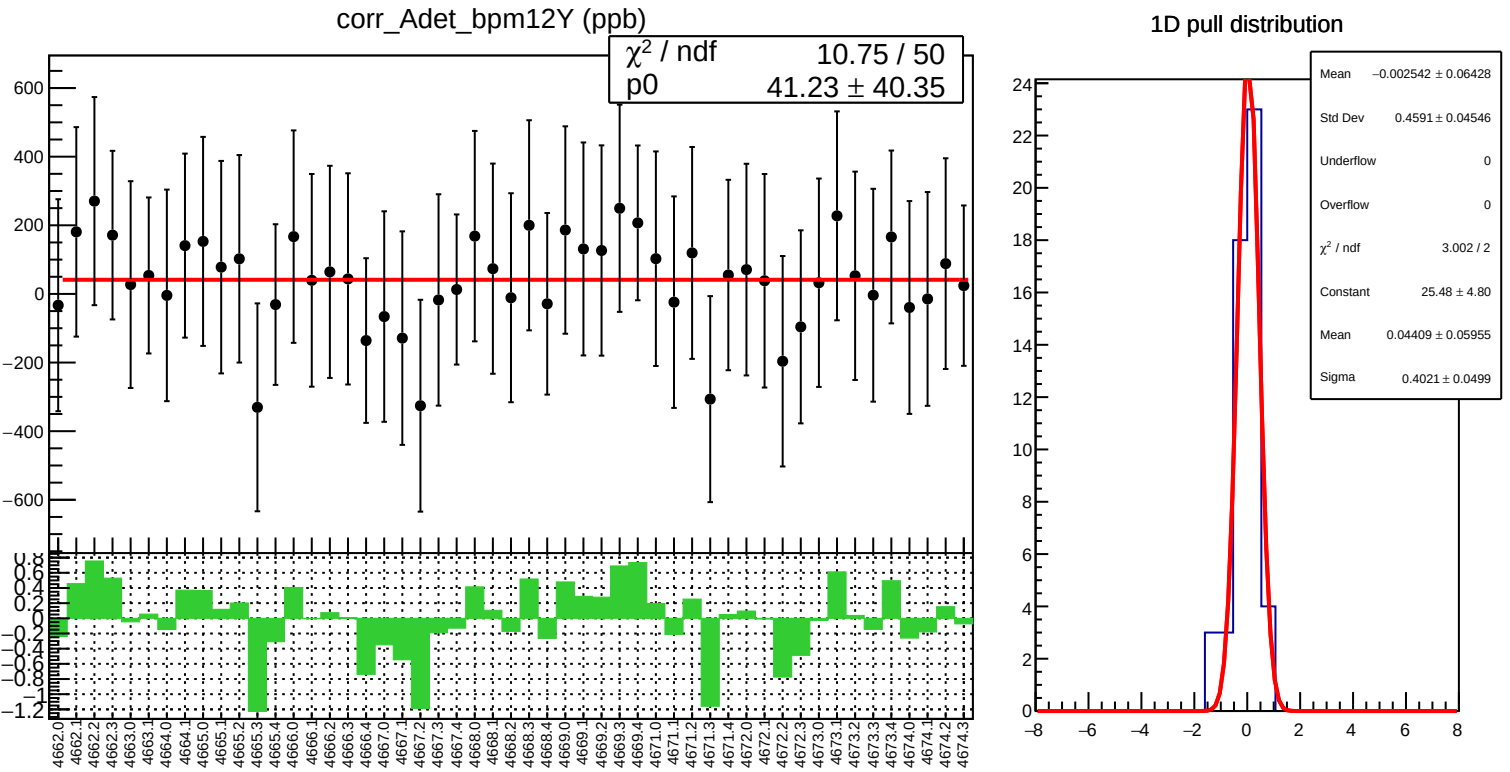

corr_Adet_bpm16Y (ppb)
χ² / ndf 36.93 / 50
p0 −1.347 ± 30.04

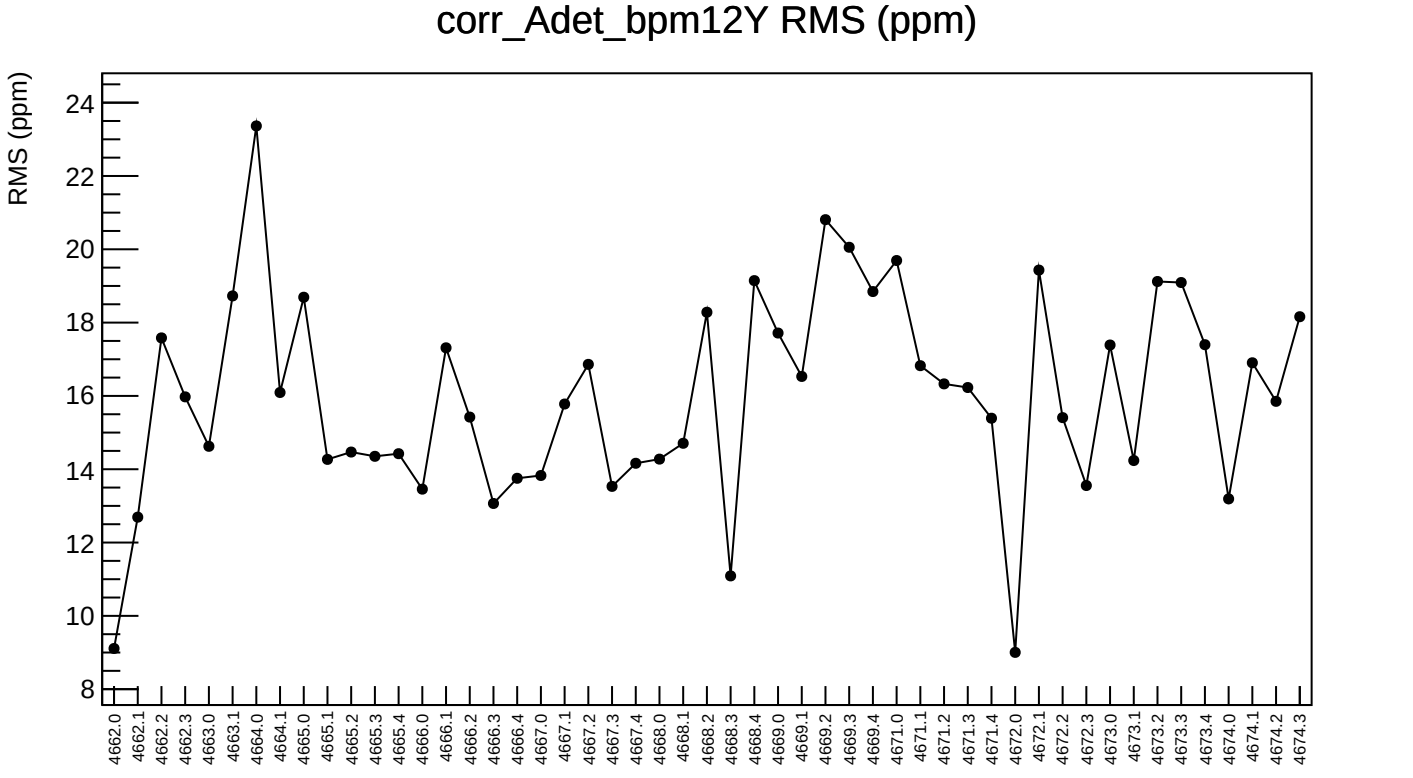

1D pull distribution
Mean 0.000882 ± 0.1192
Std Dev 0.851 ± 0.08426
Underflow 0
Overflow 0
χ² / ndf 2.611 / 5
Constant 11.45 ± 1.99
Mean −0.01871 ± 0.14103
Sigma 0.9162 ± 0.1013

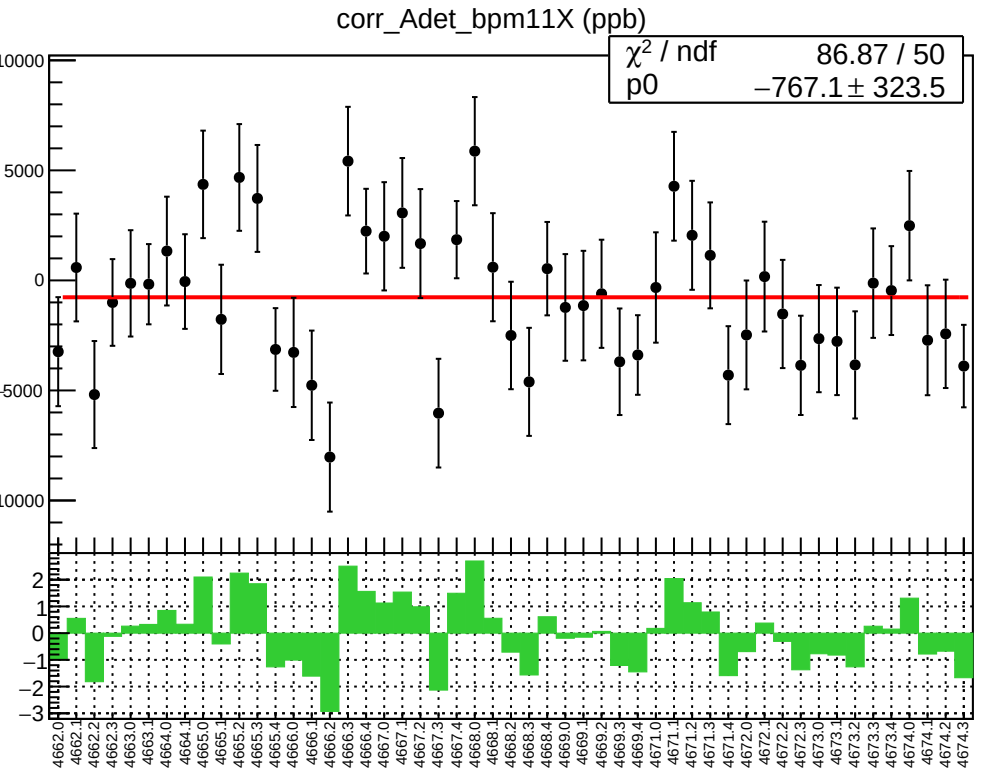

corr_Adet_bpm16Y RMS (ppm)
RMS (ppm)
24
22
20
18
16
14
12
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

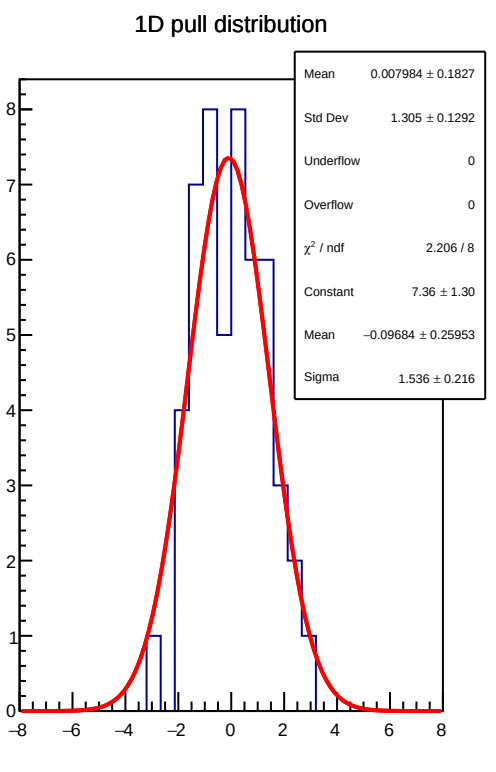

corr_Adet_bpm12X (ppb)
χ² / ndf 25.51 / 50
p0 −169.4 ± 141.2
1D pull distribution
Mean 0.001642 ± 0.09904
Std Dev 0.7073 ± 0.07003
Underflow 0
Overflow 0
χ² / ndf 1.942 / 5
Constant 13.96 ± 2.70
Mean 0.009627 ± 0.112406
Sigma 0.7506 ± 0.1015

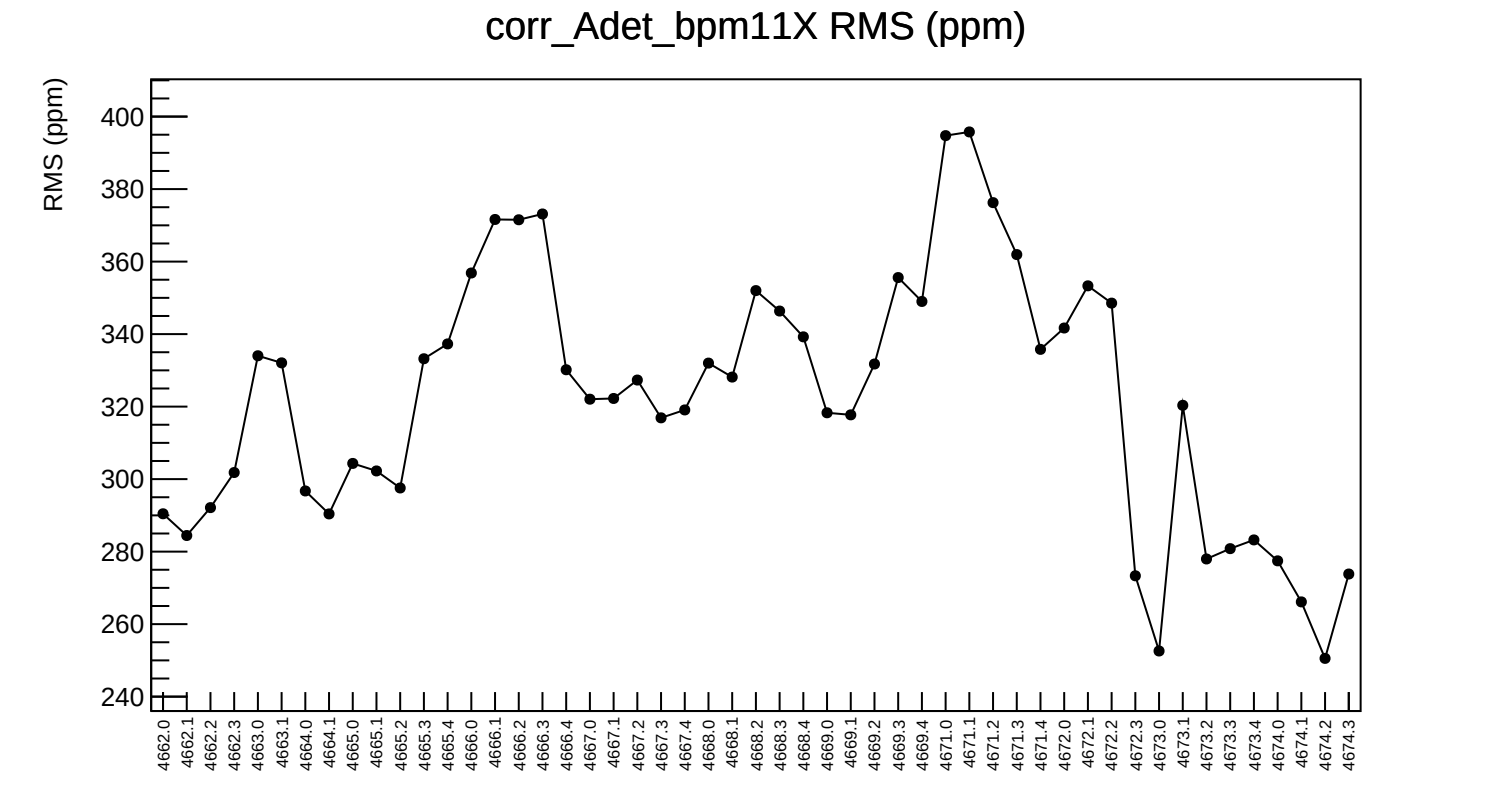

corr_Adet_bpm12X RMS (ppm)
RMS (ppm)
100
90
80
70
60
50
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

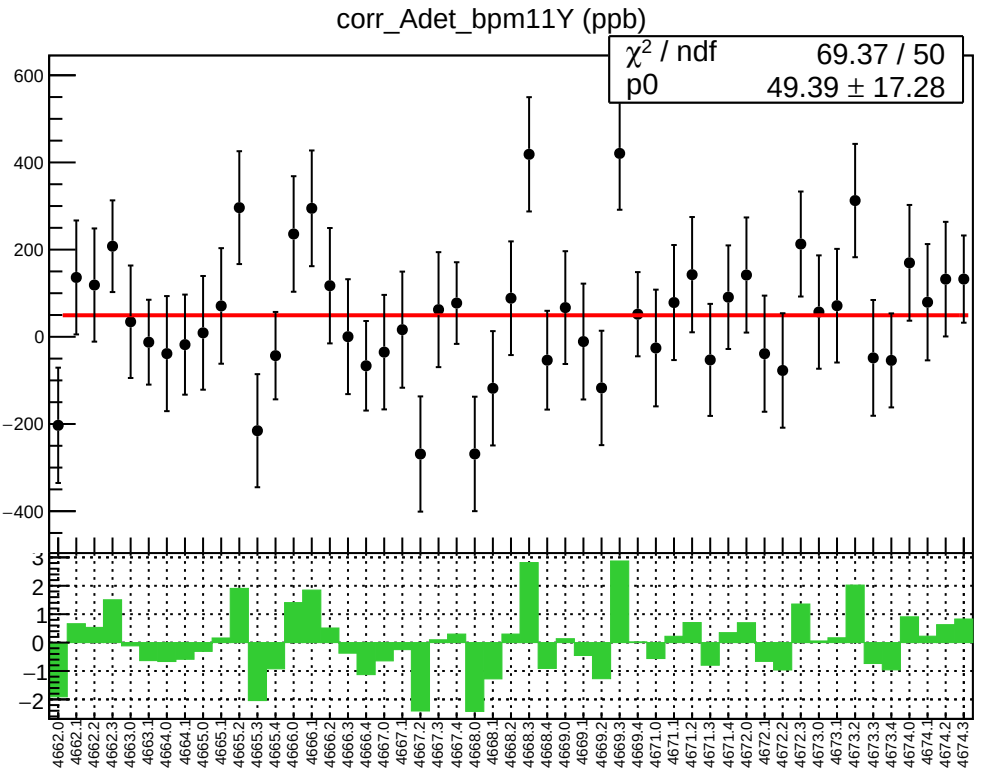

corr_Adet_bpm12Y (ppb)
χ² / ndf 10.75 / 50
p0 41.23 ± 40.35
1D pull distribution
Mean −0.002542 ± 0.06428
Std Dev 0.4591 ± 0.04546
Underflow 0
Overflow 0
χ² / ndf 3.002 / 2
Constant 25.48 ± 4.80
Mean 0.04409 ± 0.05955
Sigma 0.4021 ± 0.0499

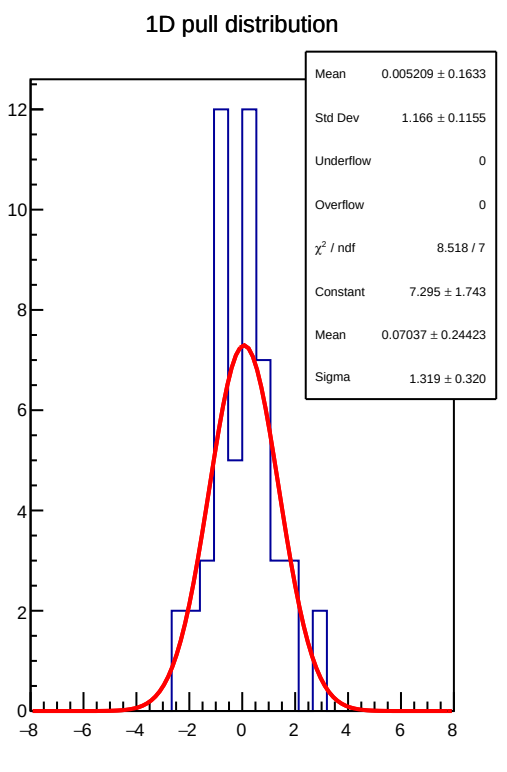

corr_Adet_bpm12Y RMS (ppm)
RMS (ppm)
24
22
20
18
16
14
12
10
8
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

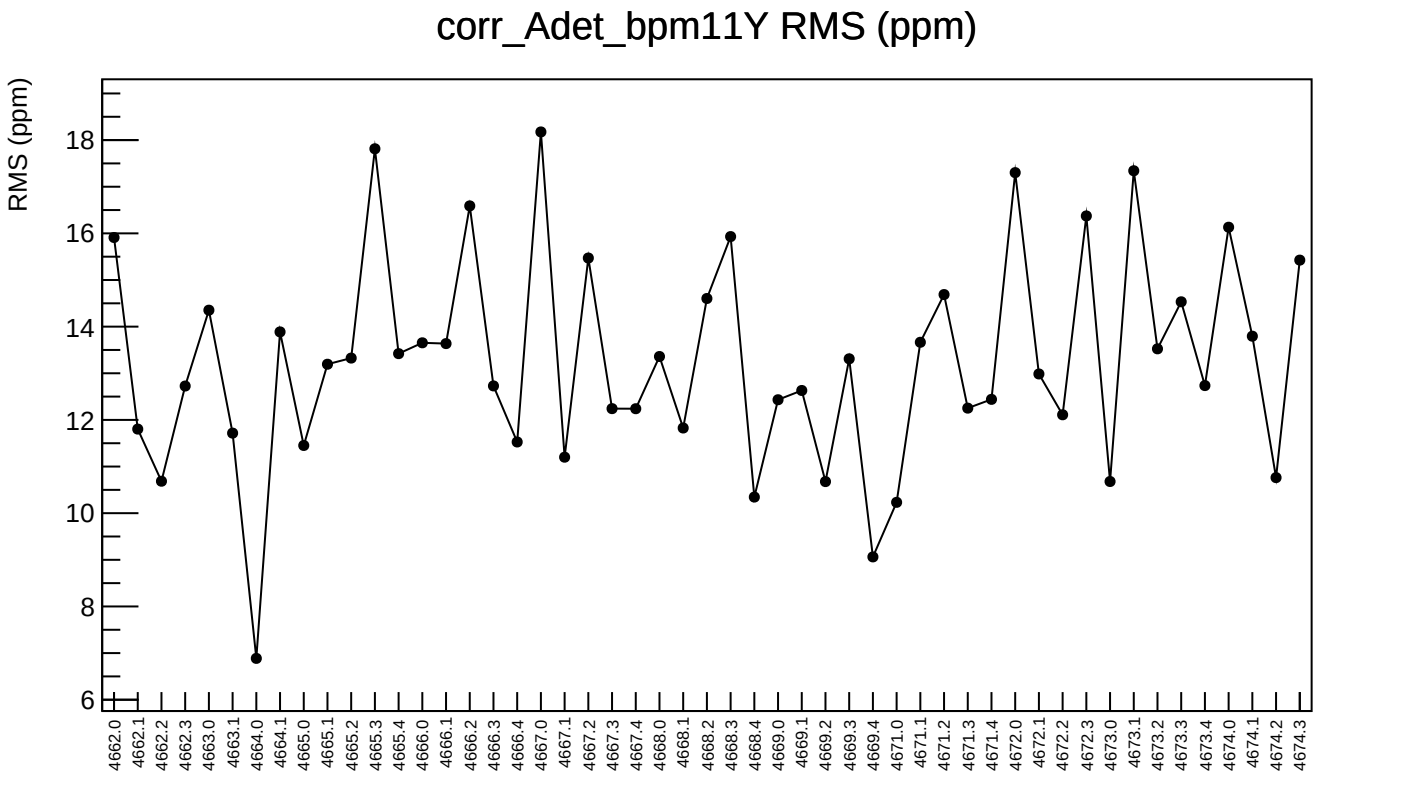

corr_Adet_bpm11X (ppb)
χ² / ndf 86.87 / 50
p0 −767.1 ± 323.5
10000
5000
0
-5000
-10000
2
1
0
−1
−2
−3
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

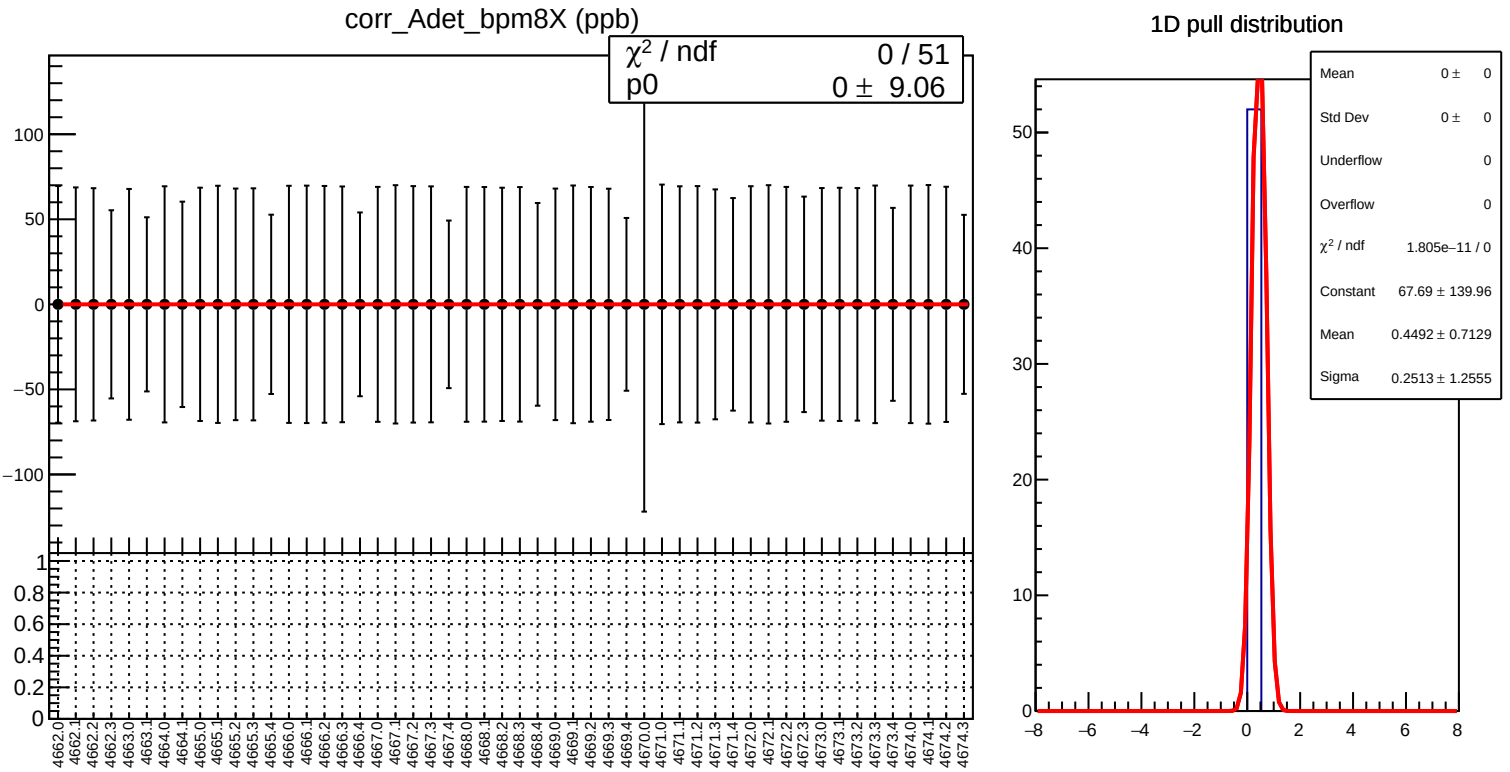

1D pull distribution
Mean 0.007984 ± 0.1827
Std Dev 1.305 ± 0.1292
Underflow 0
Overflow 0
χ² / ndf 2.206 / 8
Constant 7.36 ± 1.30
Mean −0.09684 ± 0.25953
Sigma 1.536 ± 0.216
8
7
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

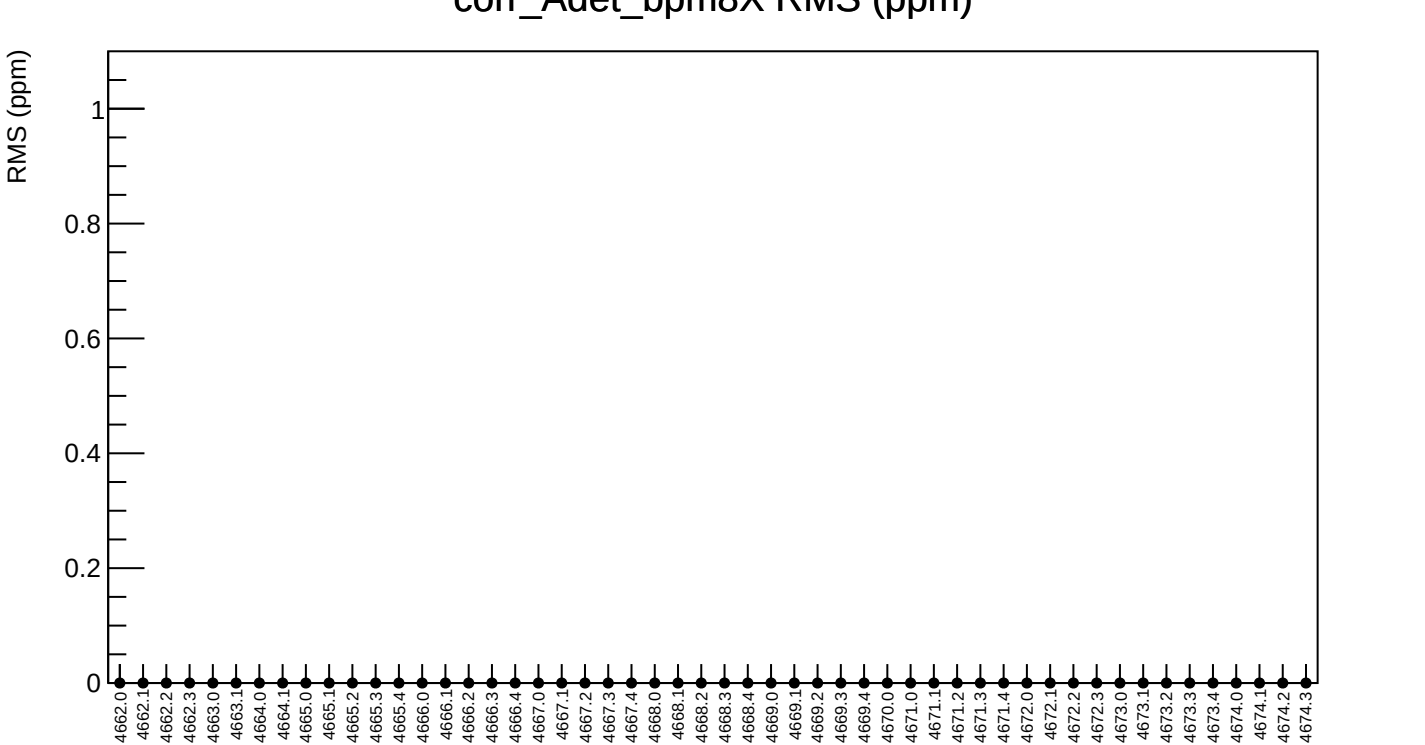

corr_Adet_bpm11X RMS (ppm)
RMS (ppm)
400
380
360
340
320
300
280
260
240
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

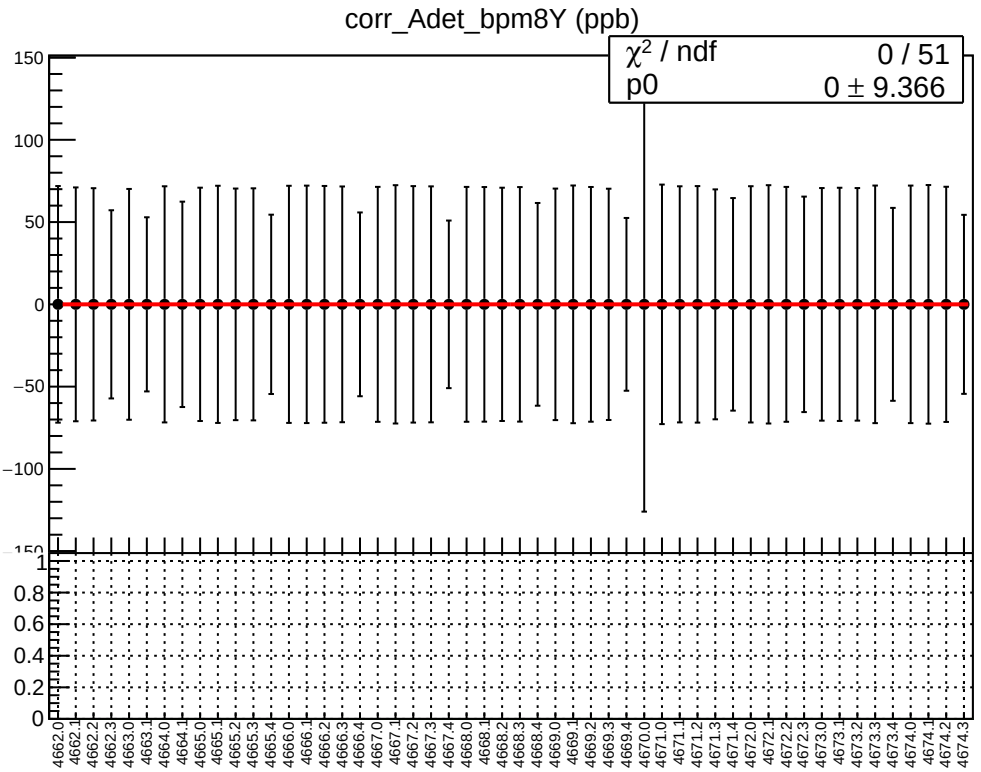

corr_Adet_bpm11Y (ppb)
χ² / ndf 69.37 / 50
p0 49.39 ± 17.28
600
400
200
0
−200
−400
3
2
1
0
−1
−2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

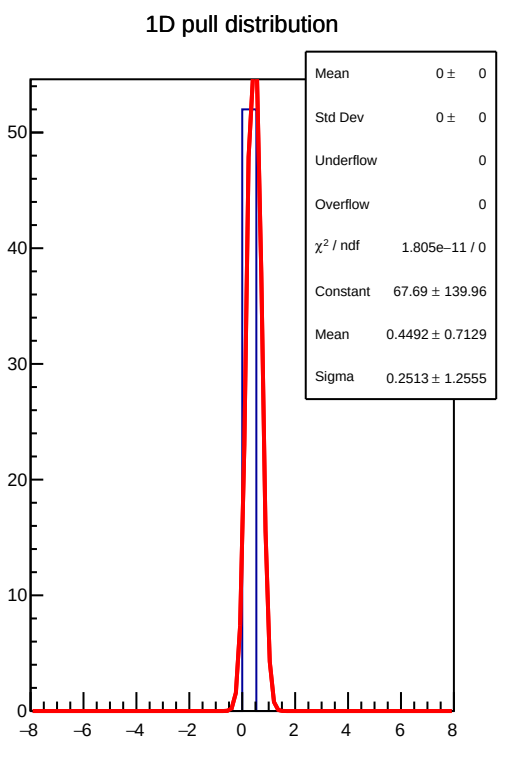

1D pull distribution
Mean 0.005209 ± 0.1633
Std Dev 1.166 ± 0.1155
Underflow 0
Overflow 0
χ² / ndf 8.518 / 7
Constant 7.295 ± 1.743
Mean 0.07037 ± 0.24423
Sigma 1.319 ± 0.320
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

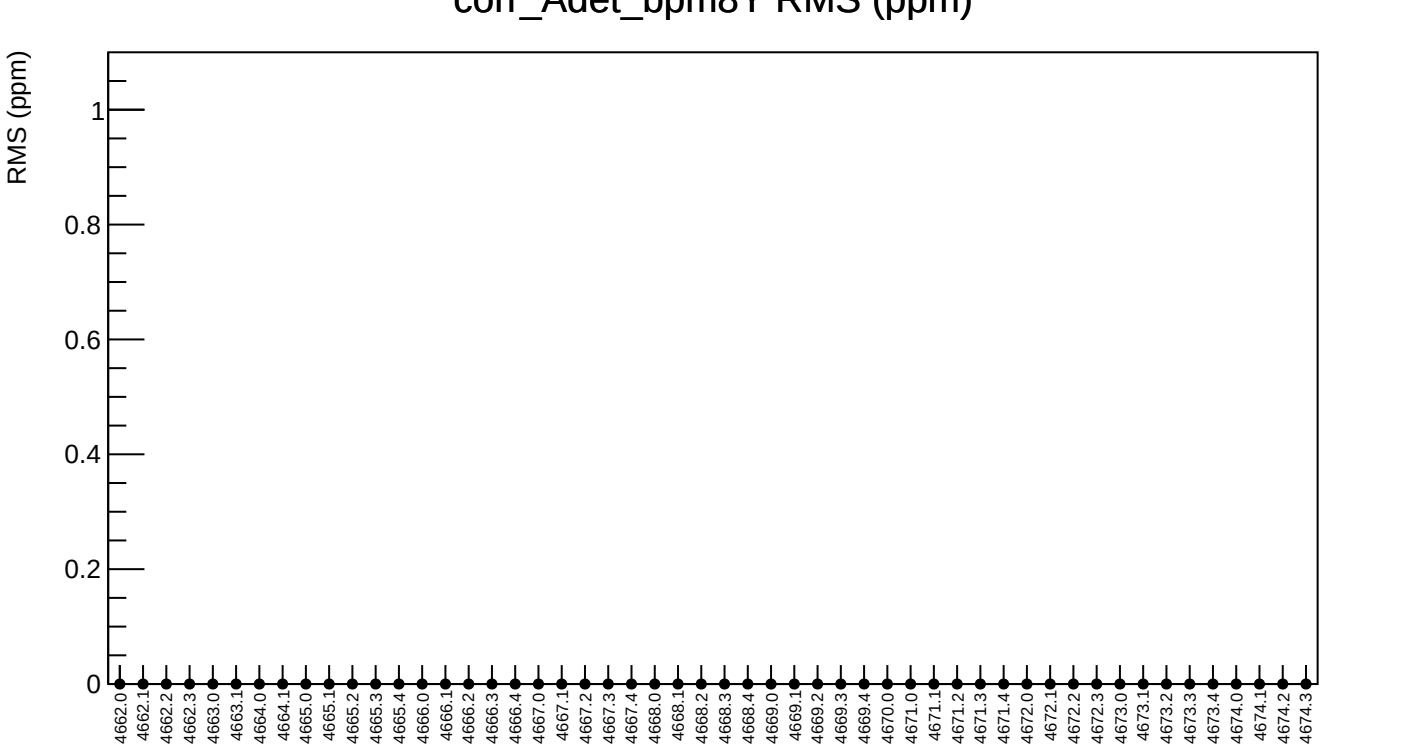

corr_Adet_bpm11Y RMS (ppm)
RMS (ppm)
18
16
14
12
10
8
6
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

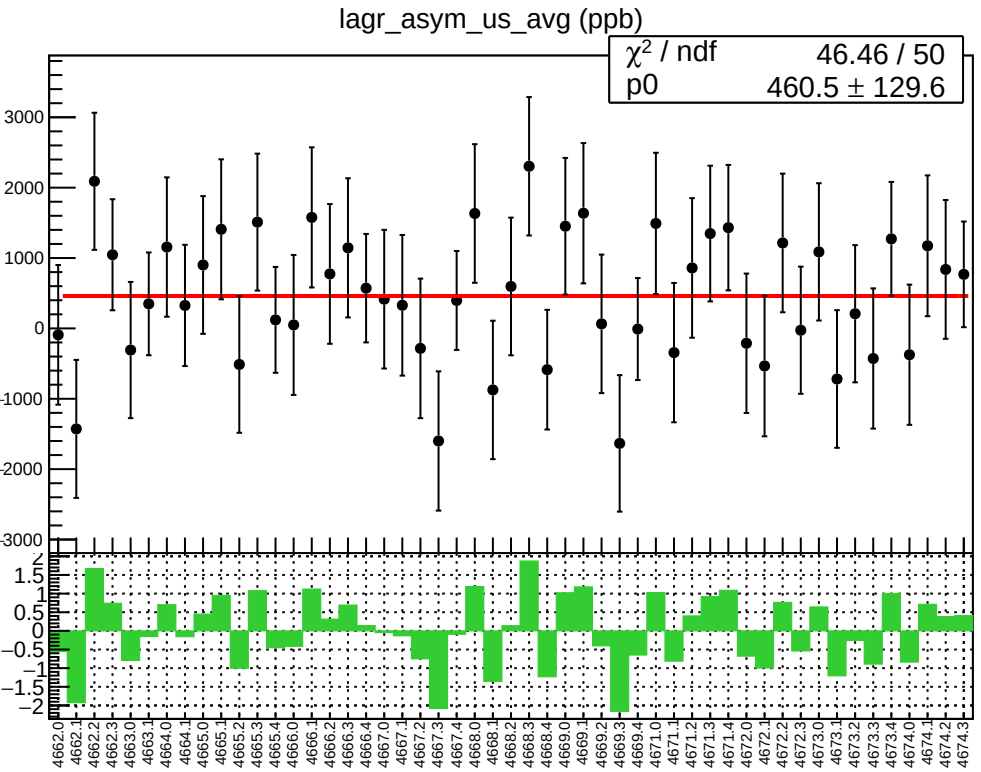

corr_Adet_bpm8X (ppb)
χ² / ndf 0 / 51
p0 0 ± 9.06
100
50
0
−50
−100
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3
1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

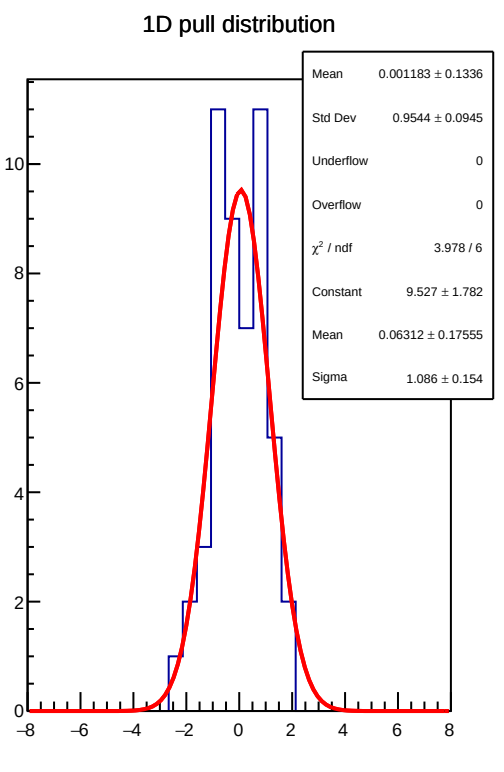

corr_Adet_bpm8X RMS (ppm)
RMS (ppm)
0
0.2
0.4
0.6
0.8
1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

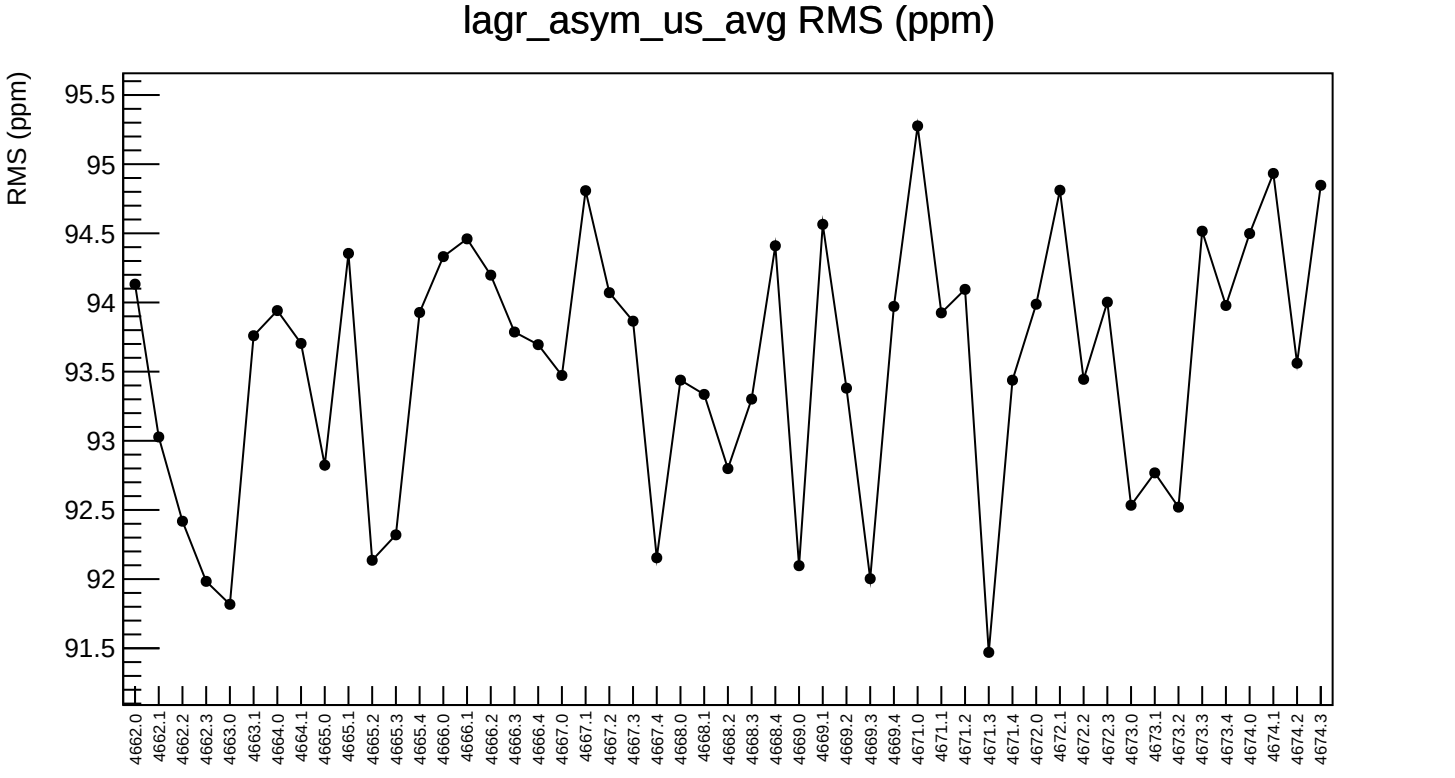

corr_Adet_bpm8Y (ppb)
χ² / ndf 0 / 51
p0 0 ± 9.366
150
100
50
0
−50
−100
−150
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

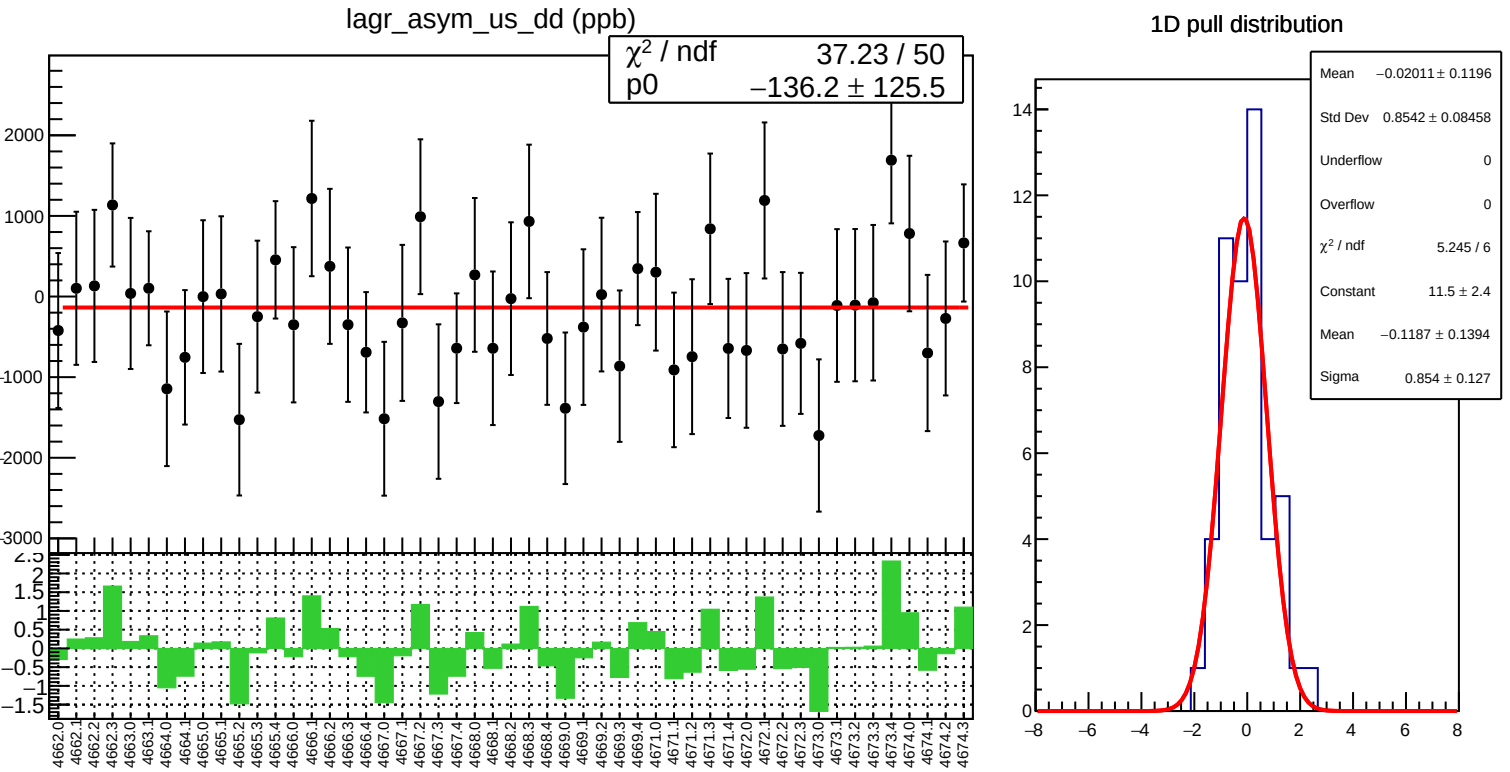

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

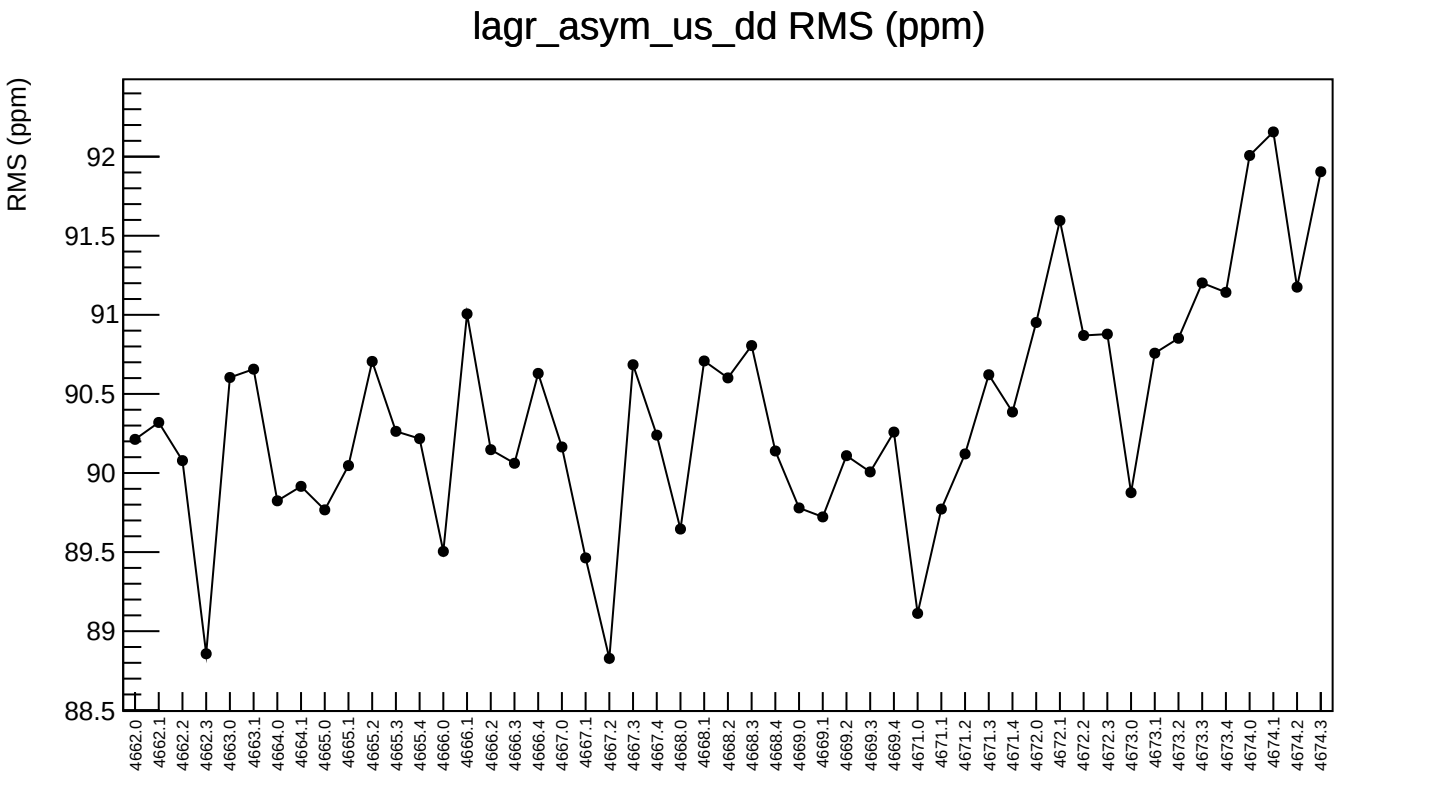

corr_Adet_bpm8Y RMS (ppm)
RMS (ppm)
0
0.2
0.4
0.6
0.8
1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

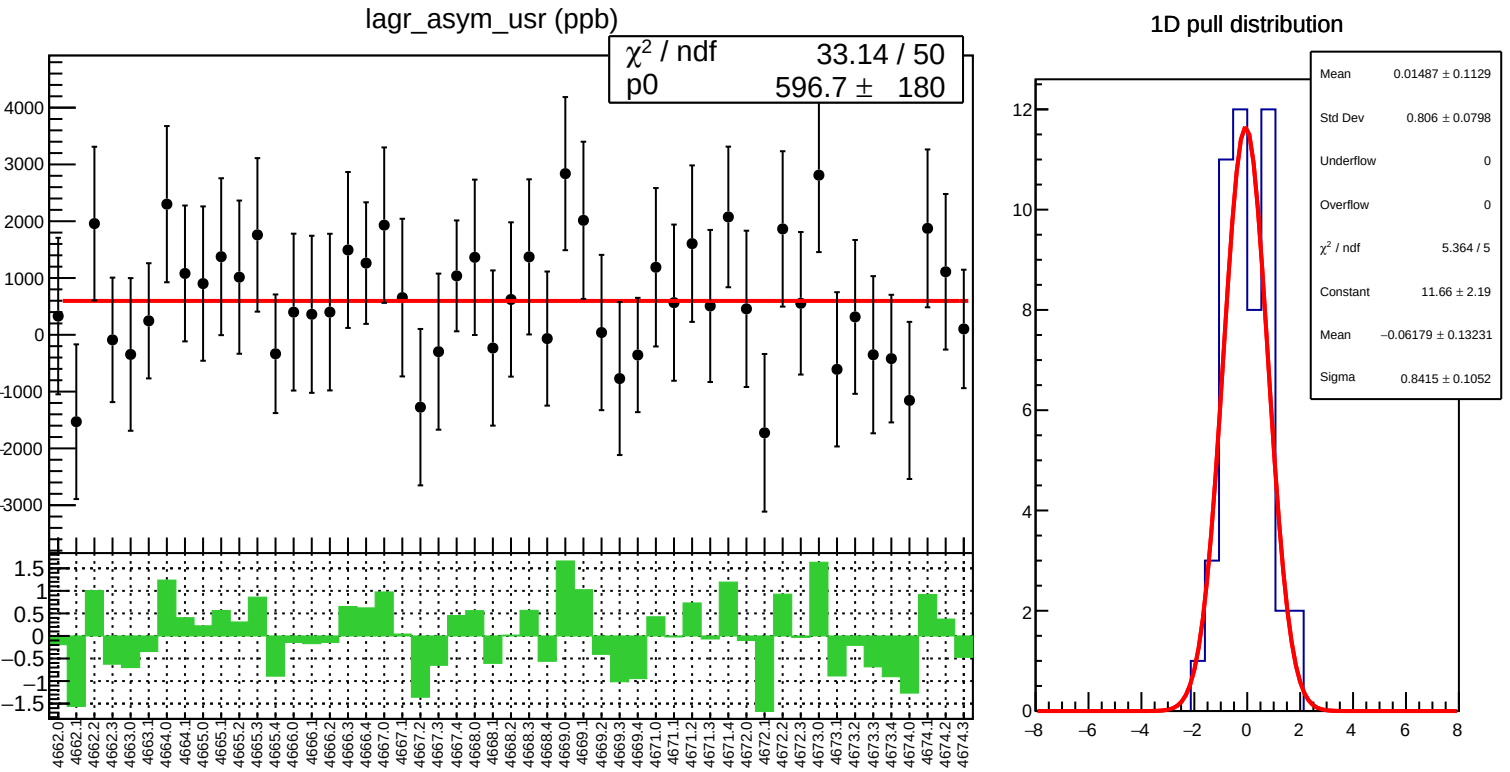

lagr_asym_us_avg (ppb)
χ² / ndf 46.46 / 50
p0 460.5 ± 129.6
3000
2000
1000
0
-1000
-2000
-3000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3


1D pull distribution
Mean 0.001183 ± 0.1336
Std Dev 0.9544 ± 0.0945
Underflow 0
Overflow 0
χ² / ndf 3.978 / 6
Constant 9.527 ± 1.782
Mean 0.06312 ± 0.17555
Sigma 1.086 ± 0.154
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

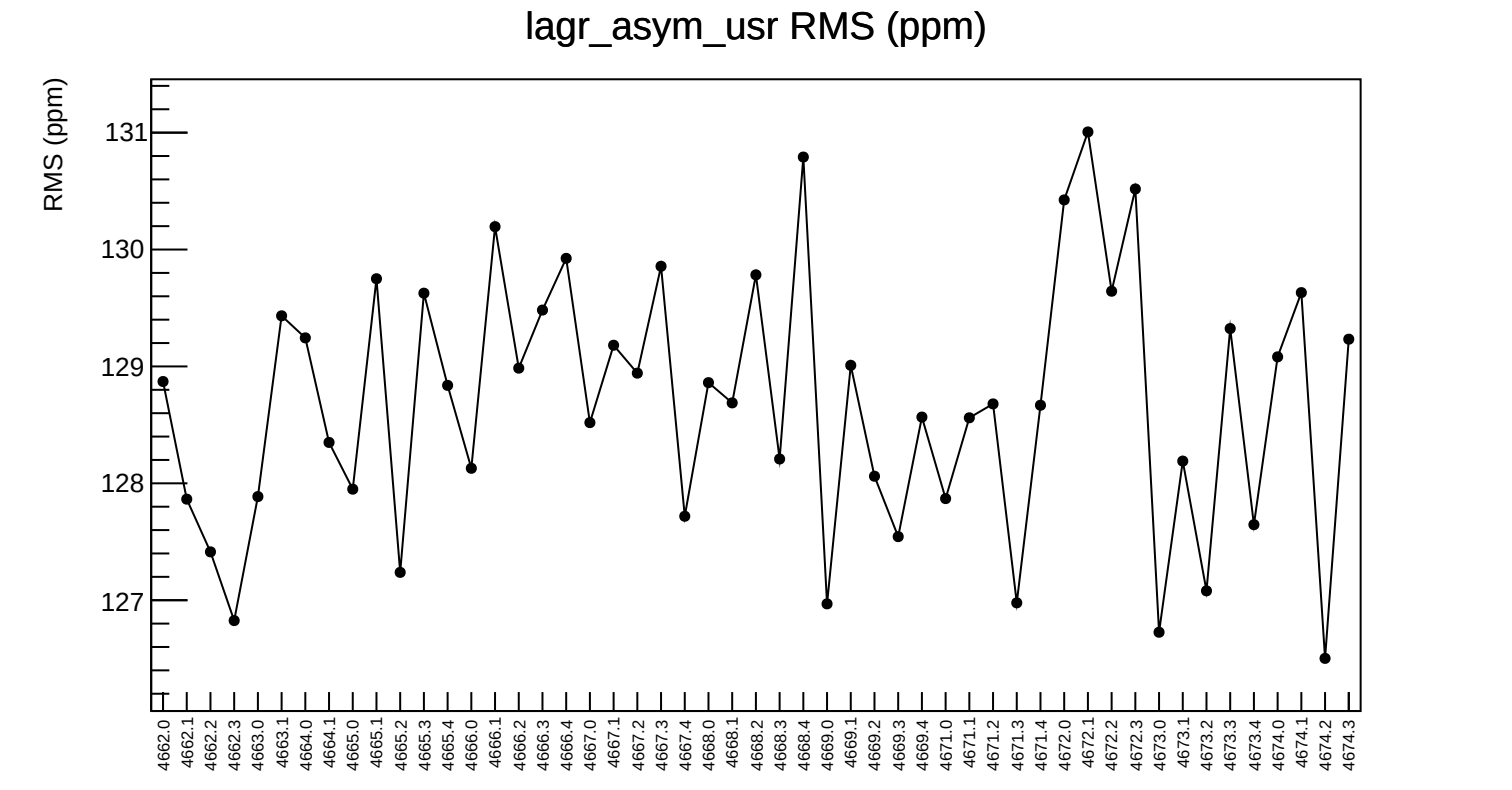

lagr_asym_us_avg RMS (ppm)
RMS (ppm)
95.5
95
94.5
94
93.5
93
92.5
92
91.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

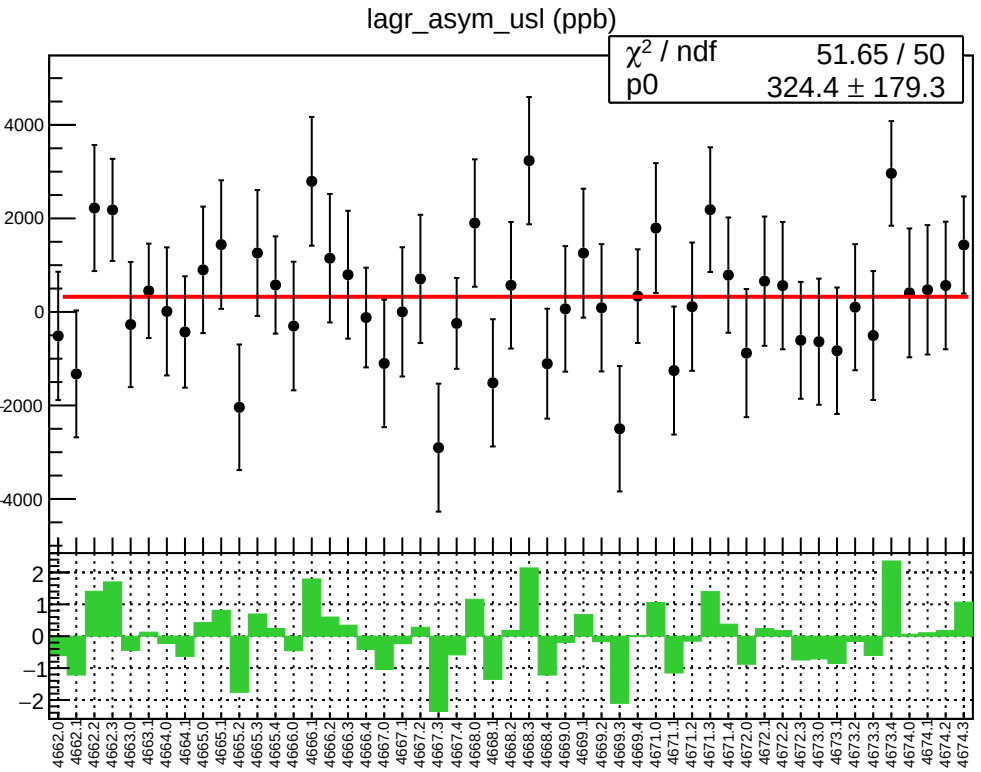

lagr_asym_us_dd (ppb)
χ² / ndf 37.23 / 50
p0 −136.2 ± 125.5
1D pull distribution
Mean −0.02011 ± 0.1196
Std Dev 0.8542 ± 0.08458
Underflow 0
Overflow 0
χ² / ndf 5.245 / 6
Constant 11.5 ± 2.4
Mean −0.1187 ± 0.1394
Sigma 0.854 ± 0.127

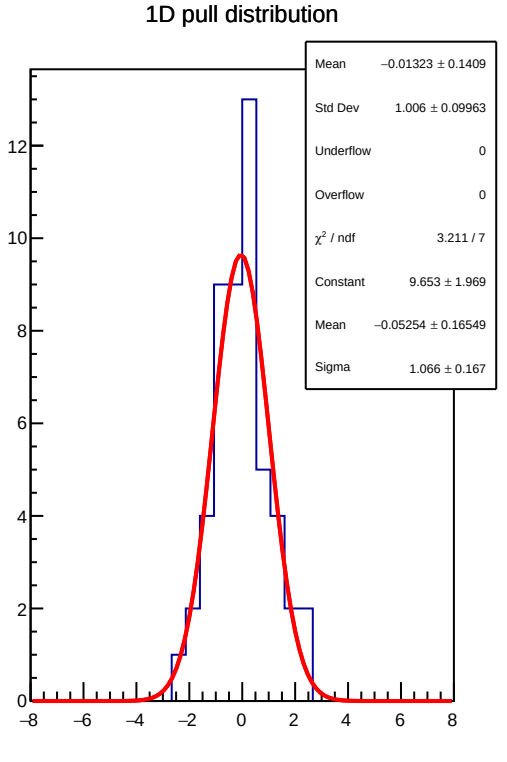

lagr_asym_us_dd RMS (ppm)
RMS (ppm)
92
91.5
91
90.5
90
89.5
89
88.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

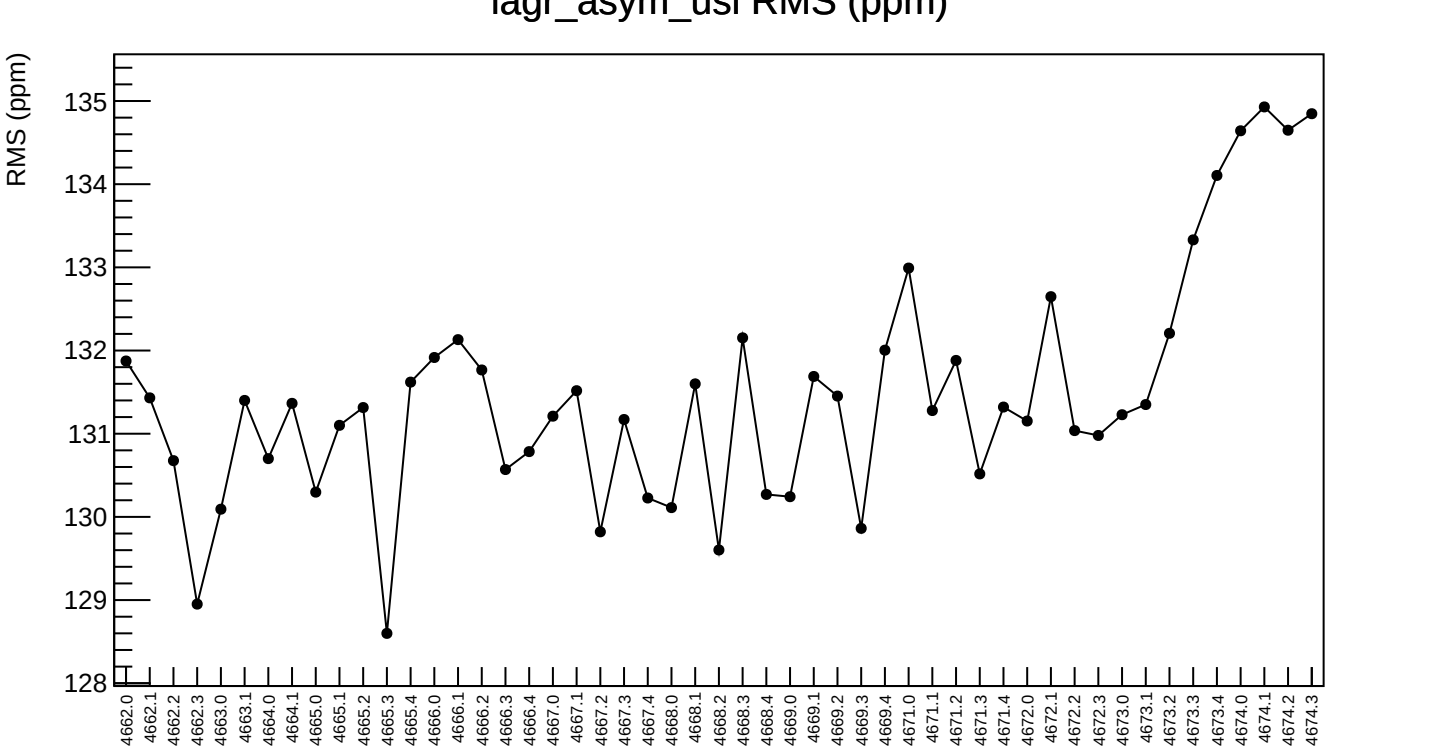

lagr_asym_usr (ppb)
χ² / ndf 33.14 / 50
p0 596.7 ± 180
4000
3000
2000
1000
0
-1000
-2000
-3000
1.5
1
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

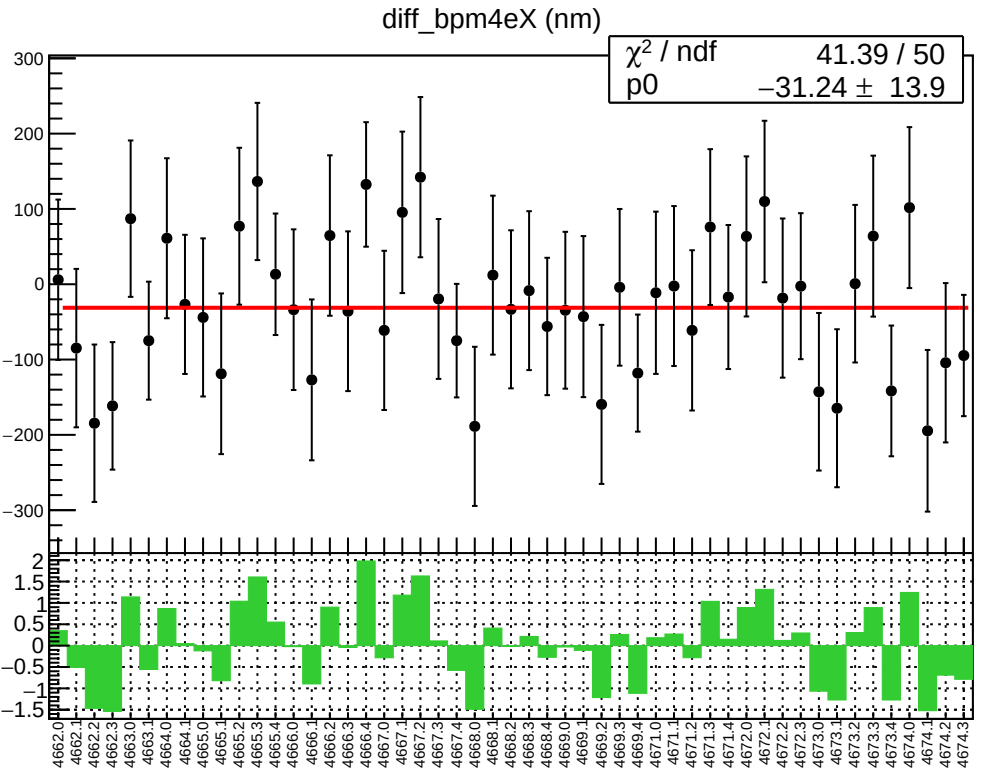
1D pull distribution
Mean 0.01487 ± 0.1129
Std Dev 0.806 ± 0.0798
Underflow 0
Overflow 0
χ² / ndf 5.364 / 5
Constant 11.66 ± 2.19
Mean −0.06179 ± 0.13231
Sigma 0.8415 ± 0.1052
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

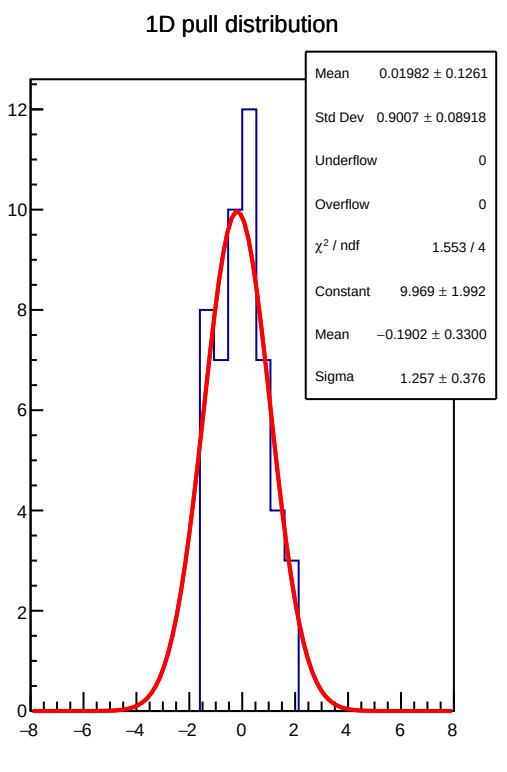

lagr_asym_usr RMS (ppm)
RMS (ppm)
131
130
129
128
127
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

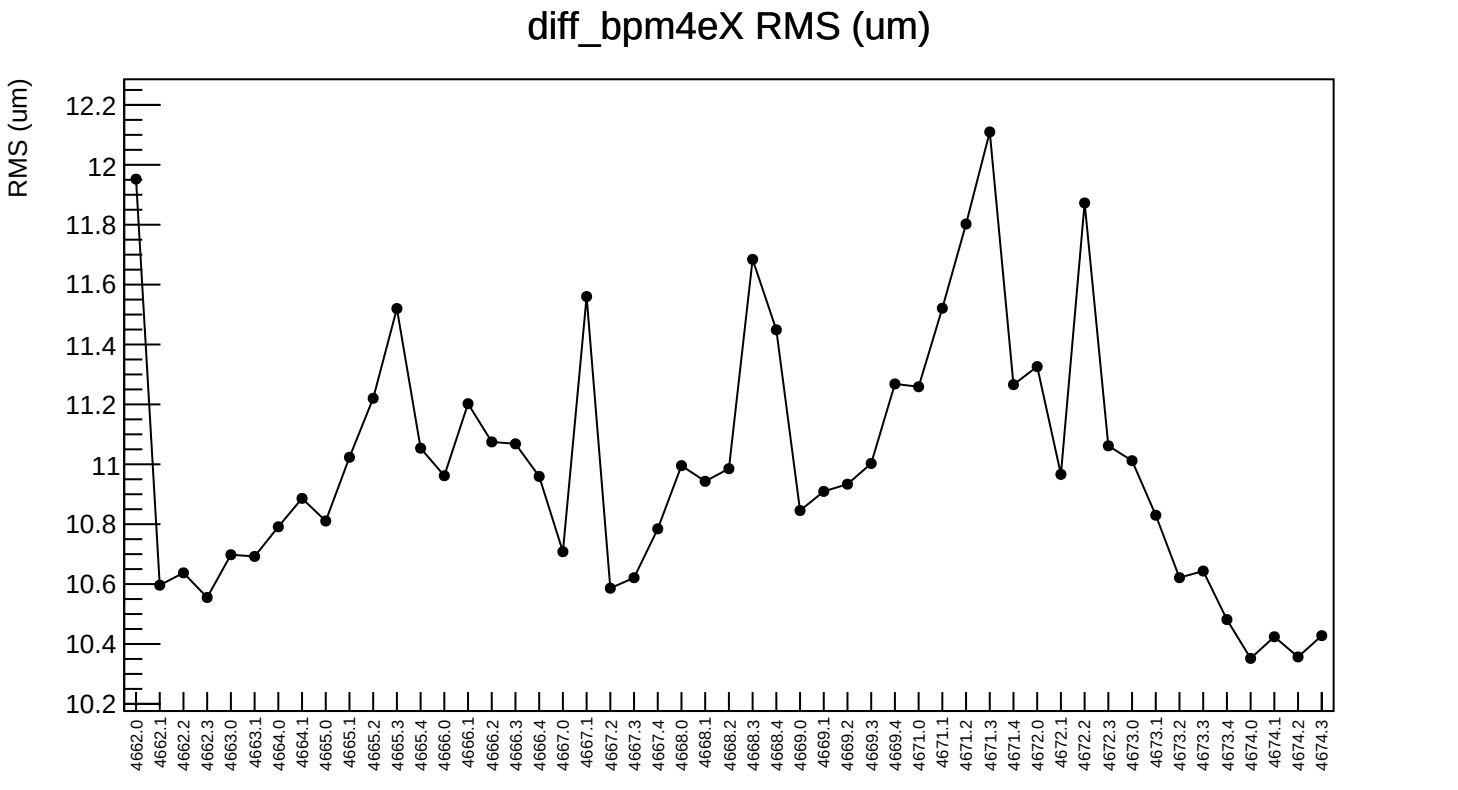

lagr_asym_usl (ppb)
χ² / ndf 51.65 / 50
p0 324.4 ± 179.3
4000
2000
0
-2000
-4000
2
1
0
−1
−2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

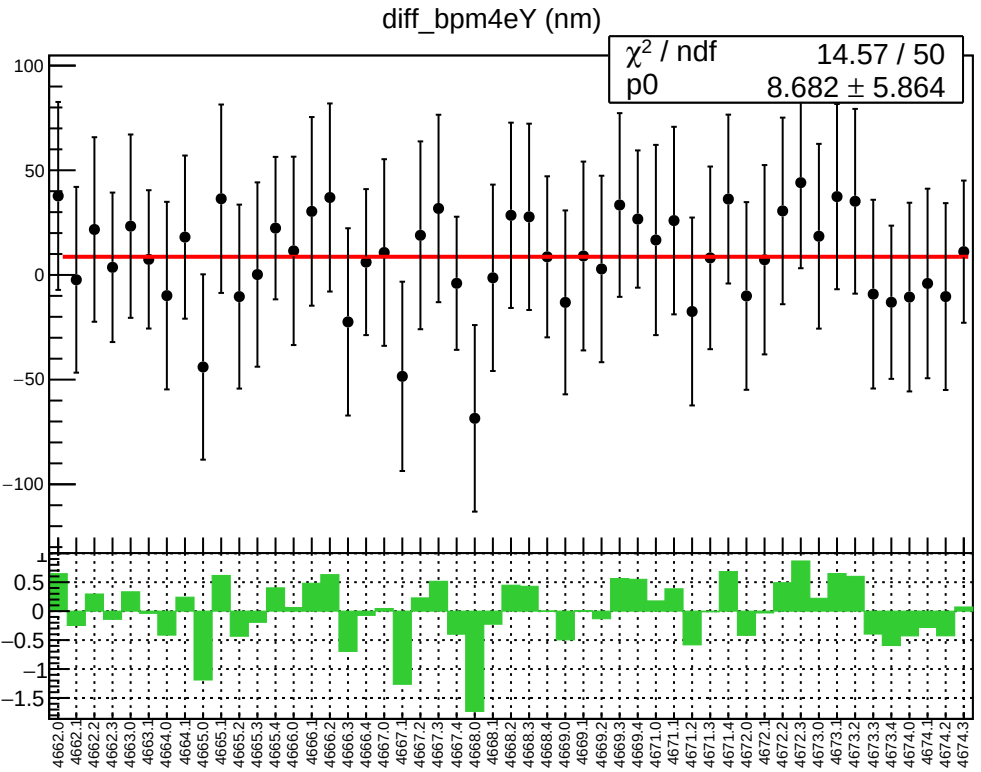

1D pull distribution
Mean −0.01323 ± 0.1409
Std Dev 1.006 ± 0.09963
Underflow 0
Overflow 0
χ² / ndf 3.211 / 7
Constant 9.653 ± 1.969
Mean −0.05254 ± 0.16549
Sigma 1.066 ± 0.167
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

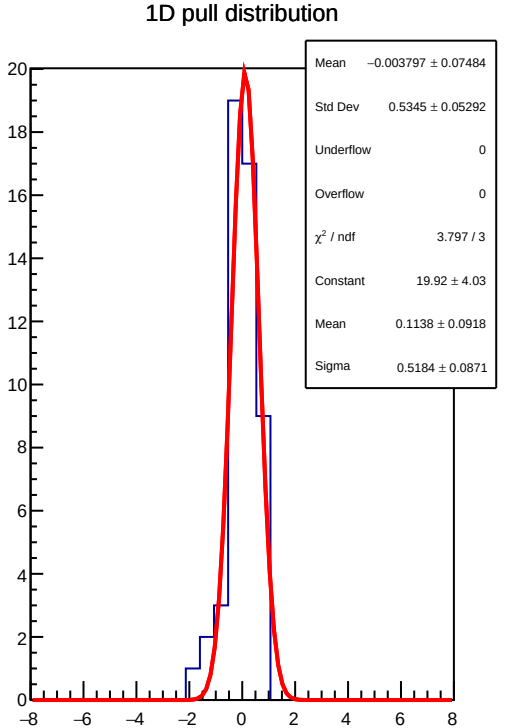

lagr_asym_usl RMS (ppm)
RMS (ppm)
135
134
133
132
131
130
129
128
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

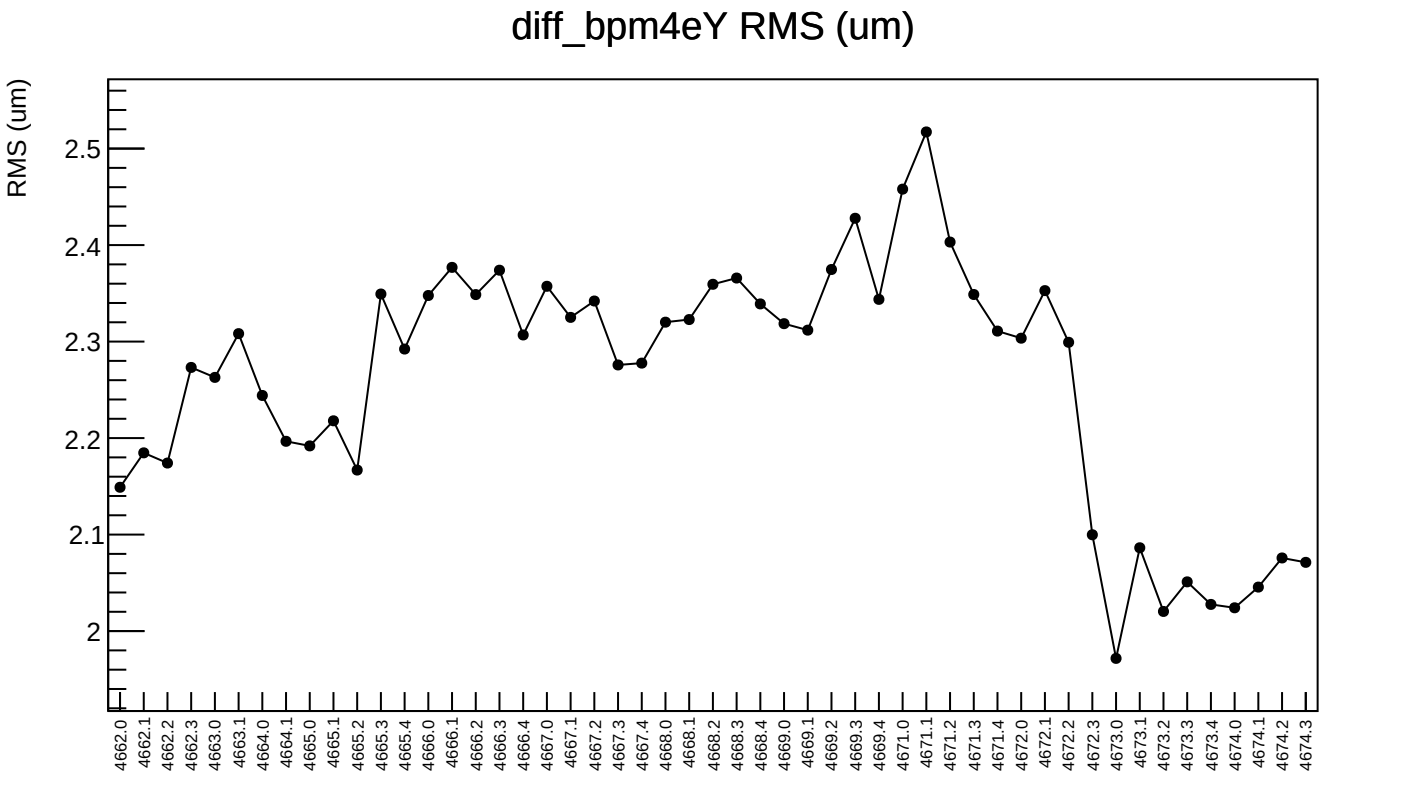

diff_bpm4eX (nm)
χ² / ndf 41.39 / 50
p0 −31.24 ± 13.9

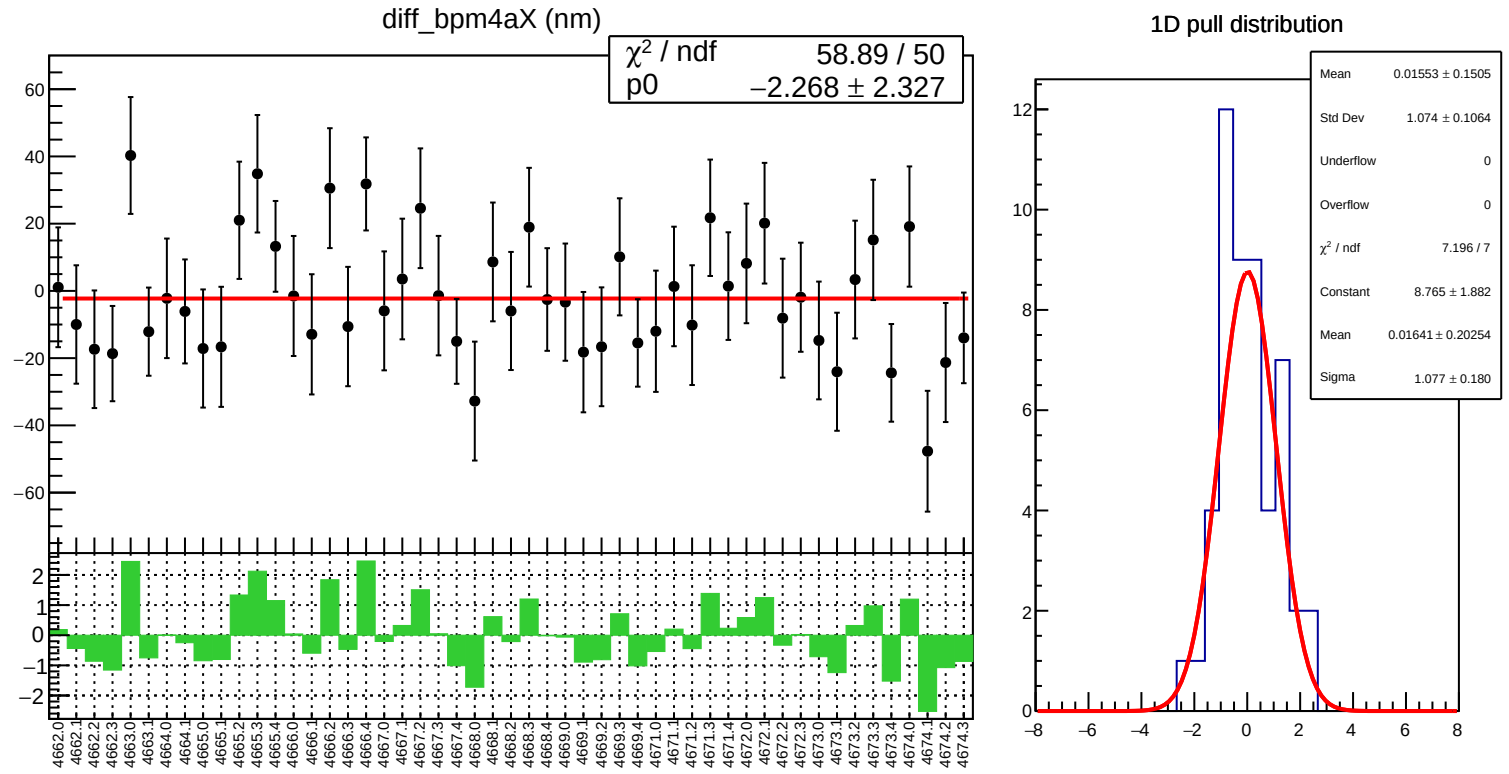

1D pull distribution
Mean 0.01982 ± 0.1261
Std Dev 0.9007 ± 0.08918
Underflow 0
Overflow 0
χ² / ndf 1.553 / 4
Constant 9.969 ± 1.992
Mean −0.1902 ± 0.3300
Sigma 1.257 ± 0.376

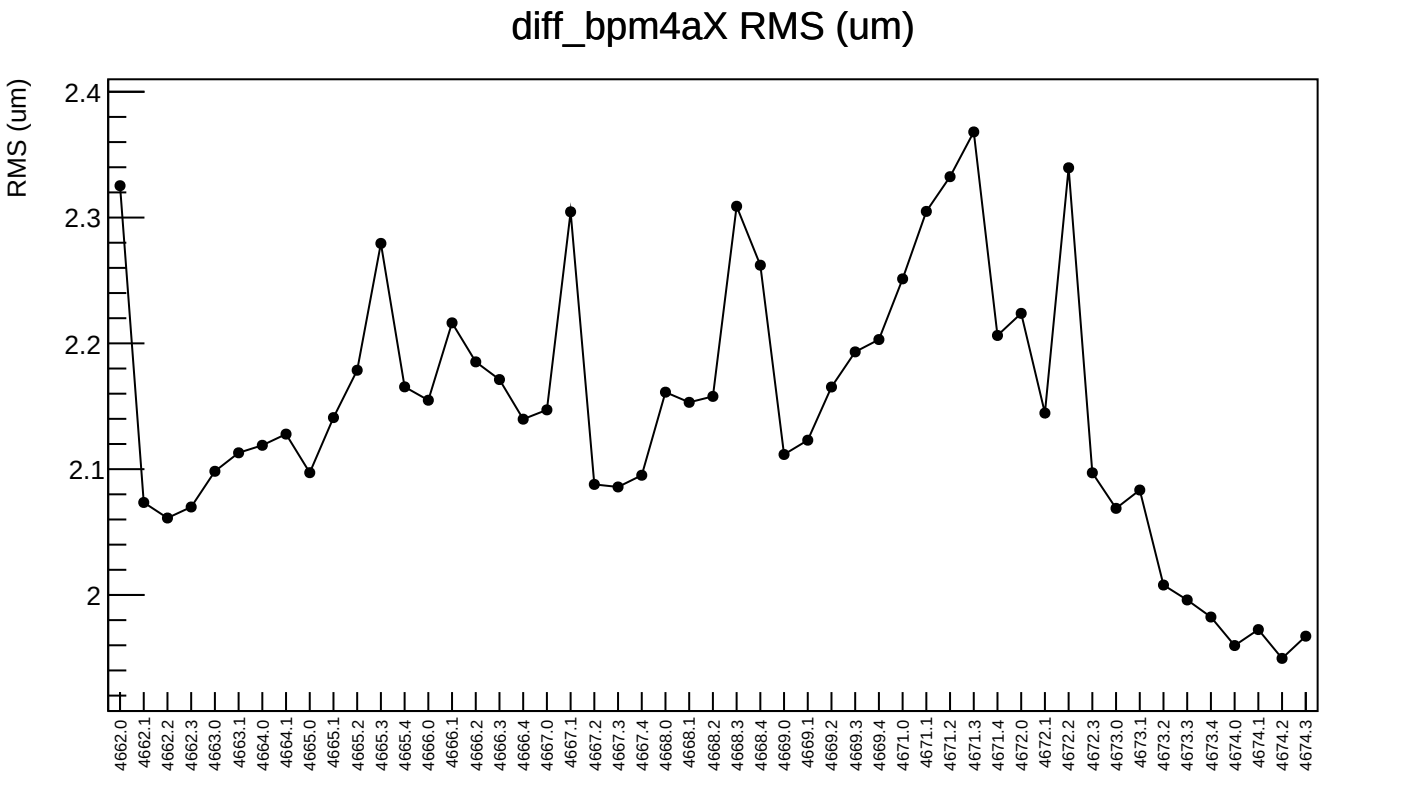

diff_bpm4eX RMS (um)
RMS (um)
12.2
12
11.8
11.6
11.4
11.2
11
10.8
10.6
10.4
10.2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

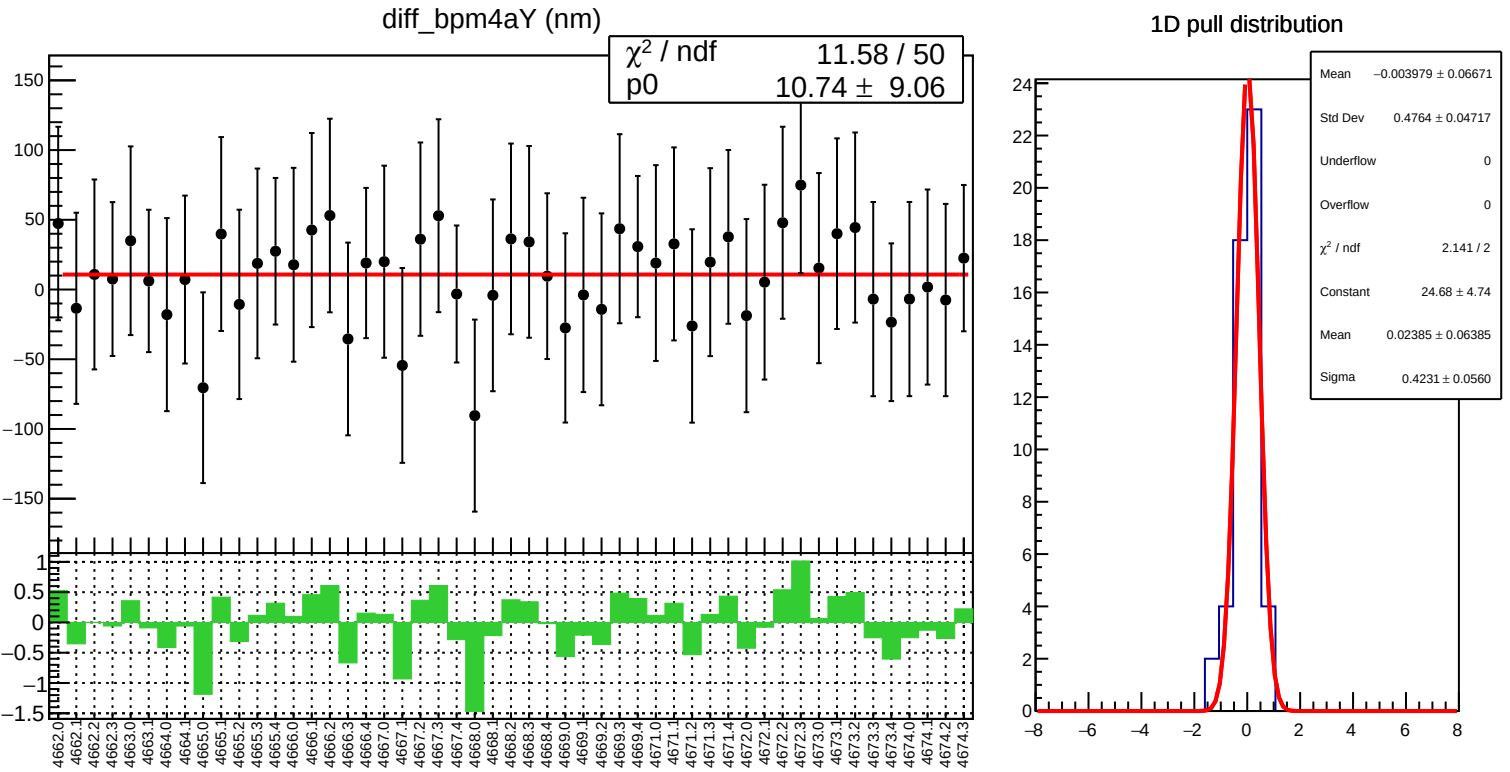

diff_bpm4eY (nm)
χ² / ndf 14.57 / 50
p0 8.682 ± 5.864
100
50
0
−50
−100
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

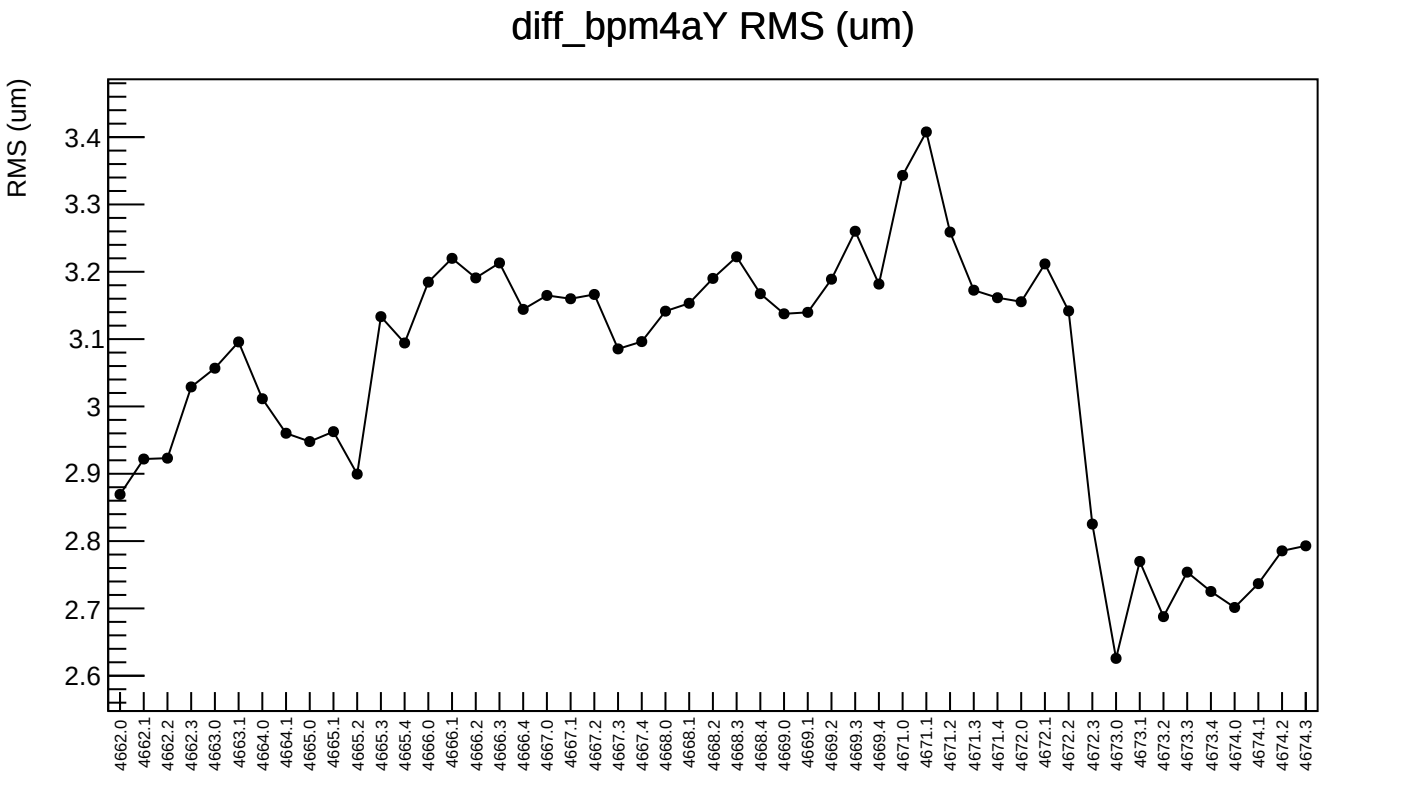

1D pull distribution
Mean −0.003797 ± 0.07484
Std Dev 0.5345 ± 0.05292
Underflow 0
Overflow 0
χ² / ndf 3.797 / 3
Constant 19.92 ± 4.03
Mean 0.1138 ± 0.0918
Sigma 0.5184 ± 0.0871
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

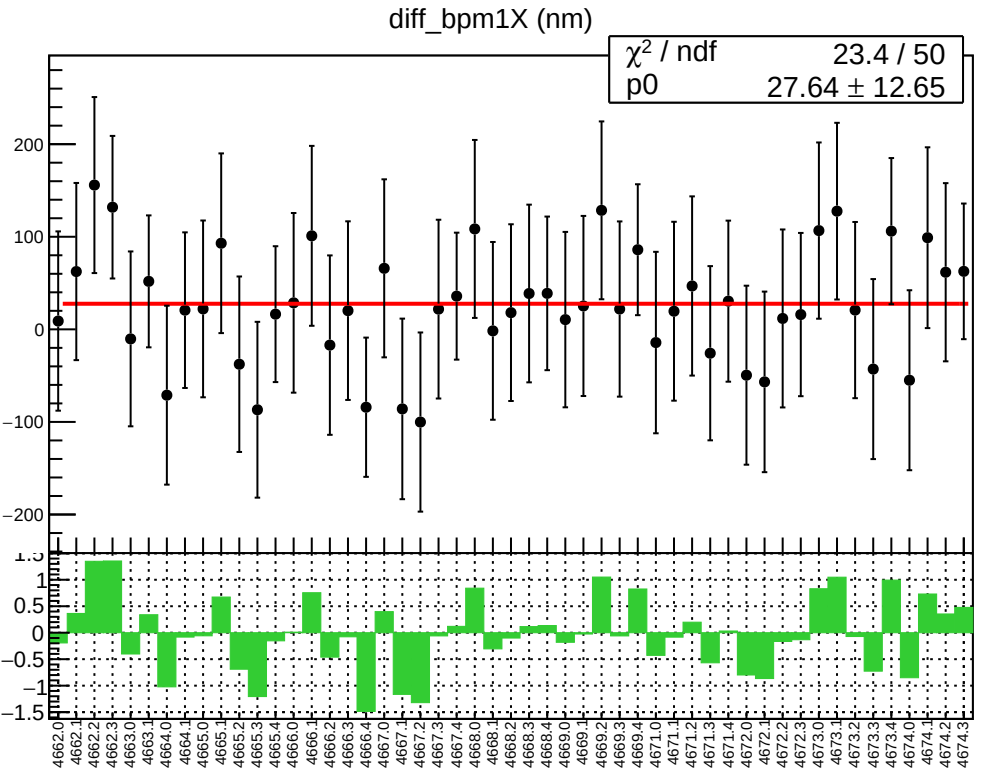

diff_bpm4eY RMS (um)
RMS (um)
2.5
2.4
2.3
2.2
2.1
2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

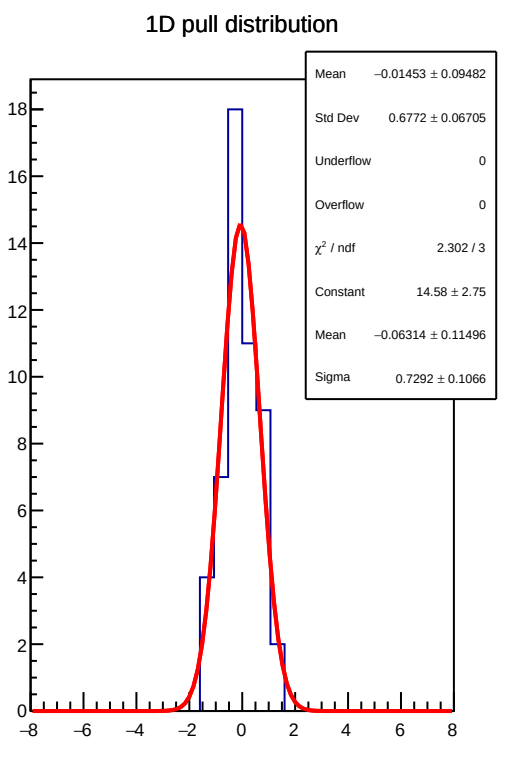

diff_bpm4aX (nm)
χ² / ndf 58.89 / 50
p0 −2.268 ± 2.327
1D pull distribution
Mean 0.01553 ± 0.1505
Std Dev 1.074 ± 0.1064
Underflow 0
Overflow 0
χ² / ndf 7.196 / 7
Constant 8.765 ± 1.882
Mean 0.01641 ± 0.20254
Sigma 1.077 ± 0.180

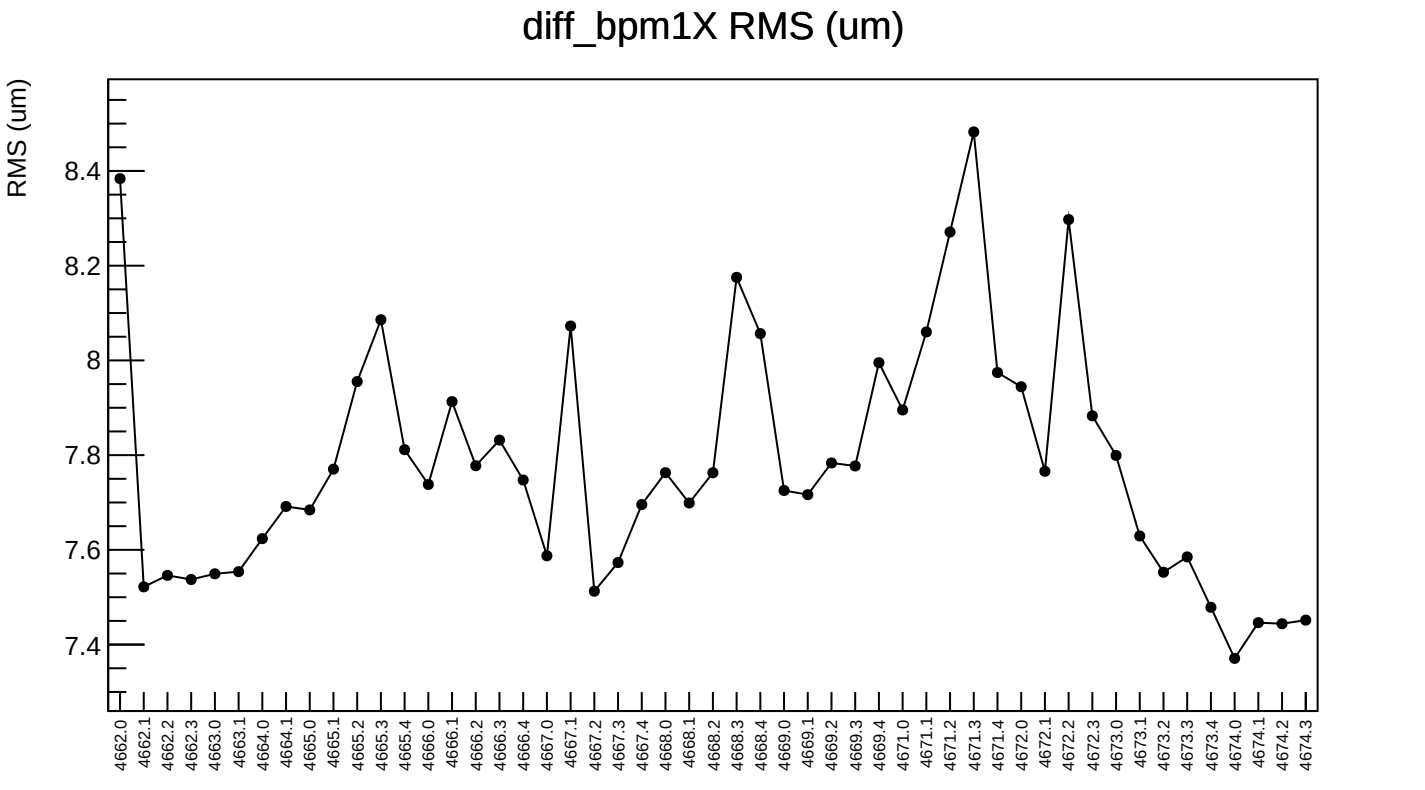

diff_bpm4aX RMS (um)
RMS (um)
2.4
2.3
2.2
2.1
2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

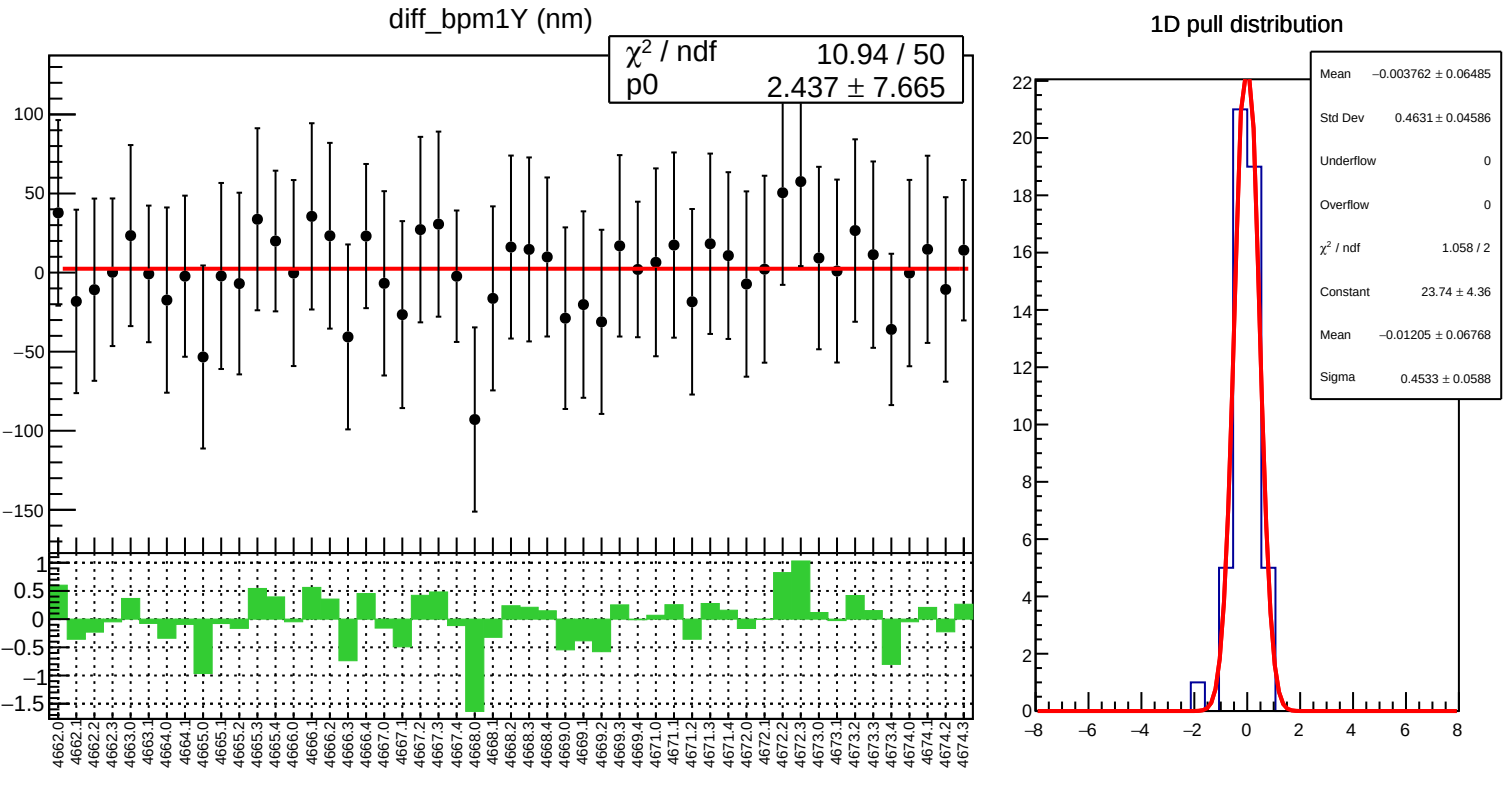

diff_bpm4aY (nm)
χ² / ndf 11.58 / 50
p0 10.74 ± 9.06
1D pull distribution
Mean −0.003979 ± 0.06671
Std Dev 0.4764 ± 0.04717
Underflow 0
Overflow 0
χ² / ndf 2.141 / 2
Constant 24.68 ± 4.74
Mean 0.02385 ± 0.06385
Sigma 0.4231 ± 0.0560

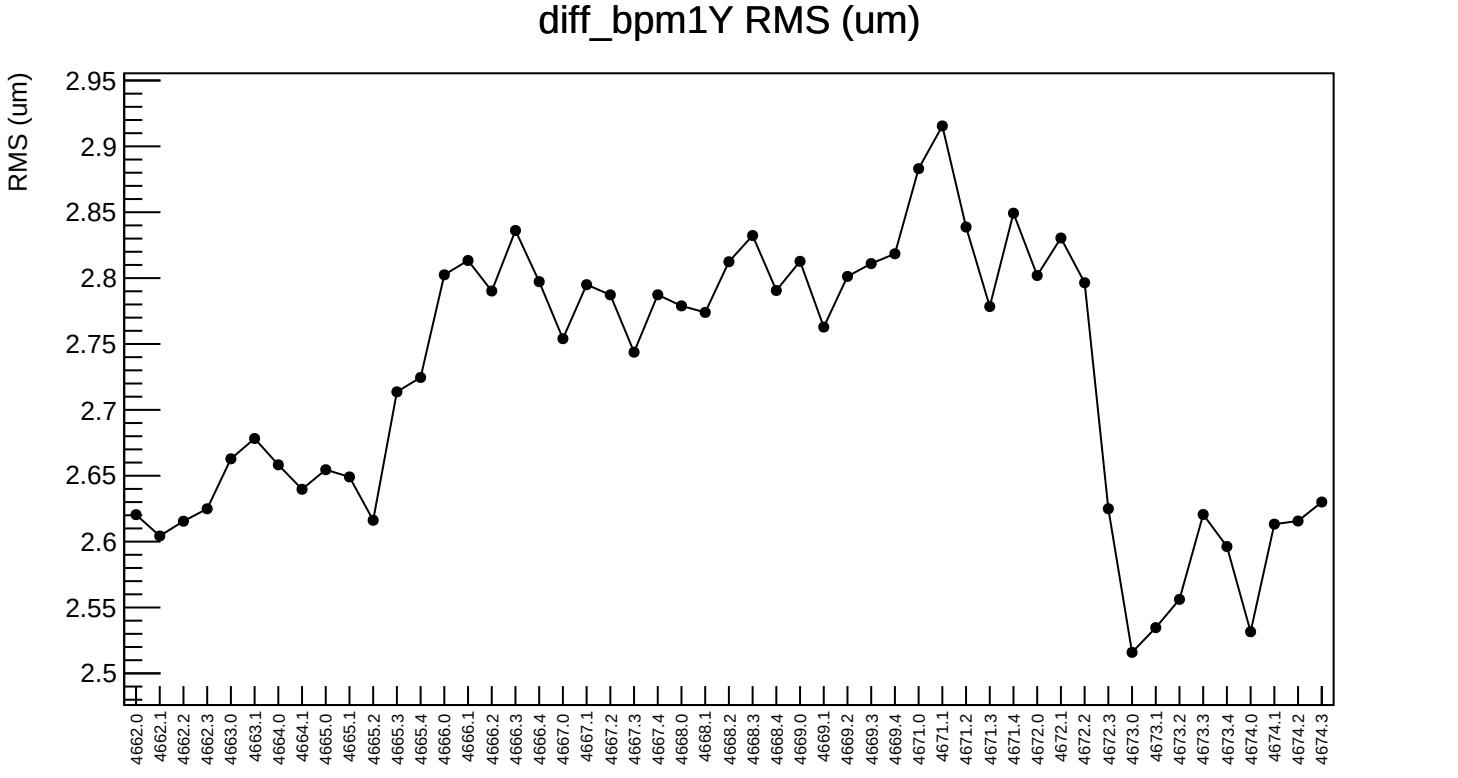

diff_bpm4aY RMS (um)
RMS (um)
3.4
3.3
3.2
3.1
3
2.9
2.8
2.7
2.6
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

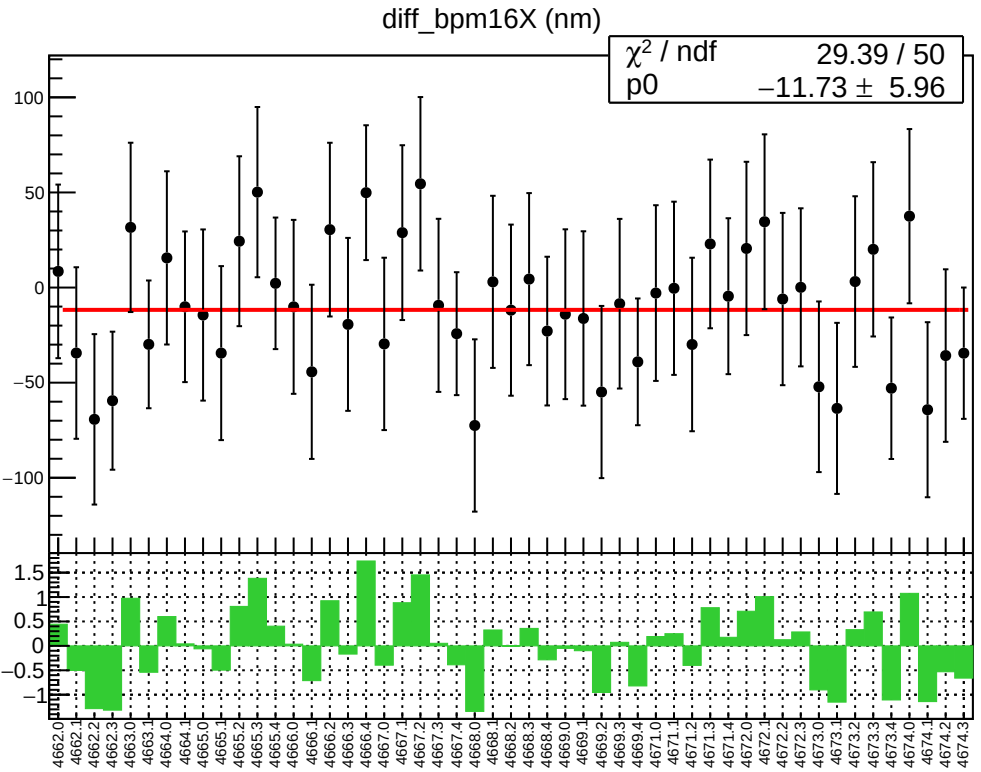

diff_bpm1X (nm)
χ² / ndf 23.4 / 50
p0 27.64 ± 12.65

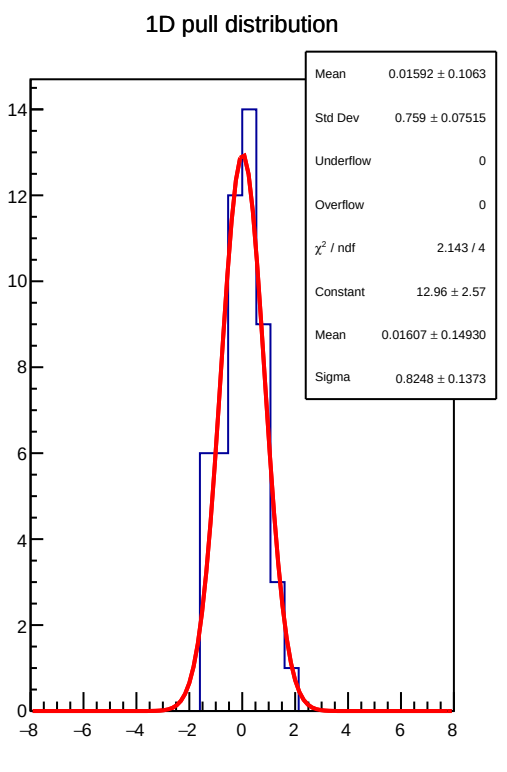

1D pull distribution
Mean −0.01453 ± 0.09482
Std Dev 0.6772 ± 0.06705
Underflow 0
Overflow 0
χ² / ndf 2.302 / 3
Constant 14.58 ± 2.75
Mean −0.06314 ± 0.11496
Sigma 0.7292 ± 0.1066

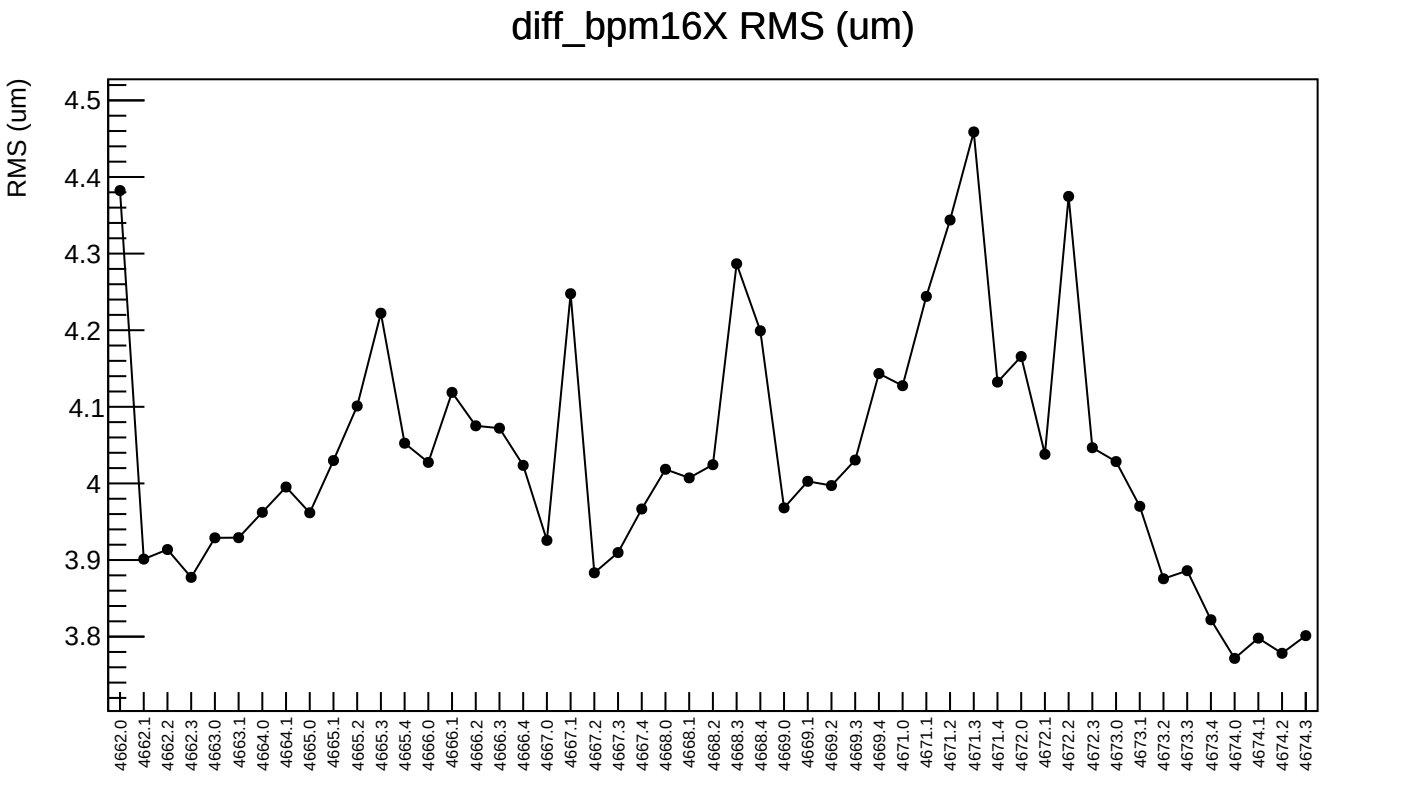

diff_bpm1X RMS (um)
RMS (um)
8.4
8.2
8
7.8
7.6
7.4
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

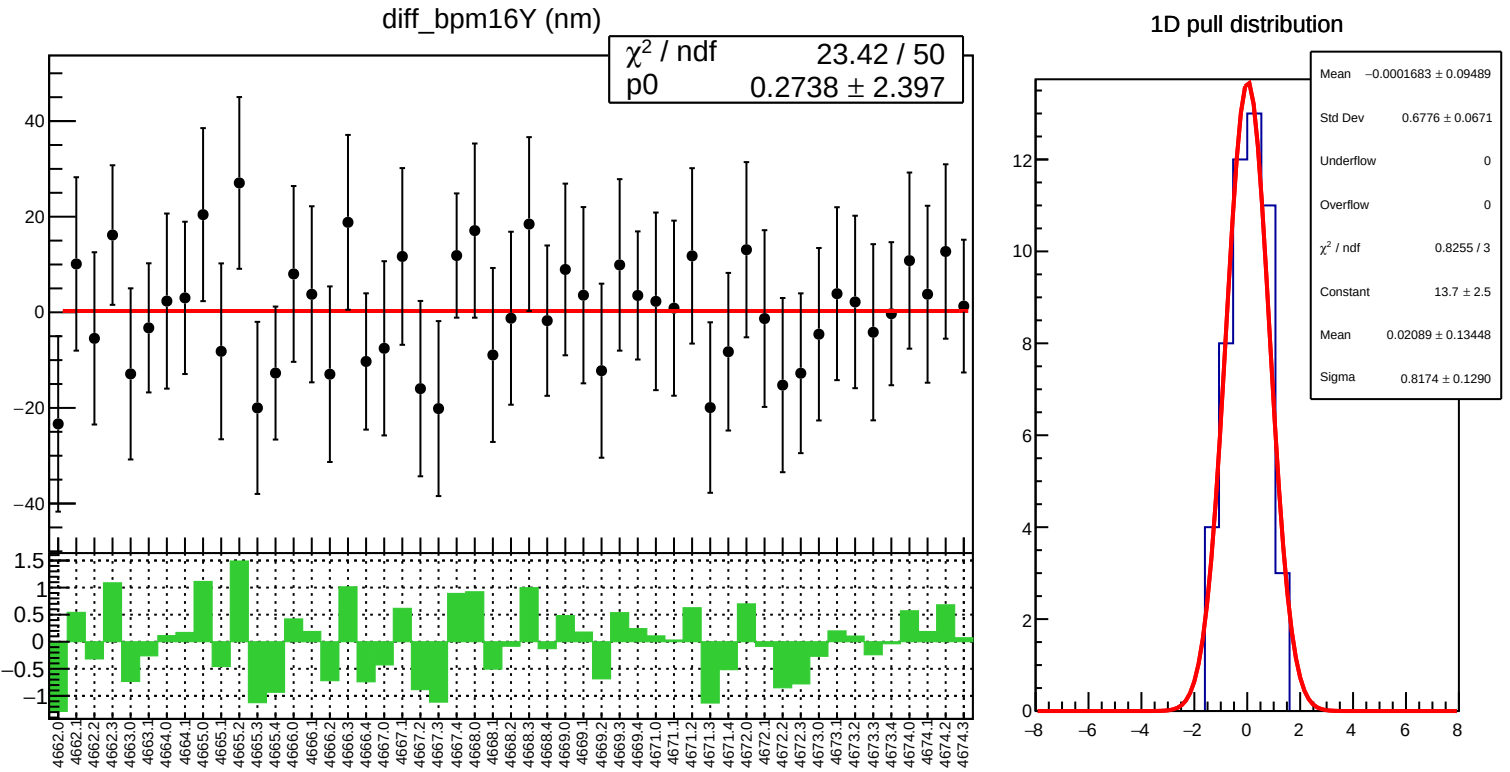

diff_bpm1Y (nm)
χ² / ndf 10.94 / 50
p0 2.437 ± 7.665
1D pull distribution
Mean −0.003762 ± 0.06485
Std Dev 0.4631 ± 0.04586
Underflow 0
Overflow 0
χ² / ndf 1.058 / 2
Constant 23.74 ± 4.36
Mean −0.01205 ± 0.06768
Sigma 0.4533 ± 0.0588

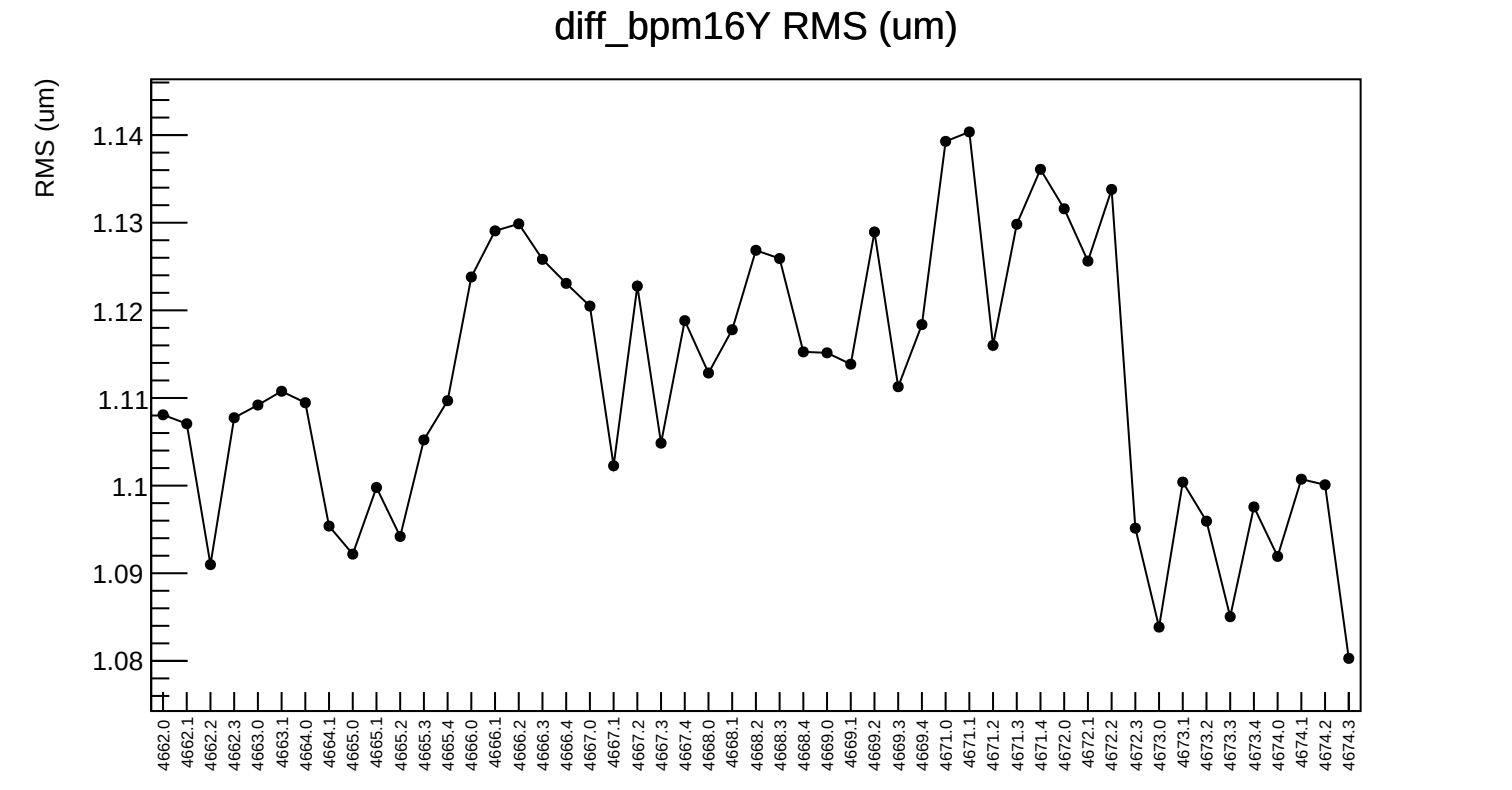

diff_bpm1Y RMS (um)
RMS (um)
2.95
2.9
2.85
2.8
2.75
2.7
2.65
2.6
2.55
2.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

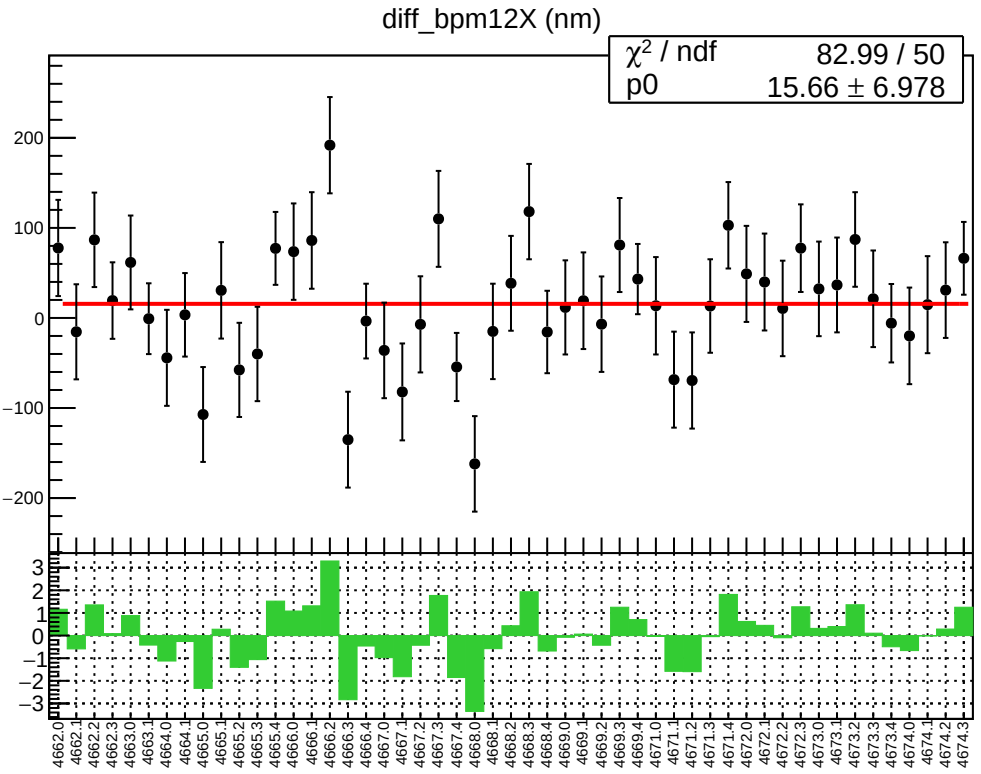

diff_bpm16X (nm)
χ² / ndf 29.39 / 50
p0 −11.73 ± 5.96
100
50
0
−50
−100
1.5
1
0.5
0
−0.5
−1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

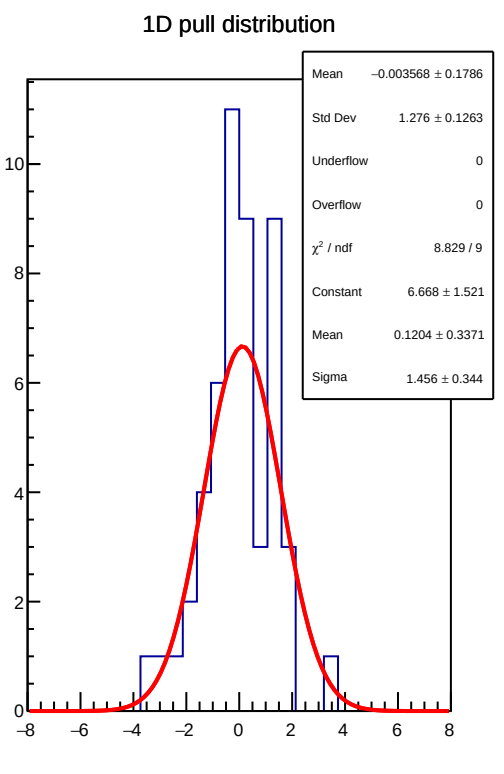

1D pull distribution
Mean 0.01592 ± 0.1063
Std Dev 0.759 ± 0.07515
Underflow 0
Overflow 0
χ² / ndf 2.143 / 4
Constant 12.96 ± 2.57
Mean 0.01607 ± 0.14930
Sigma 0.8248 ± 0.1373
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

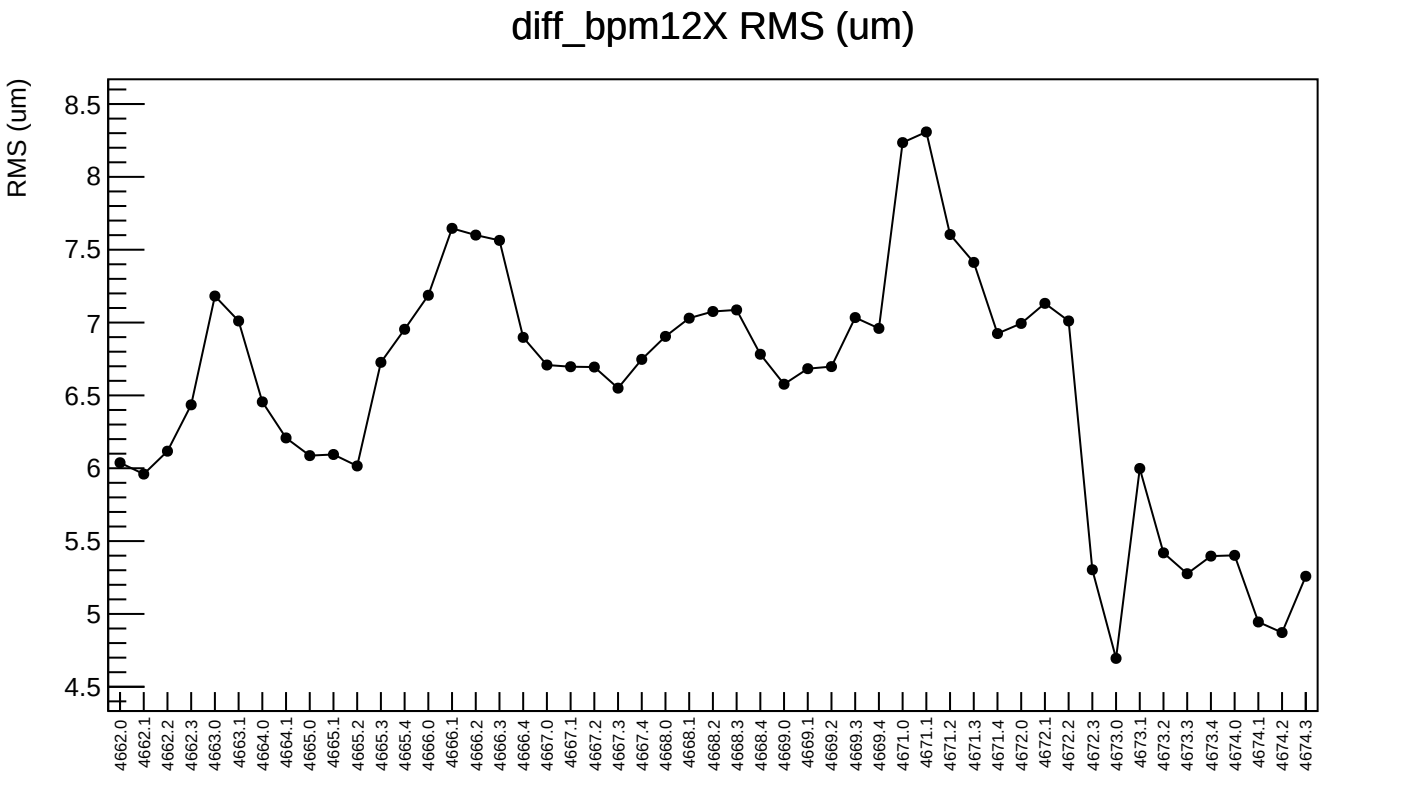

diff_bpm16X RMS (um)
RMS (um)
4.5
4.4
4.3
4.2
4.1
4
3.9
3.8
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

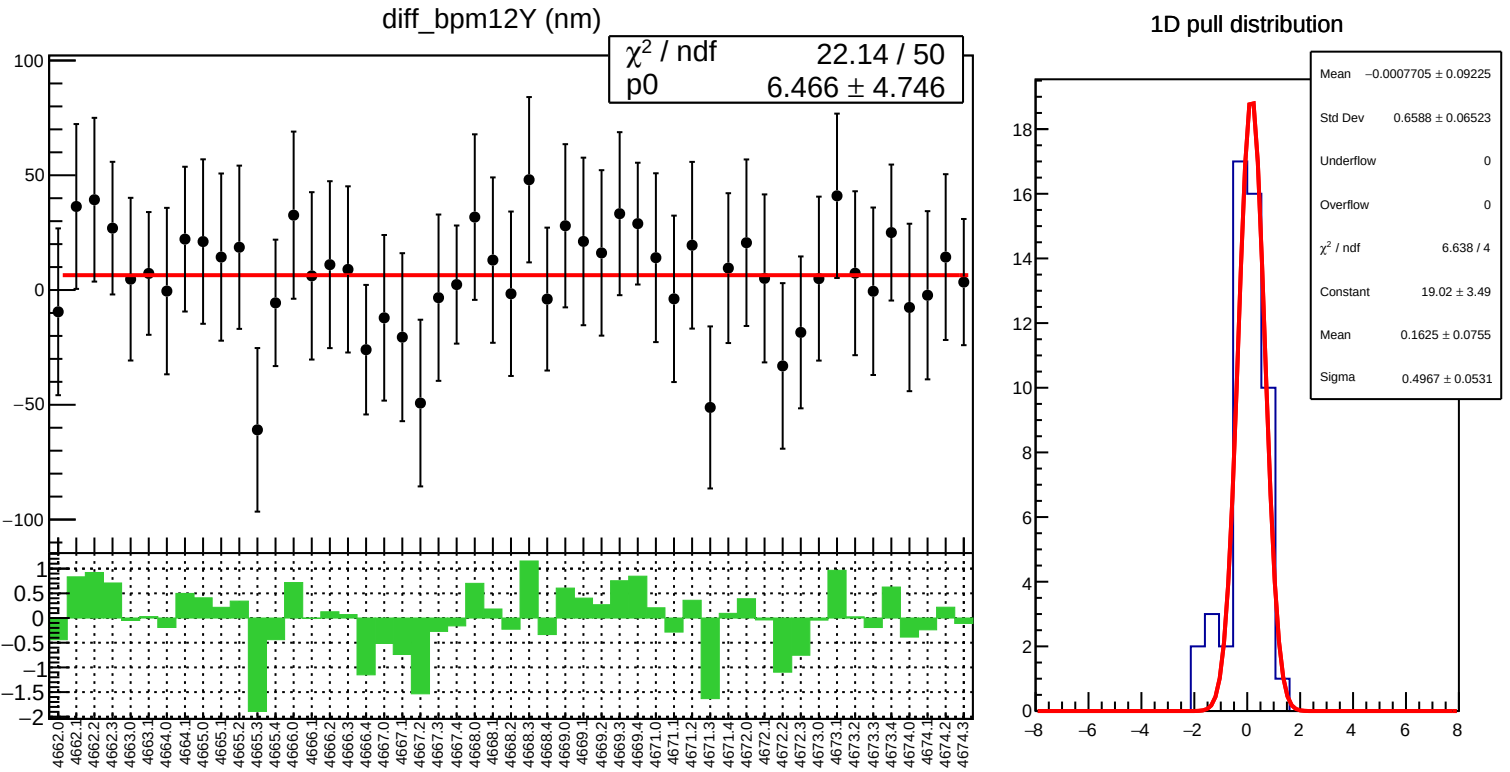

diff_bpm16Y (nm)
χ² / ndf 23.42 / 50
p0 0.2738 ± 2.397
1D pull distribution
Mean −0.0001683 ± 0.09489
Std Dev 0.6776 ± 0.0671
Underflow 0
Overflow 0
χ² / ndf 0.8255 / 3
Constant 13.7 ± 2.5
Mean 0.02089 ± 0.13448
Sigma 0.8174 ± 0.1290

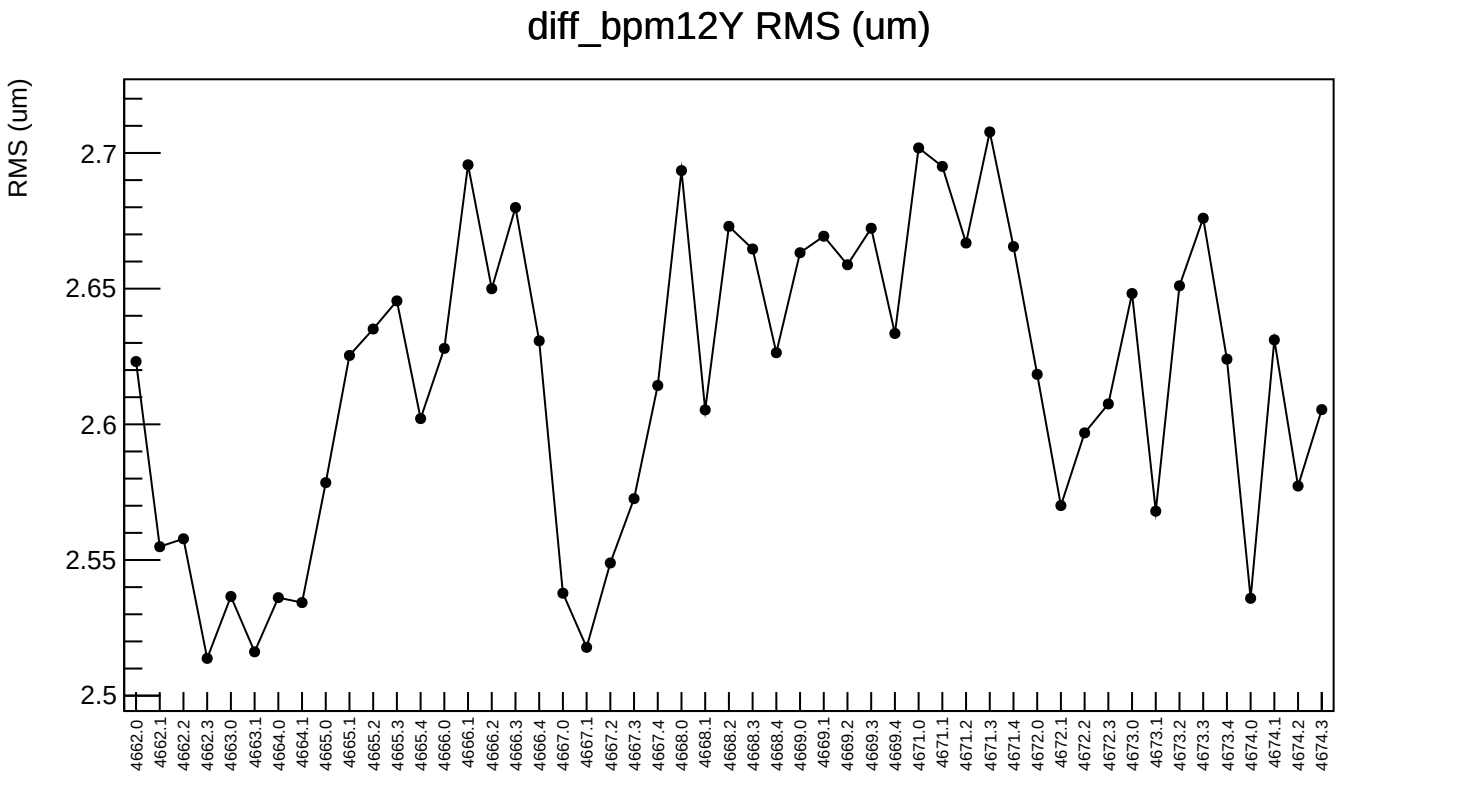

diff_bpm16Y RMS (um)
RMS (um)
1.14
1.13
1.12
1.11
1.1
1.09
1.08
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

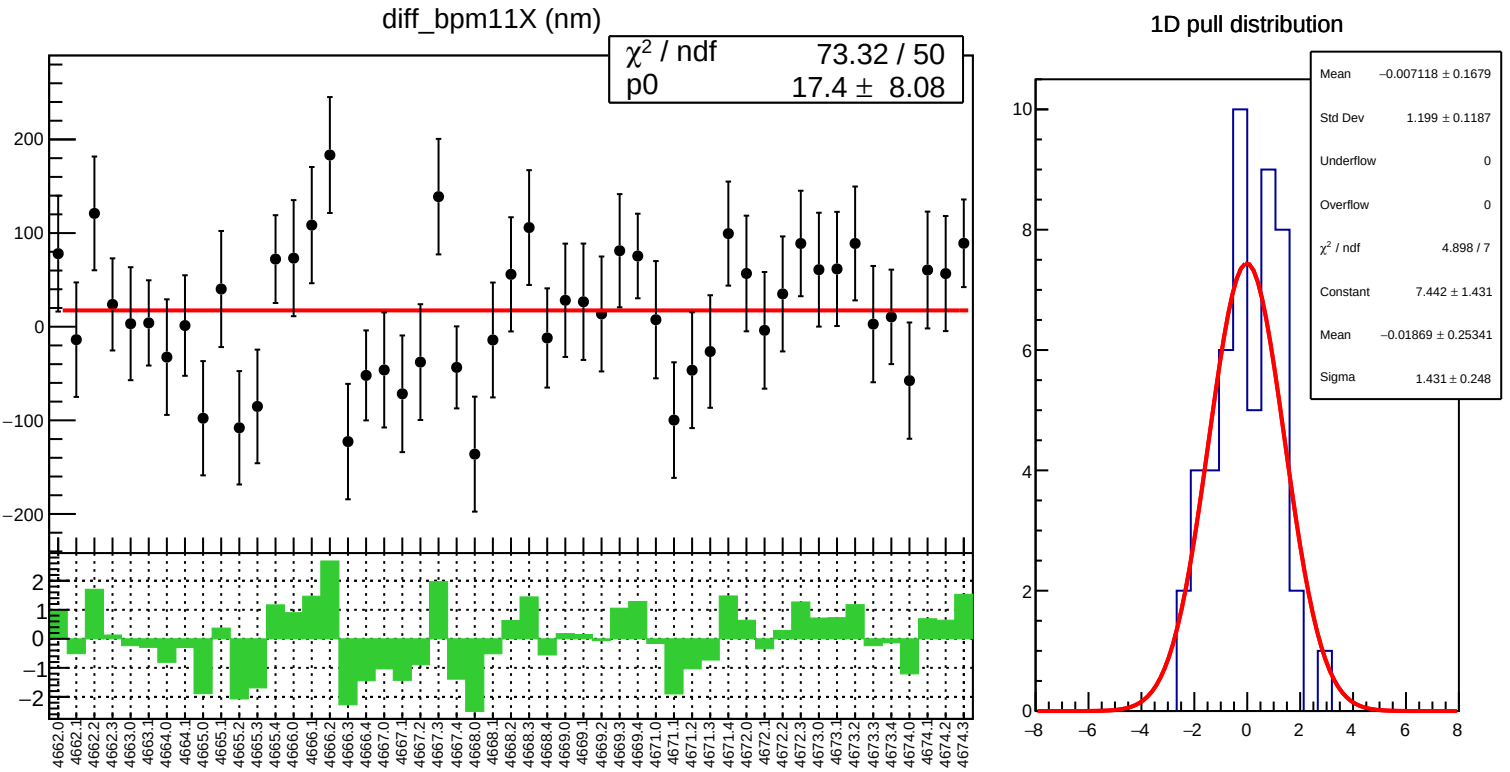

diff_bpm12X (nm)
χ² / ndf 82.99 / 50
p0 15.66 ± 6.978
200
100
0
−100
−200
3
2
1
0
−1
−2
−3
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

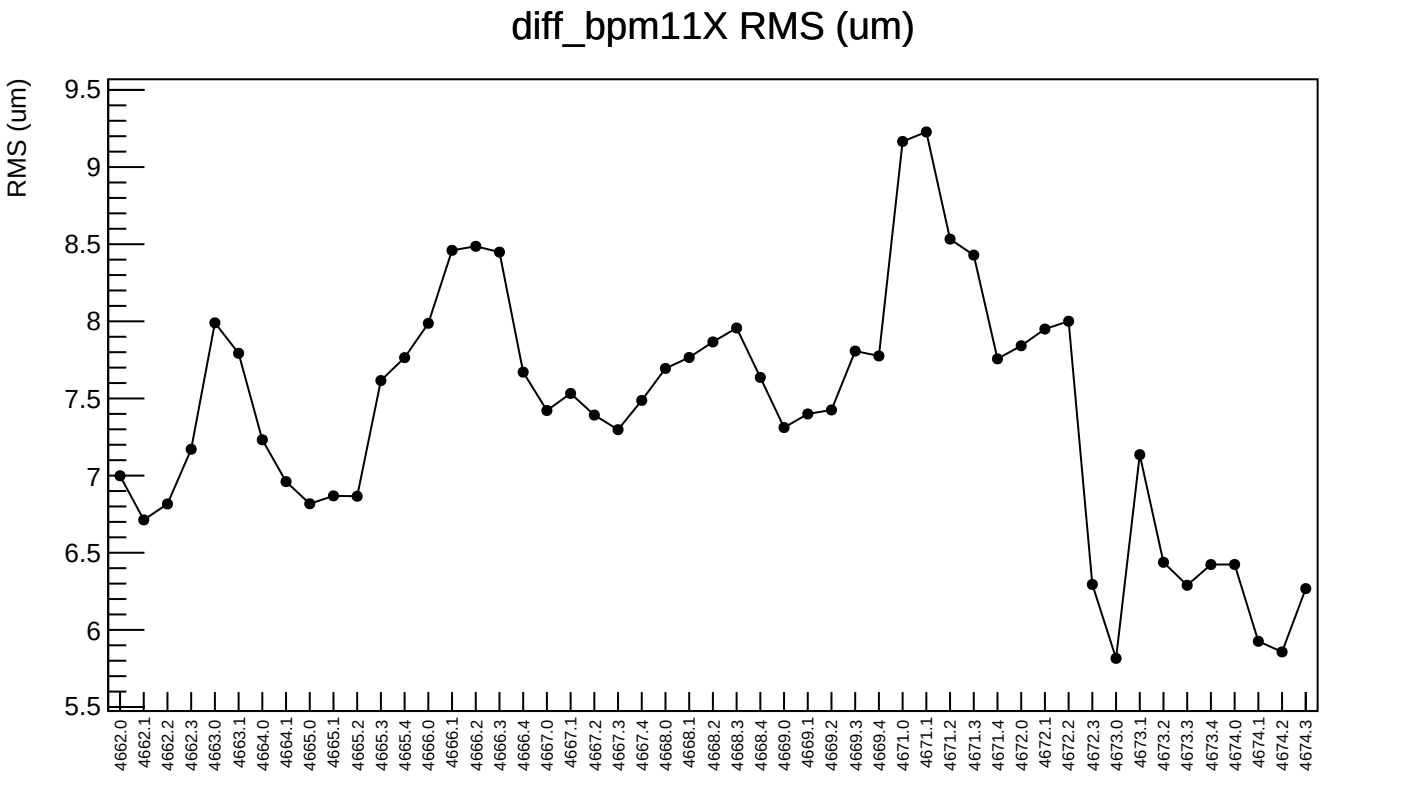

1D pull distribution
Mean −0.003568 ± 0.1786
Std Dev 1.276 ± 0.1263
Underflow 0
Overflow 0
χ² / ndf 8.829 / 9
Constant 6.668 ± 1.521
Mean 0.1204 ± 0.3371
Sigma 1.456 ± 0.344
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

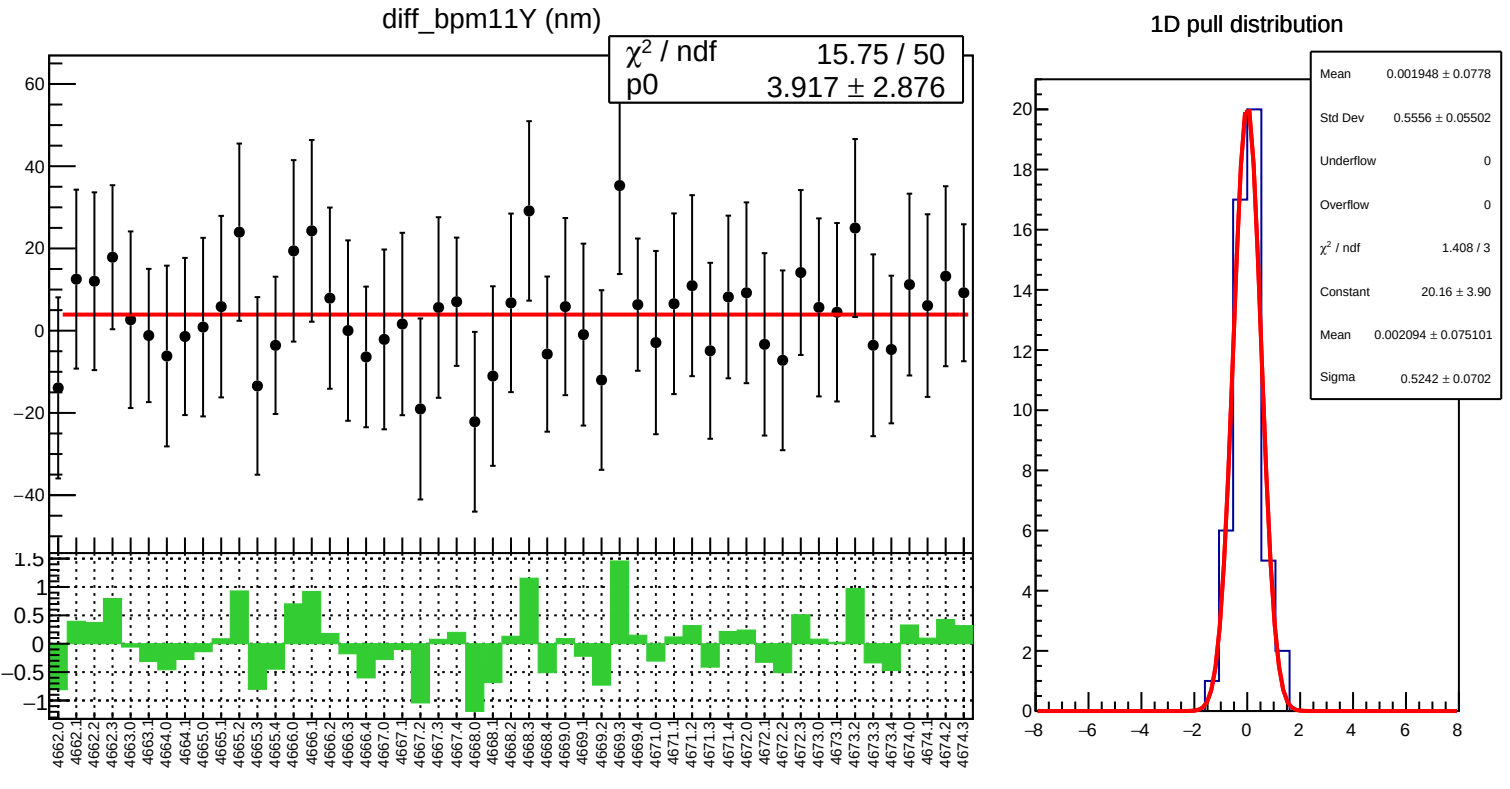

diff_bpm12X RMS (um)
RMS (um)
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

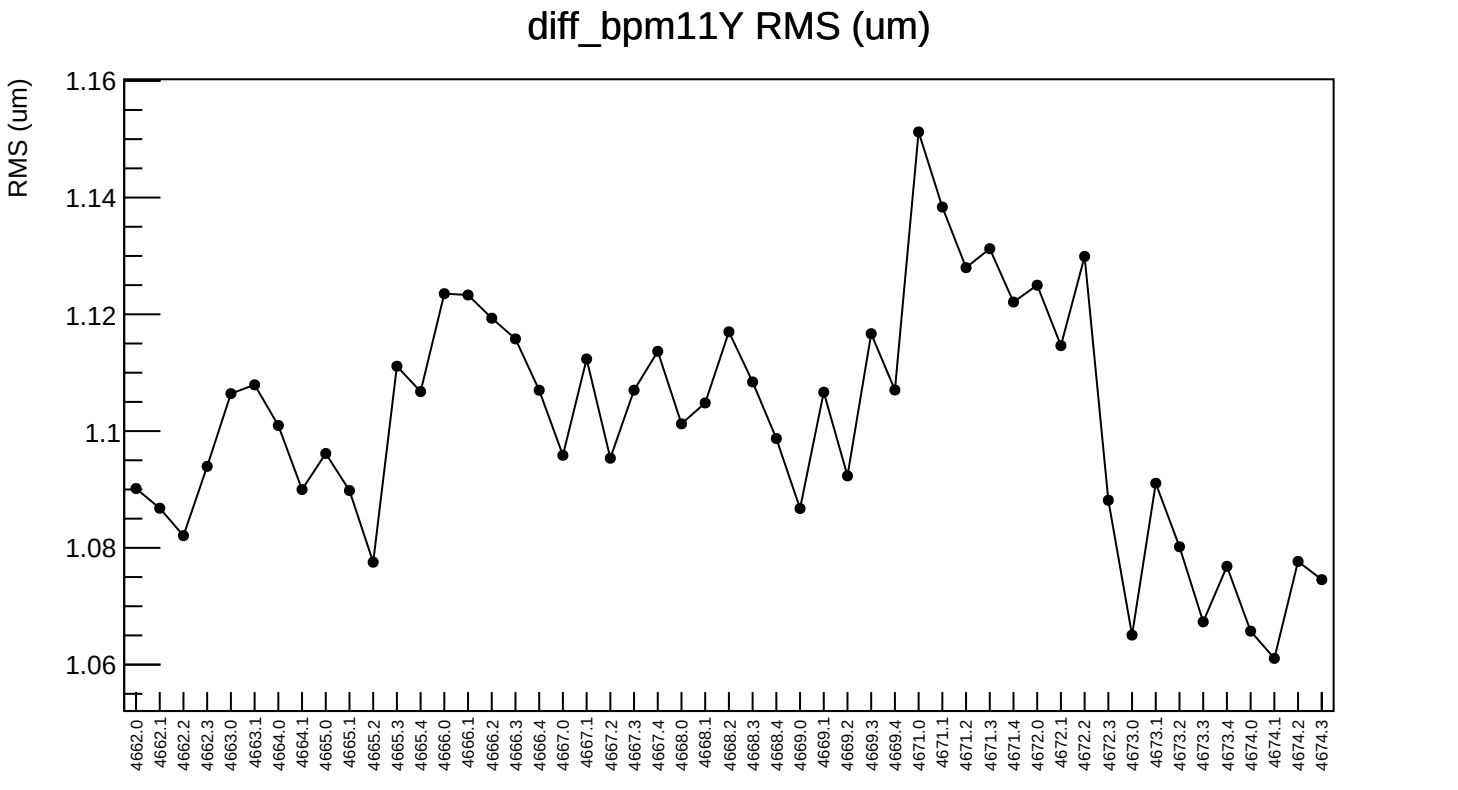

diff_bpm12Y (nm)
χ² / ndf 22.14 / 50
p0 6.466 ± 4.746
1D pull distribution
Mean −0.0007705 ± 0.09225
Std Dev 0.6588 ± 0.06523
Underflow 0
Overflow 0
χ² / ndf 6.638 / 4
Constant 19.02 ± 3.49
Mean 0.1625 ± 0.0755
Sigma 0.4967 ± 0.0531

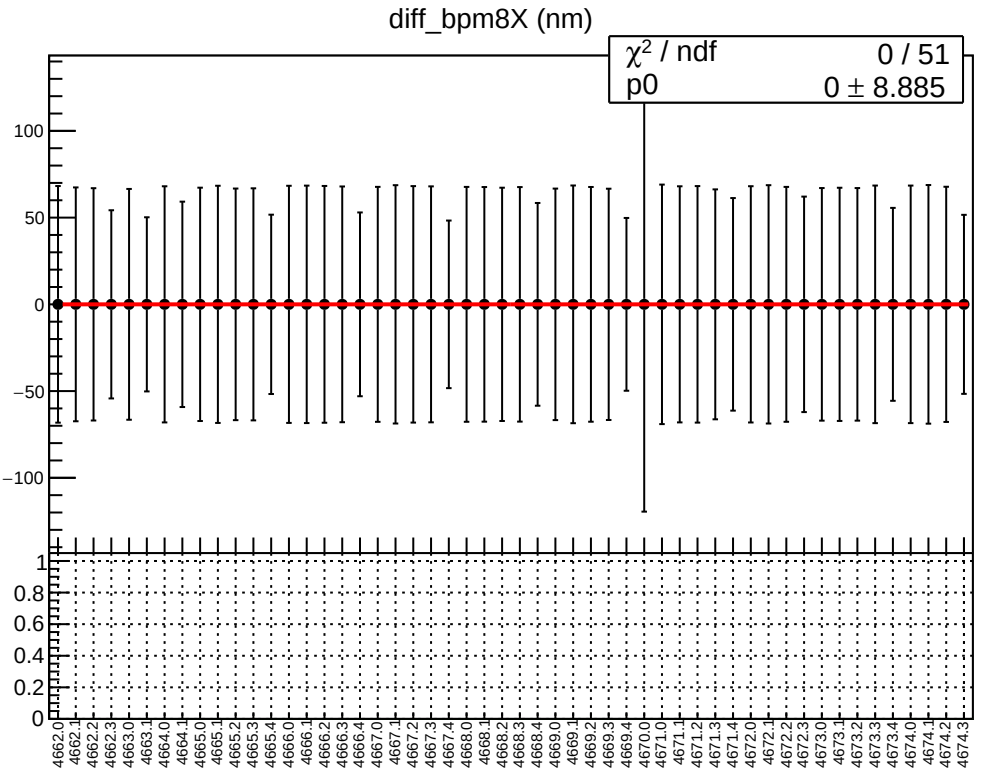

diff_bpm12Y RMS (um)
RMS (um)
2.7
2.65
2.6
2.55
2.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

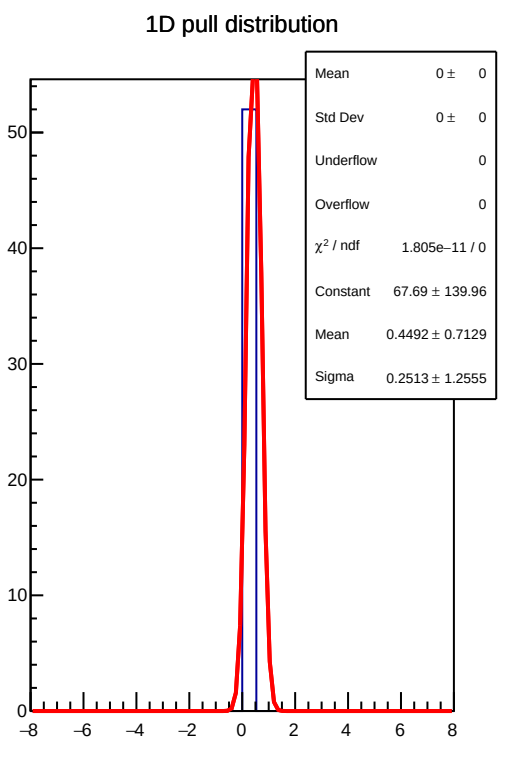

diff_bpm11X (nm)
χ² / ndf 73.32 / 50
p0 17.4 ± 8.08
200
100
0
−100
−200
2
1
0
−1
−2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3
1D pull distribution
Mean −0.007118 ± 0.1679
Std Dev 1.199 ± 0.1187
Underflow 0
Overflow 0
χ² / ndf 4.898 / 7
Constant 7.442 ± 1.431
Mean −0.01869 ± 0.25341
Sigma 1.431 ± 0.248
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

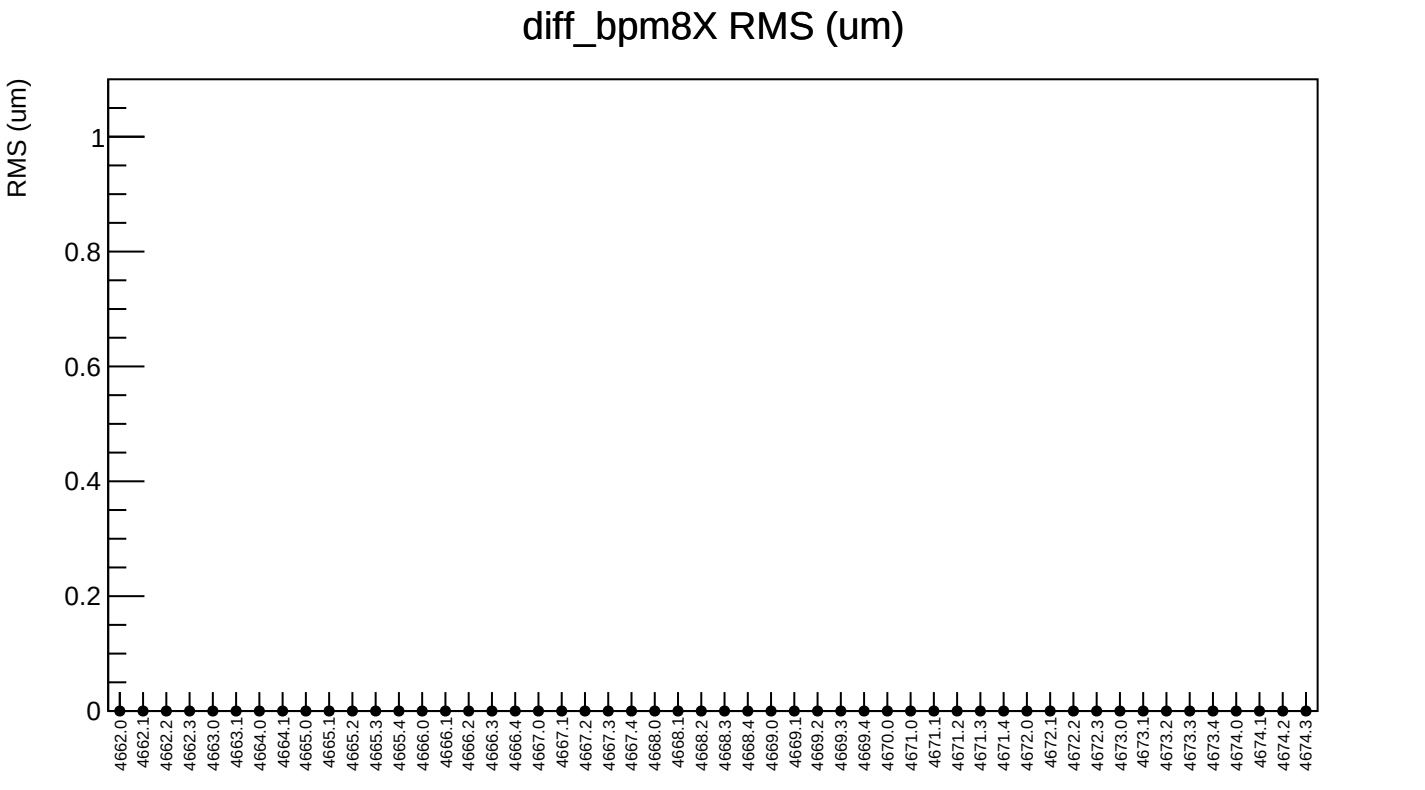

diff_bpm11X RMS (um)
RMS (um)
9.5
9
8.5
8
7.5
7
6.5
6
5.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

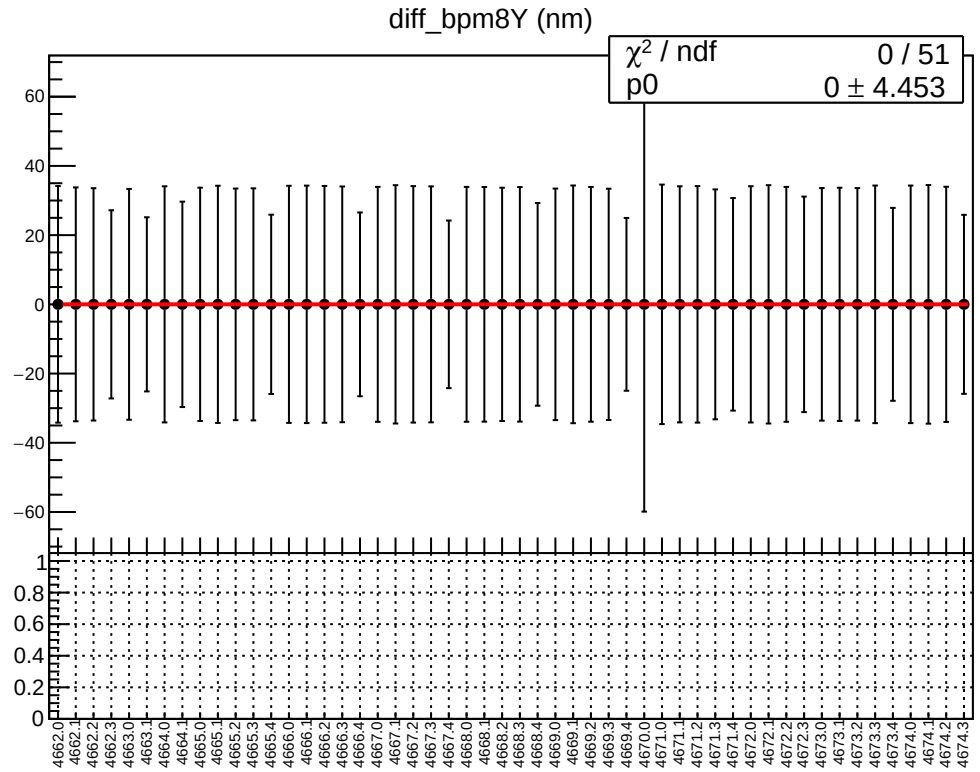

diff_bpm11Y (nm)
χ² / ndf 15.75 / 50
p0 3.917 ± 2.876
1D pull distribution
Mean 0.001948 ± 0.0778
Std Dev 0.5556 ± 0.05502
Underflow 0
Overflow 0
χ² / ndf 1.408 / 3
Constant 20.16 ± 3.90
Mean 0.002094 ± 0.075101
Sigma 0.5242 ± 0.0702

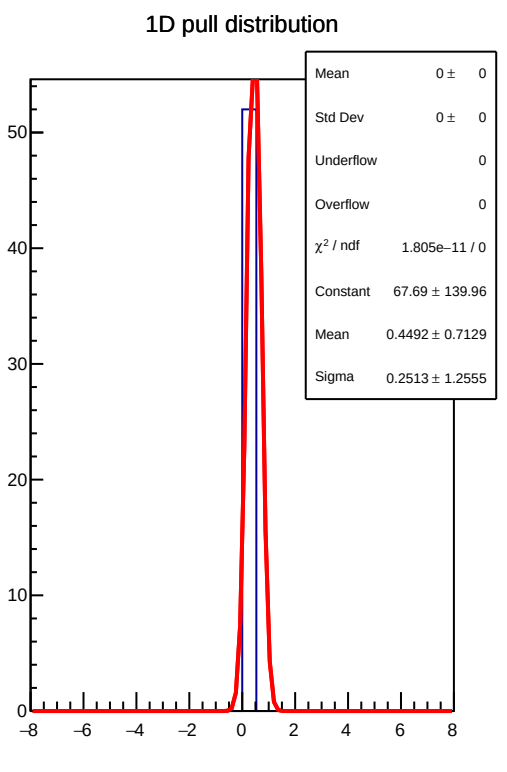

diff_bpm11Y RMS (um)
RMS (um)
1.16
1.14
1.12
1.1
1.08
1.06
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

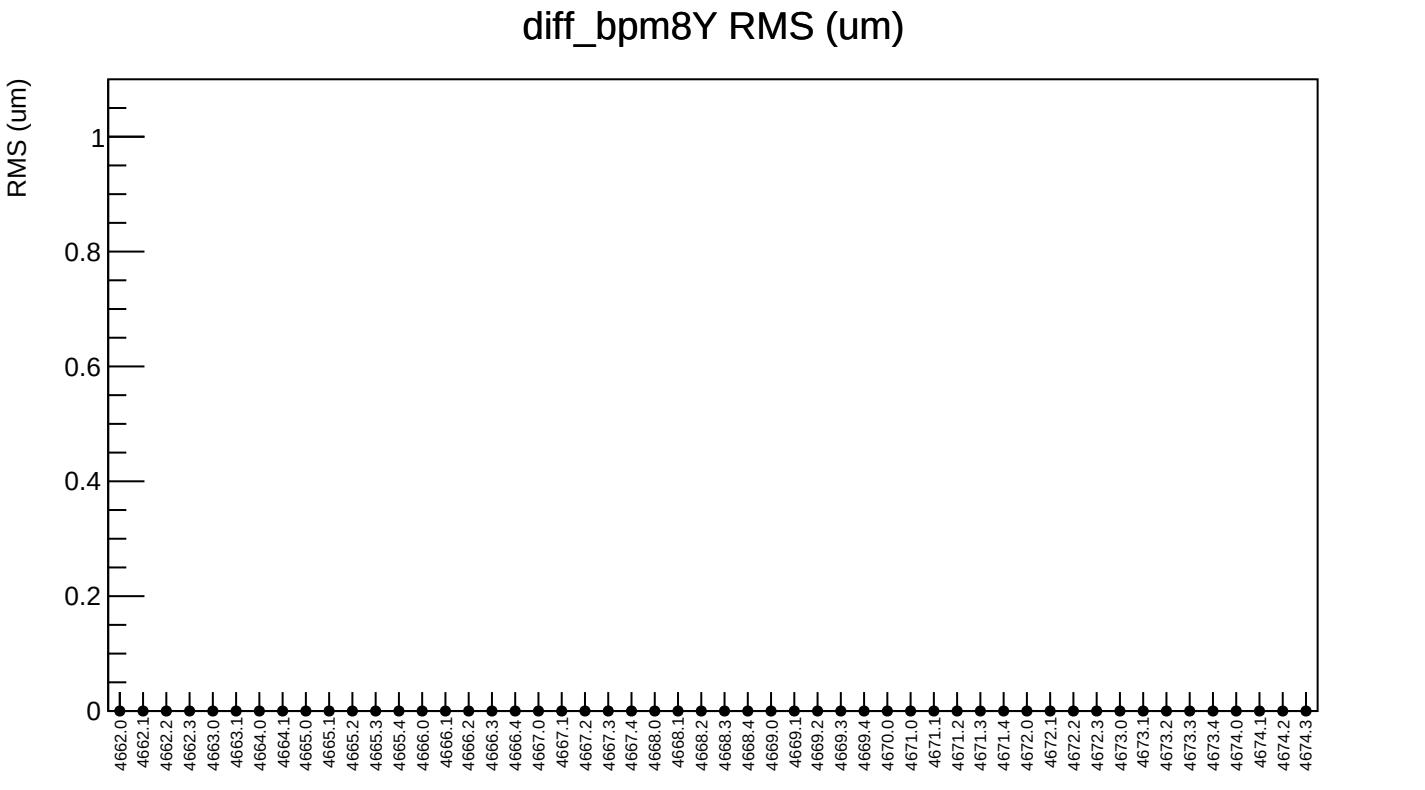

diff_bpm8X (nm)
χ² / ndf 0 / 51
p0 0 ± 8.885
100
50
0
−50
−100
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

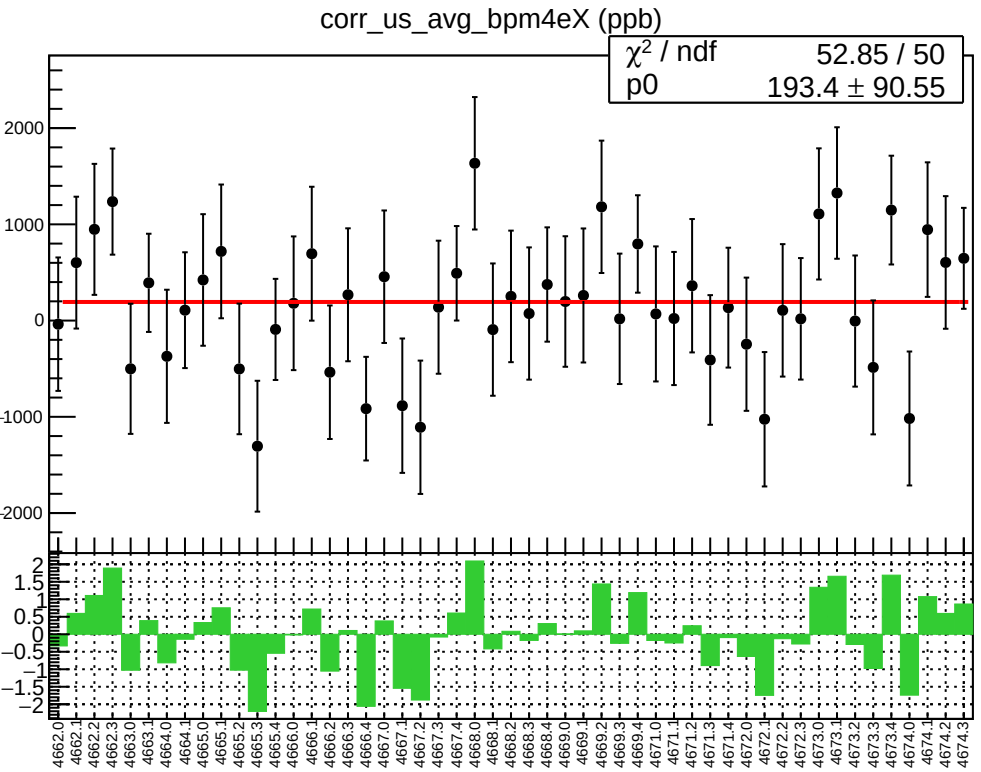

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

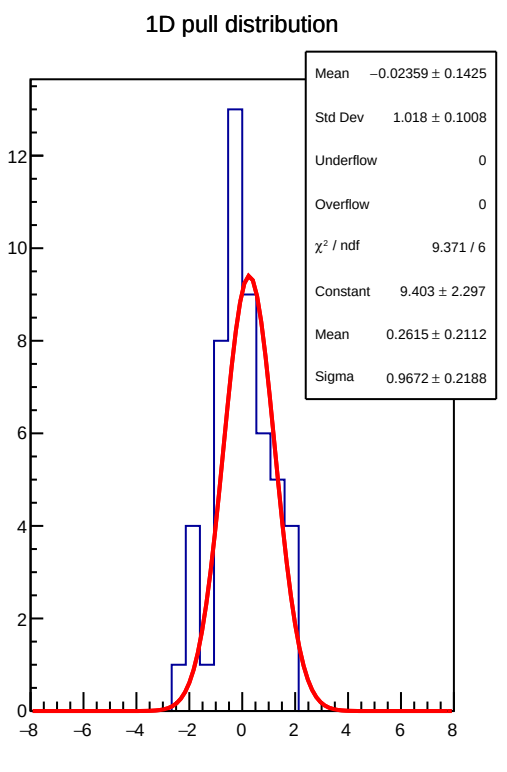

diff_bpm8X RMS (um)
RMS (um)
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

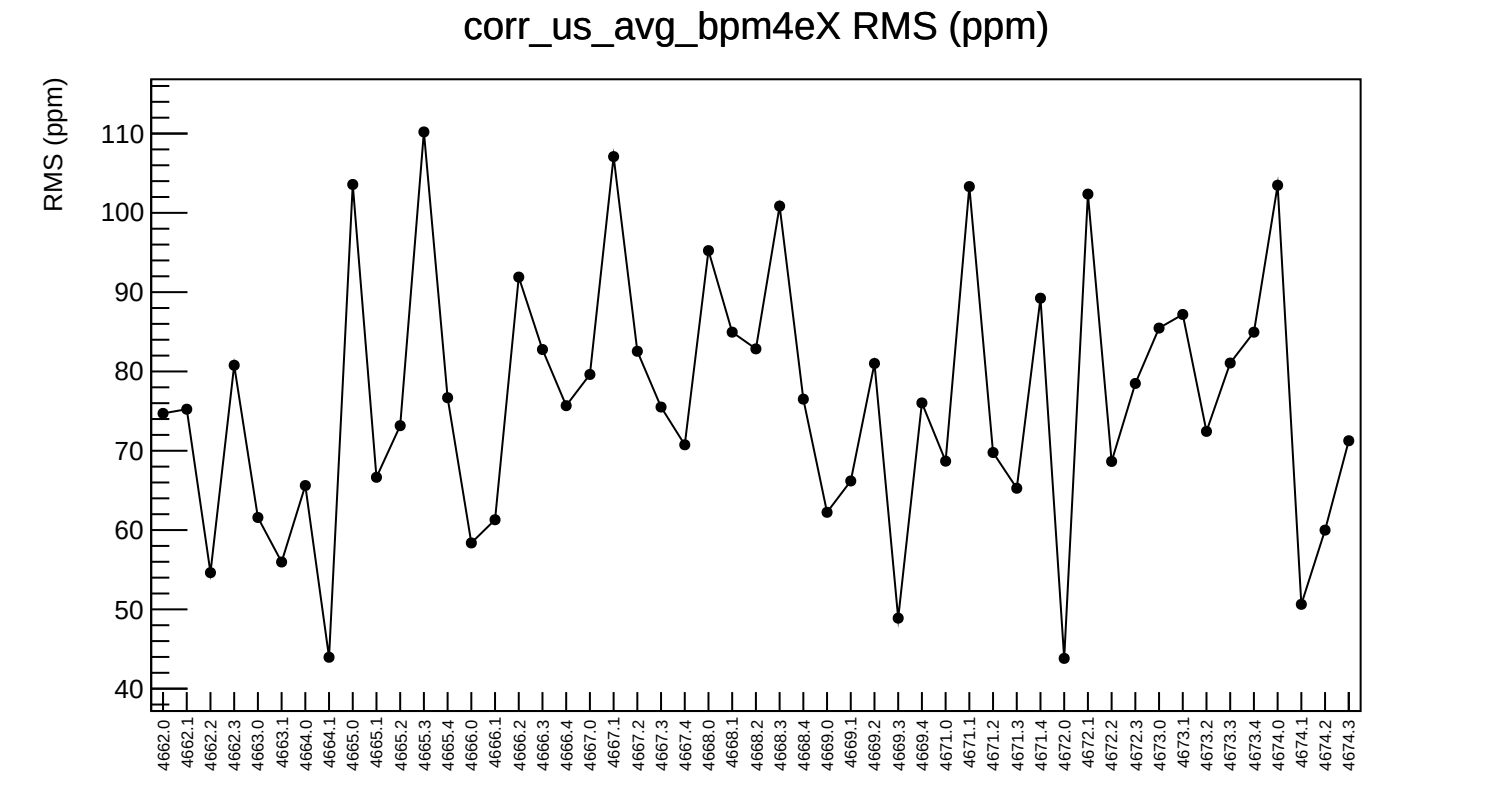

diff_bpm8Y (nm)
χ² / ndf 0 / 51
p0 0 ± 4.453

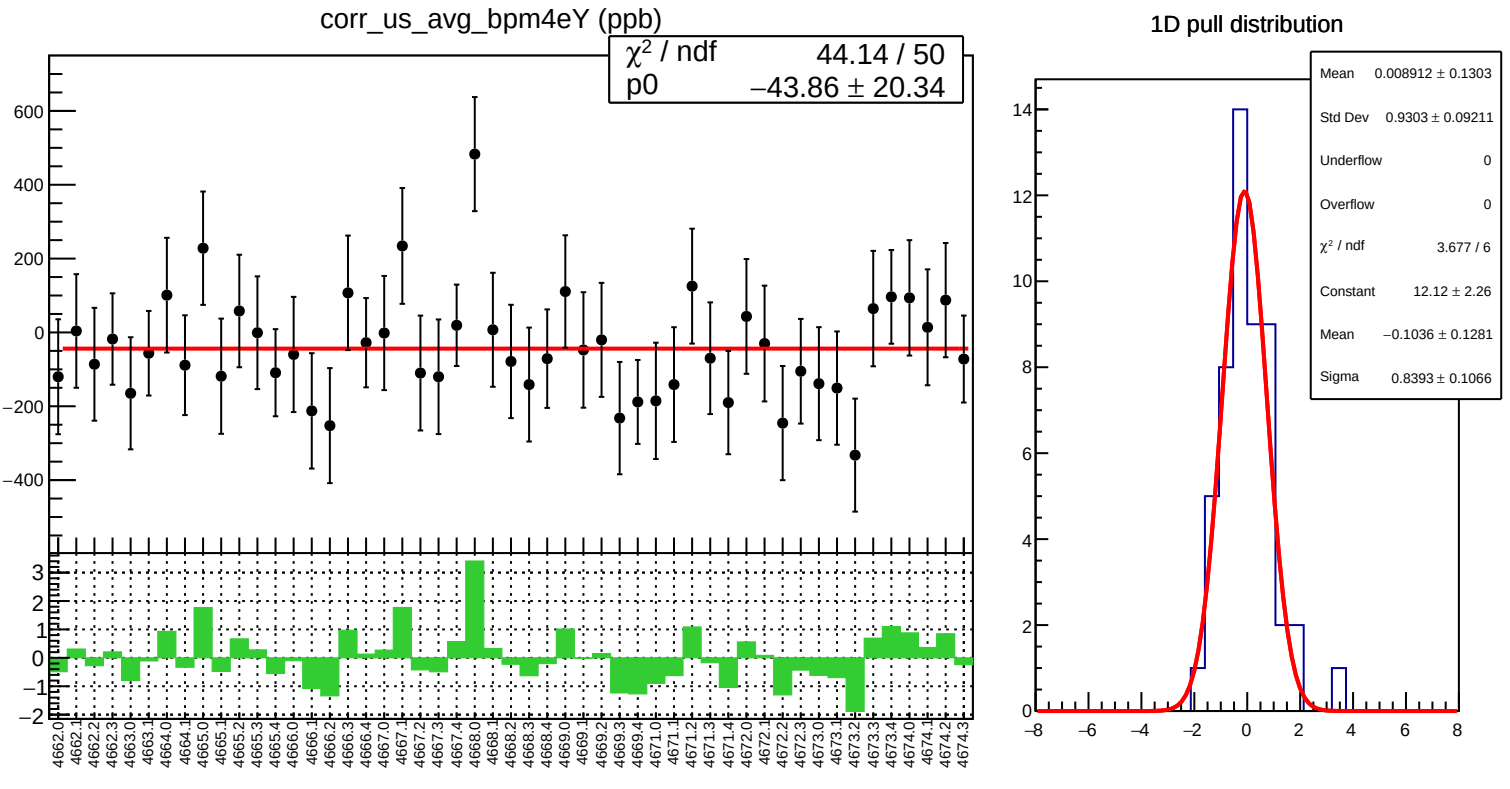

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555

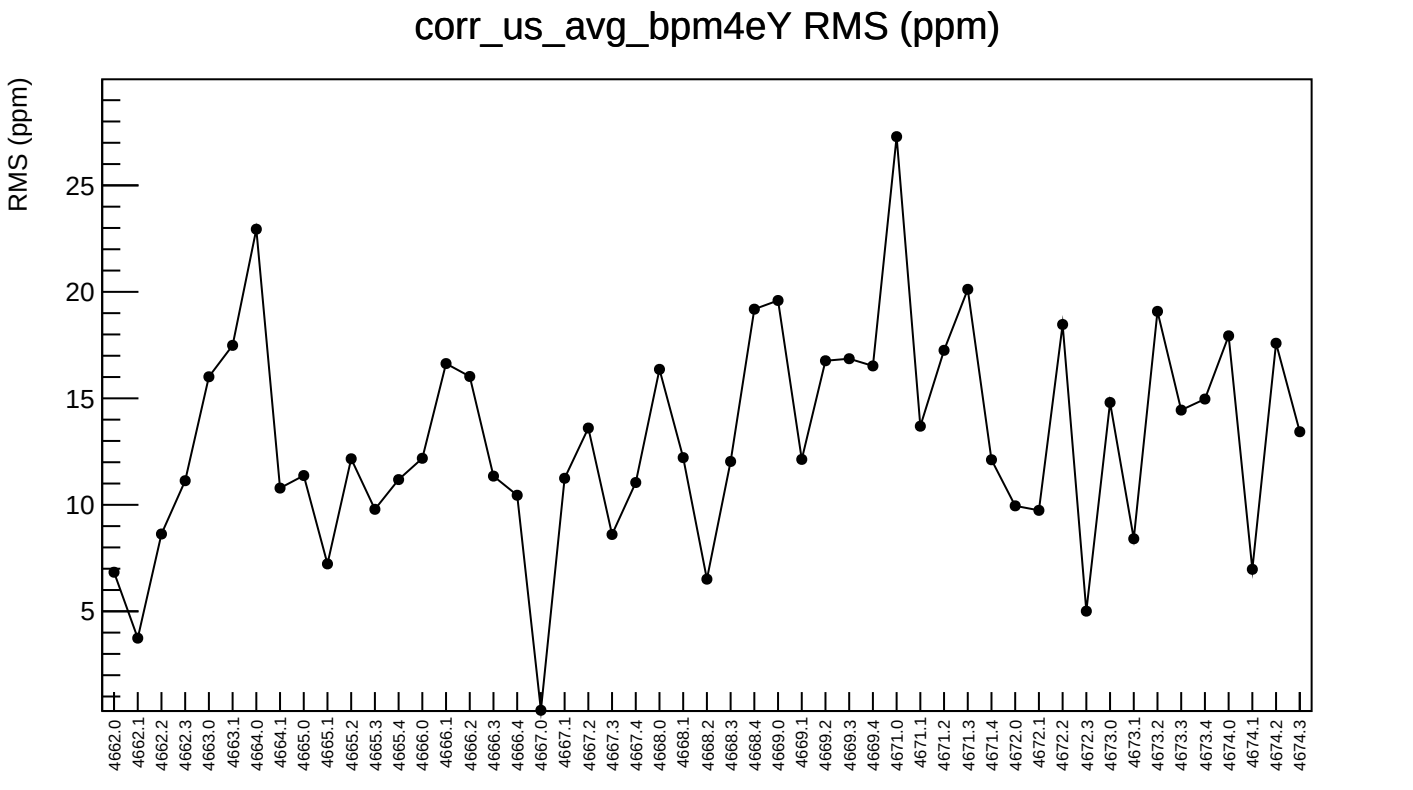

diff_bpm8Y RMS (um)
RMS (um)
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

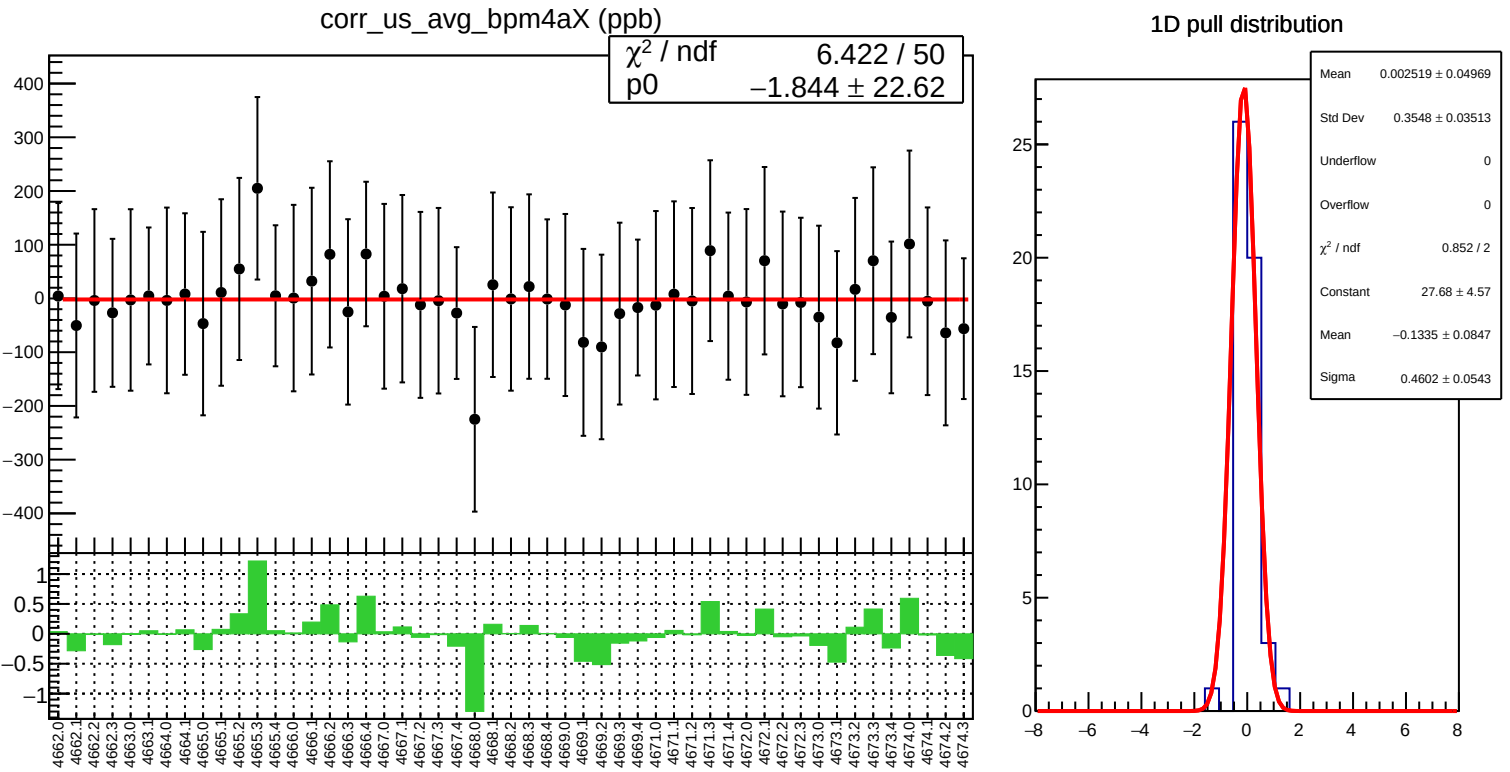

corr_us_avg_bpm4eX (ppb)
χ² / ndf 52.85 / 50
p0 193.4 ± 90.55
2000
1000
0
-1000
-2000
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

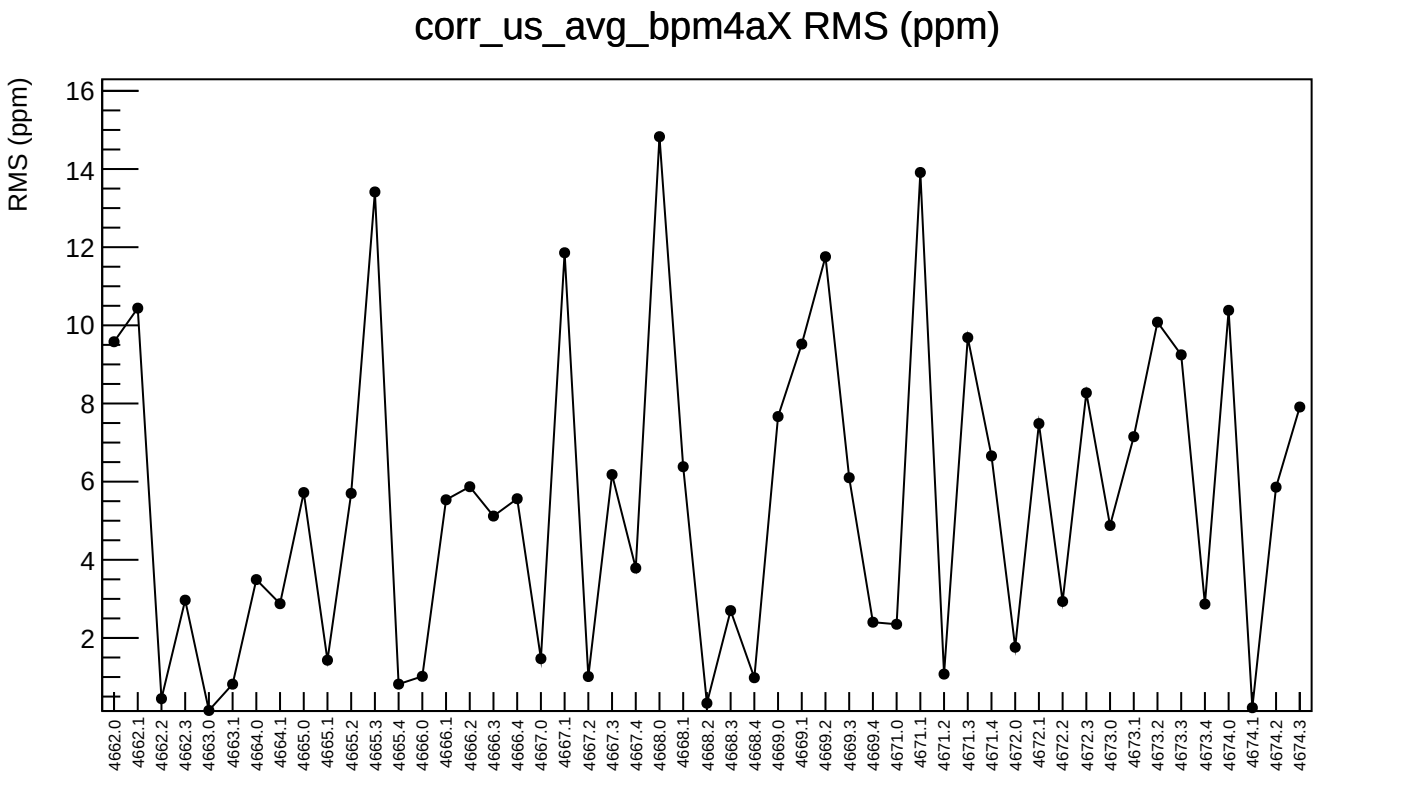

1D pull distribution
Mean −0.02359 ± 0.1425
Std Dev 1.018 ± 0.1008
Underflow 0
Overflow 0
χ² / ndf 9.371 / 6
Constant 9.403 ± 2.297
Mean 0.2615 ± 0.2112
Sigma 0.9672 ± 0.2188
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

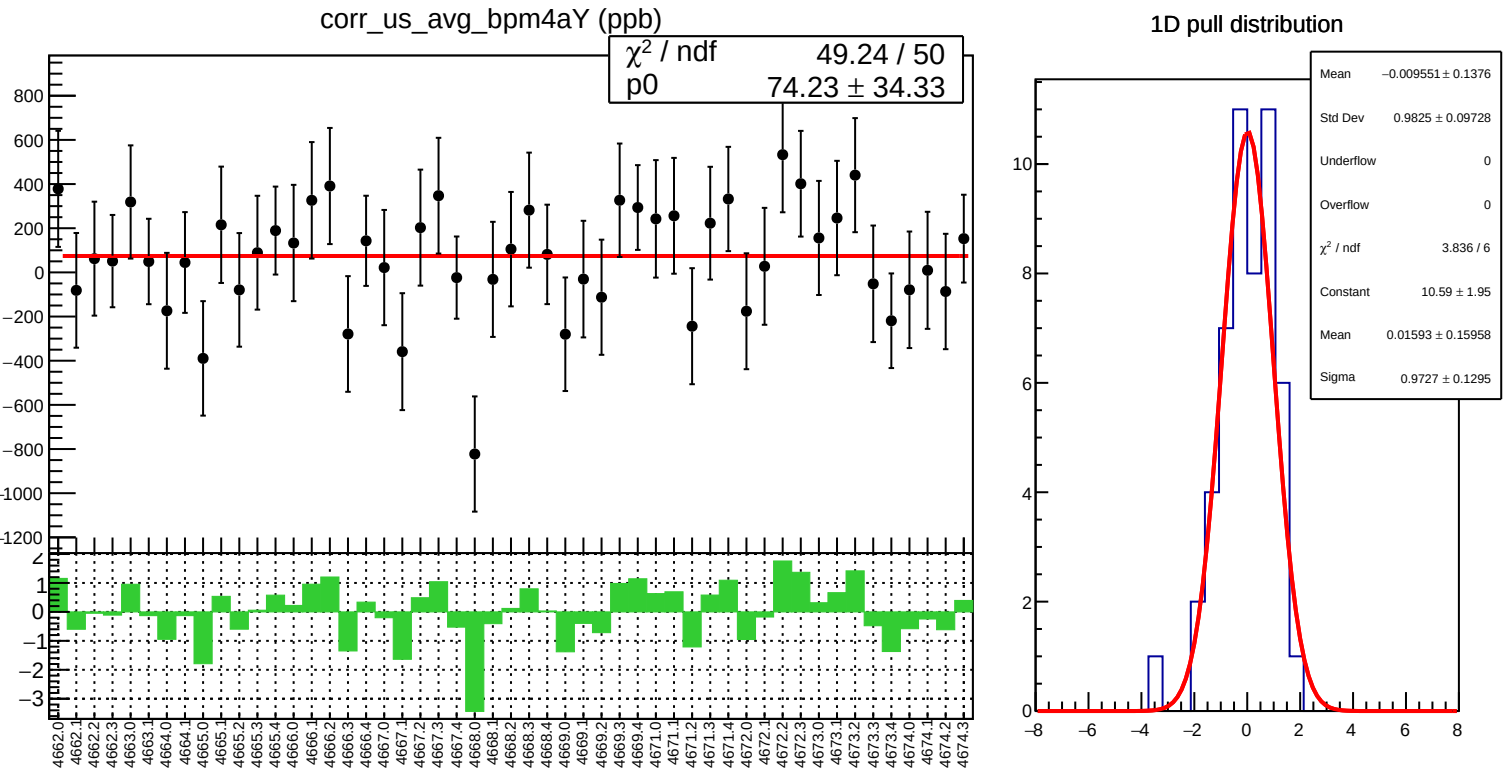

corr_us_avg_bpm4eX RMS (ppm)
RMS (ppm)
110
100
90
80
70
60
50
40
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

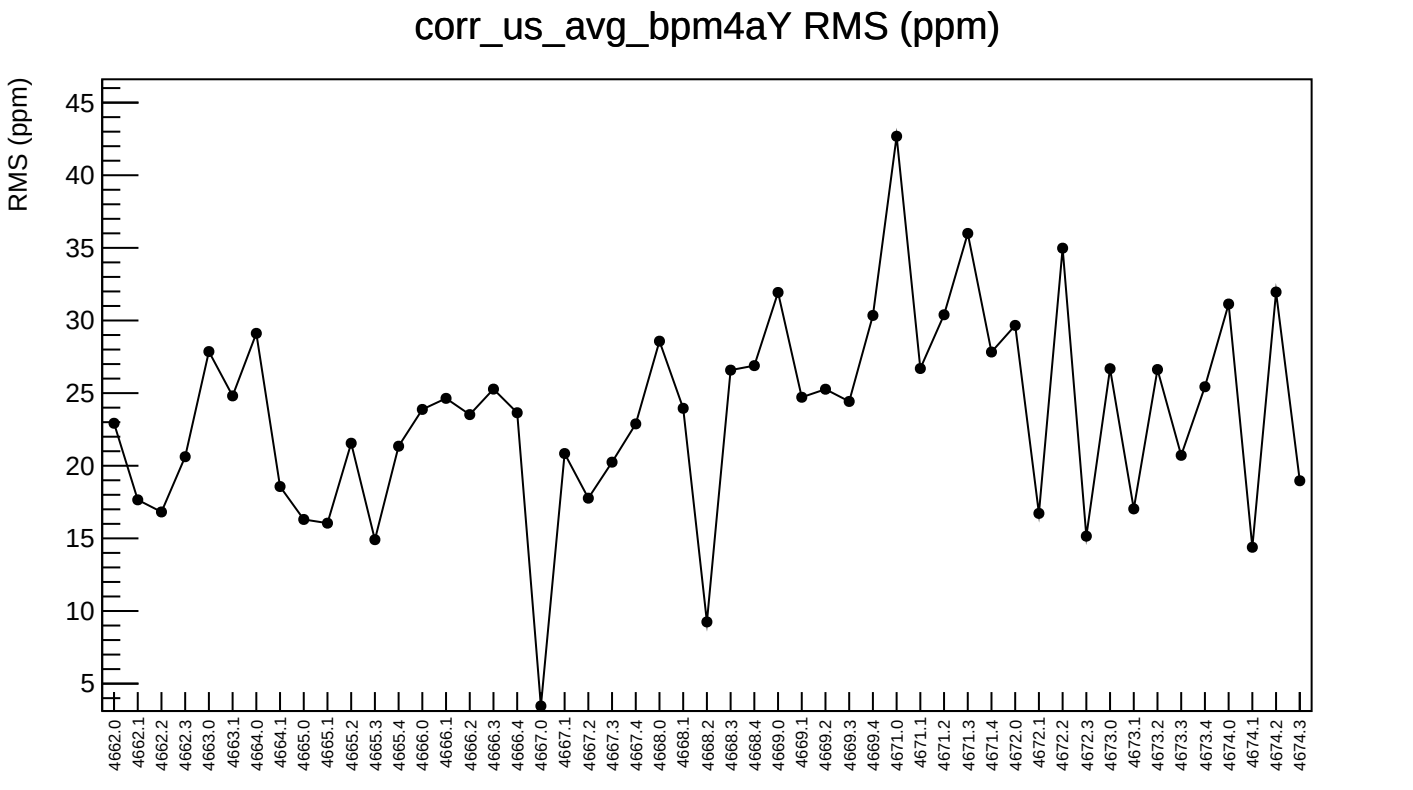

corr_us_avg_bpm4eY (ppb)
χ² / ndf 44.14 / 50
p0 −43.86 ± 20.34
1D pull distribution
Mean 0.008912 ± 0.1303
Std Dev 0.9303 ± 0.09211
Underflow 0
Overflow 0
χ² / ndf 3.677 / 6
Constant 12.12 ± 2.26
Mean −0.1036 ± 0.1281
Sigma 0.8393 ± 0.1066

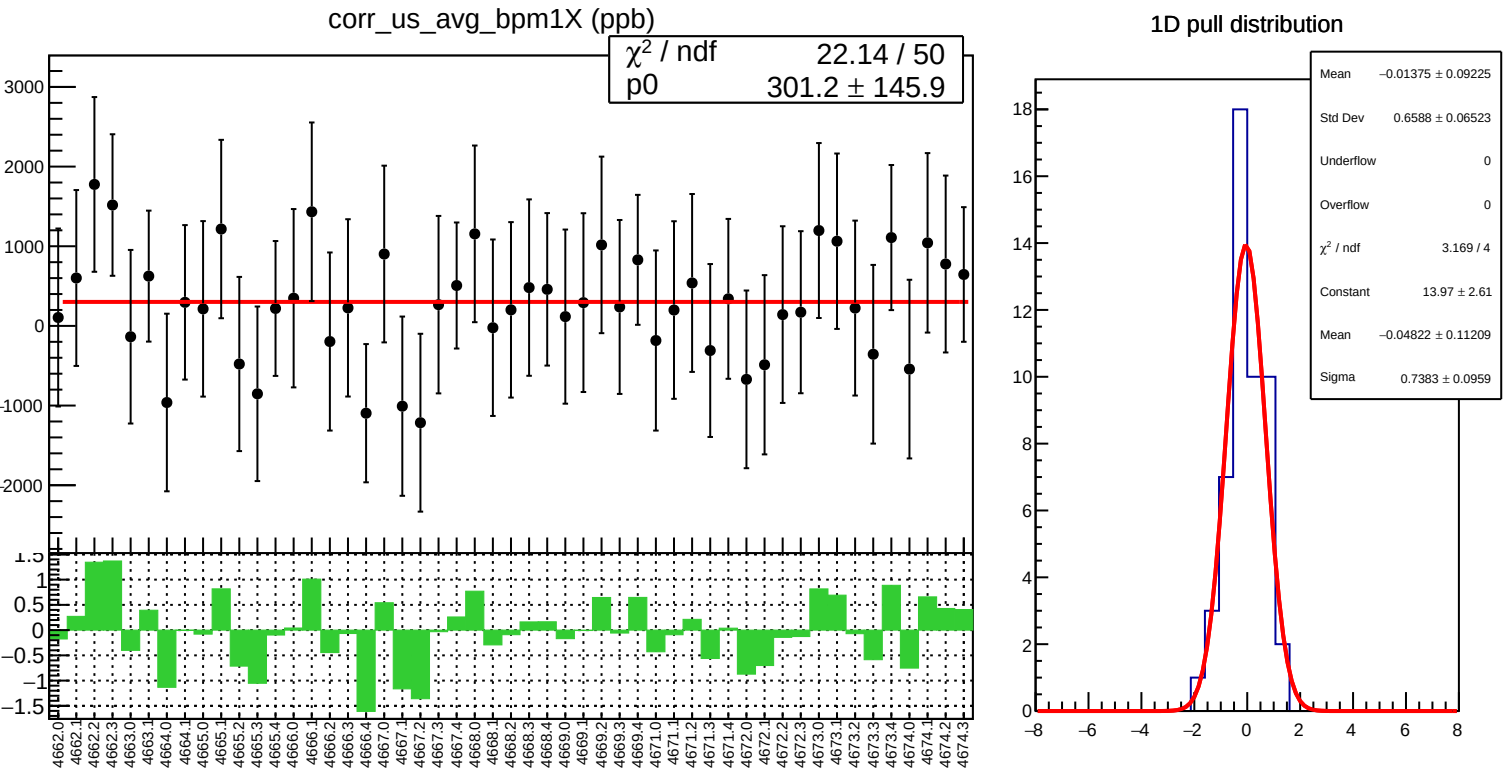

corr_us_avg_bpm4eY RMS (ppm)
RMS (ppm)
25
20
15
10
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

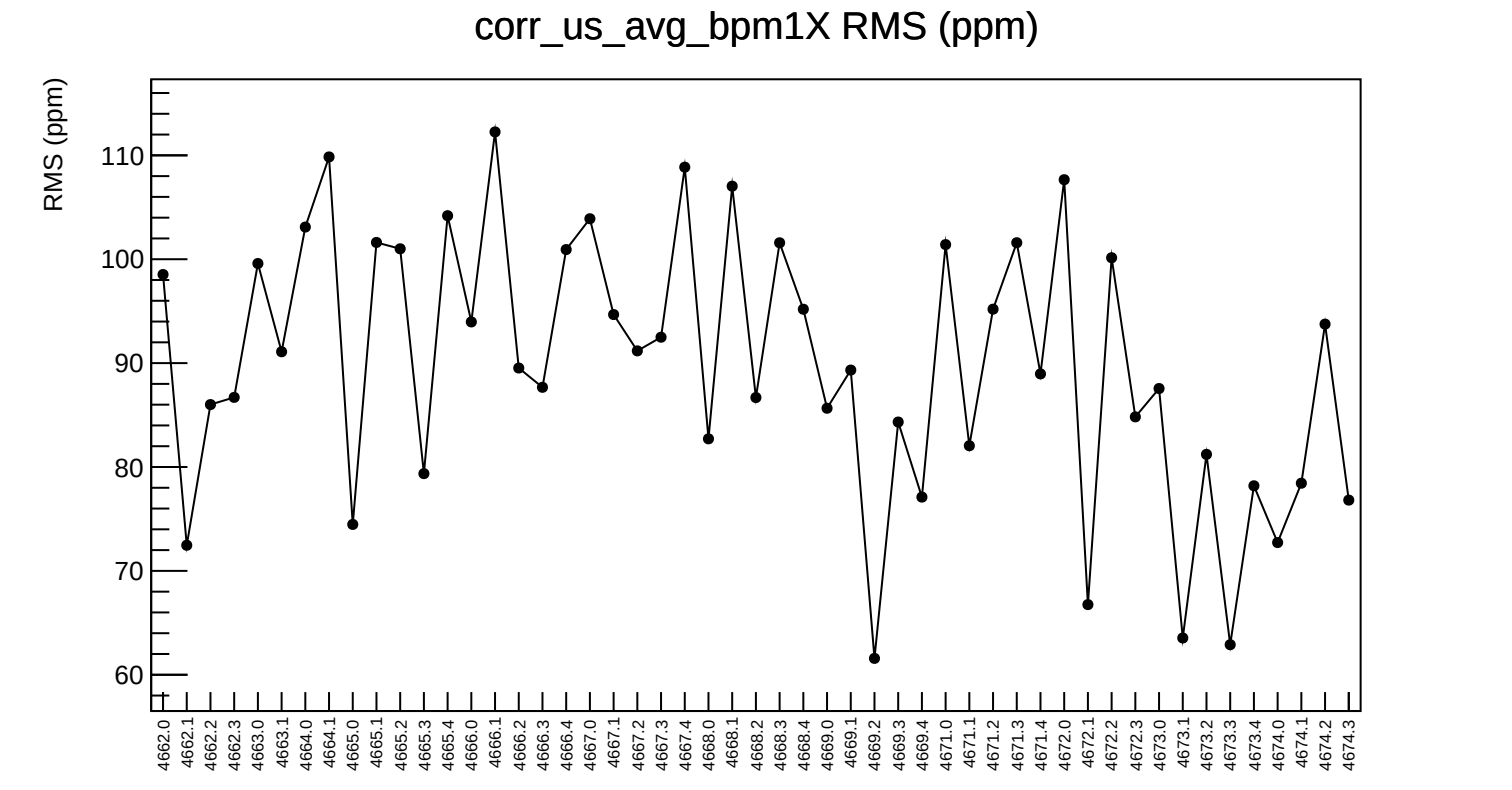

corr_us_avg_bpm4aX (ppb)
χ² / ndf 6.422 / 50
p0 −1.844 ± 22.62
1D pull distribution
Mean 0.002519 ± 0.04969
Std Dev 0.3548 ± 0.03513
Underflow 0
Overflow 0
χ² / ndf 0.852 / 2
Constant 27.68 ± 4.57
Mean −0.1335 ± 0.0847
Sigma 0.4602 ± 0.0543

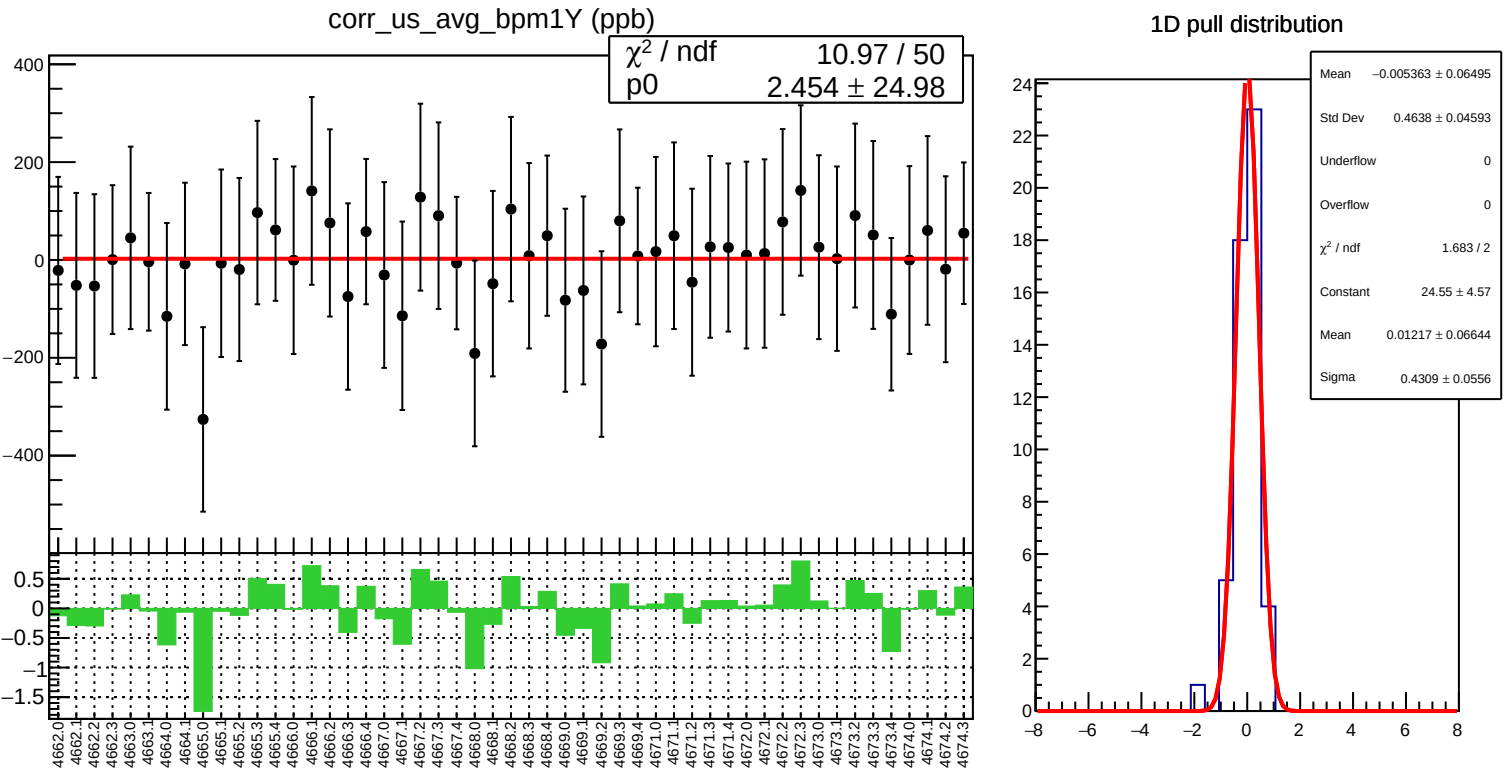

corr_us_avg_bpm4aX RMS (ppm)
RMS (ppm)
16
14
12
10
8
6
4
2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

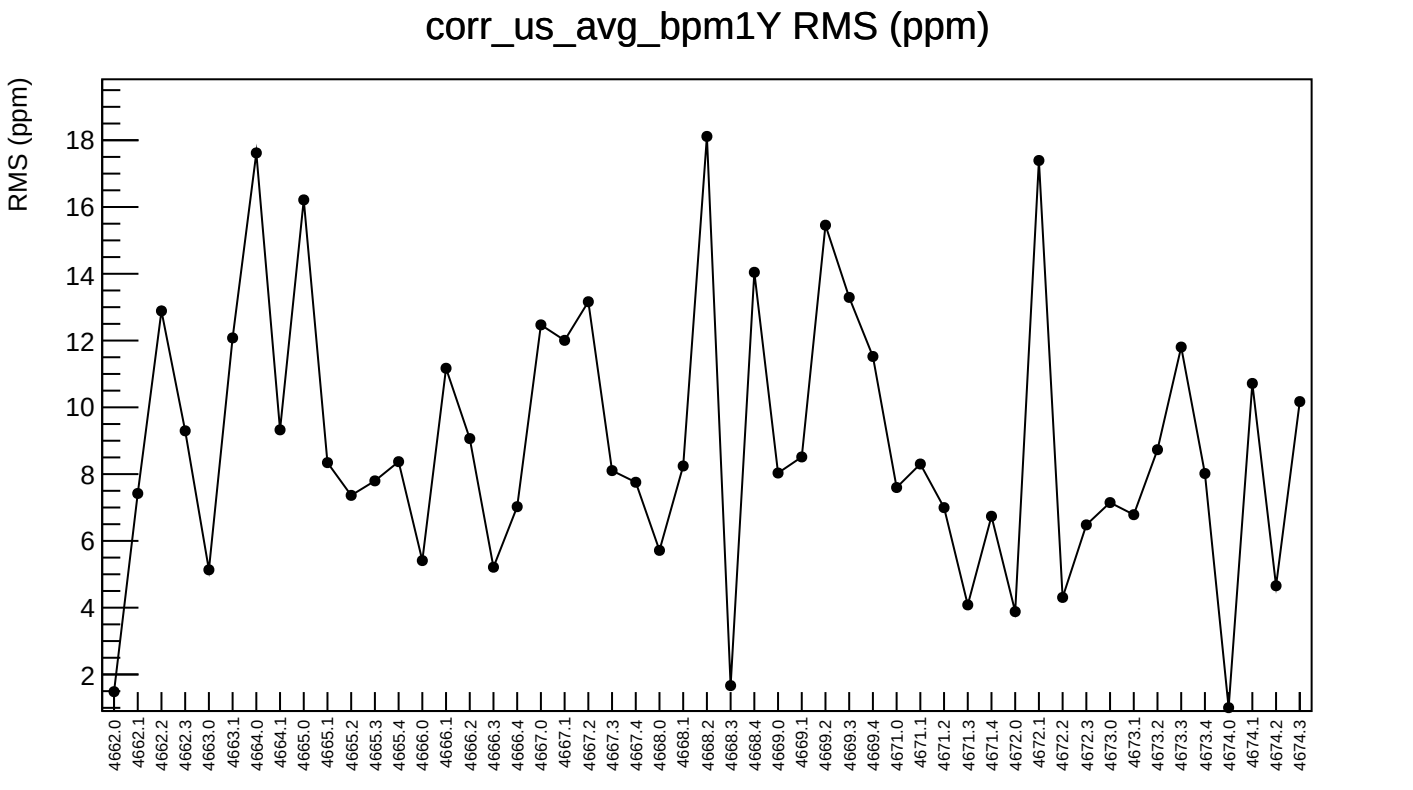

corr_us_avg_bpm4aY (ppb)
χ² / ndf 49.24 / 50
p0 74.23 ± 34.33
1D pull distribution
Mean −0.009551 ± 0.1376
Std Dev 0.9825 ± 0.09728
Underflow 0
Overflow 0
χ² / ndf 3.836 / 6
Constant 10.59 ± 1.95
Mean 0.01593 ± 0.15958
Sigma 0.9727 ± 0.1295

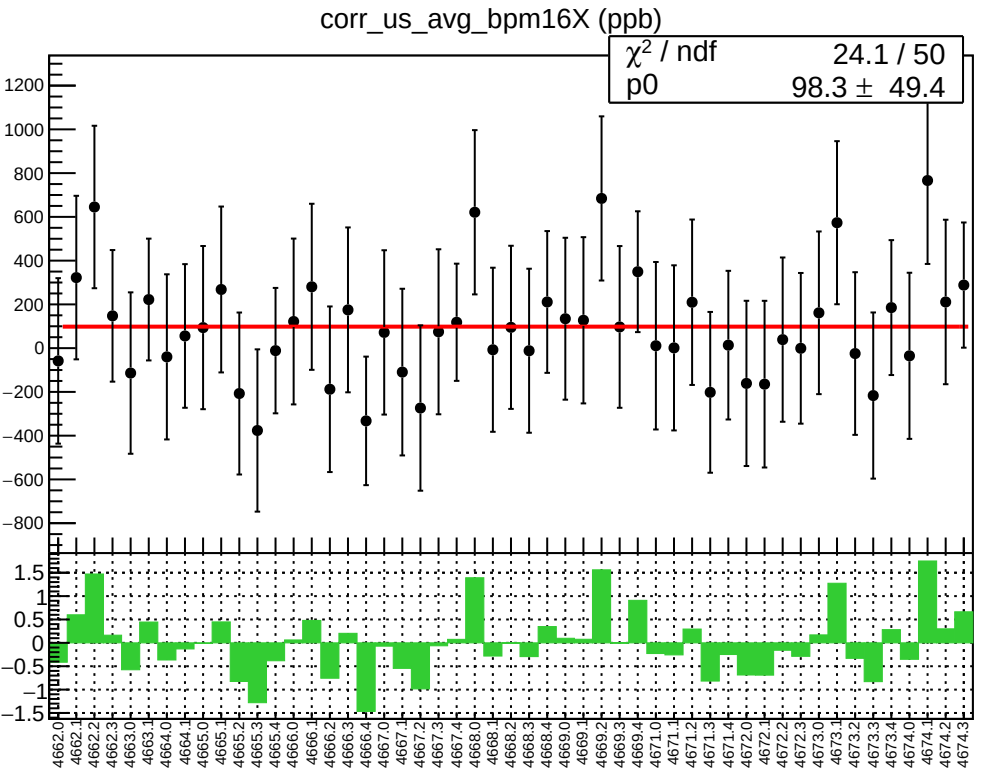

corr_us_avg_bpm4aY RMS (ppm)
RMS (ppm)
45
40
35
30
25
20
15
10
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

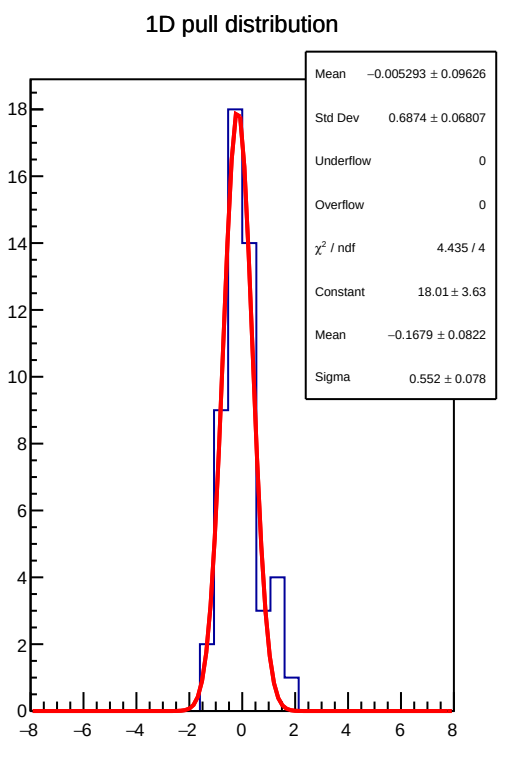

corr_us_avg_bpm1X (ppb)
χ² / ndf 22.14 / 50
p0 301.2 ± 145.9
1D pull distribution
Mean −0.01375 ± 0.09225
Std Dev 0.6588 ± 0.06523
Underflow 0
Overflow 0
χ² / ndf 3.169 / 4
Constant 13.97 ± 2.61
Mean −0.04822 ± 0.11209
Sigma 0.7383 ± 0.0959

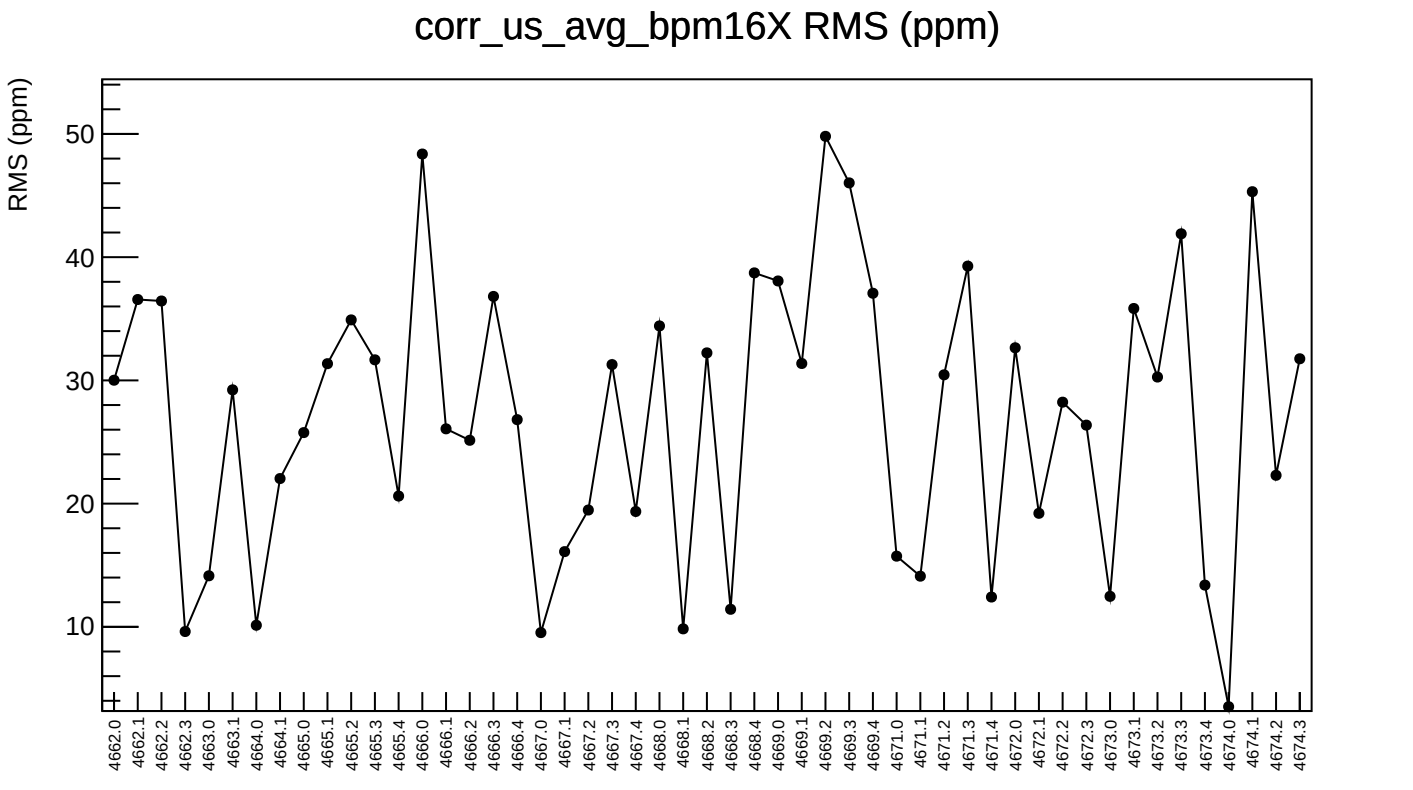

corr_us_avg_bpm1X RMS (ppm)
RMS (ppm)
110
100
90
80
70
60
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

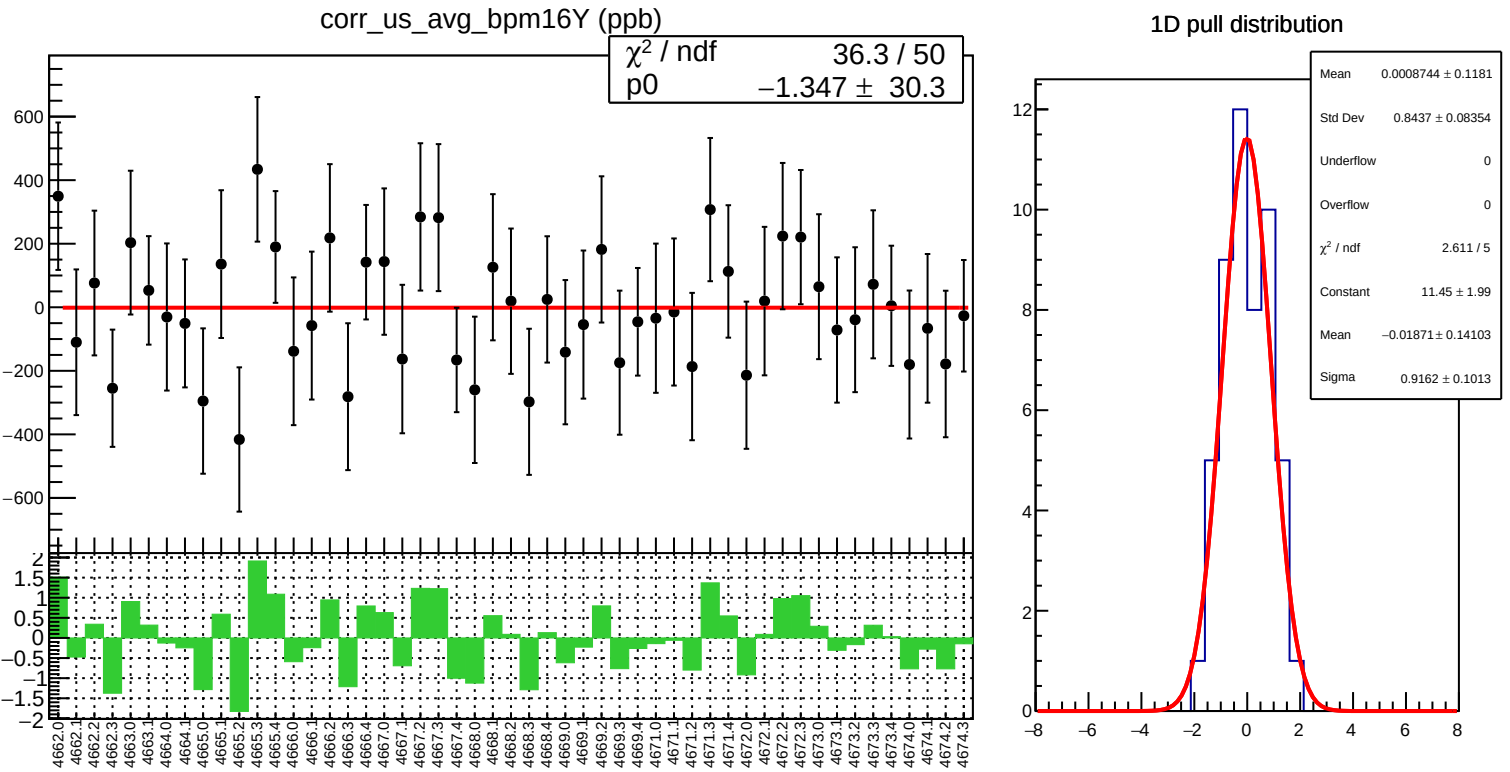

corr_us_avg_bpm1Y (ppb)
χ² / ndf 10.97 / 50
p0 2.454 ± 24.98
400
200
0
−200
−400
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3
1D pull distribution
Mean −0.005363 ± 0.06495
Std Dev 0.4638 ± 0.04593
Underflow 0
Overflow 0
χ² / ndf 1.683 / 2
Constant 24.55 ± 4.57
Mean 0.01217 ± 0.06644
Sigma 0.4309 ± 0.0556
24
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

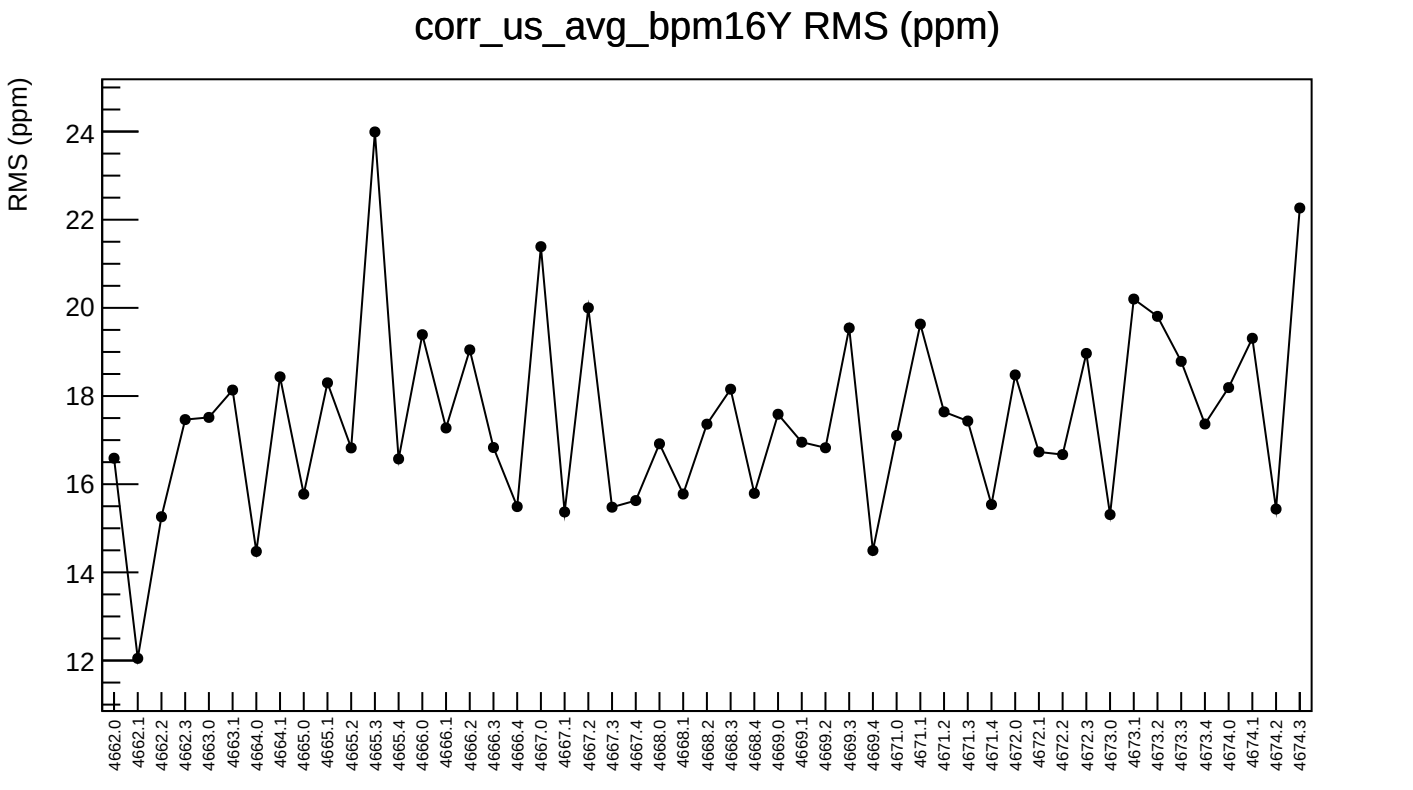

corr_us_avg_bpm1Y RMS (ppm)
RMS (ppm)
2
4
6
8
10
12
14
16
18
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

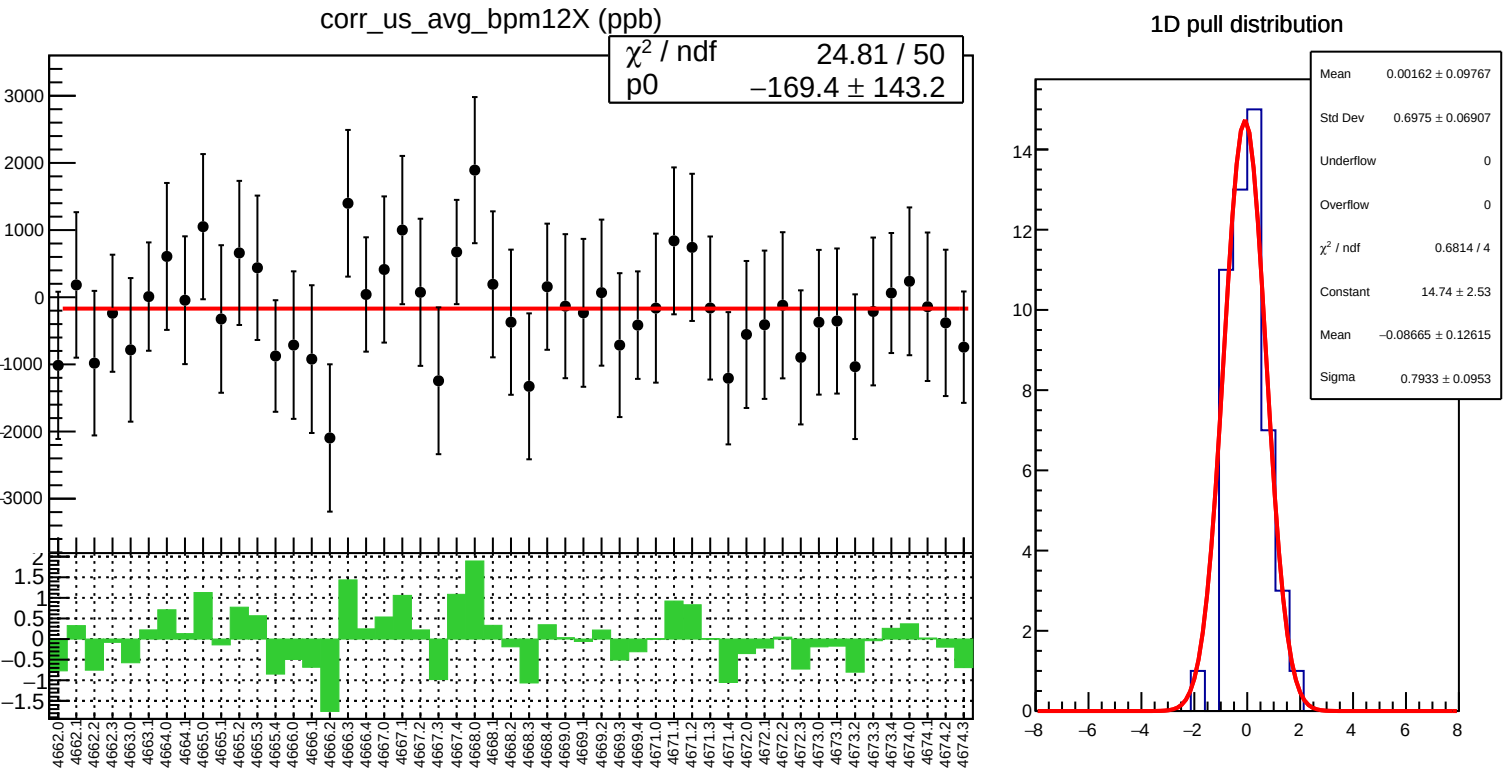

corr_us_avg_bpm16X (ppb)
χ² / ndf 24.1 / 50
p0 98.3 ± 49.4

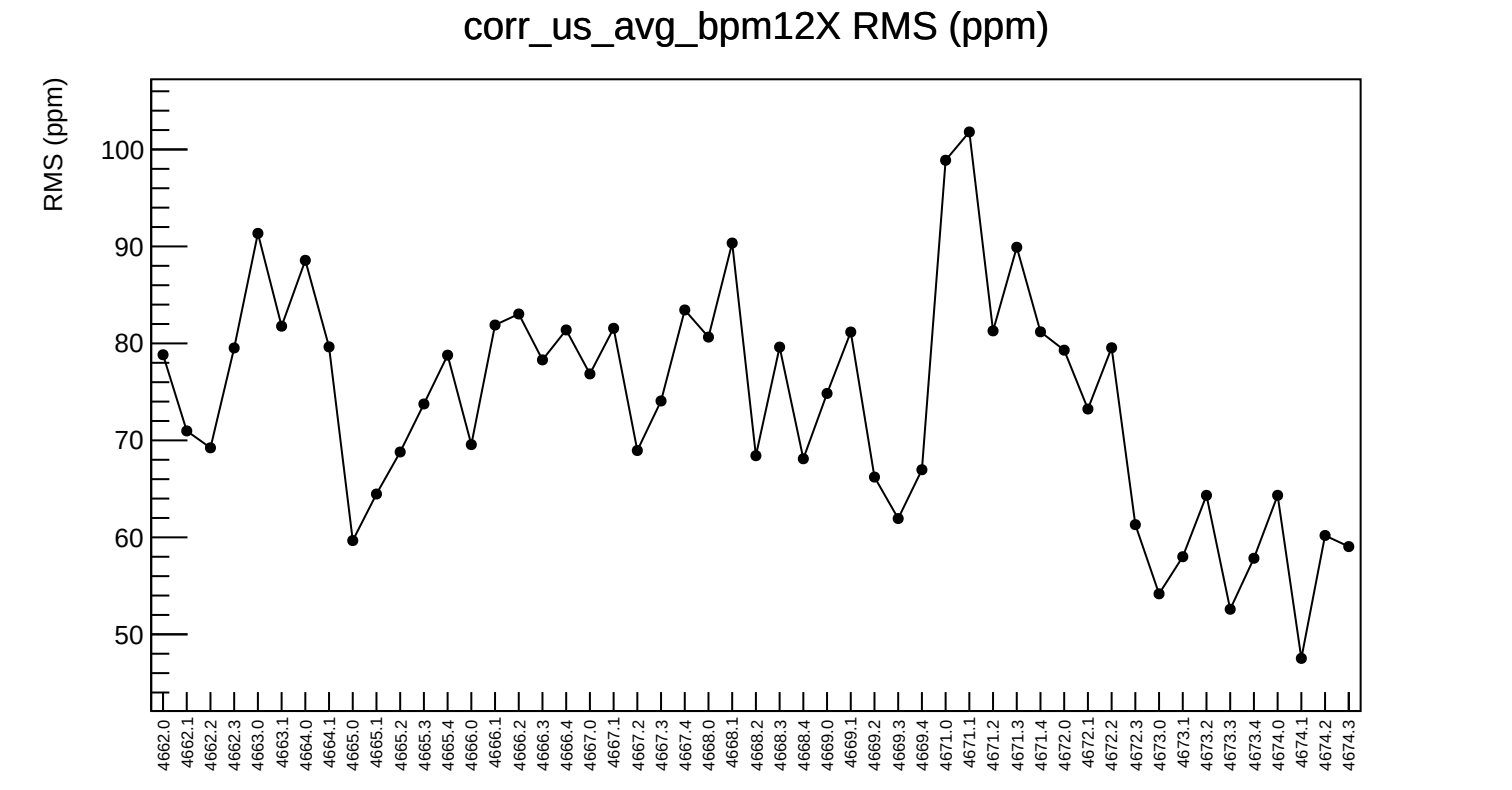

1D pull distribution
Mean −0.005293 ± 0.09626
Std Dev 0.6874 ± 0.06807
Underflow 0
Overflow 0
χ² / ndf 4.435 / 4
Constant 18.01 ± 3.63
Mean −0.1679 ± 0.0822
Sigma 0.552 ± 0.078

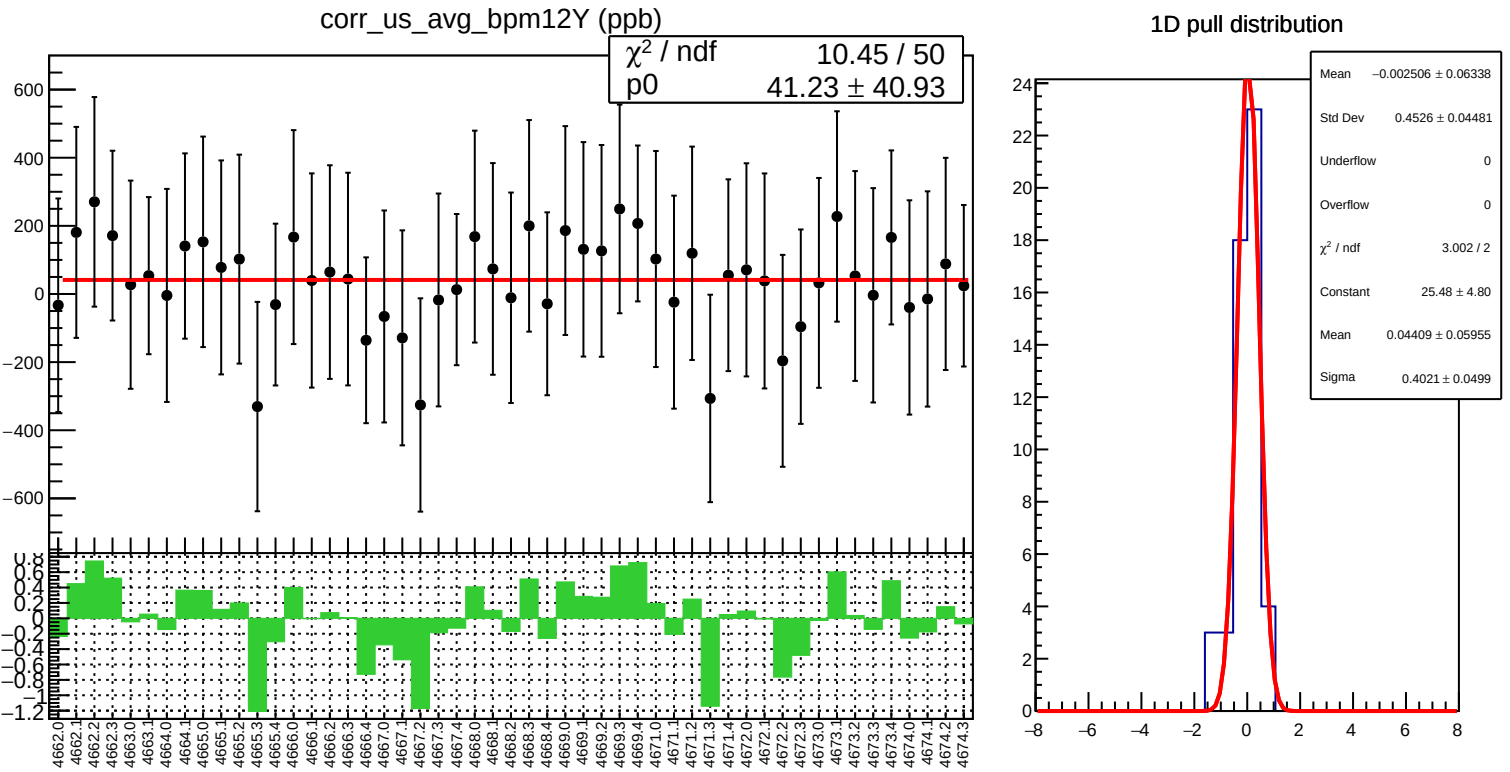

corr_us_avg_bpm16X RMS (ppm)
RMS (ppm)
50
40
30
20
10
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

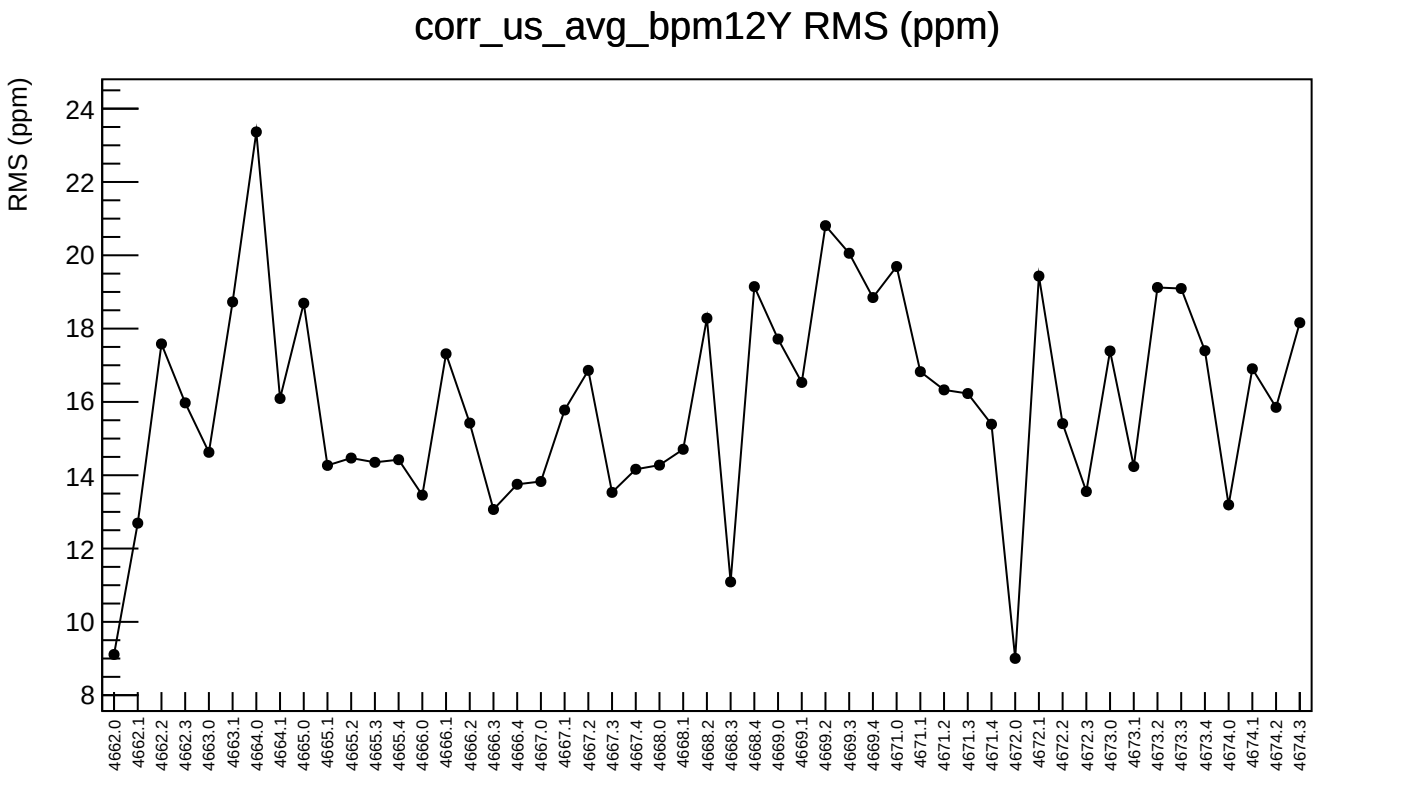

corr_us_avg_bpm16Y (ppb)
χ² / ndf 36.3 / 50
p0 −1.347 ± 30.3
600
400
200
0
−200
−400
−600
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3
1D pull distribution
Mean 0.0008744 ± 0.1181
Std Dev 0.8437 ± 0.08354
Underflow 0
Overflow 0
χ² / ndf 2.611 / 5
Constant 11.45 ± 1.99
Mean −0.01871 ± 0.14103
Sigma 0.9162 ± 0.1013
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

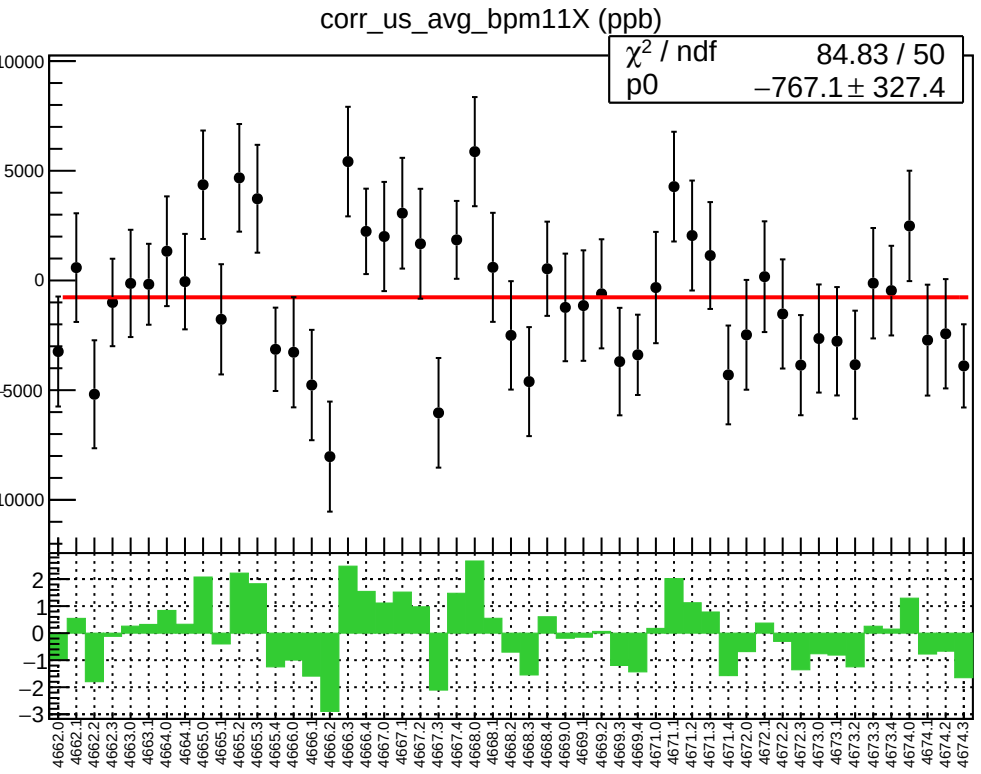

corr_us_avg_bpm16Y RMS (ppm)
RMS (ppm)
24
22
20
18
16
14
12
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

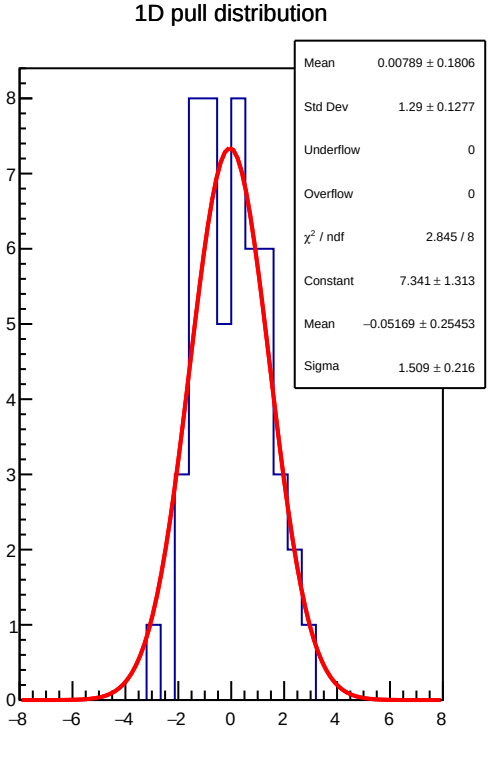

corr_us_avg_bpm12X (ppb)
χ² / ndf 24.81 / 50
p0 −169.4 ± 143.2
1D pull distribution
Mean 0.00162 ± 0.09767
Std Dev 0.6975 ± 0.06907
Underflow 0
Overflow 0
χ² / ndf 0.6814 / 4
Constant 14.74 ± 2.53
Mean −0.08665 ± 0.12615
Sigma 0.7933 ± 0.0953

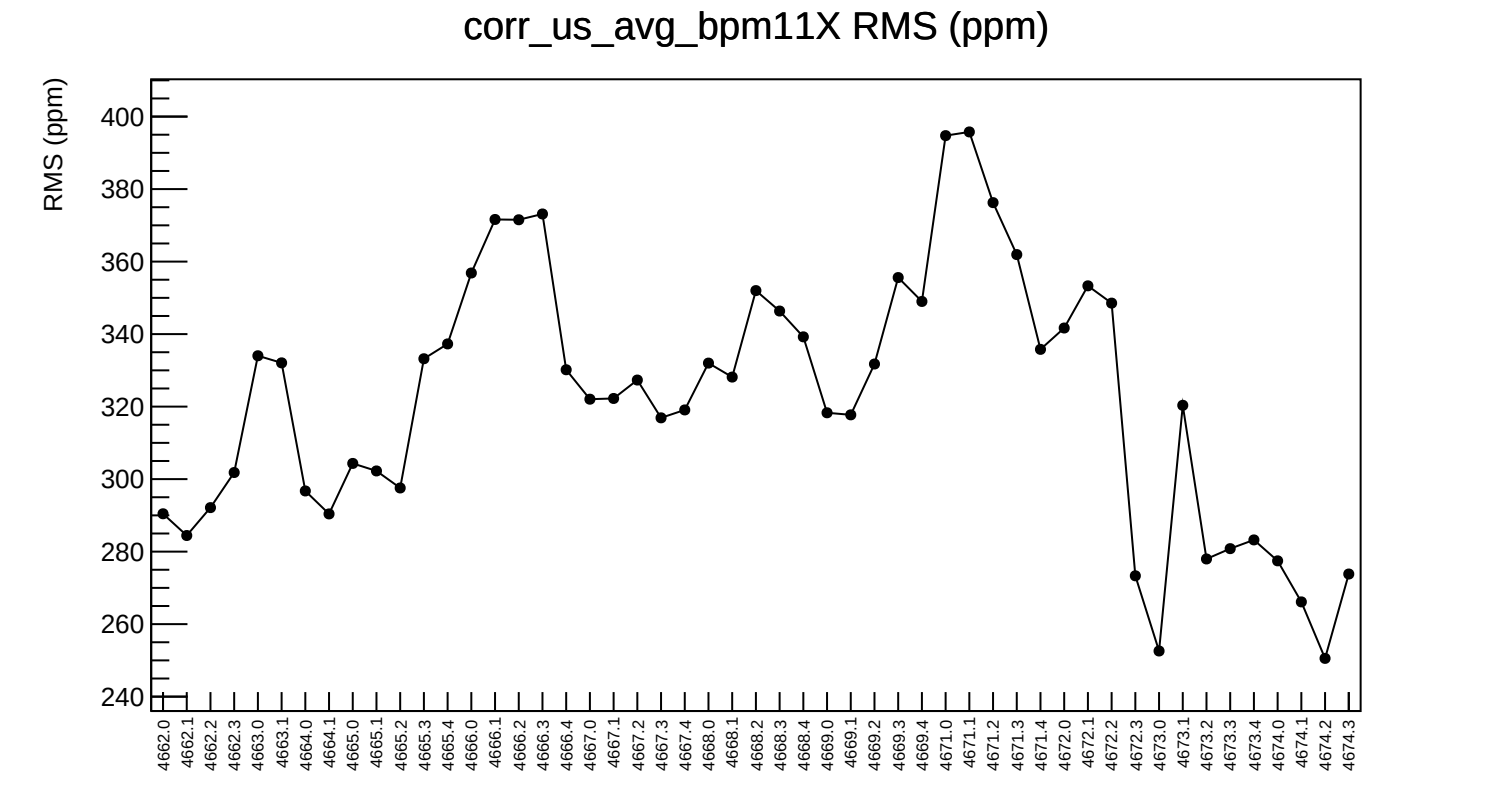

corr_us_avg_bpm12X RMS (ppm)
RMS (ppm)
100
90
80
70
60
50
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

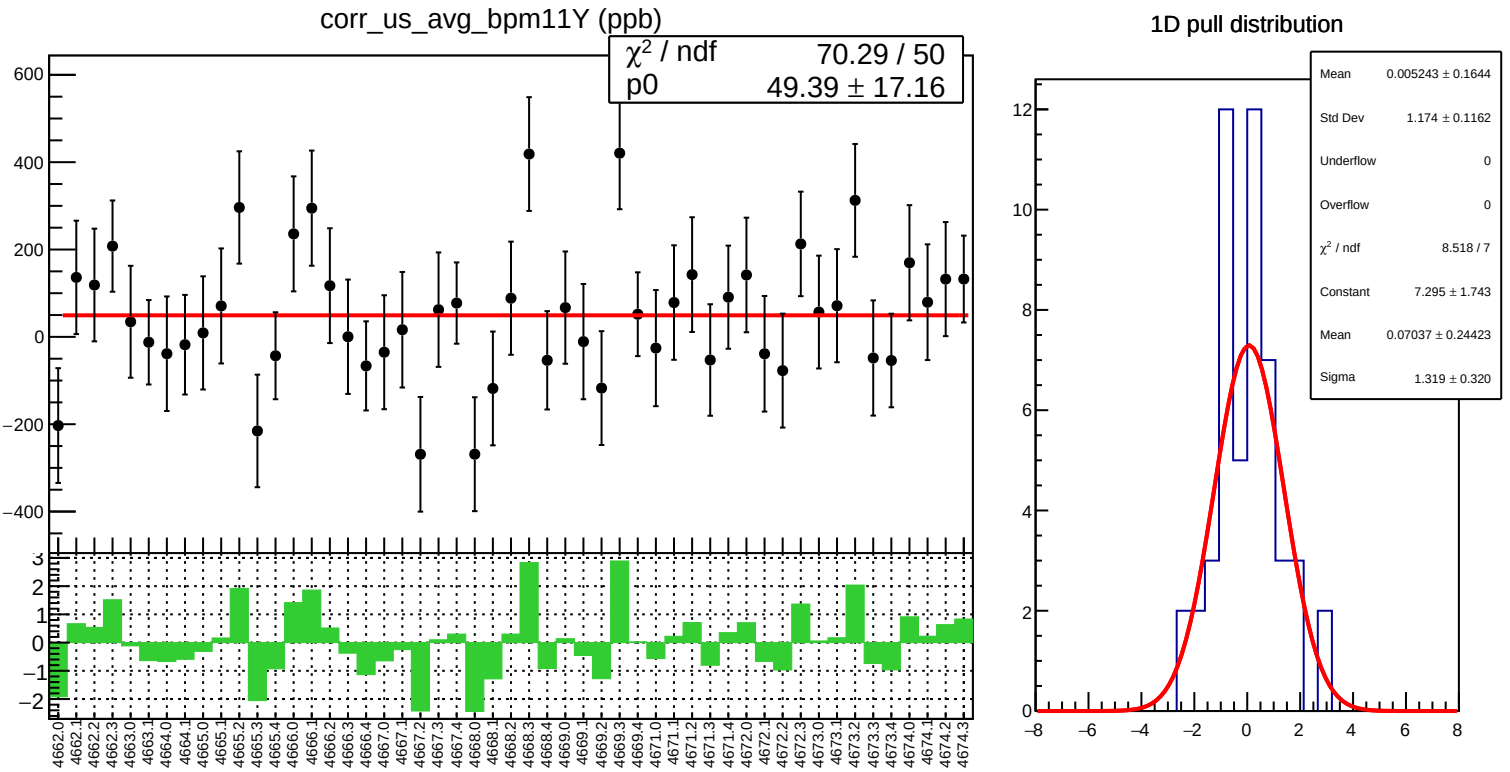

corr_us_avg_bpm12Y (ppb)
χ² / ndf 10.45 / 50
p0 41.23 ± 40.93
1D pull distribution
Mean −0.002506 ± 0.06338
Std Dev 0.4526 ± 0.04481
Underflow 0
Overflow 0
χ² / ndf 3.002 / 2
Constant 25.48 ± 4.80
Mean 0.04409 ± 0.05955
Sigma 0.4021 ± 0.0499

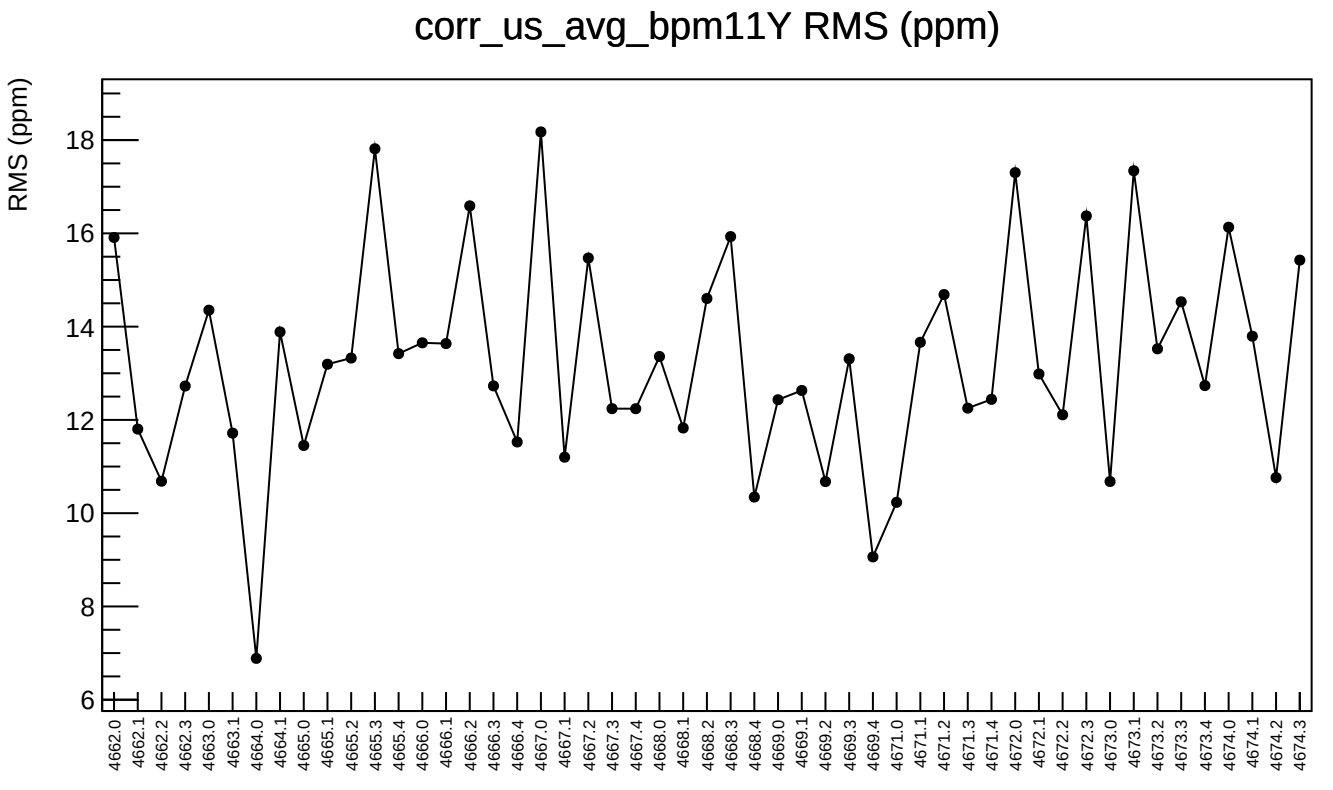

corr_us_avg_bpm12Y RMS (ppm)
RMS (ppm)
24
22
20
18
16
14
12
10
8
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

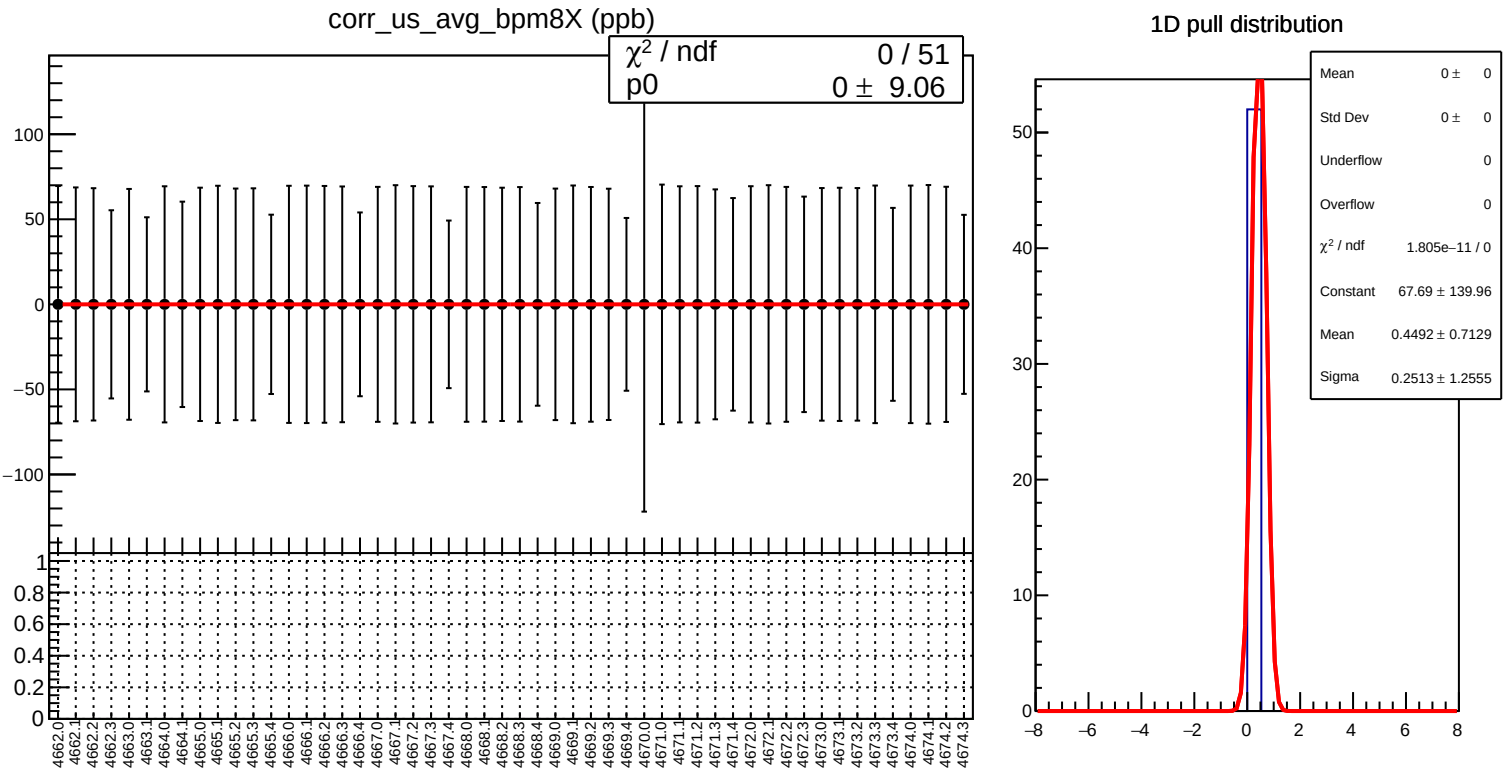

corr_us_avg_bpm11X (ppb)
χ² / ndf 84.83 / 50
p0 −767.1 ± 327.4
10000
5000
0
−5000
−10000
2
1
0
−1
−2
−3
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

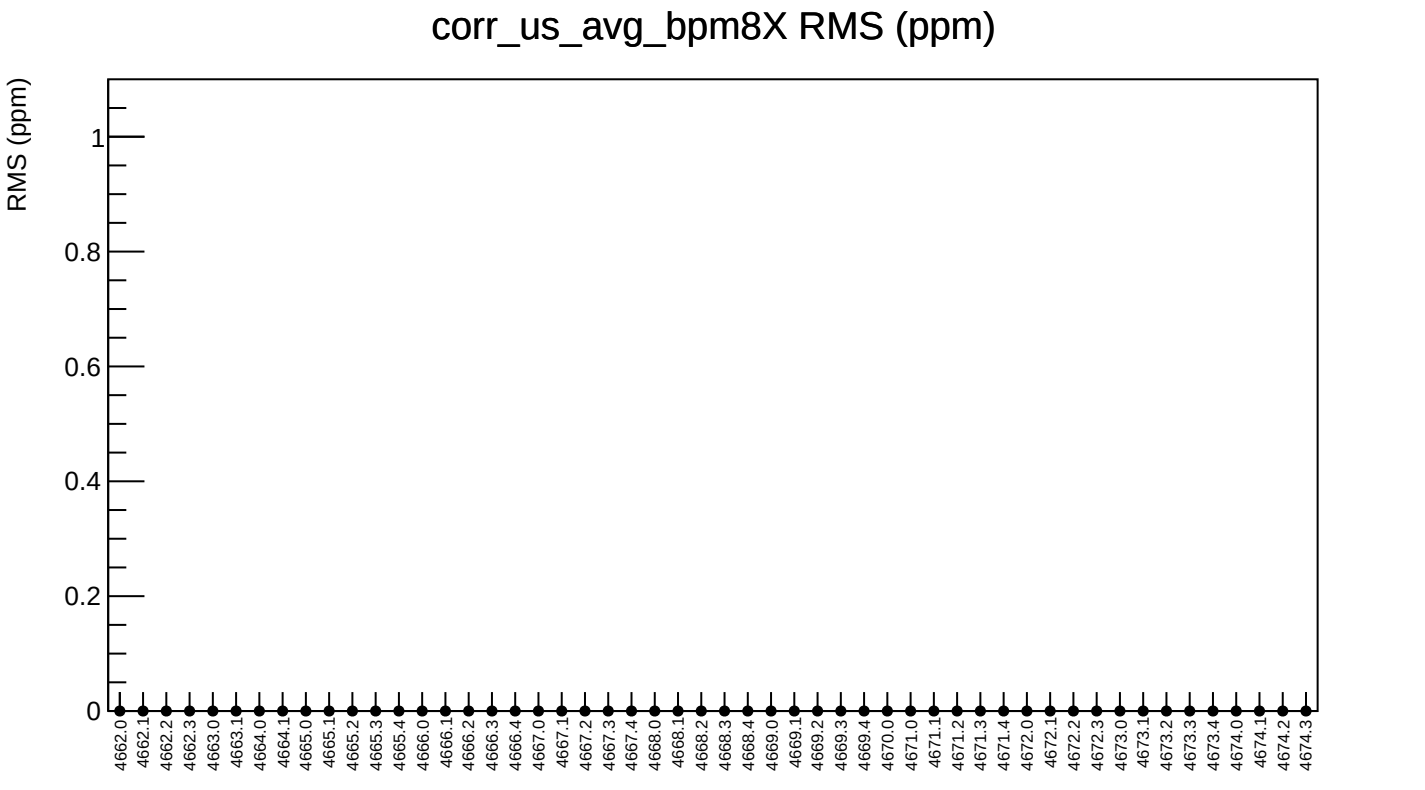

1D pull distribution
Mean 0.00789 ± 0.1806
Std Dev 1.29 ± 0.1277
Underflow 0
Overflow 0
χ² / ndf 2.845 / 8
Constant 7.341 ± 1.313
Mean −0.05169 ± 0.25453
Sigma 1.509 ± 0.216
8
7
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

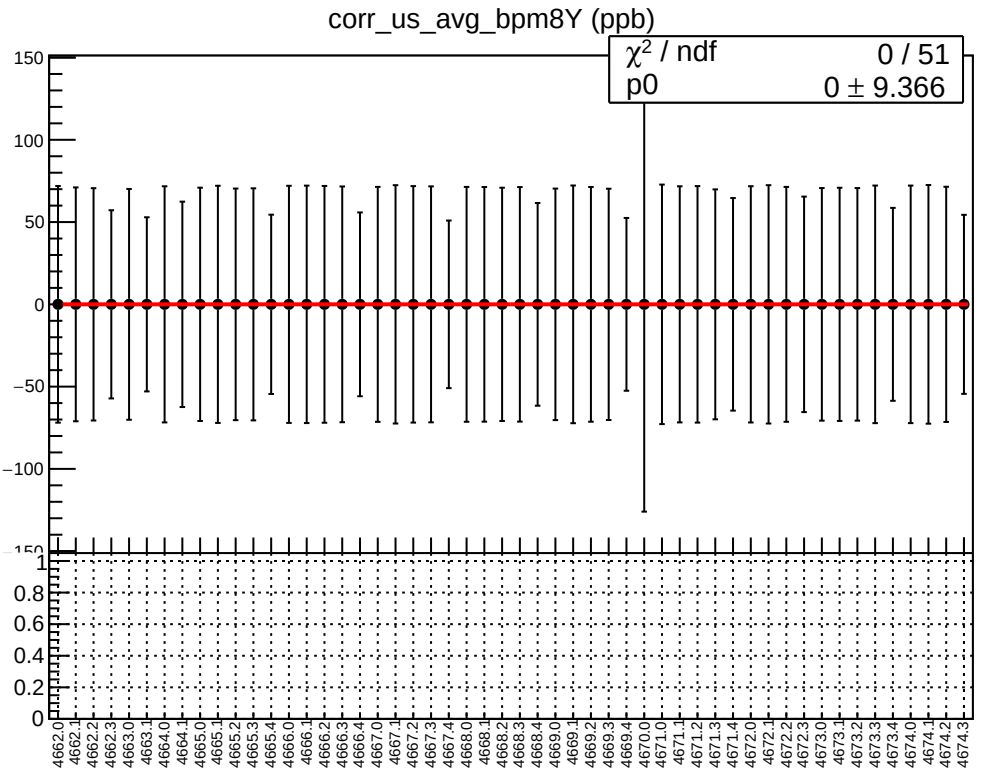

corr_us_avg_bpm11X RMS (ppm)
RMS (ppm)
400
380
360
340
320
300
280
260
240
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

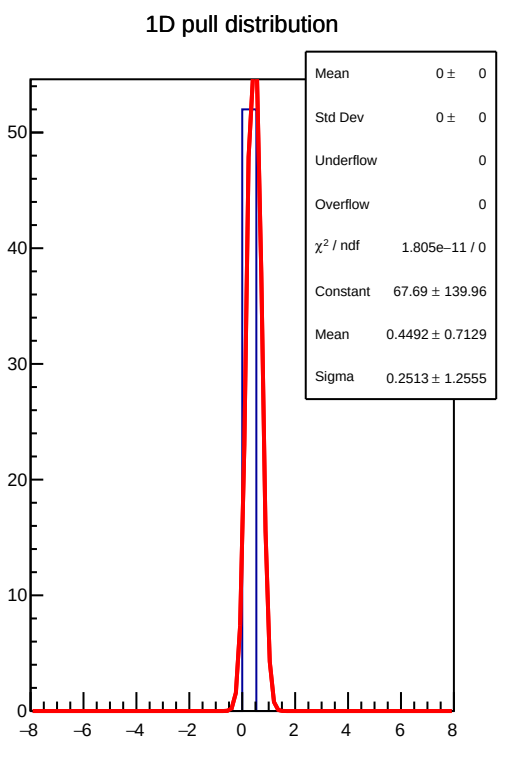

corr_us_avg_bpm11Y (ppb)
χ² / ndf 70.29 / 50
p0 49.39 ± 17.16
1D pull distribution
Mean 0.005243 ± 0.1644
Std Dev 1.174 ± 0.1162
Underflow 0
Overflow 0
χ² / ndf 8.518 / 7
Constant 7.295 ± 1.743
Mean 0.07037 ± 0.24423
Sigma 1.319 ± 0.320

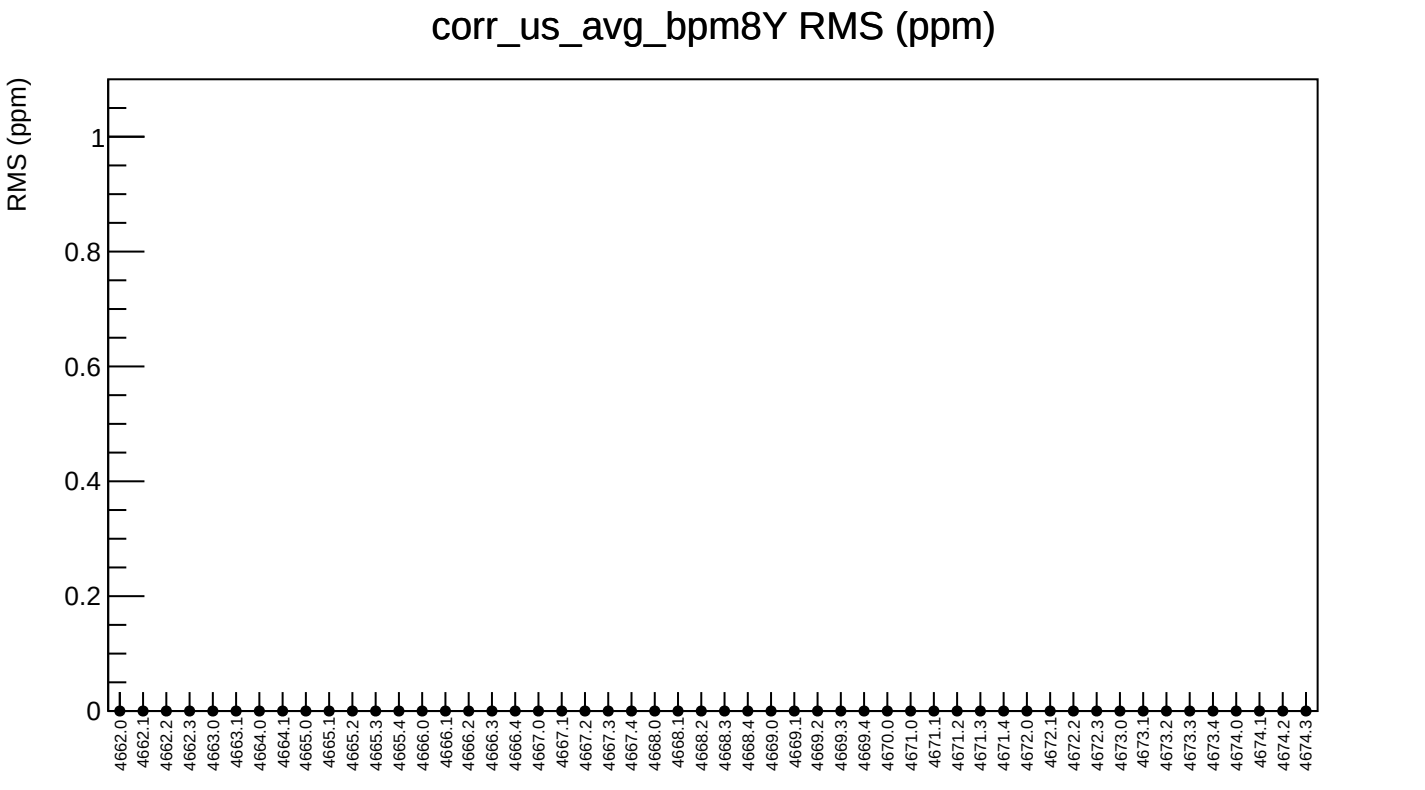

corr_us_avg_bpm11Y RMS (ppm)
RMS (ppm)
18
16
14
12
10
8
6
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

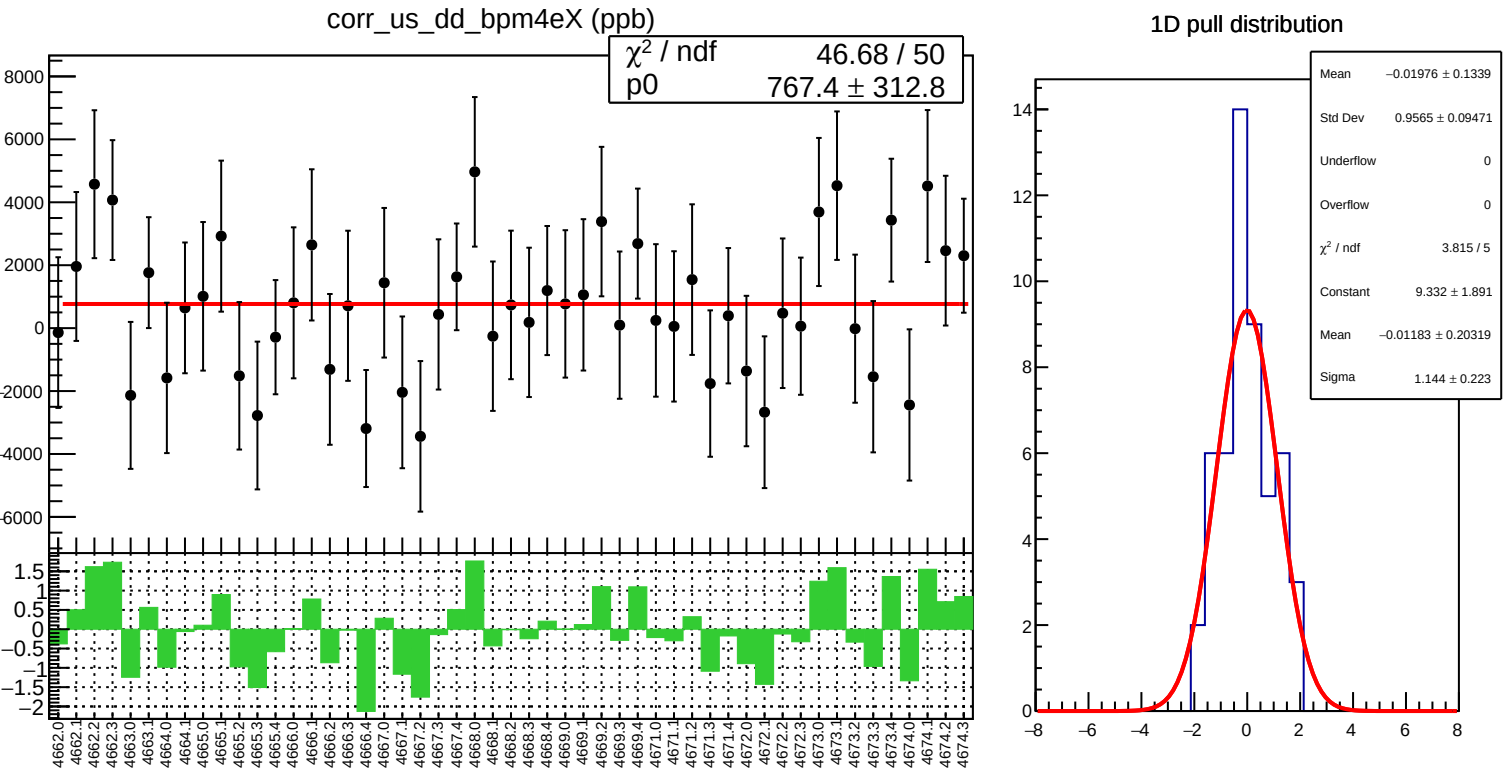

corr_us_avg_bpm8X (ppb)
χ² / ndf 0 / 51
p0 0 ± 9.06
100
50
0
−50
−100
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3
1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

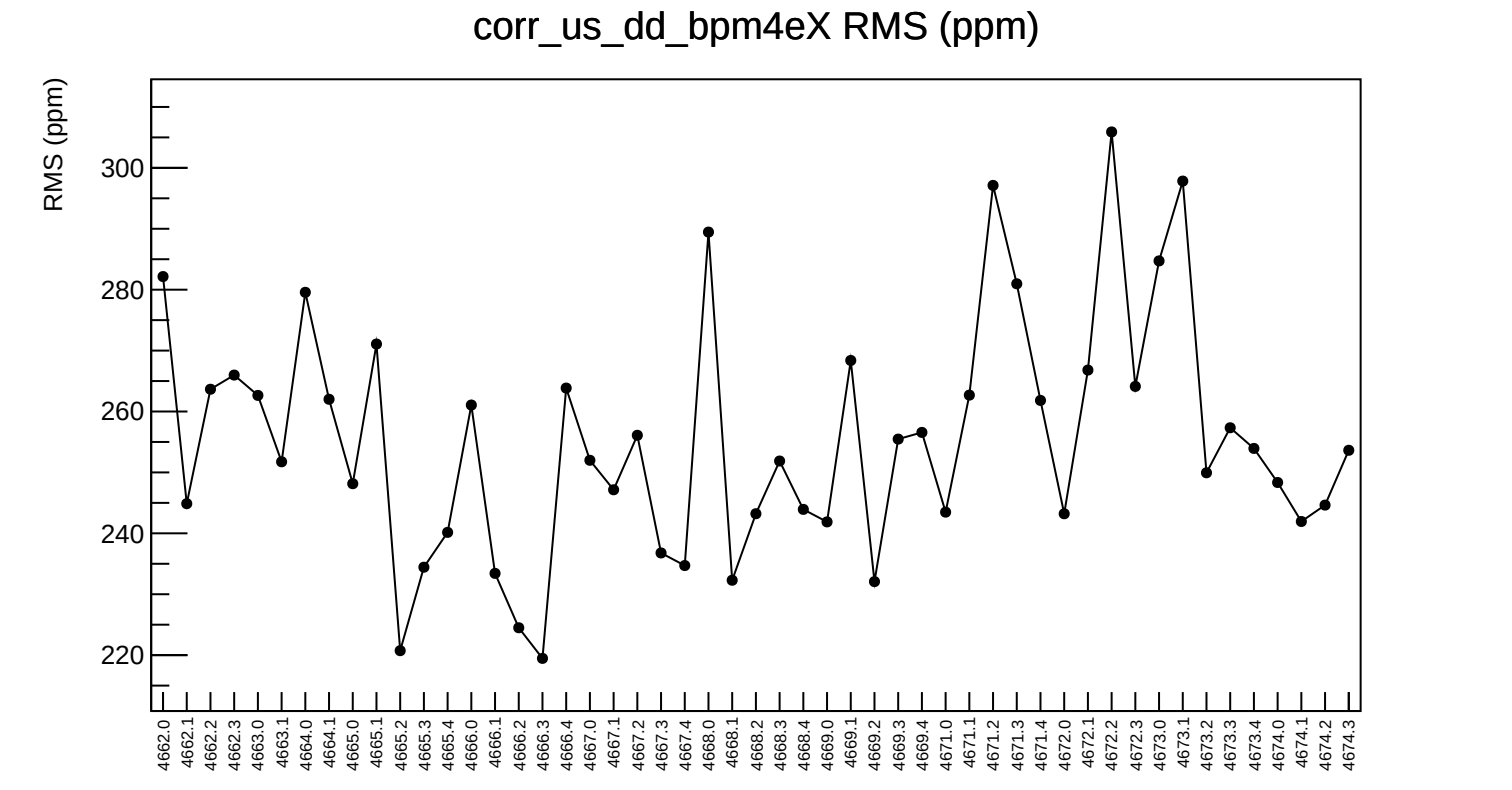

corr_us_avg_bpm8X RMS (ppm)
RMS (ppm)
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

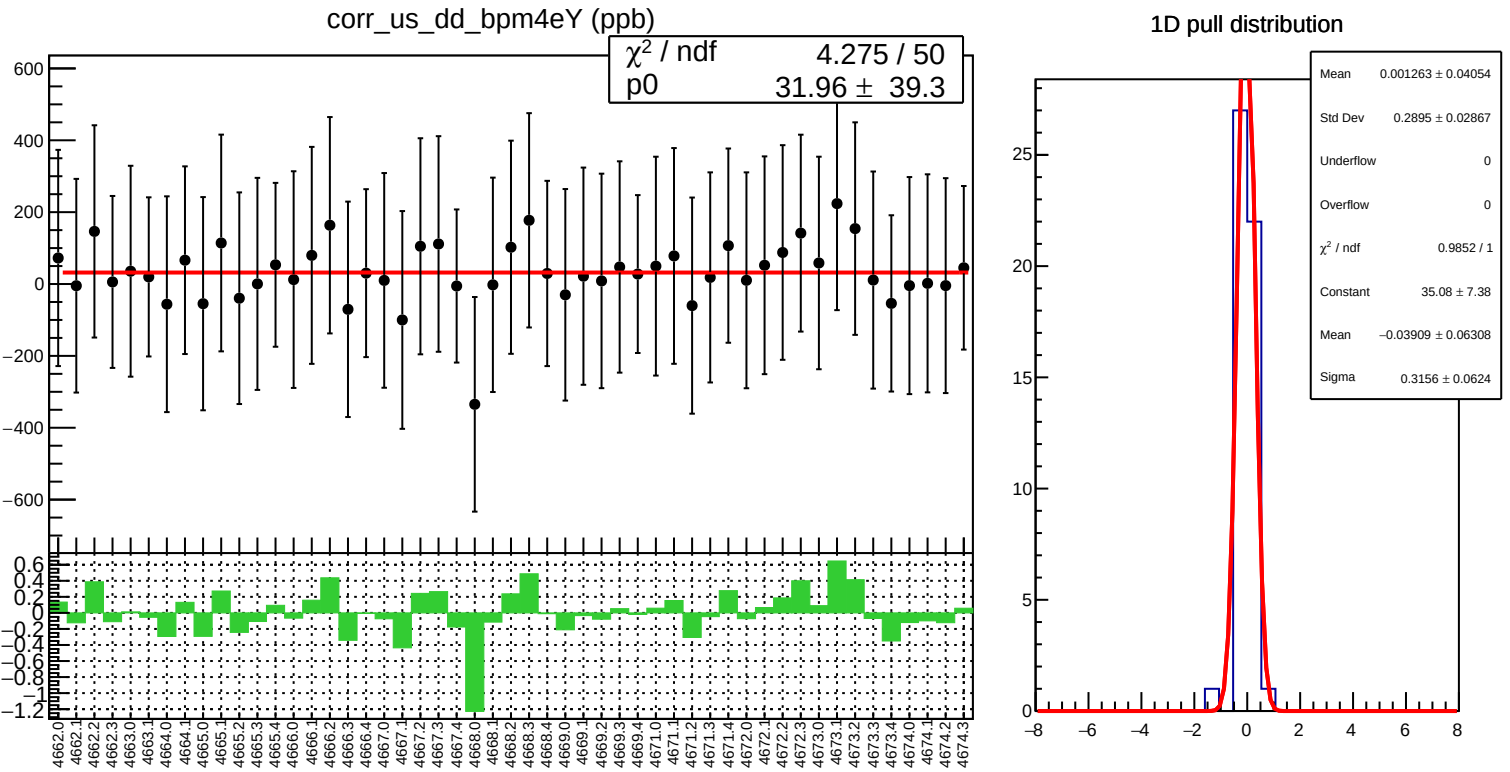

corr_us_avg_bpm8Y (ppb)
χ² / ndf 0 / 51
p0 0 ± 9.366
150
100
50
0
−50
−100
−150
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

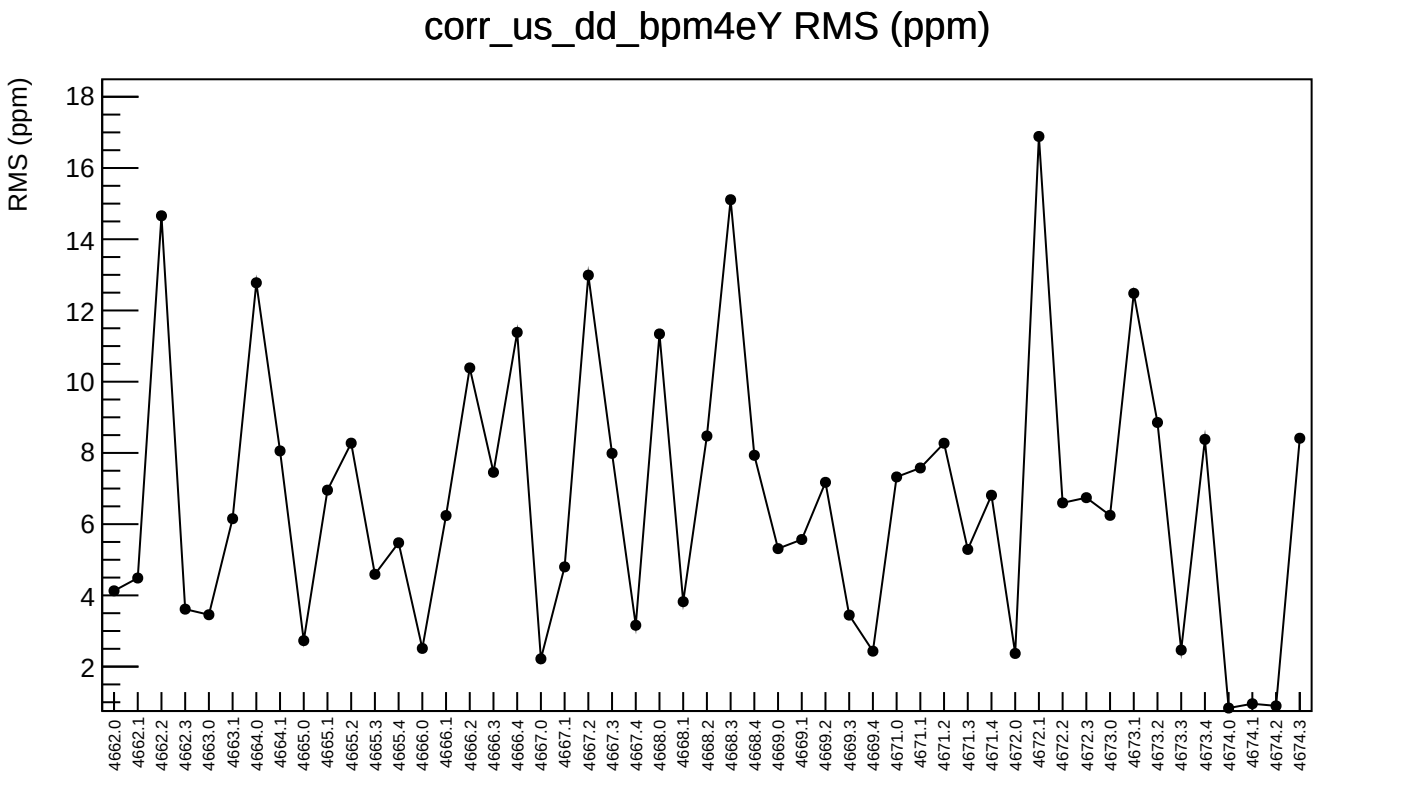

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

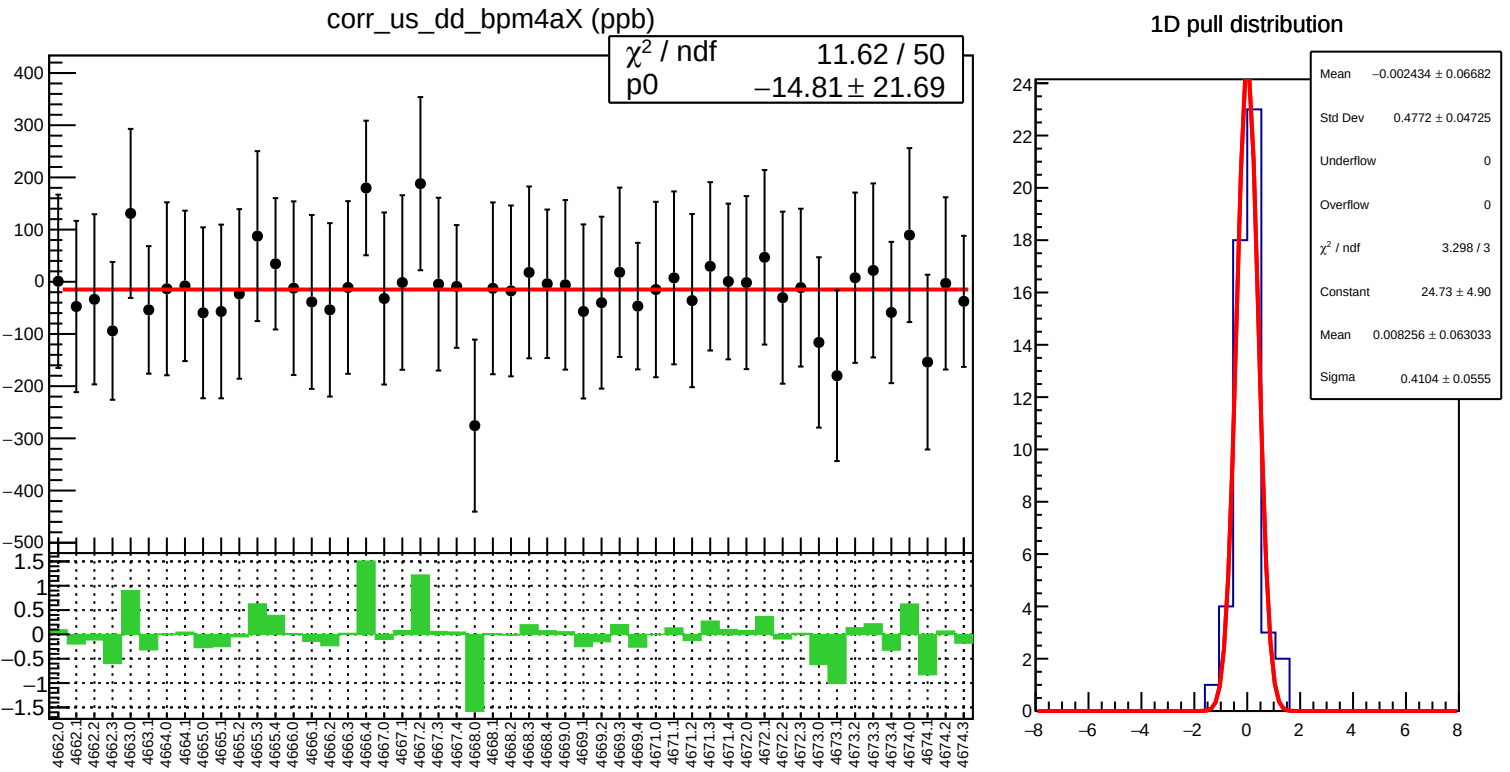

corr_us_avg_bpm8Y RMS (ppm)
RMS (ppm)
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

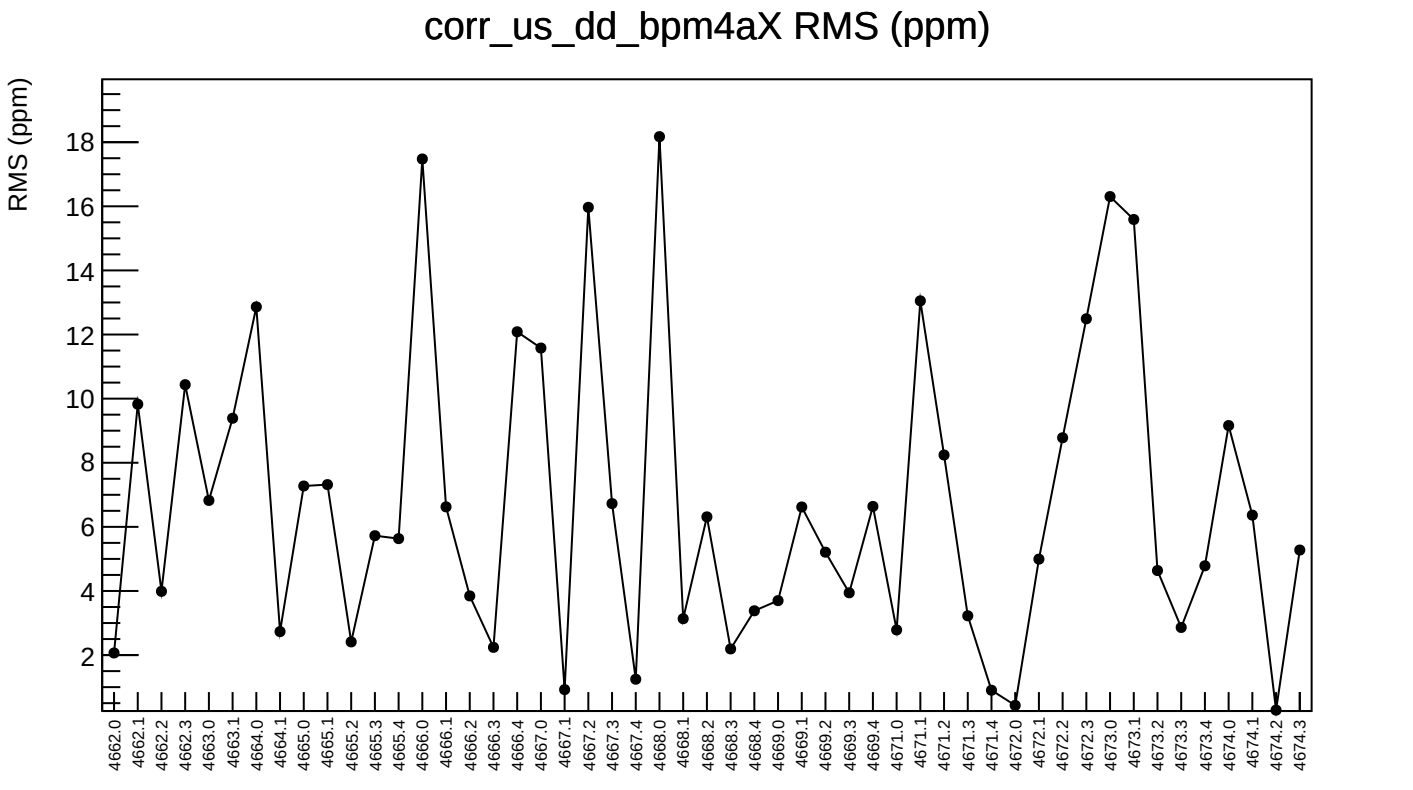

corr_us_dd_bpm4eX (ppb)
χ² / ndf 46.68 / 50
p0 767.4 ± 312.8
1D pull distribution
Mean −0.01976 ± 0.1339
Std Dev 0.9565 ± 0.09471
Underflow 0
Overflow 0
χ² / ndf 3.815 / 5
Constant 9.332 ± 1.891
Mean −0.01183 ± 0.20319
Sigma 1.144 ± 0.223

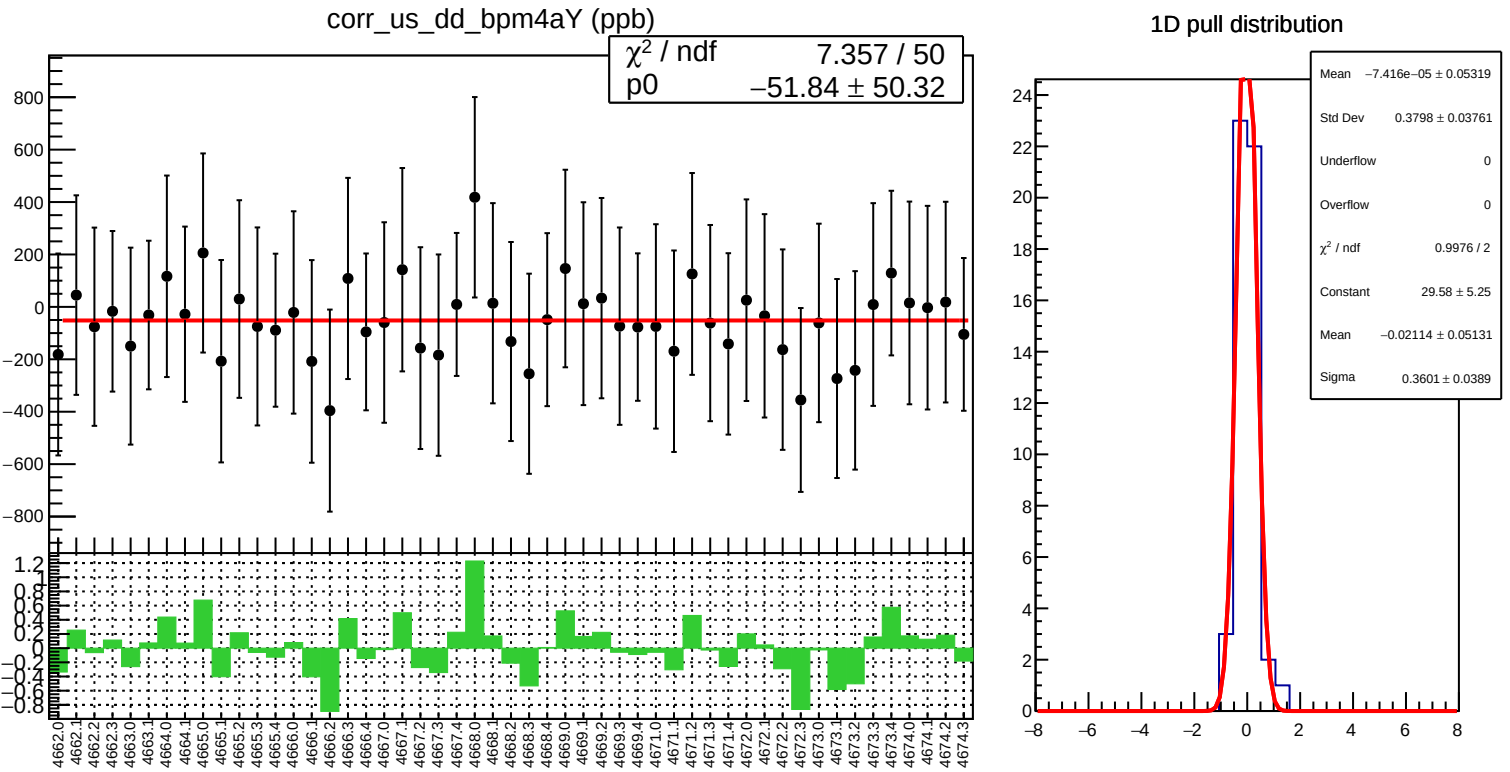

corr_us_dd_bpm4eX RMS (ppm)
RMS (ppm)
300
280
260
240
220
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

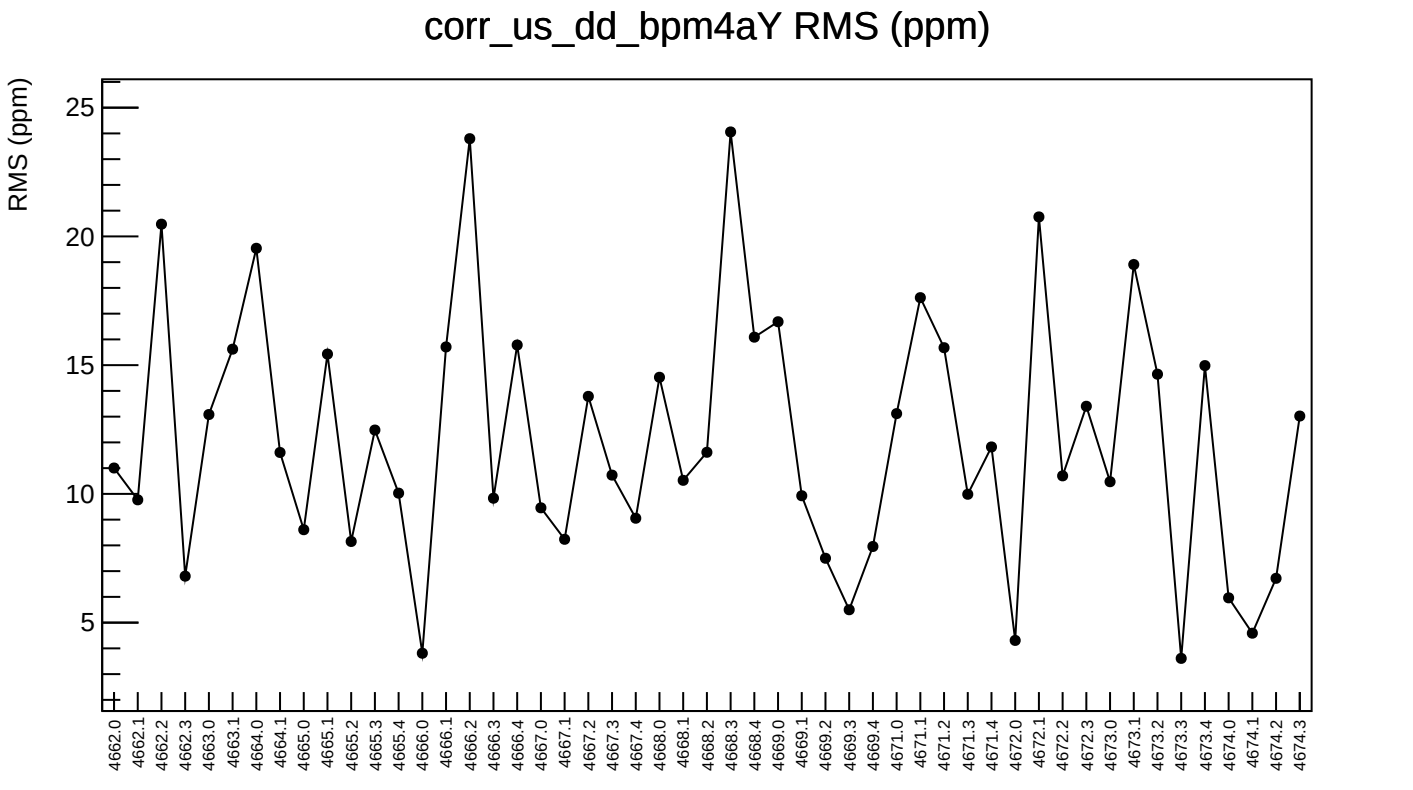

corr_us_dd_bpm4eY (ppb)
χ² / ndf 4.275 / 50
p0 31.96 ± 39.3
1D pull distribution
Mean 0.001263 ± 0.04054
Std Dev 0.2895 ± 0.02867
Underflow 0
Overflow 0
χ² / ndf 0.9852 / 1
Constant 35.08 ± 7.38
Mean −0.03909 ± 0.06308
Sigma 0.3156 ± 0.0624

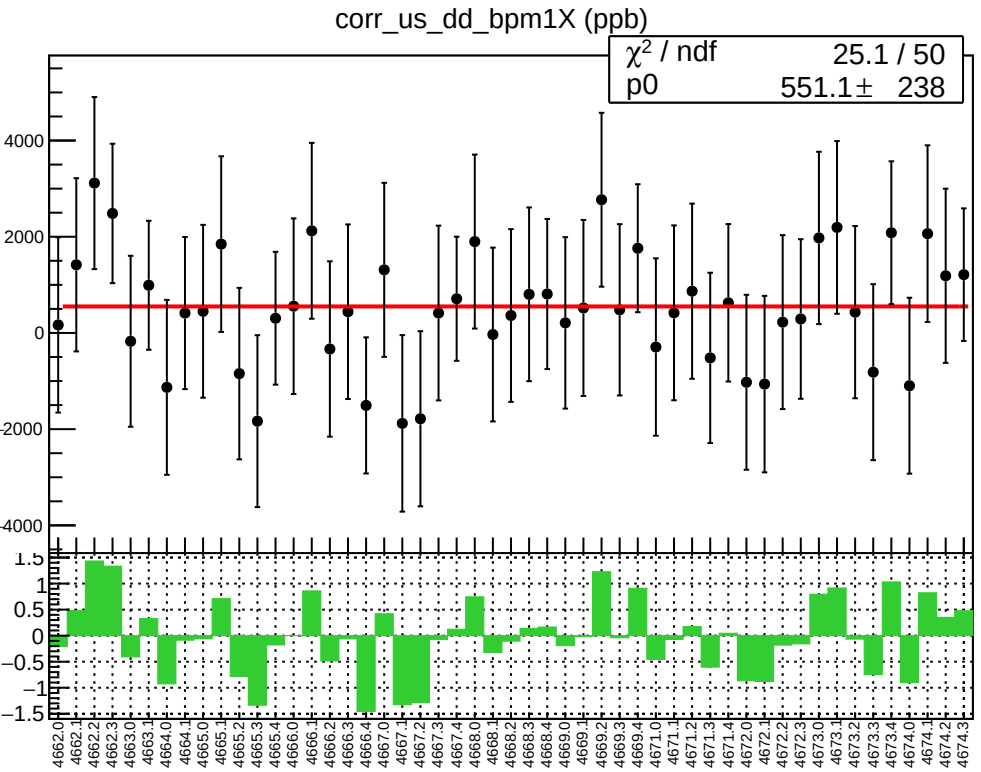

corr_us_dd_bpm4eY RMS (ppm)
RMS (ppm)
18
16
14
12
10
8
6
4
2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

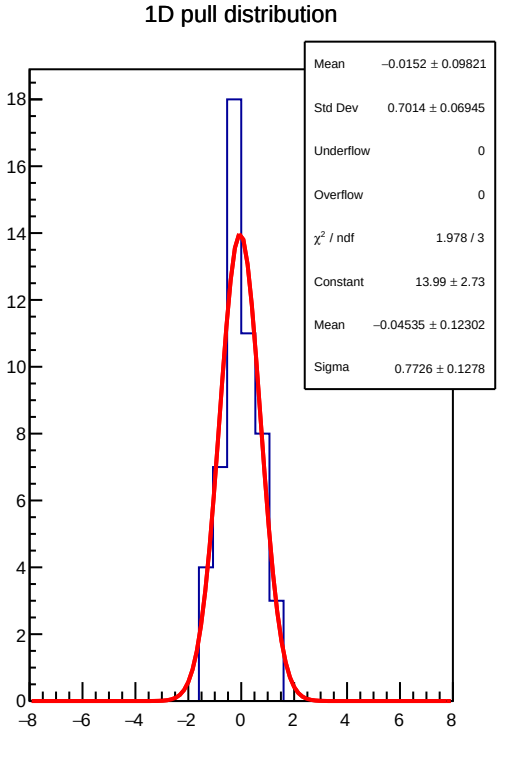

corr_us_dd_bpm4aX (ppb)
χ² / ndf 11.62 / 50
p0 −14.81 ± 21.69
1D pull distribution
Mean −0.002434 ± 0.06682
Std Dev 0.4772 ± 0.04725
Underflow 0
Overflow 0
χ² / ndf 3.298 / 3
Constant 24.73 ± 4.90
Mean 0.008256 ± 0.063033
Sigma 0.4104 ± 0.0555

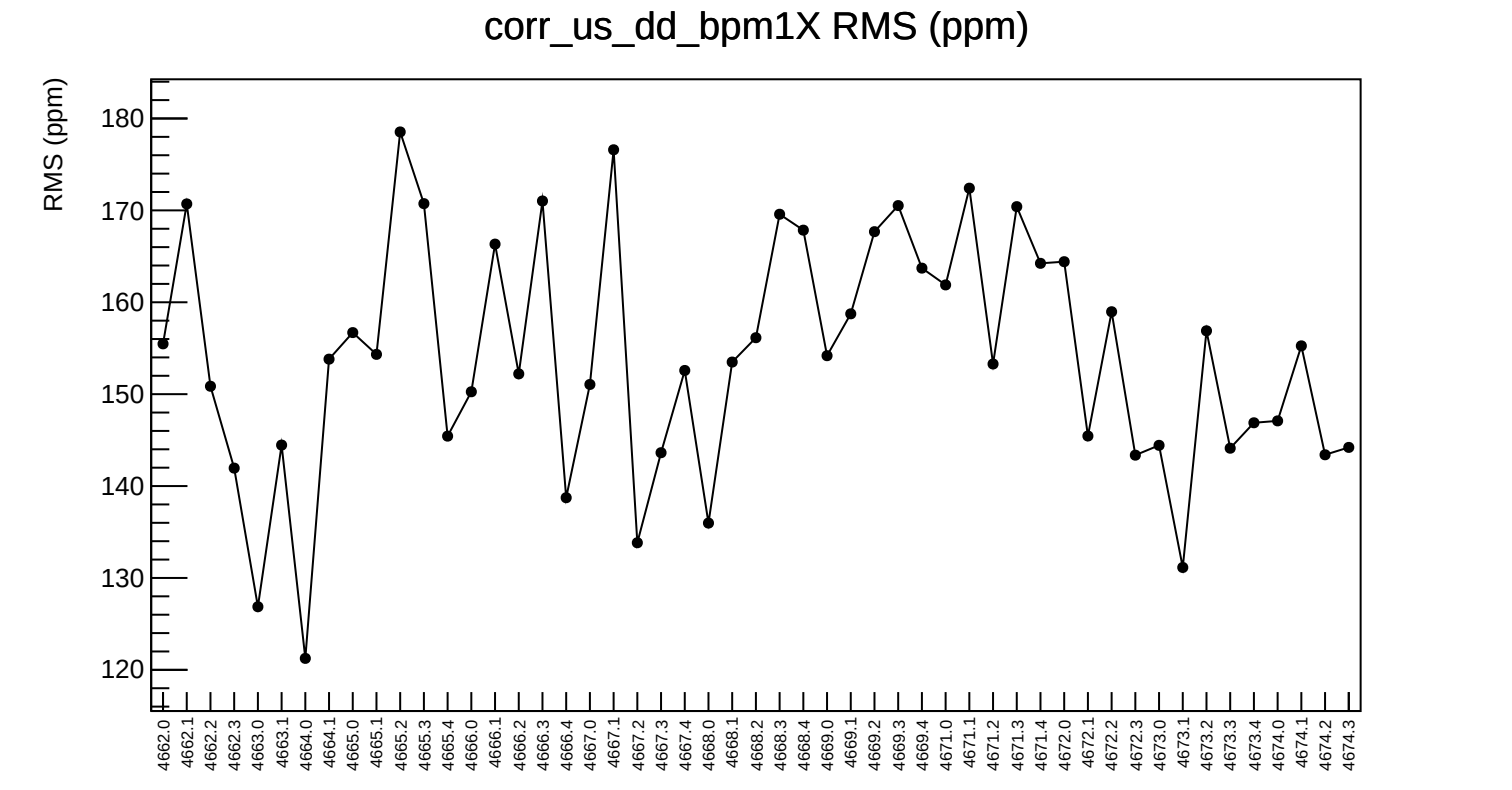

corr_us_dd_bpm4aX RMS (ppm)
RMS (ppm)
2
4
6
8
10
12
14
16
18
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

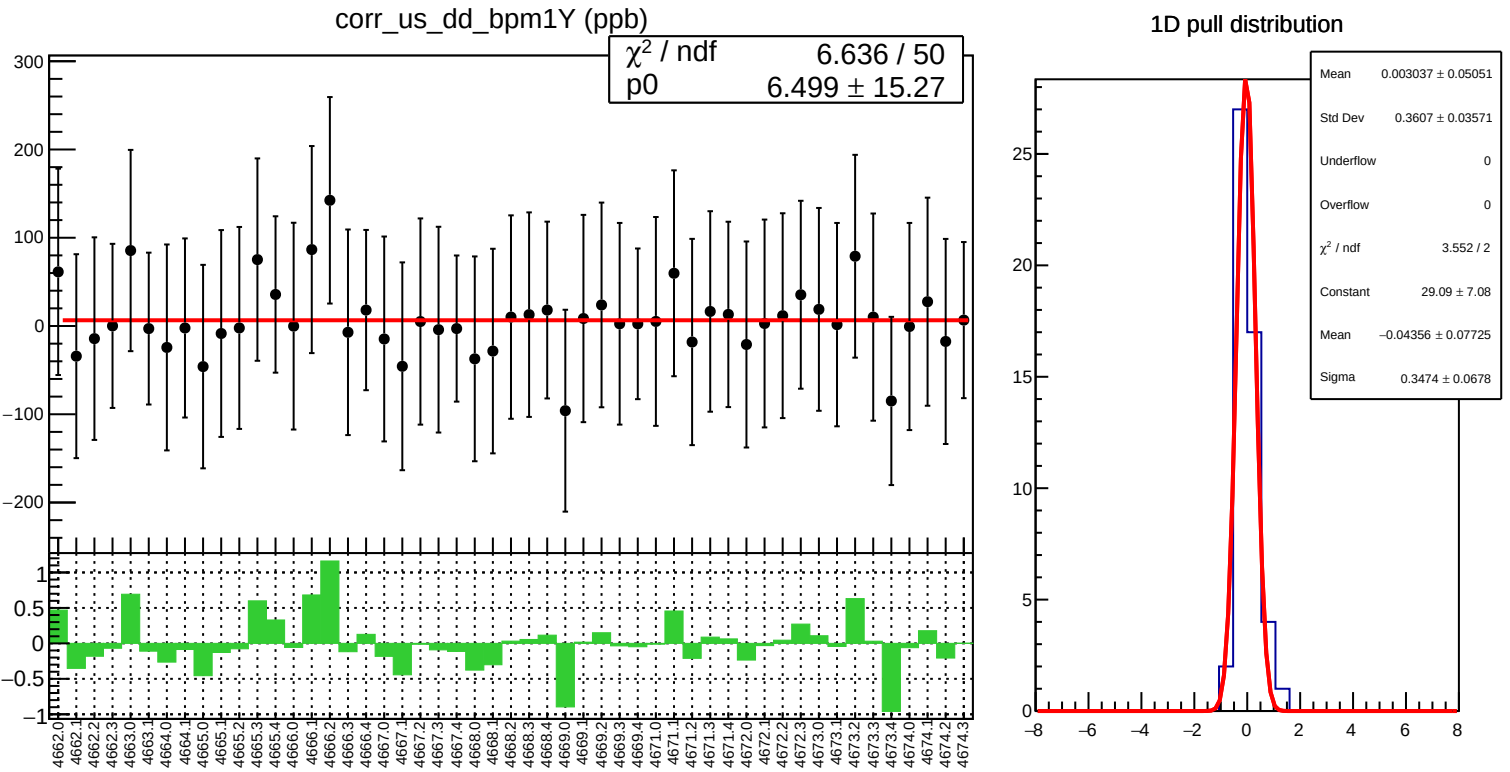

corr_us_dd_bpm4aY (ppb)
χ² / ndf 7.357 / 50
p0 −51.84 ± 50.32
1D pull distribution
Mean −7.416e−05 ± 0.05319
Std Dev 0.3798 ± 0.03761
Underflow 0
Overflow 0
χ² / ndf 0.9976 / 2
Constant 29.58 ± 5.25
Mean −0.02114 ± 0.05131
Sigma 0.3601 ± 0.0389

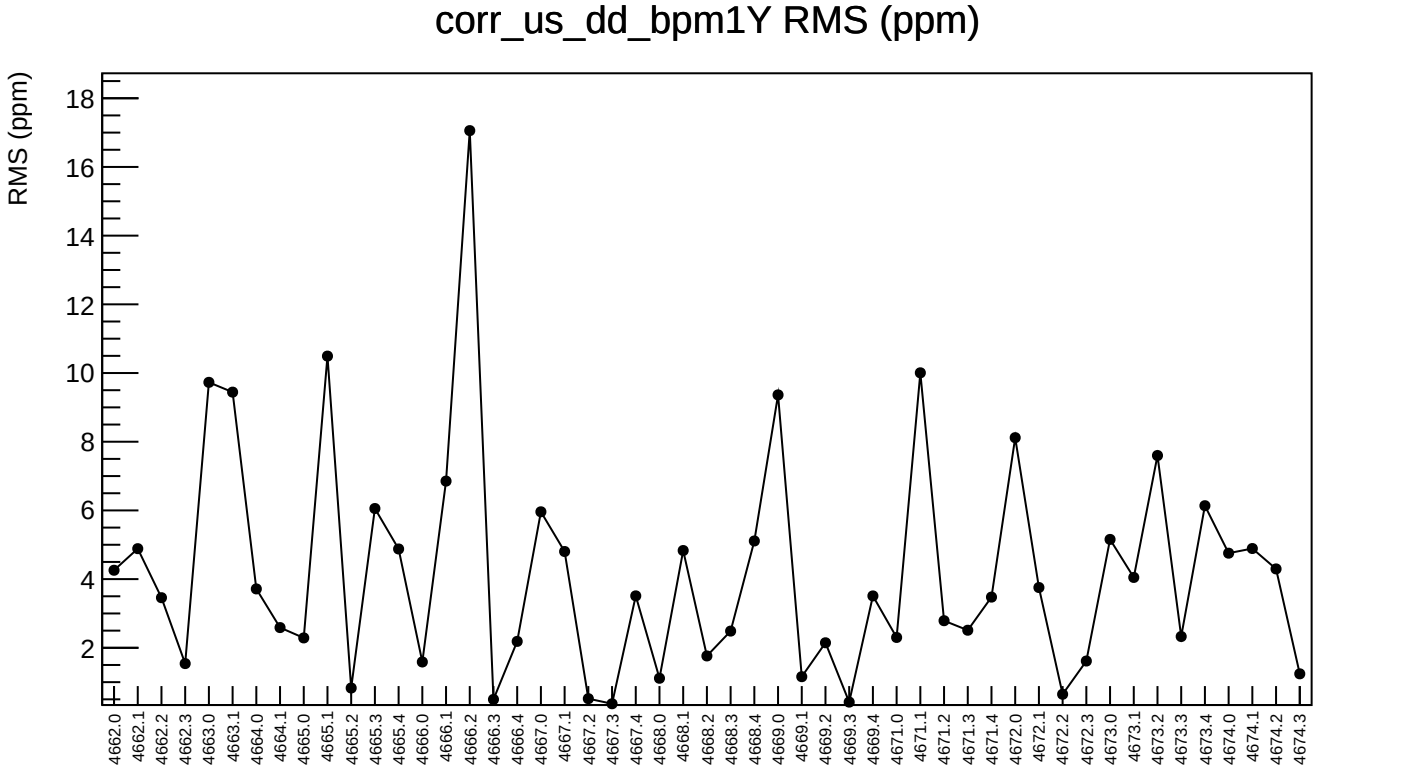

corr_us_dd_bpm4aY RMS (ppm)
RMS (ppm)
25
20
15
10
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

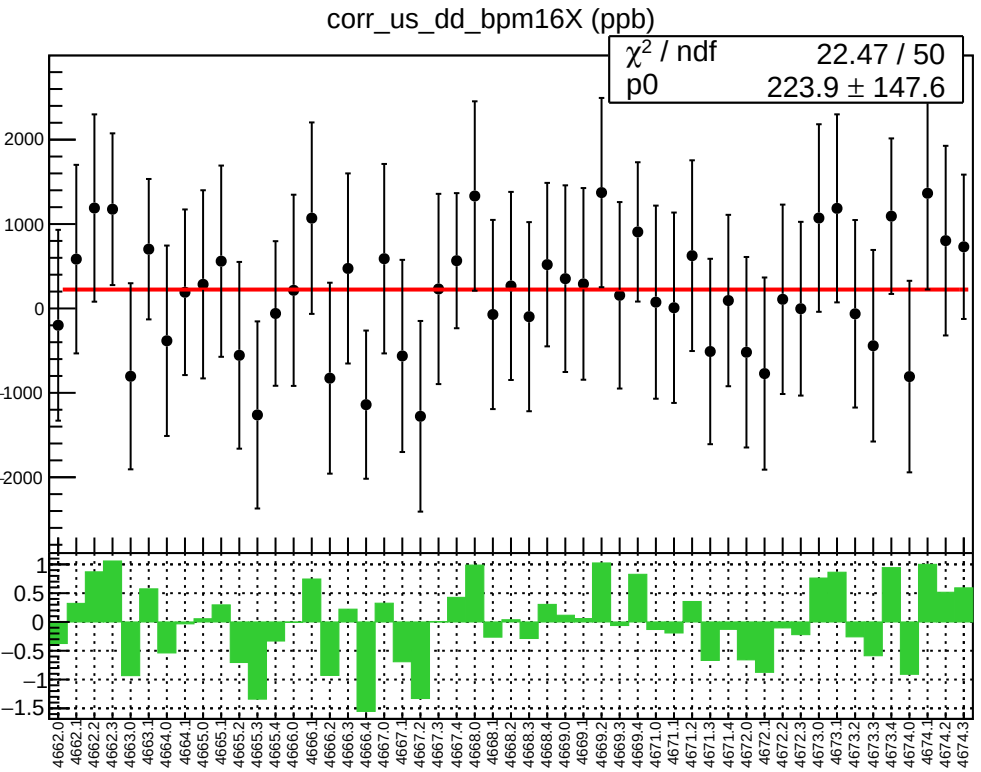

corr_us_dd_bpm1X (ppb)
χ² / ndf 25.1 / 50
p0 551.1± 238
4000
2000
0
-2000
-4000
1.5
1
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

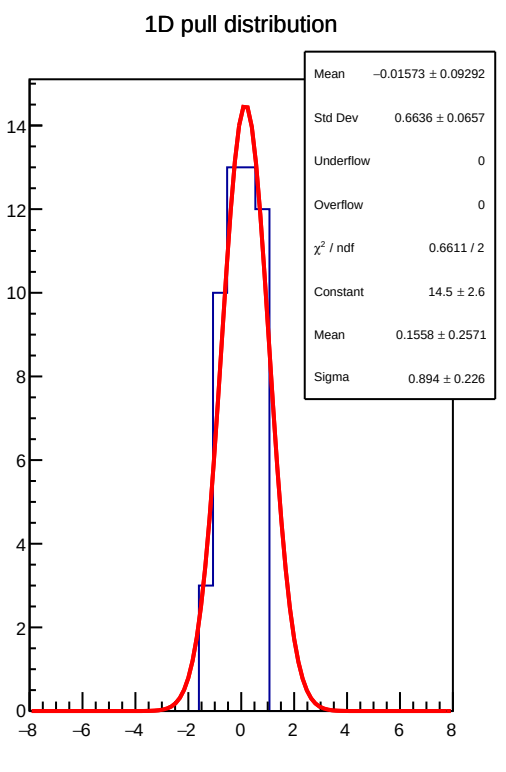

1D pull distribution
Mean −0.0152 ± 0.09821
Std Dev 0.7014 ± 0.06945
Underflow 0
Overflow 0
χ² / ndf 1.978 / 3
Constant 13.99 ± 2.73
Mean −0.04535 ± 0.12302
Sigma 0.7726 ± 0.1278
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

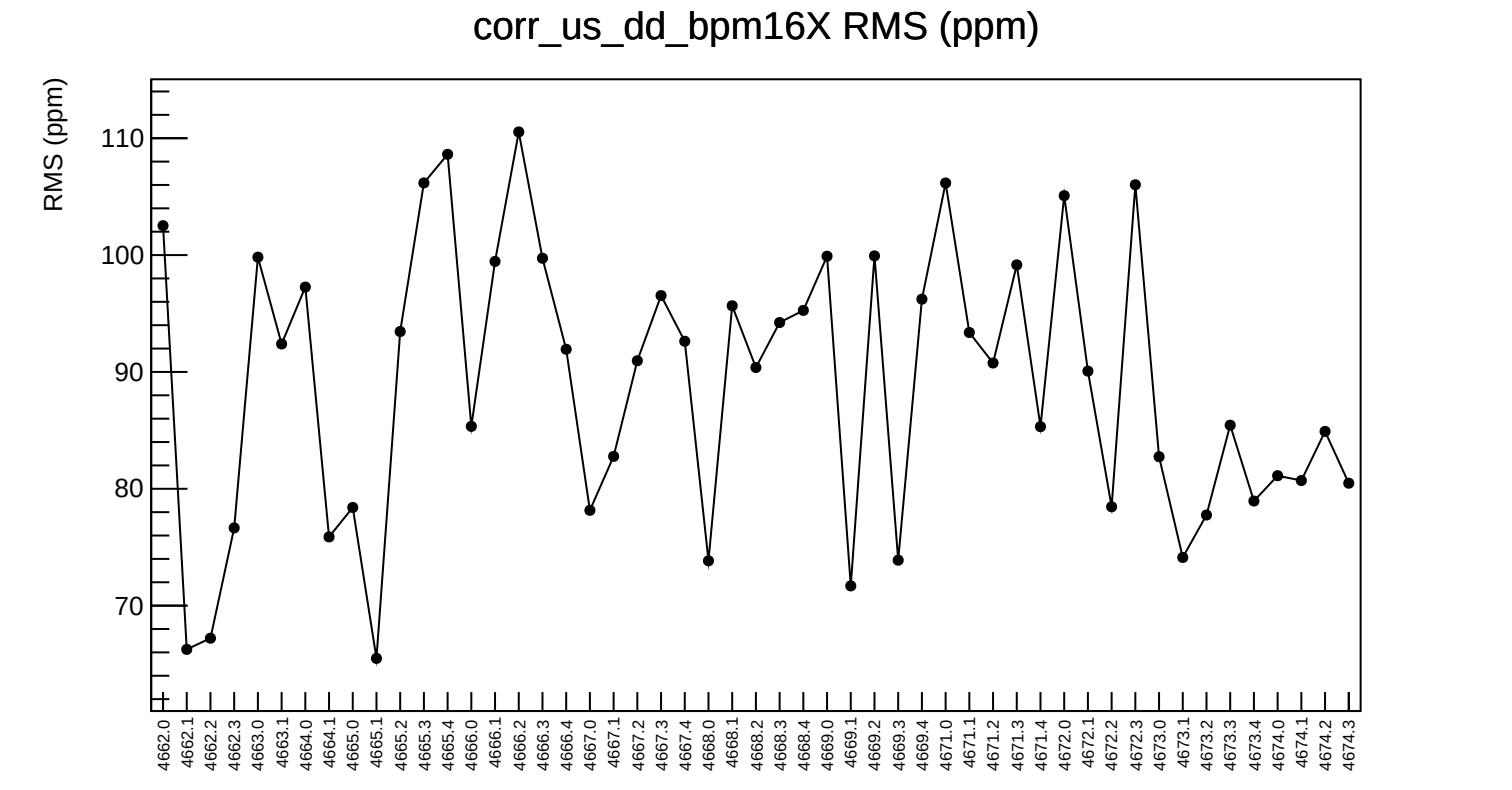

corr_us_dd_bpm1X RMS (ppm)
RMS (ppm)
180
170
160
150
140
130
120
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

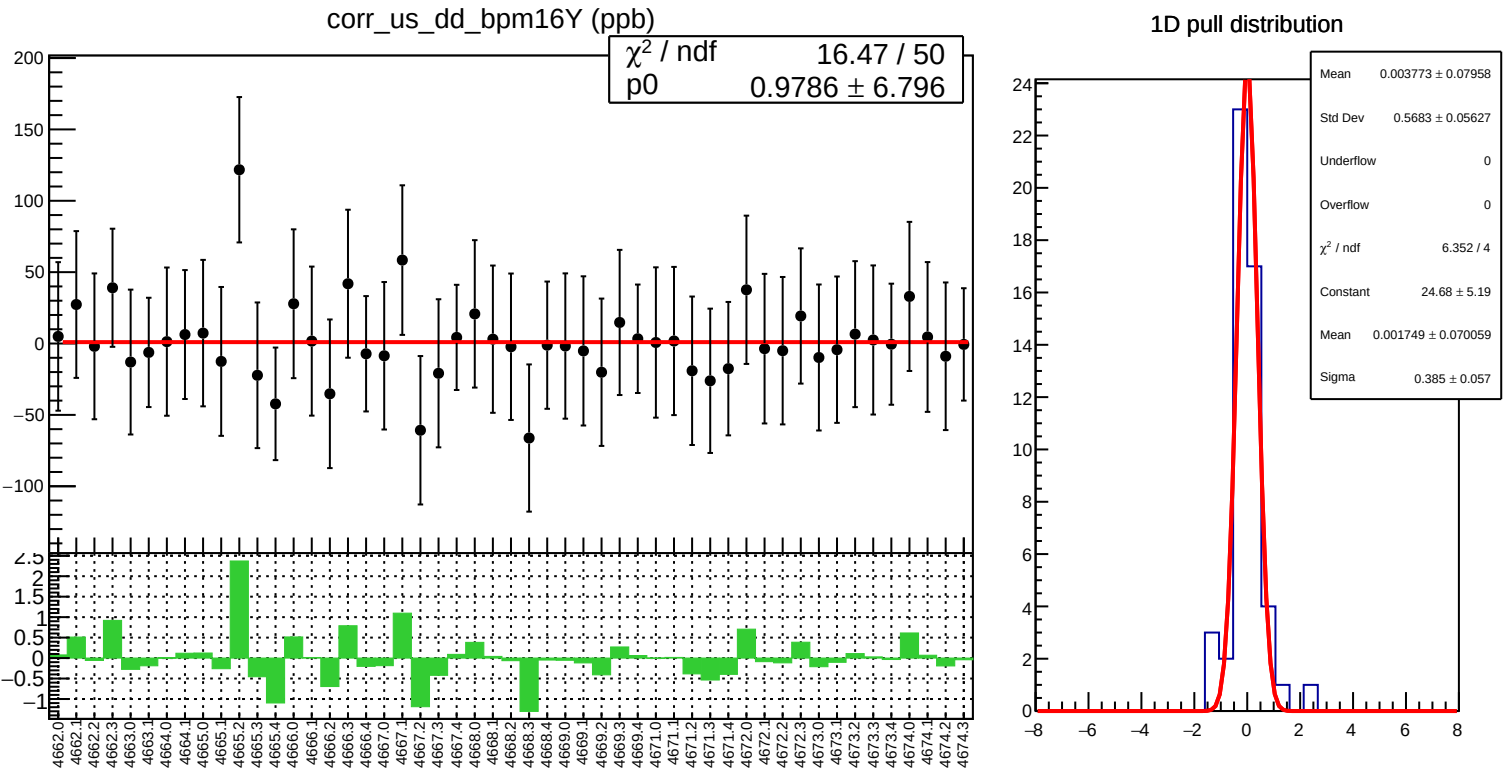

corr_us_dd_bpm1Y (ppb)
χ² / ndf 6.636 / 50
p0 6.499 ± 15.27
1D pull distribution
Mean 0.003037 ± 0.05051
Std Dev 0.3607 ± 0.03571
Underflow 0
Overflow 0
χ² / ndf 3.552 / 2
Constant 29.09 ± 7.08
Mean −0.04356 ± 0.07725
Sigma 0.3474 ± 0.0678

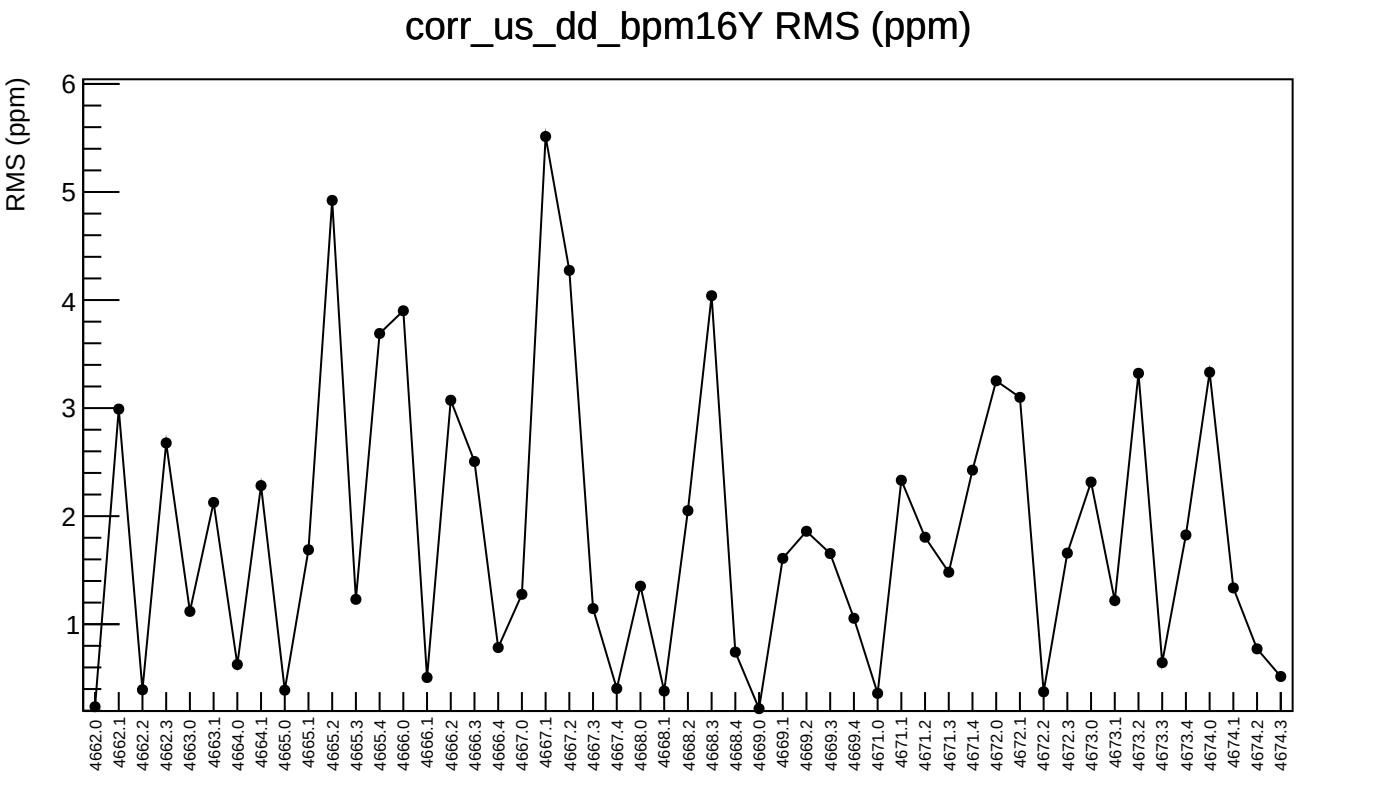

corr_us_dd_bpm1Y RMS (ppm)
RMS (ppm)
18
16
14
12
10
8
6
4
2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

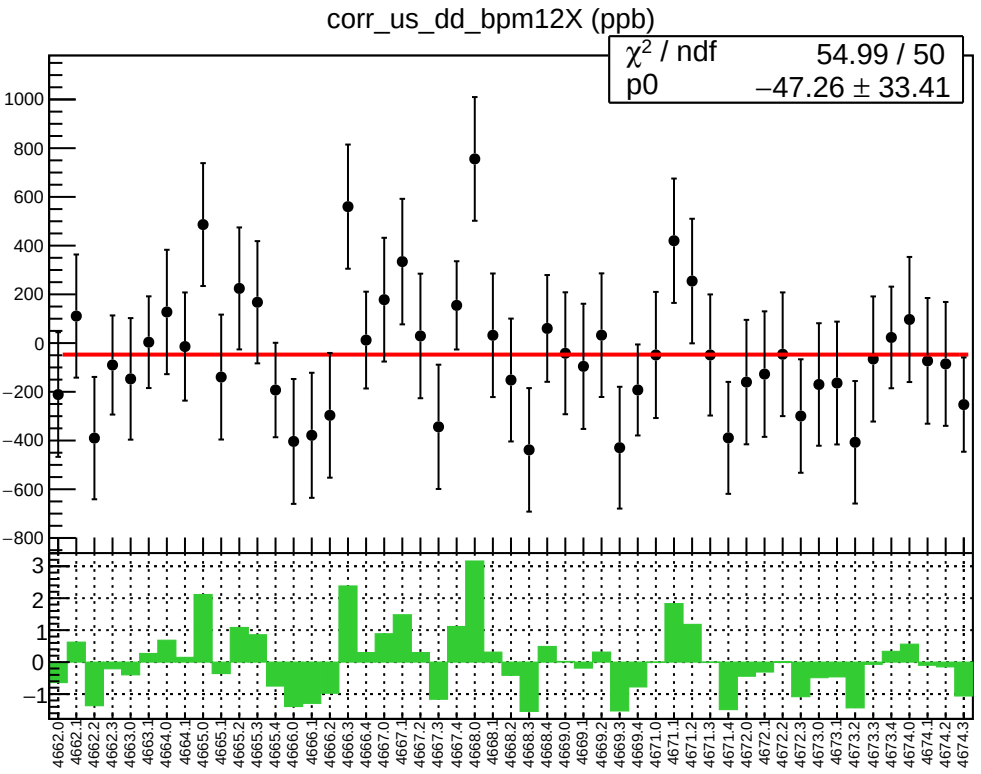

corr_us_dd_bpm16X (ppb)
χ² / ndf 22.47 / 50
p0 223.9 ± 147.6
2000
1000
0
-1000
-2000
1
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

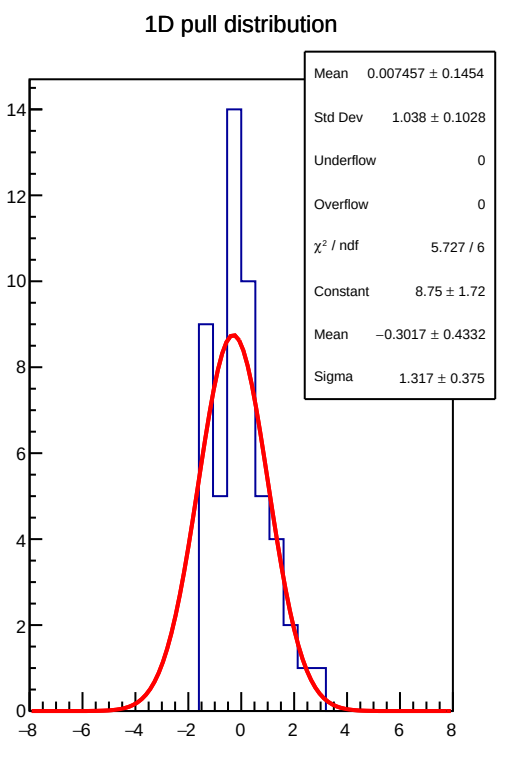

1D pull distribution
Mean −0.01573 ± 0.09292
Std Dev 0.6636 ± 0.0657
Underflow 0
Overflow 0
χ² / ndf 0.6611 / 2
Constant 14.5 ± 2.6
Mean 0.1558 ± 0.2571
Sigma 0.894 ± 0.226
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

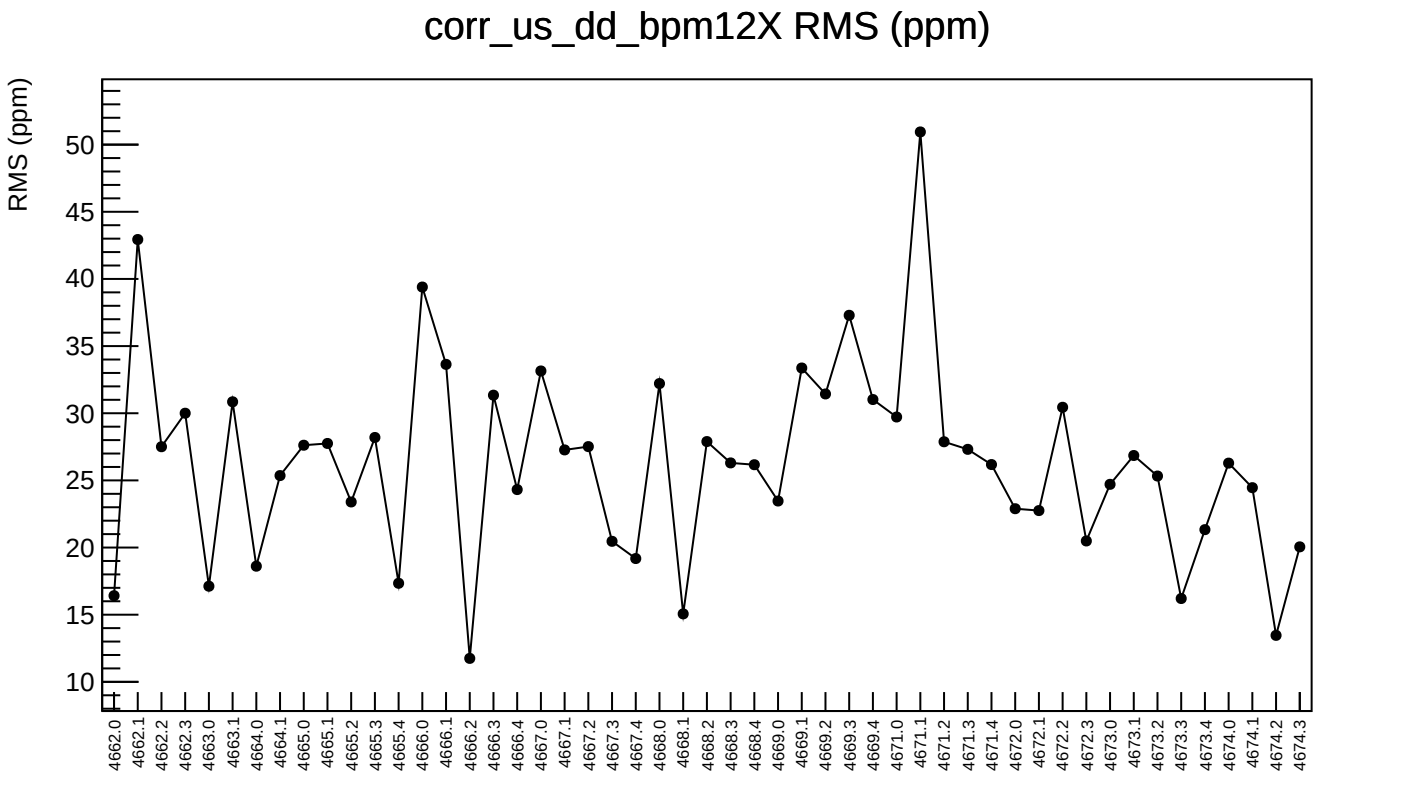

corr_us_dd_bpm16X RMS (ppm)
RMS (ppm)
110
100
90
80
70
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

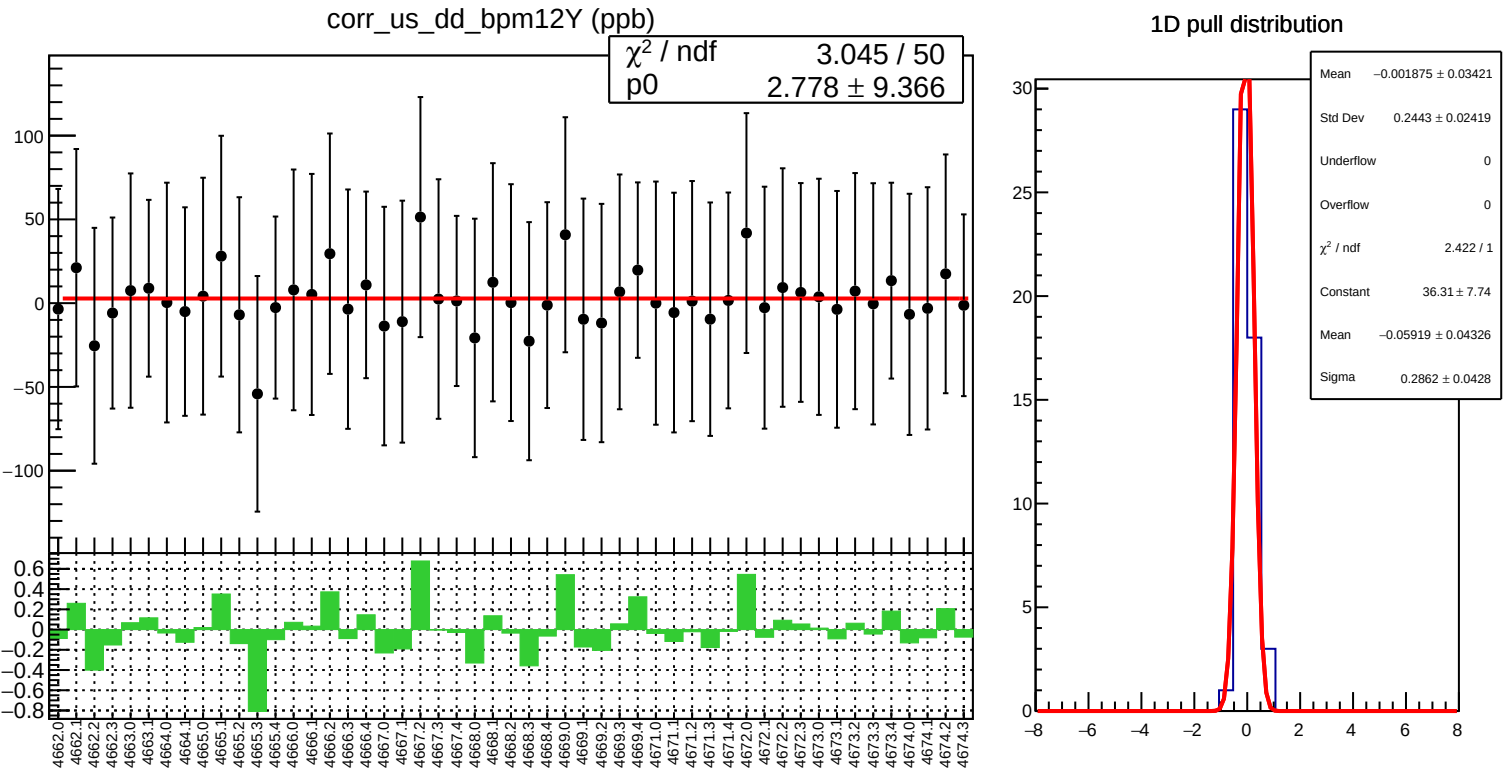

corr_us_dd_bpm16Y (ppb)
χ² / ndf 16.47 / 50
p0 0.9786 ± 6.796
1D pull distribution
Mean 0.003773 ± 0.07958
Std Dev 0.5683 ± 0.05627
Underflow 0
Overflow 0
χ² / ndf 6.352 / 4
Constant 24.68 ± 5.19
Mean 0.001749 ± 0.070059
Sigma 0.385 ± 0.057

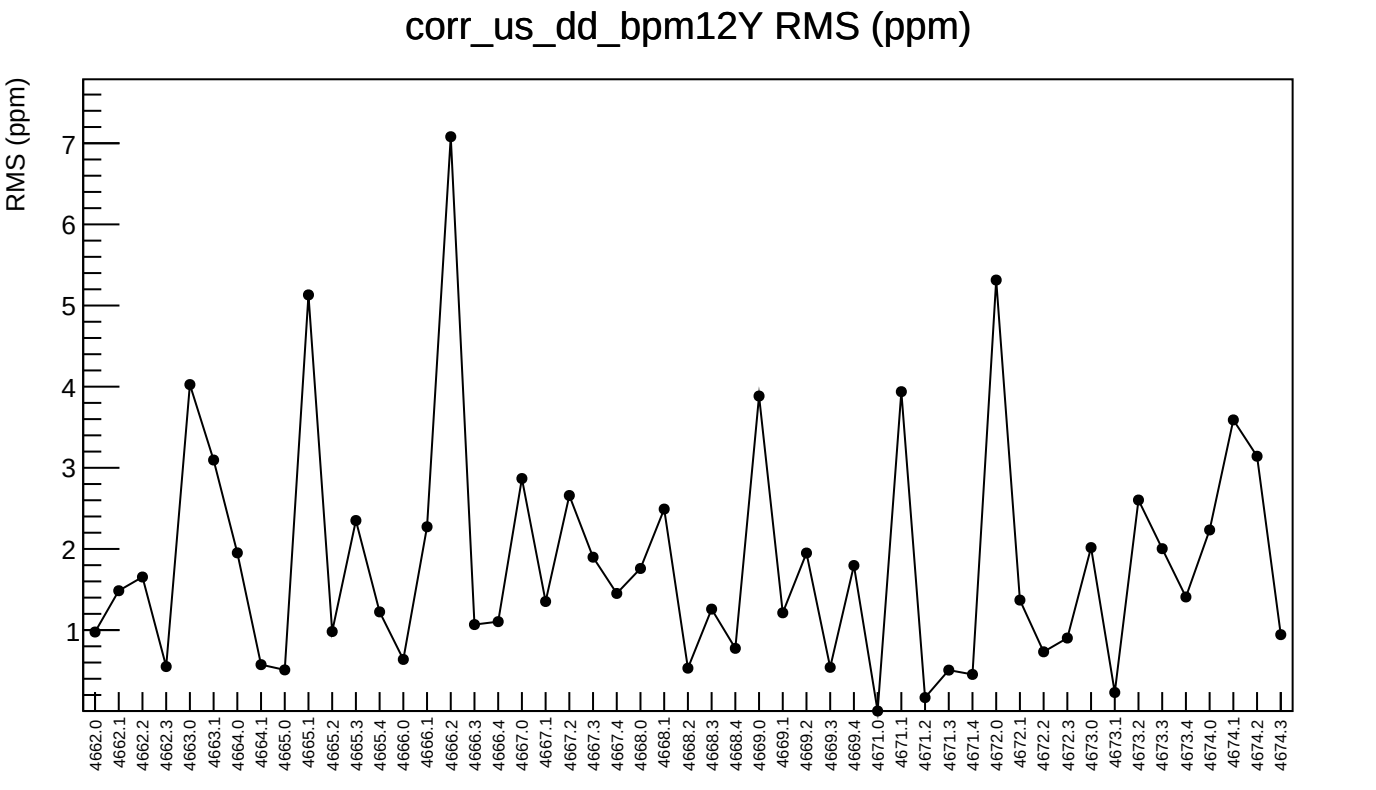

corr_us_dd_bpm16Y RMS (ppm)
RMS (ppm)
6
5
4
3
2
1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

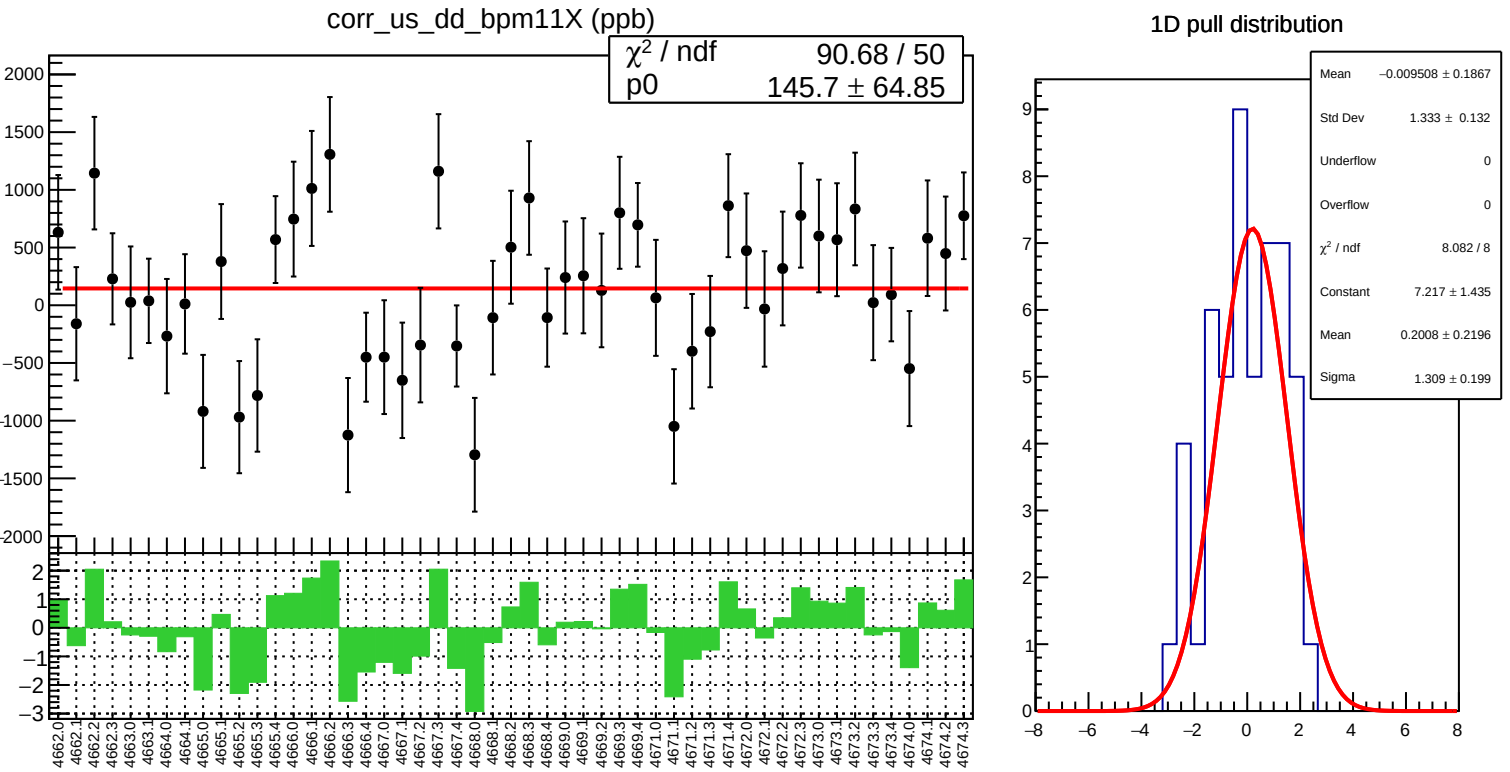

corr_us_dd_bpm12X (ppb)
χ² / ndf 54.99 / 50
p0 −47.26 ± 33.41
1000
800
600
400
200
0
−200
−400
−600
−800
3
2
1
0
−1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

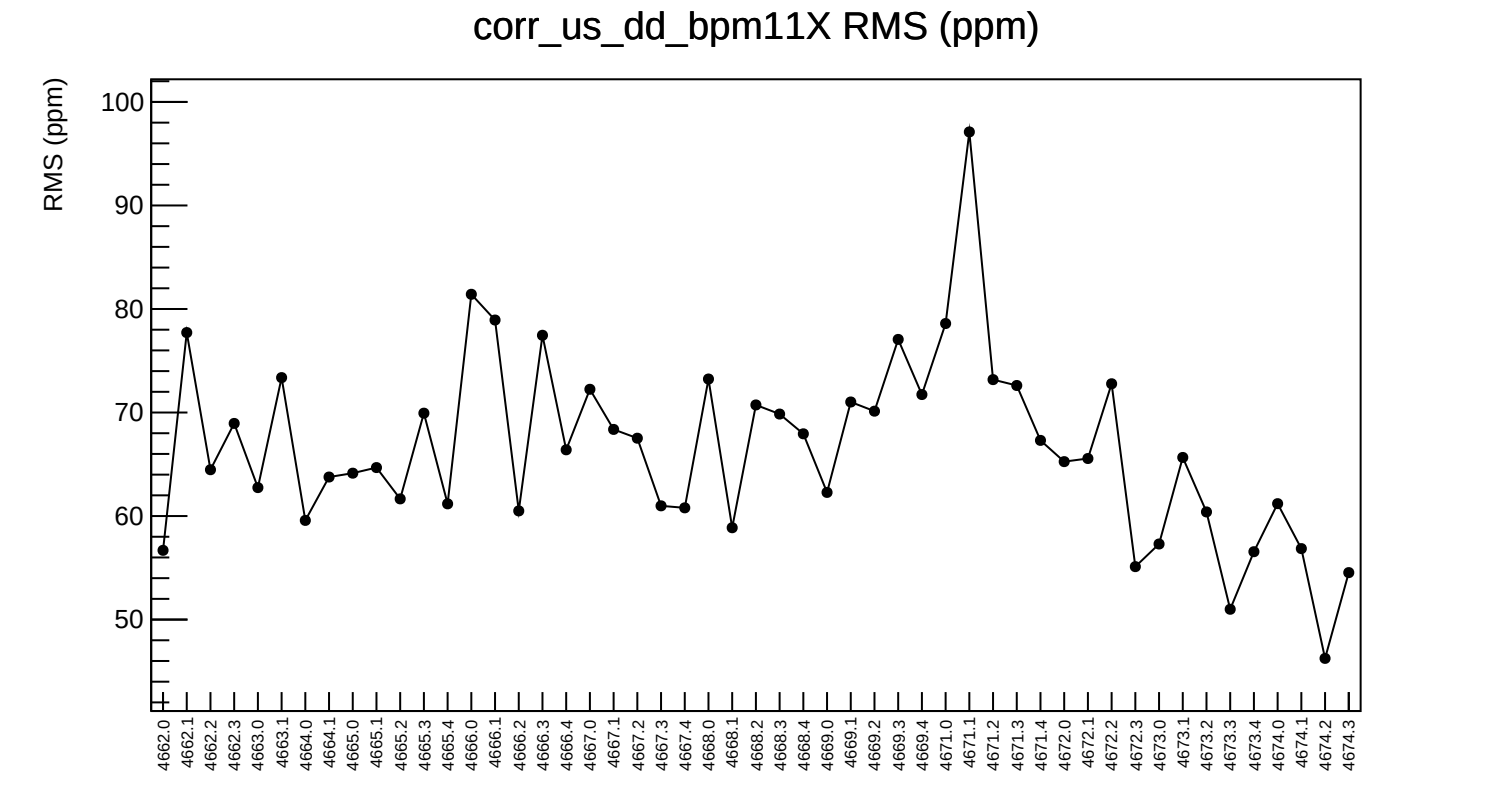

1D pull distribution
Mean 0.007457 ± 0.1454
Std Dev 1.038 ± 0.1028
Underflow 0
Overflow 0
χ² / ndf 5.727 / 6
Constant 8.75 ± 1.72
Mean −0.3017 ± 0.4332
Sigma 1.317 ± 0.375
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

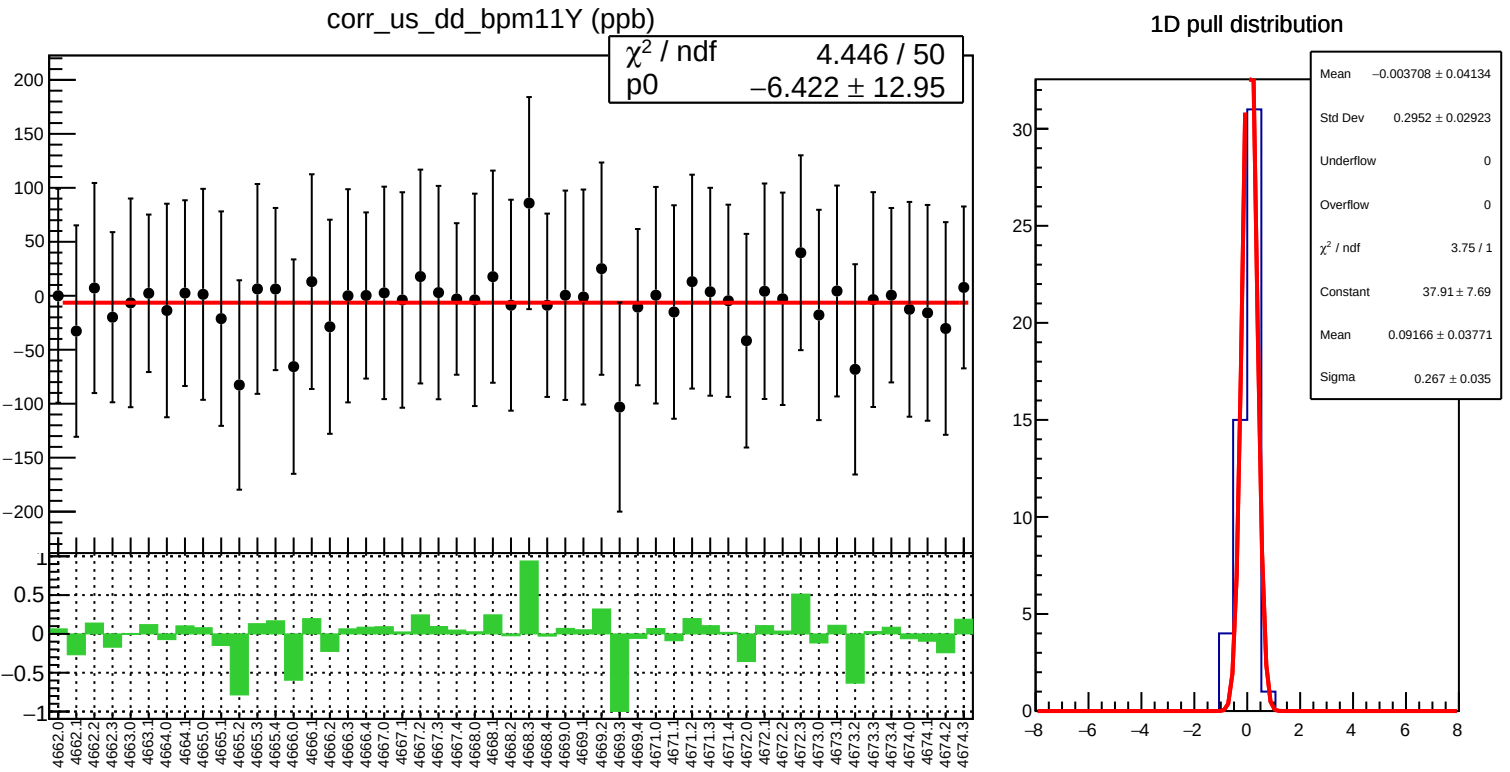

corr_us_dd_bpm12X RMS (ppm)
RMS (ppm)
10
15
20
25
30
35
40
45
50
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

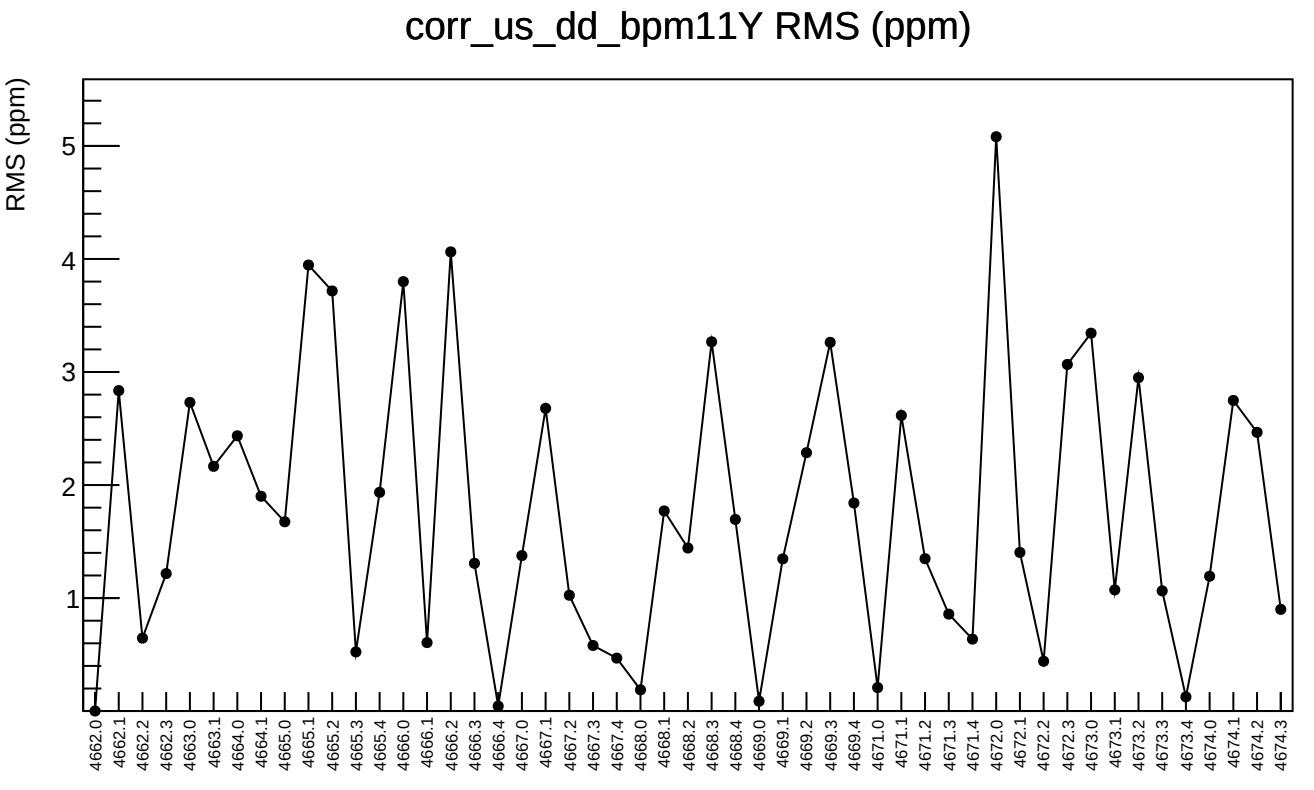

corr_us_dd_bpm12Y (ppb)
χ² / ndf 3.045 / 50
p0 2.778 ± 9.366
100
50
0
−50
−100
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3
1D pull distribution
Mean −0.001875 ± 0.03421
Std Dev 0.2443 ± 0.02419
Underflow 0
Overflow 0
χ² / ndf 2.422 / 1
Constant 36.31 ± 7.74
Mean −0.05919 ± 0.04326
Sigma 0.2862 ± 0.0428
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

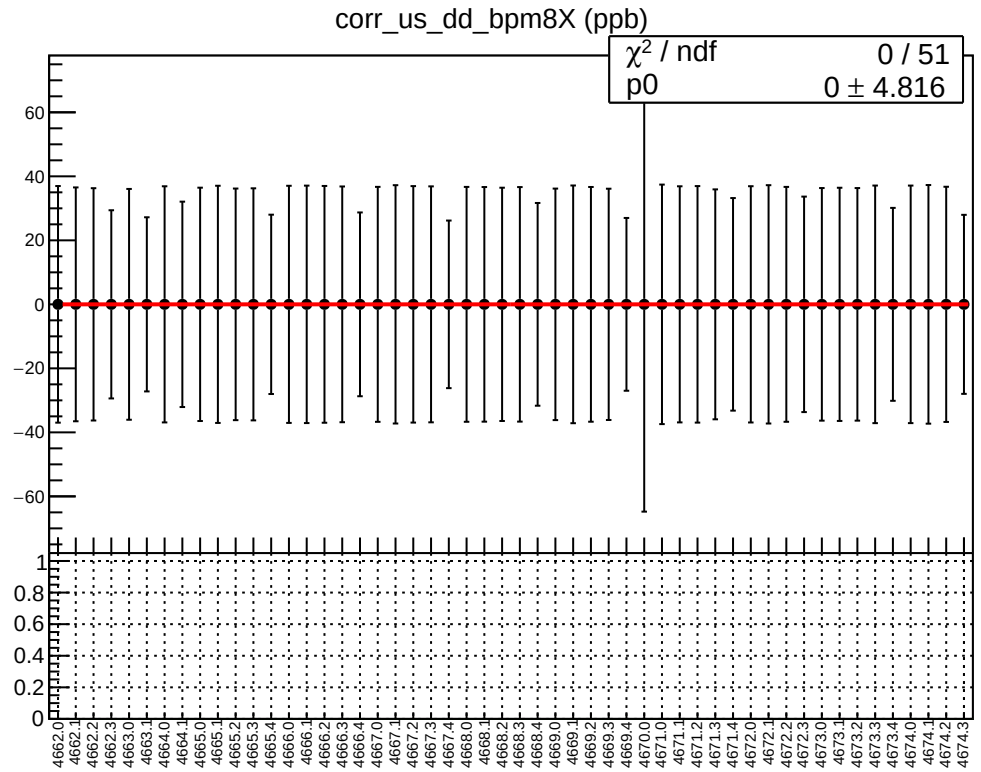

corr_us_dd_bpm12Y RMS (ppm)
RMS (ppm)
1
2
3
4
5
6
7
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

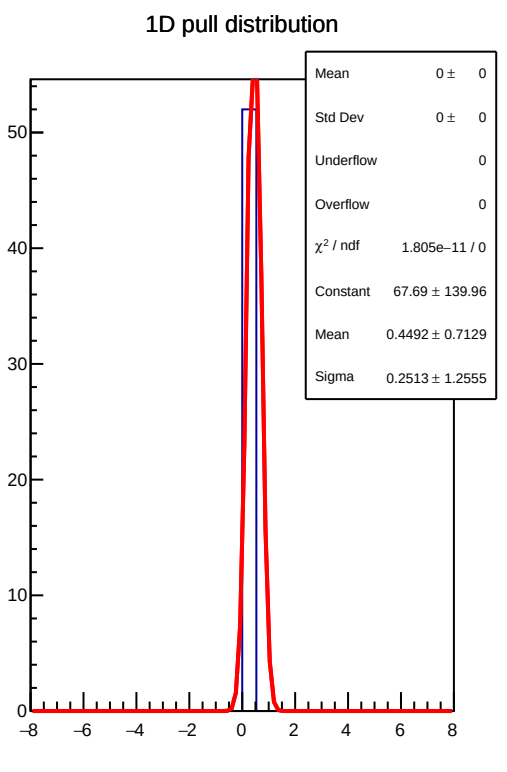

corr_us_dd_bpm11X (ppb)
χ² / ndf 90.68 / 50
p0 145.7 ± 64.85
1D pull distribution
Mean −0.009508 ± 0.1867
Std Dev 1.333 ± 0.132
Underflow 0
Overflow 0
χ² / ndf 8.082 / 8
Constant 7.217 ± 1.435
Mean 0.2008 ± 0.2196
Sigma 1.309 ± 0.199

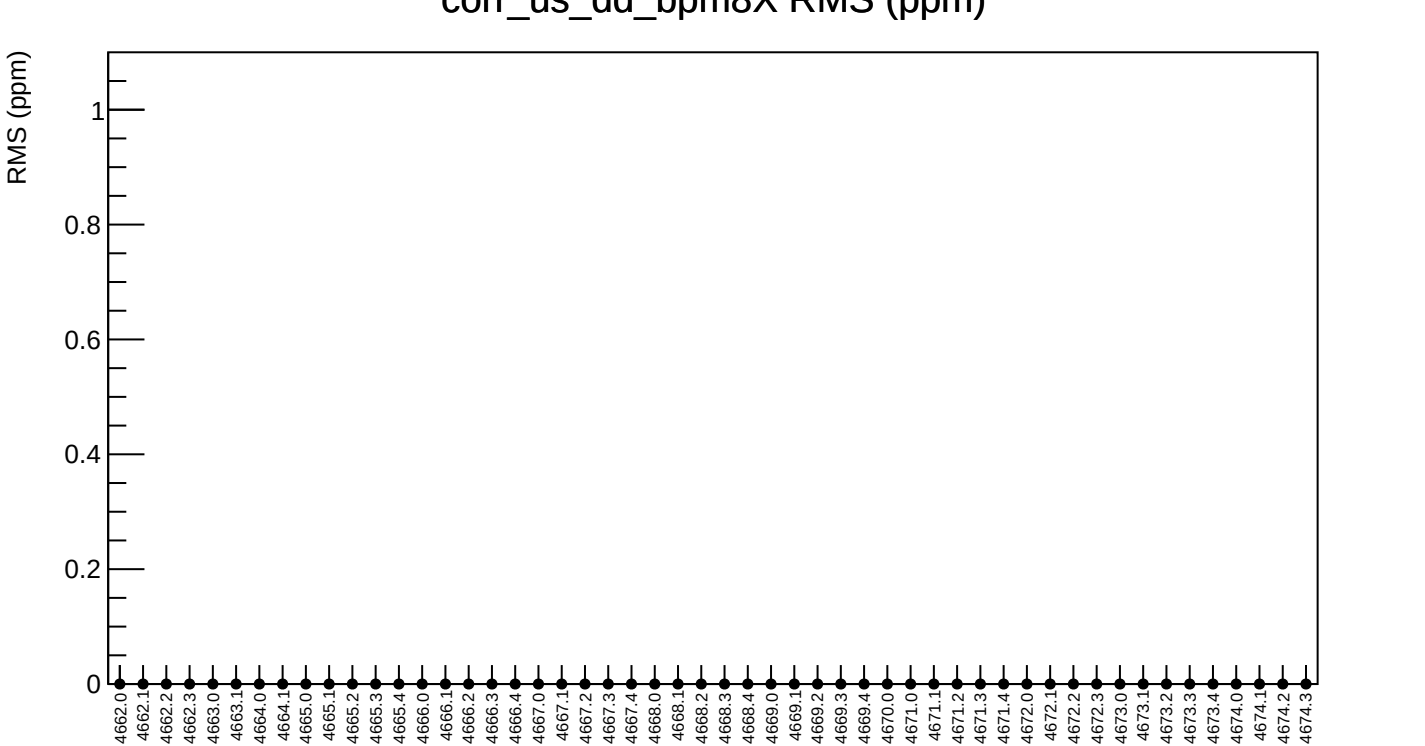

corr_us_dd_bpm11X RMS (ppm)
RMS (ppm)
100
90
80
70
60
50
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

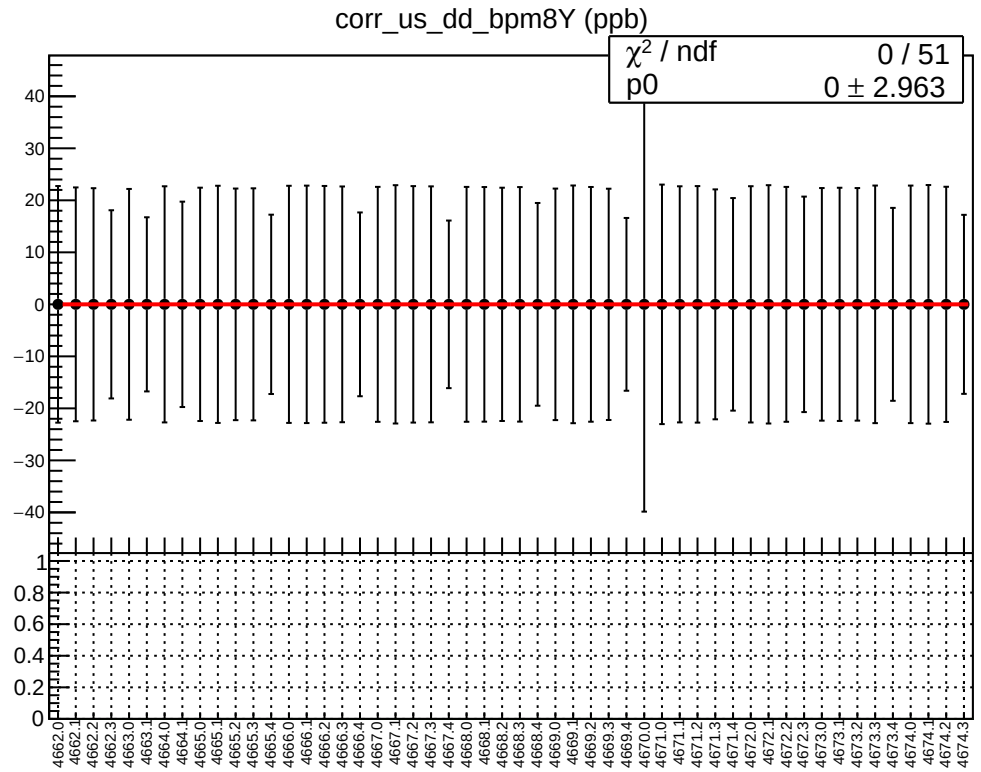

corr_us_dd_bpm11Y (ppb)
χ² / ndf 4.446 / 50
p0 −6.422 ± 12.95
1D pull distribution
Mean −0.003708 ± 0.04134
Std Dev 0.2952 ± 0.02923
Underflow 0
Overflow 0
χ² / ndf 3.75 / 1
Constant 37.91 ± 7.69
Mean 0.09166 ± 0.03771
Sigma 0.267 ± 0.035

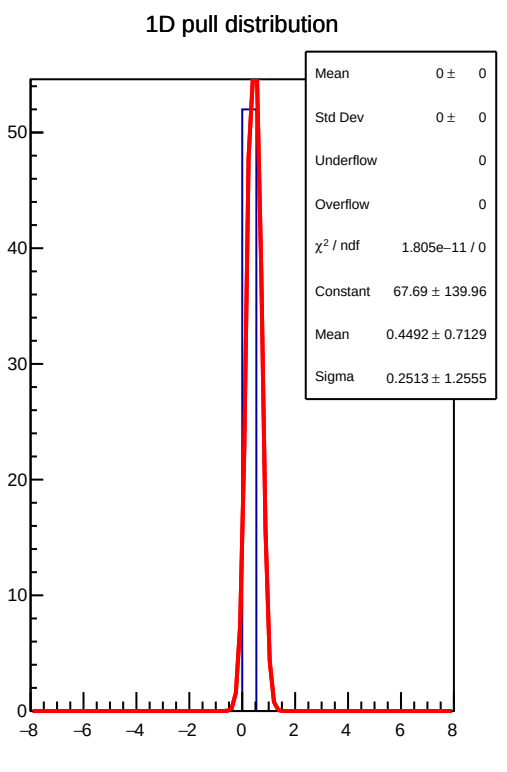

corr_us_dd_bpm11Y RMS (ppm)
RMS (ppm)
1
2
3
4
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

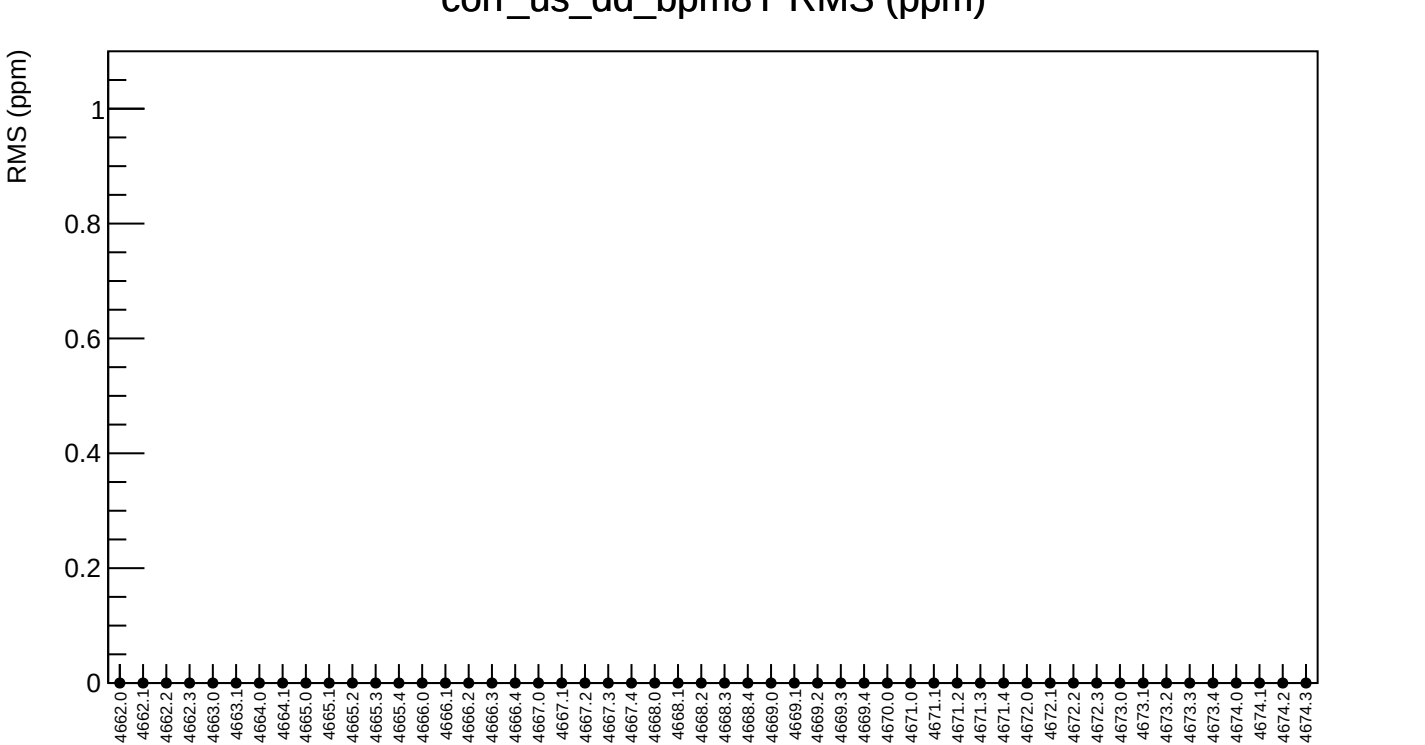

corr_us_dd_bpm8X (ppb)
χ² / ndf 0 / 51
p0 0 ± 4.816
60
40
20
0
−20
−40
−60
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

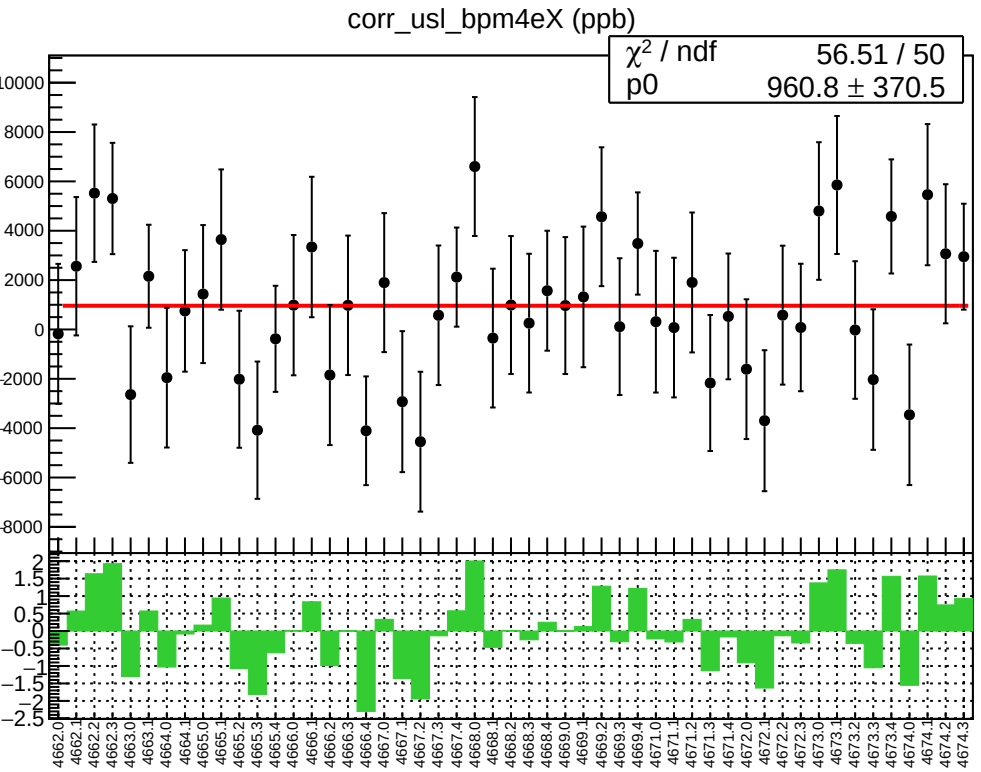

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

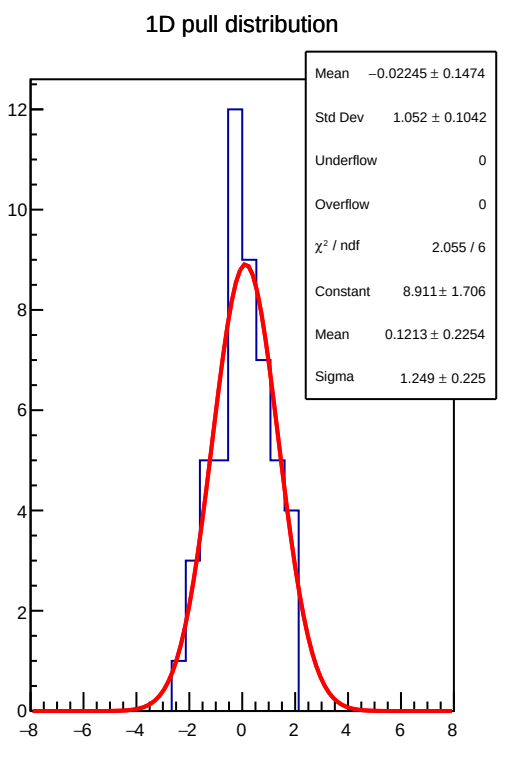

corr_us_dd_bpm8X RMS (ppm)
RMS (ppm)
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

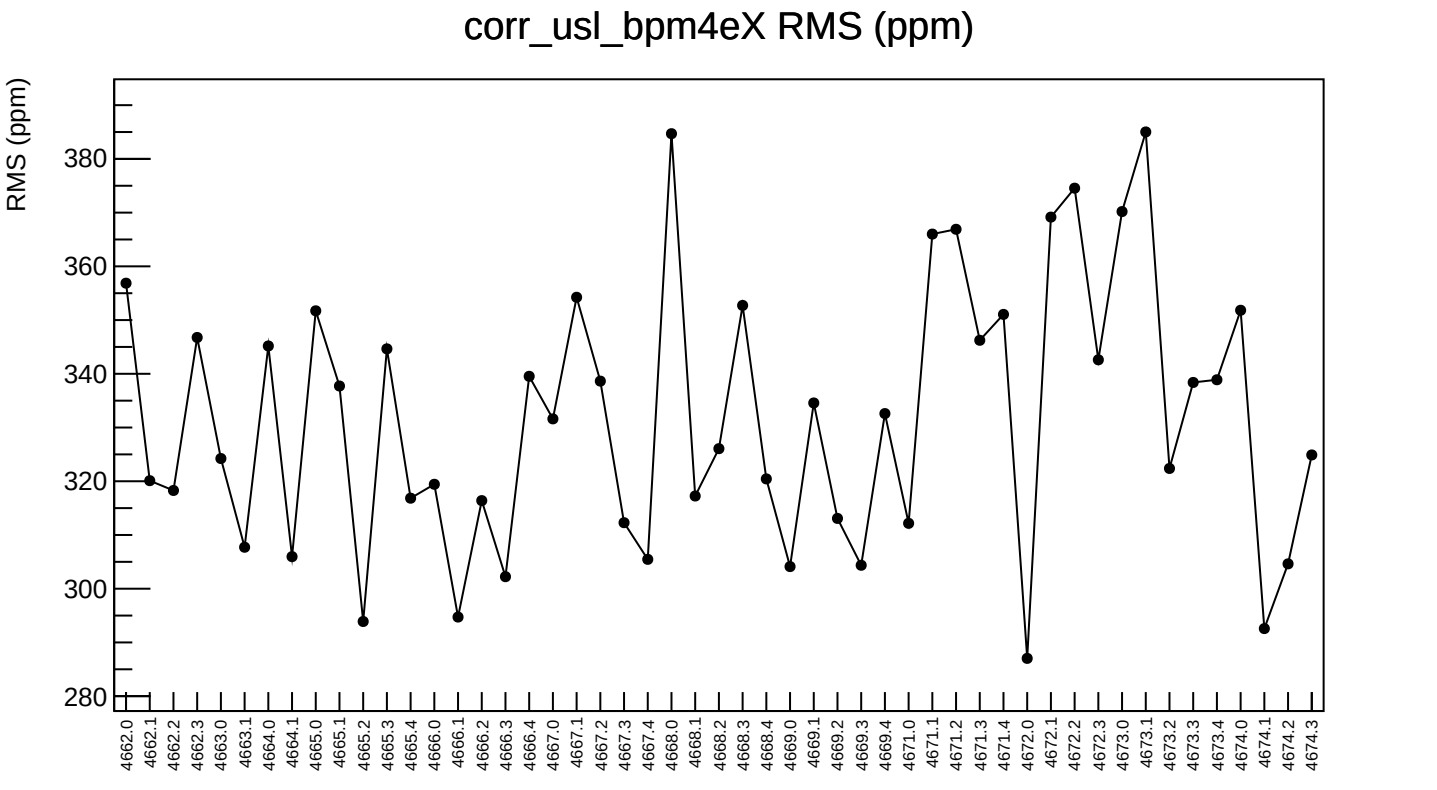

corr_us_dd_bpm8Y (ppb)
χ² / ndf 0 / 51
p0 0 ± 2.963

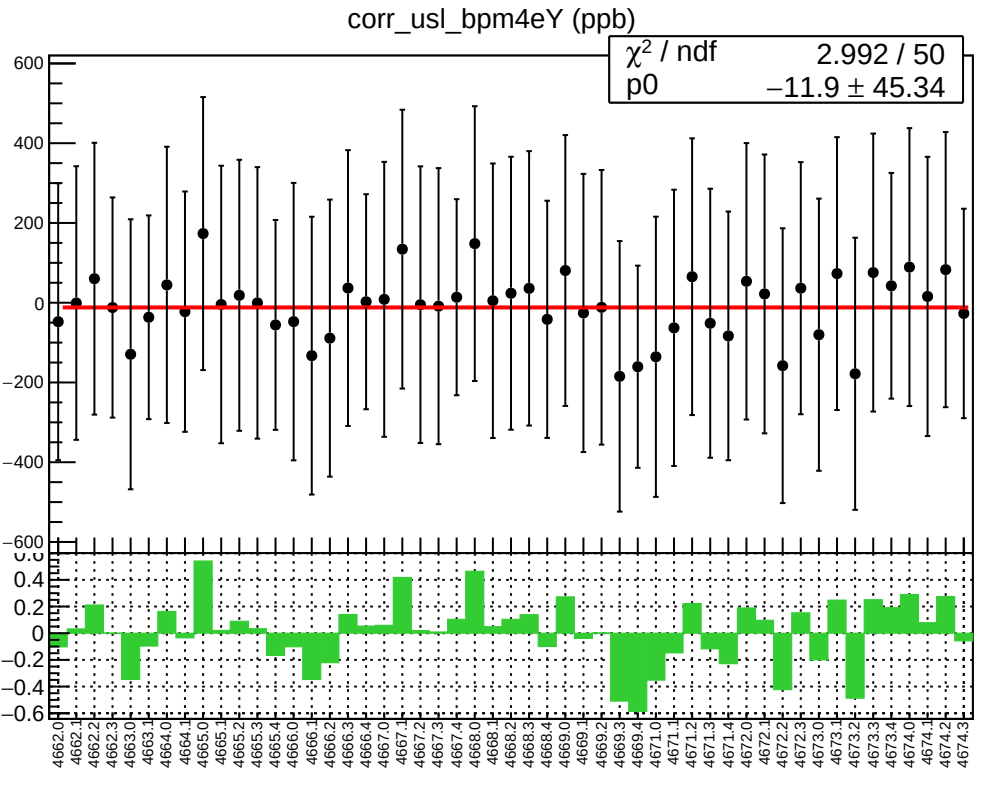

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555

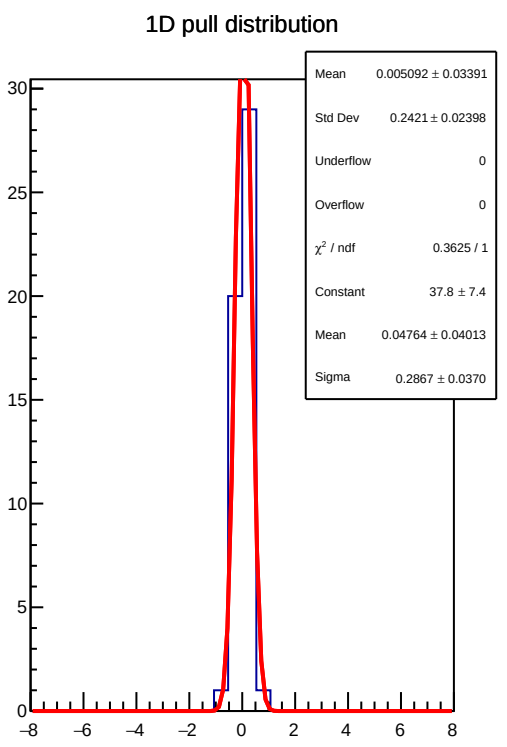

corr_us_dd_bpm8Y RMS (ppm)
RMS (ppm)
0
0.2
0.4
0.6
0.8
1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

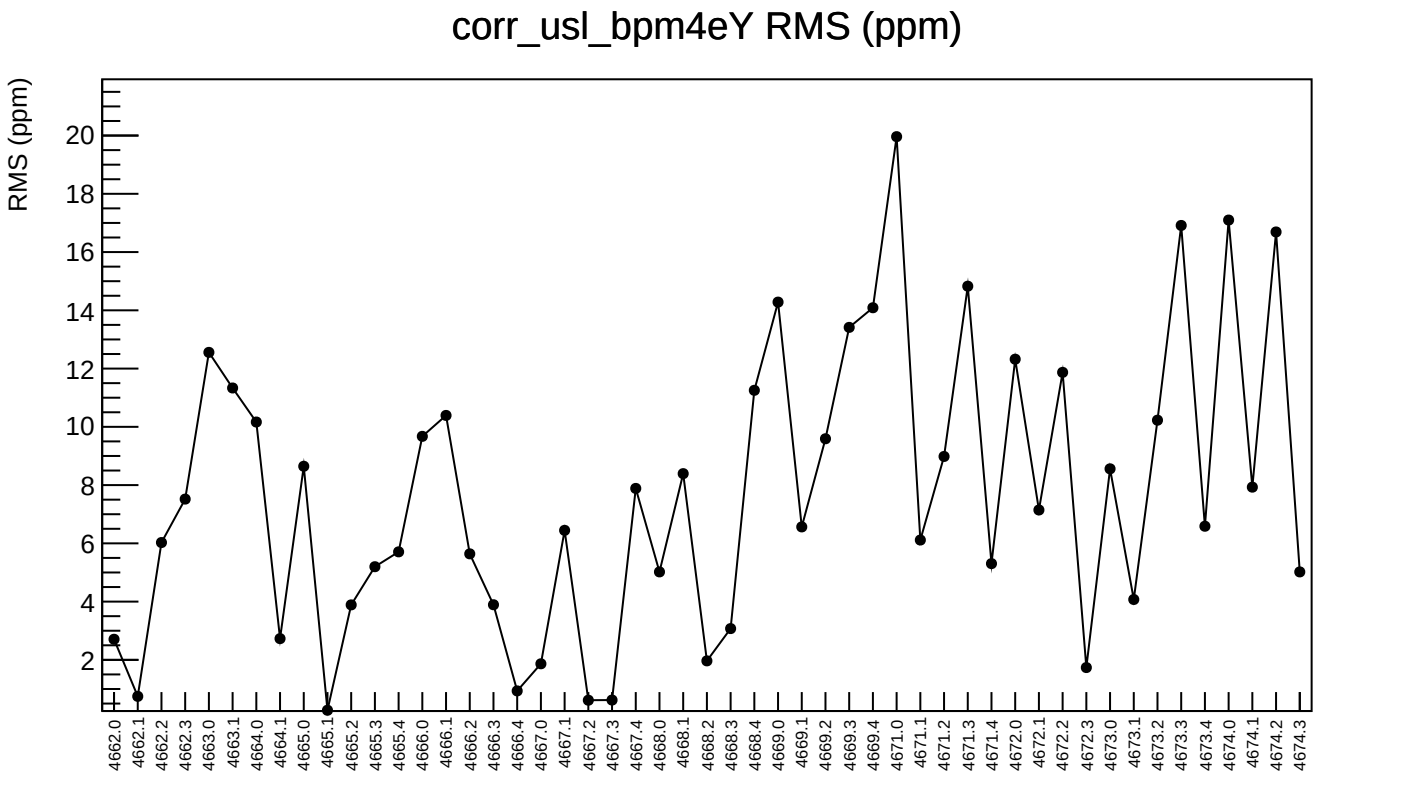

corr_usl_bpm4eX (ppb)
χ² / ndf 56.51 / 50
p0 960.8 ± 370.5

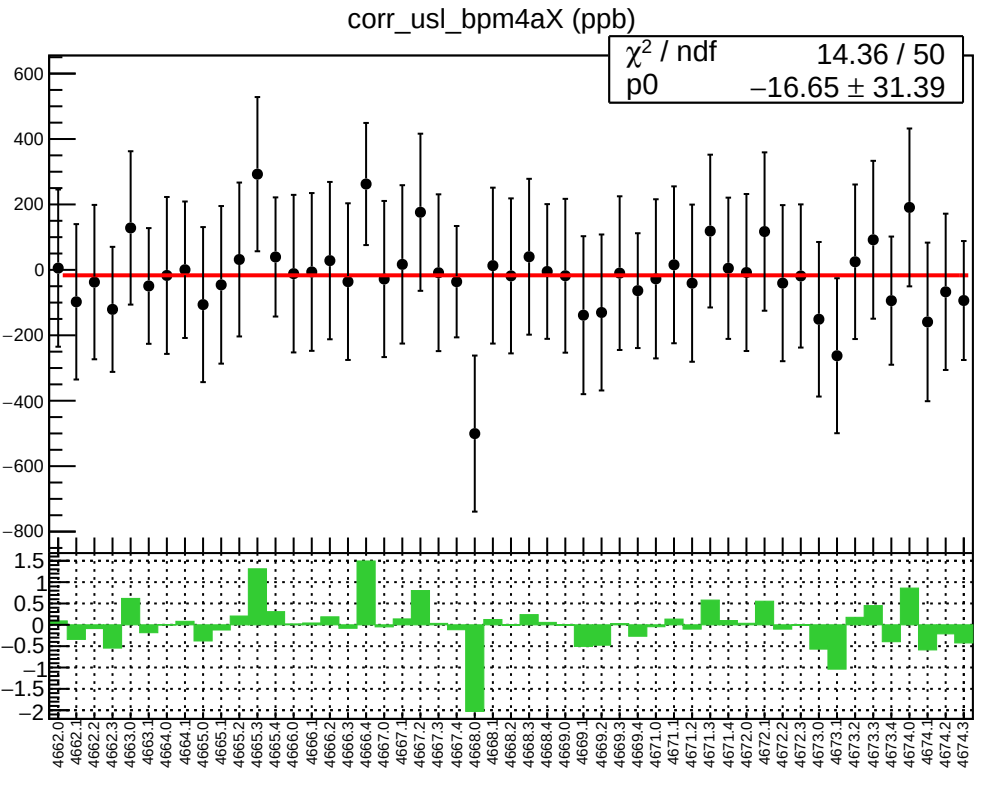

1D pull distribution
Mean −0.02245 ± 0.1474
Std Dev 1.052 ± 0.1042
Underflow 0
Overflow 0
χ² / ndf 2.055 / 6
Constant 8.911 ± 1.706
Mean 0.1213 ± 0.2254
Sigma 1.249 ± 0.225

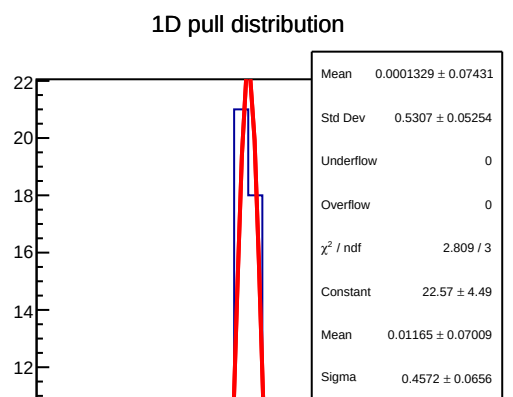

corr_usl_bpm4eX RMS (ppm)
RMS (ppm)
380
360
340
320
300
280
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

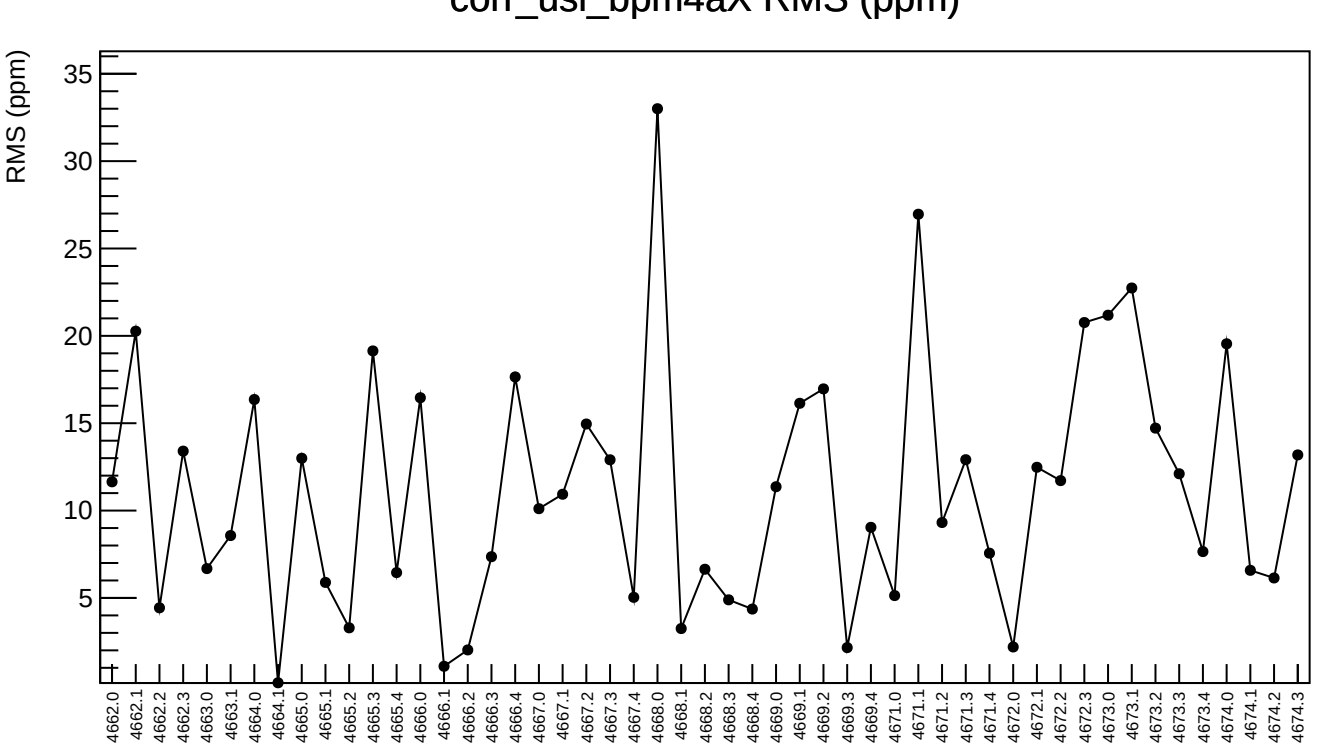

corr_usl_bpm4eY (ppb)
χ² / ndf 2.992 / 50
p0 −11.9 ± 45.34
600
400
200
0
−200
−400
−600
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

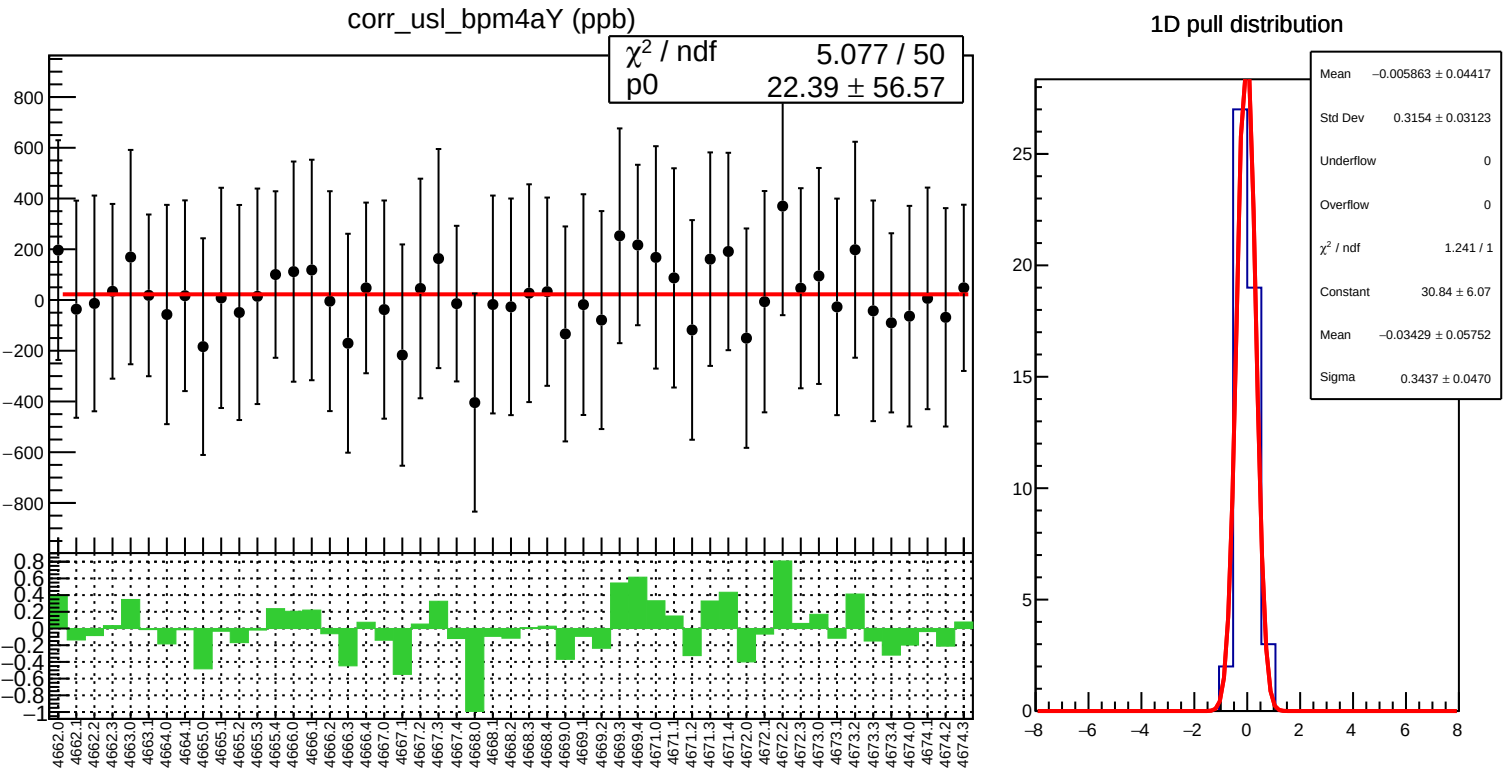

1D pull distribution
Mean 0.005092 ± 0.03391
Std Dev 0.2421 ± 0.02398
Underflow 0
Overflow 0
χ² / ndf 0.3625 / 1
Constant 37.8 ± 7.4
Mean 0.04764 ± 0.04013
Sigma 0.2867 ± 0.0370
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

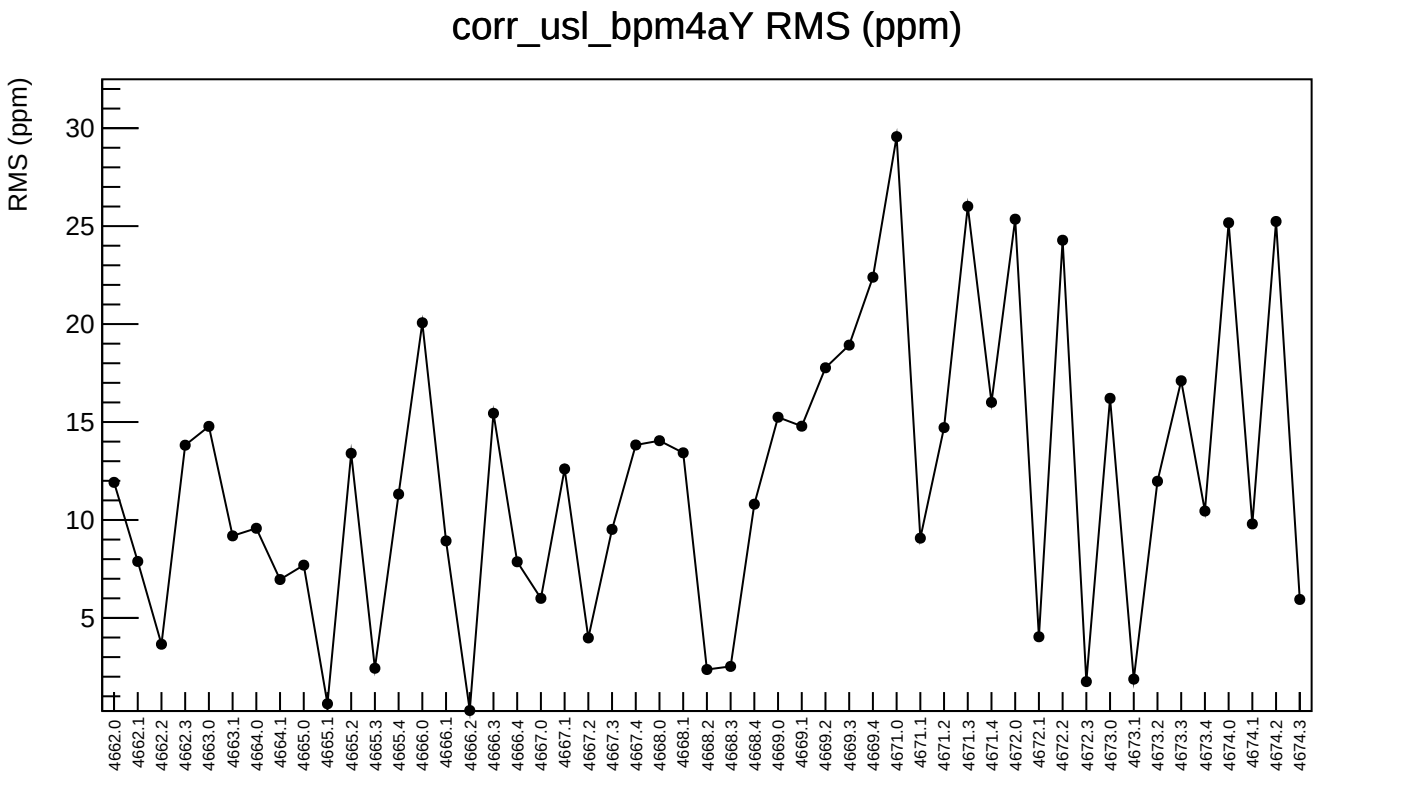

corr_usl_bpm4eY RMS (ppm)
RMS (ppm)
2
4
6
8
10
12
14
16
18
20
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

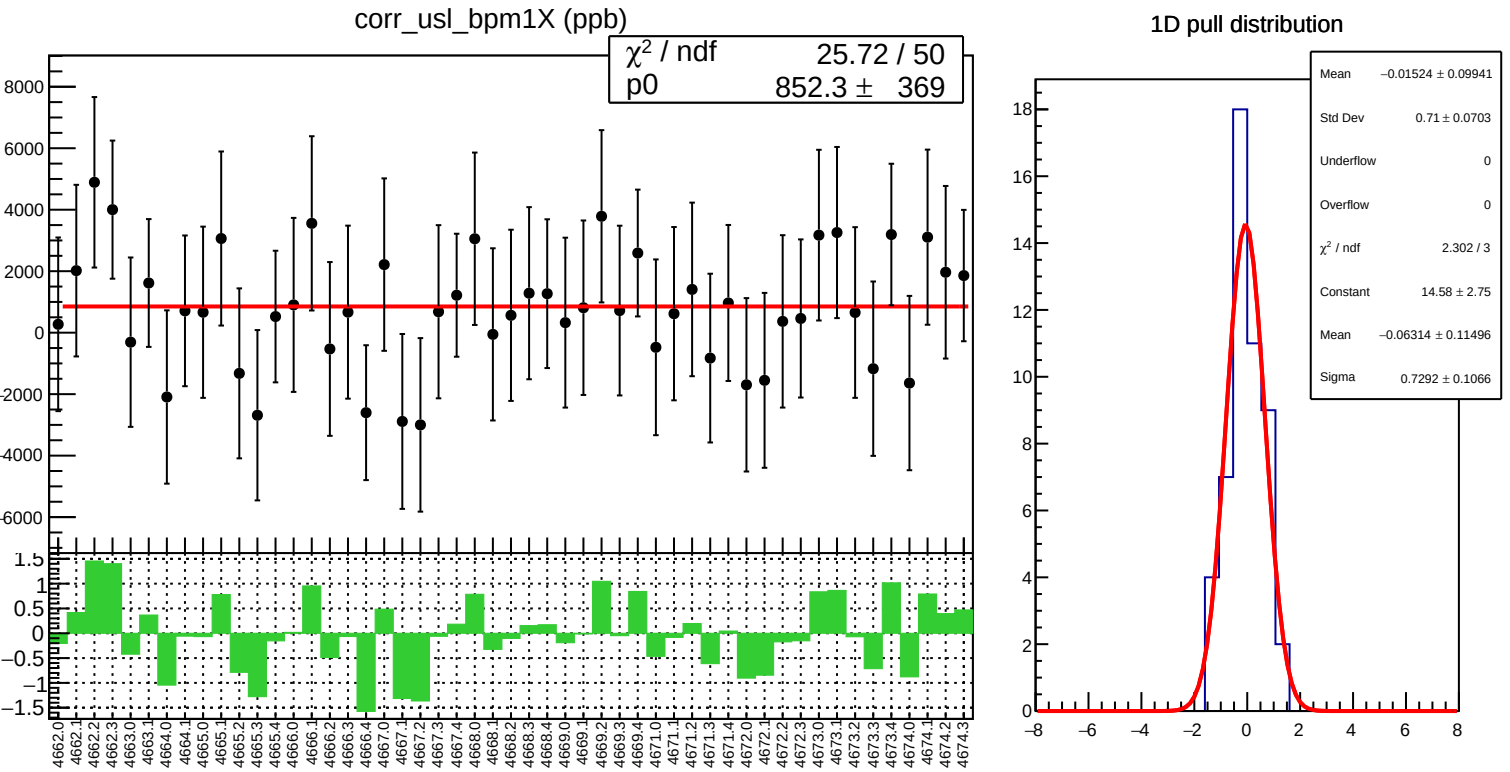

corr_usl_bpm4aX (ppb)
χ² / ndf 14.36 / 50
p0 −16.65 ± 31.39

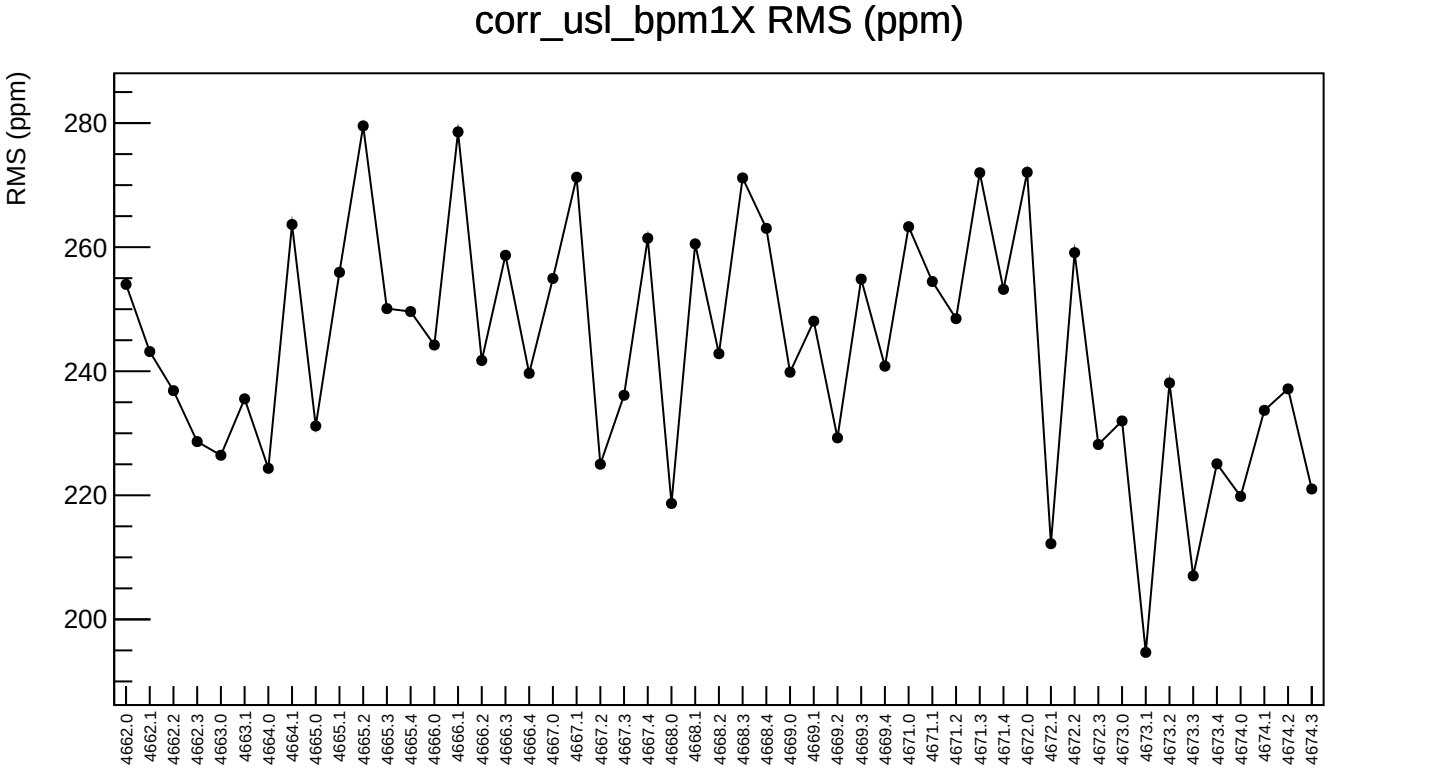

1D pull distribution
Mean 0.0001329 ± 0.07431
Std Dev 0.5307 ± 0.05254
Underflow 0
Overflow 0
χ² / ndf 2.809 / 3
Constant 22.57 ± 4.49
Mean 0.01165 ± 0.07009
Sigma 0.4572 ± 0.0656


corr_usl_bpm4aX RMS (ppm)
RMS (ppm)
35
30
25
20
15
10
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3


corr_usl_bpm4aY (ppb)
χ² / ndf 5.077 / 50
p0 22.39 ± 56.57
1D pull distribution
Mean −0.005863 ± 0.04417
Std Dev 0.3154 ± 0.03123
Underflow 0
Overflow 0
χ² / ndf 1.241 / 1
Constant 30.84 ± 6.07
Mean −0.03429 ± 0.05752
Sigma 0.3437 ± 0.0470


corr_usl_bpm4aY RMS (ppm)
RMS (ppm)
30
25
20
15
10
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3


corr_usl_bpm1X (ppb)
χ² / ndf 25.72 / 50
p0 852.3 ± 369
1D pull distribution
Mean −0.01524 ± 0.09941
Std Dev 0.71 ± 0.0703
Underflow 0
Overflow 0
χ² / ndf 2.302 / 3
Constant 14.58 ± 2.75
Mean −0.06314 ± 0.11496
Sigma 0.7292 ± 0.1066


corr_usl_bpm1X RMS (ppm)
RMS (ppm)
280
260
240
220
200
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
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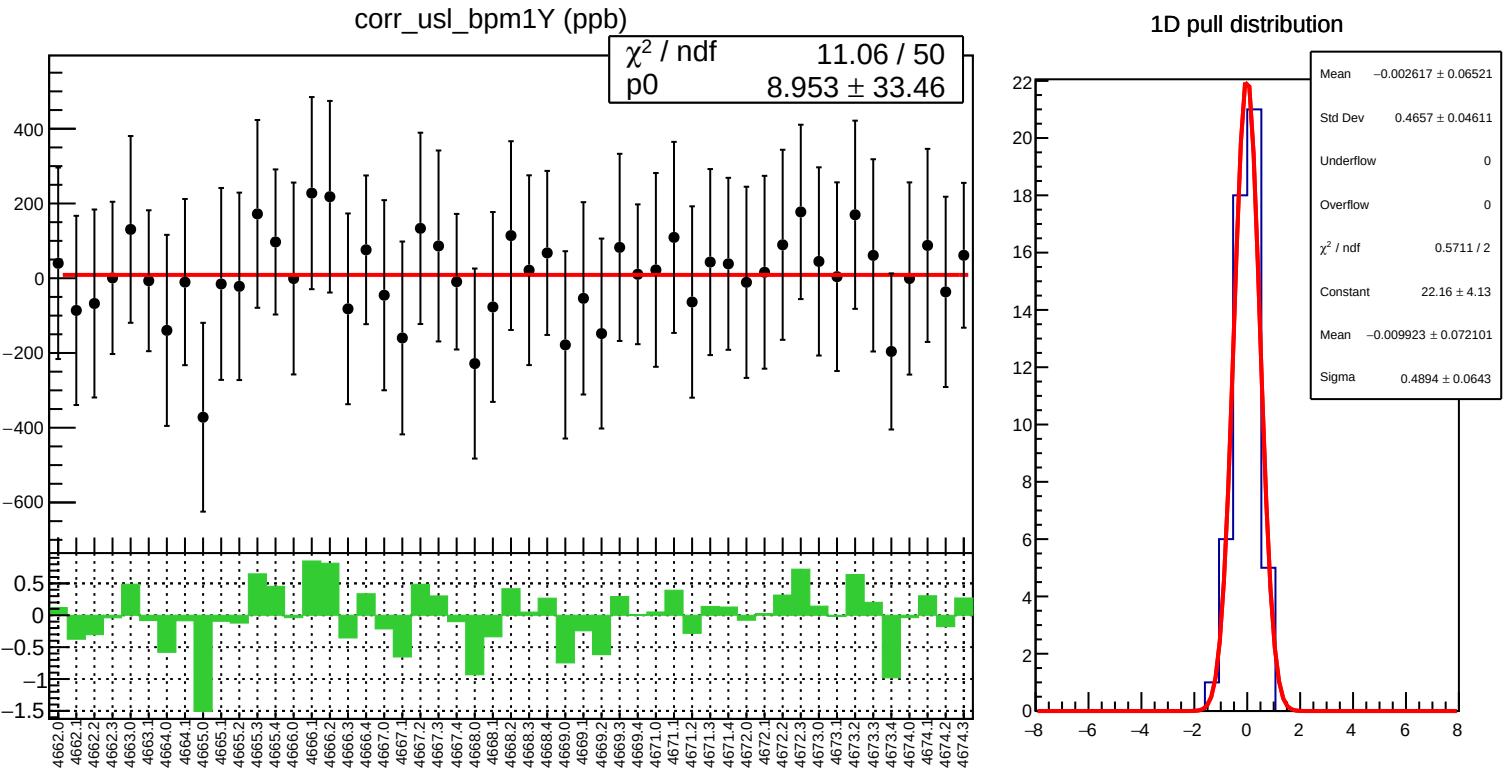
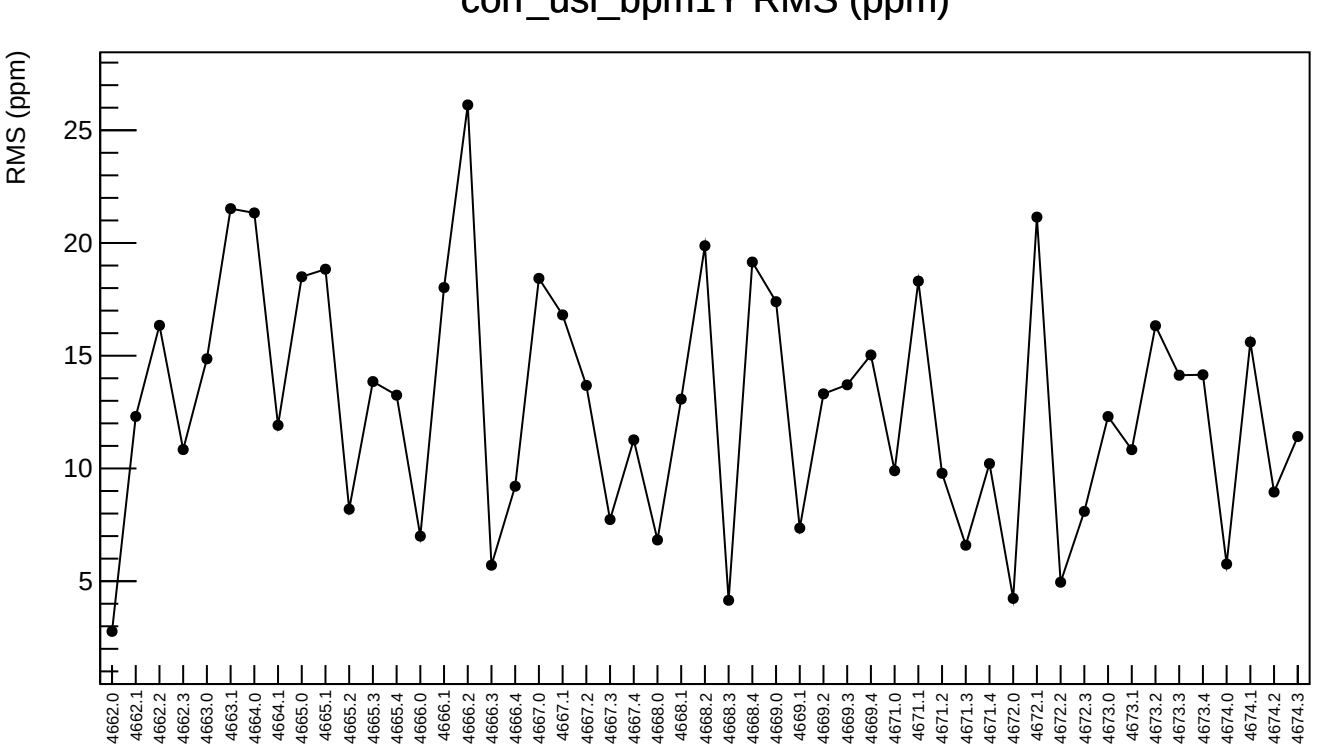
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3


corr_usl_bpm1Y (ppb)
χ² / ndf 11.06 / 50
p0 8.953 ± 33.46
1D pull distribution
Mean −0.002617 ± 0.06521
Std Dev 0.4657 ± 0.04611
Underflow 0
Overflow 0
χ² / ndf 0.5711 / 2
Constant 22.16 ± 4.13
Mean −0.009923 ± 0.072101
Sigma 0.4894 ± 0.0643


corr_usl_bpm1Y RMS (ppm)
RMS (ppm)
25
20
15
10
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
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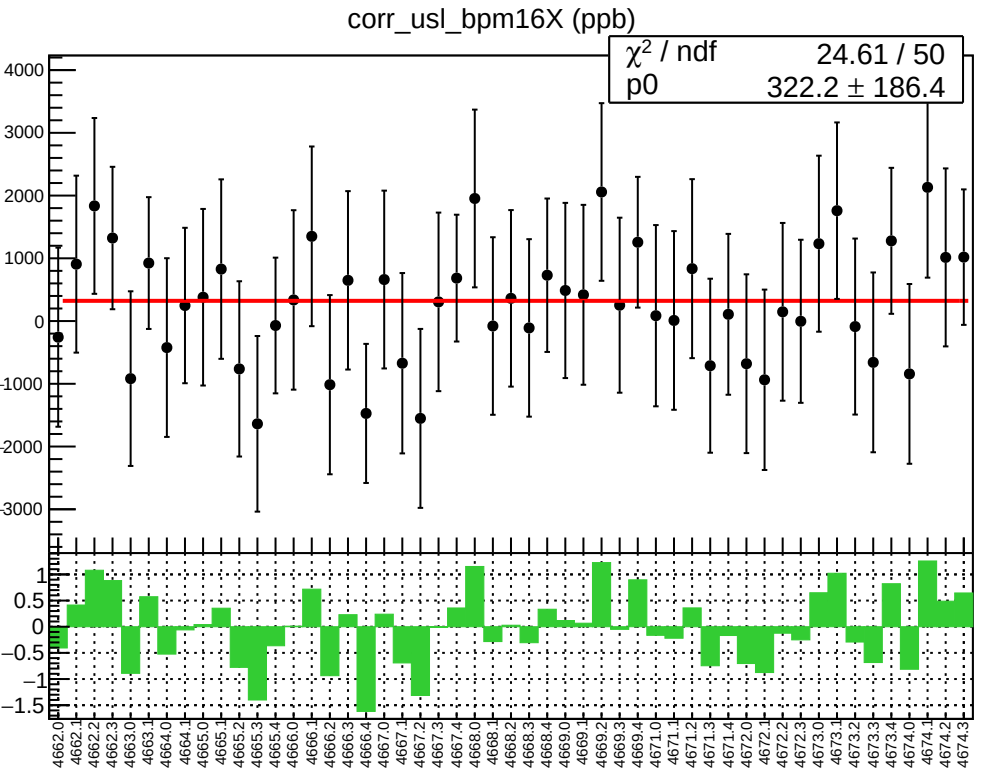
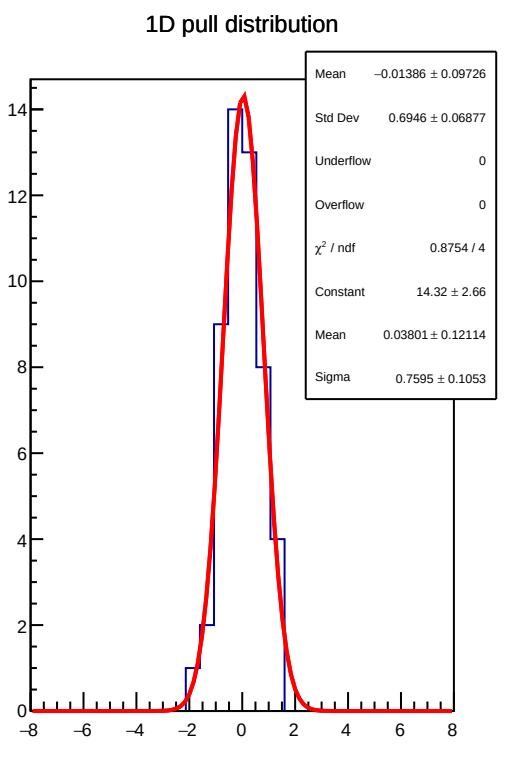
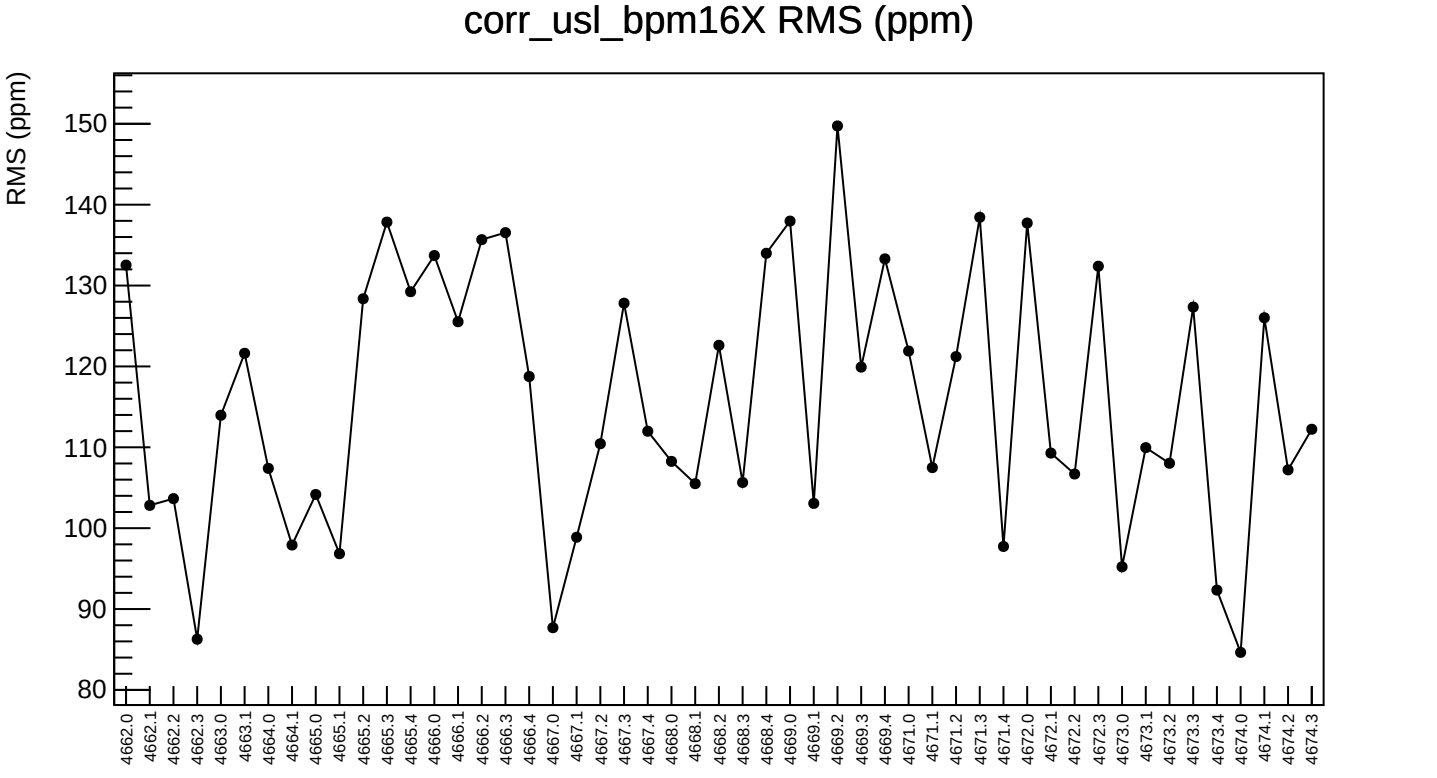
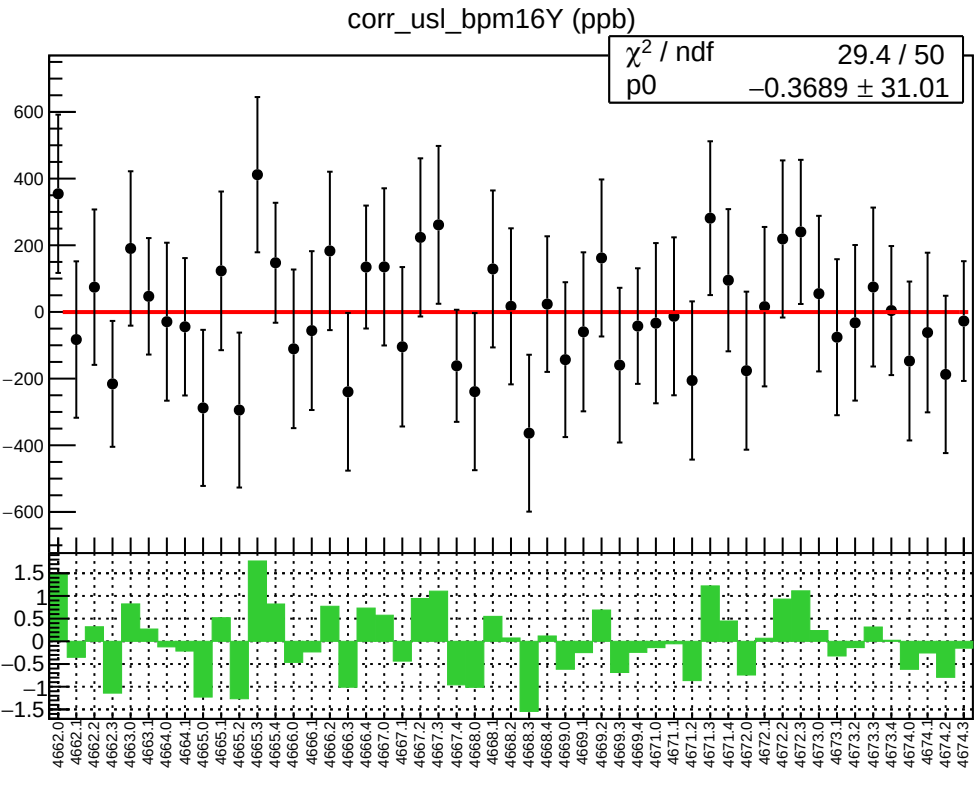
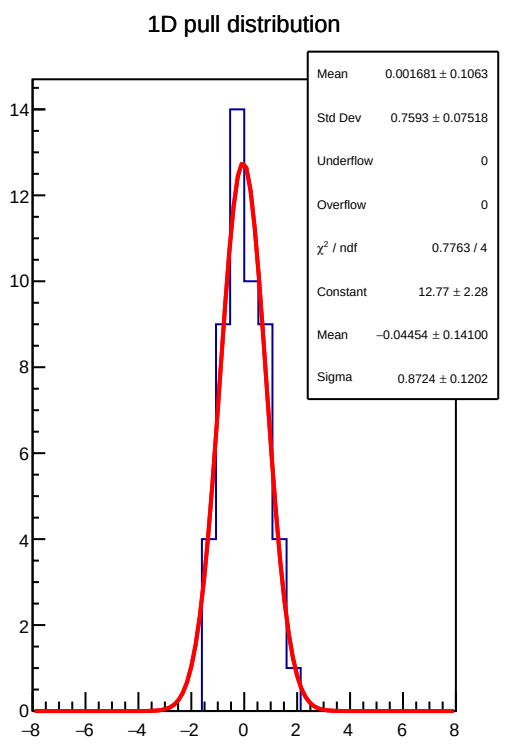
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

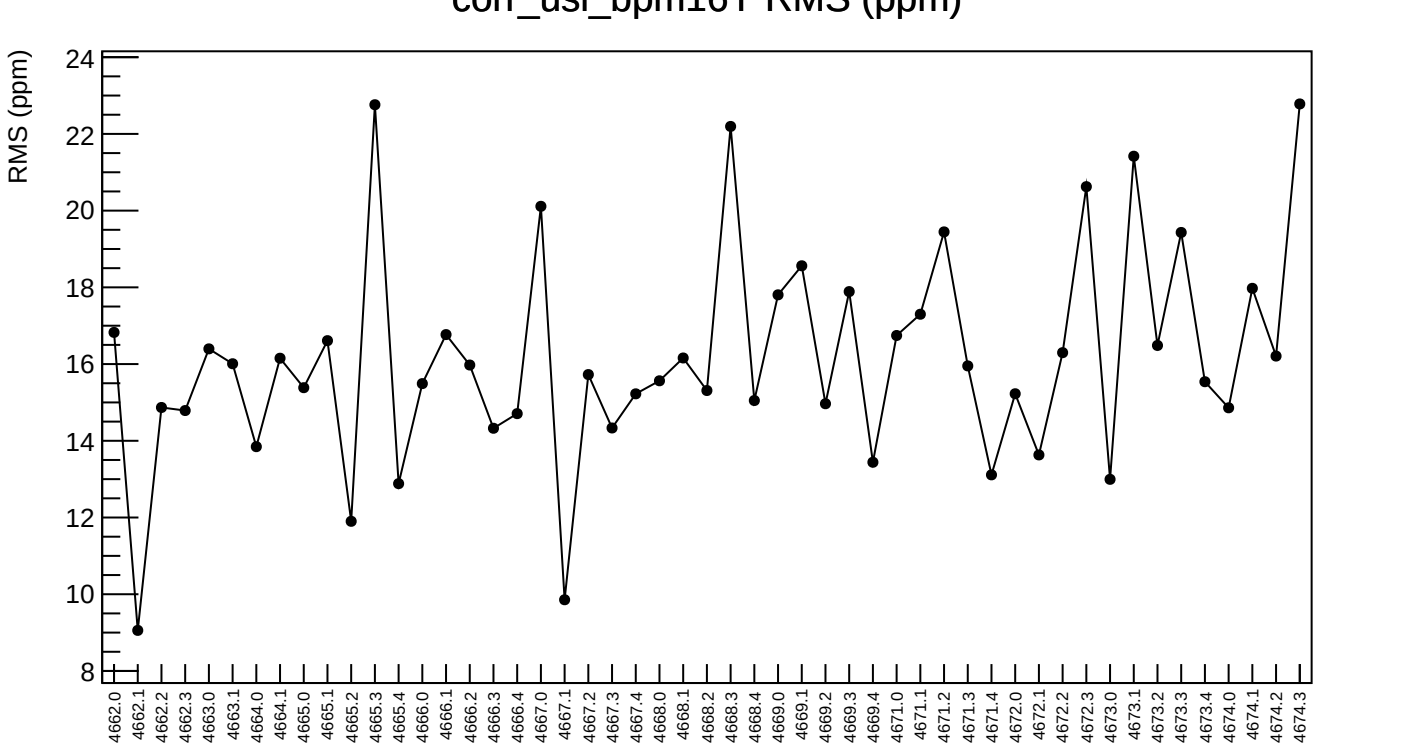

corr_usl_bpm16X (ppb)
χ² / ndf 24.61 / 50
p0 322.2 ± 186.4
4000
3000
2000
1000
0
-1000
-2000
-3000
1
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

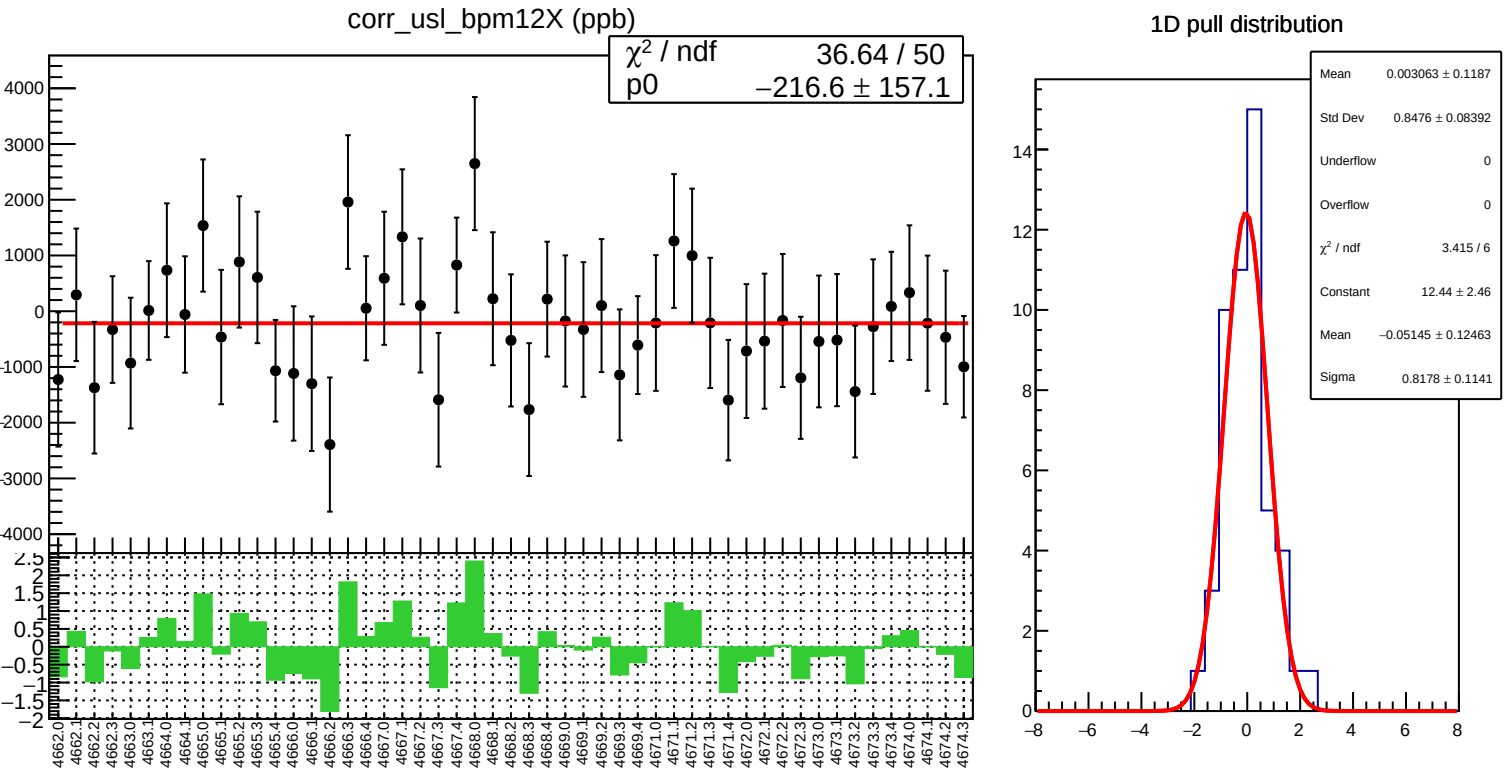

1D pull distribution
Mean −0.01386 ± 0.09726
Std Dev 0.6946 ± 0.06877
Underflow 0
Overflow 0
χ² / ndf 0.8754 / 4
Constant 14.32 ± 2.66
Mean 0.03801 ± 0.12114
Sigma 0.7595 ± 0.1053
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

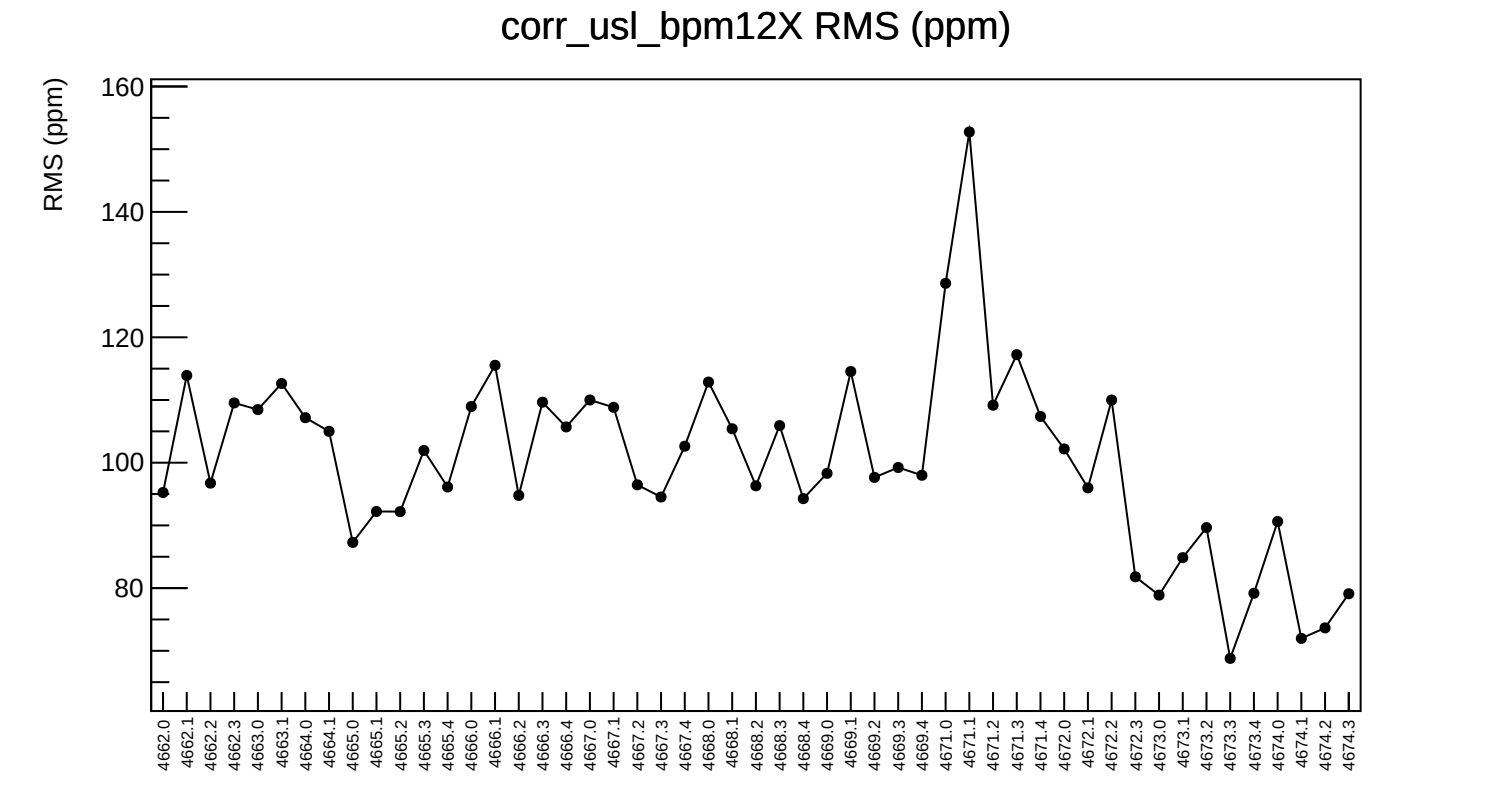

corr_usl_bpm16X RMS (ppm)
RMS (ppm)
150
140
130
120
110
100
90
80
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

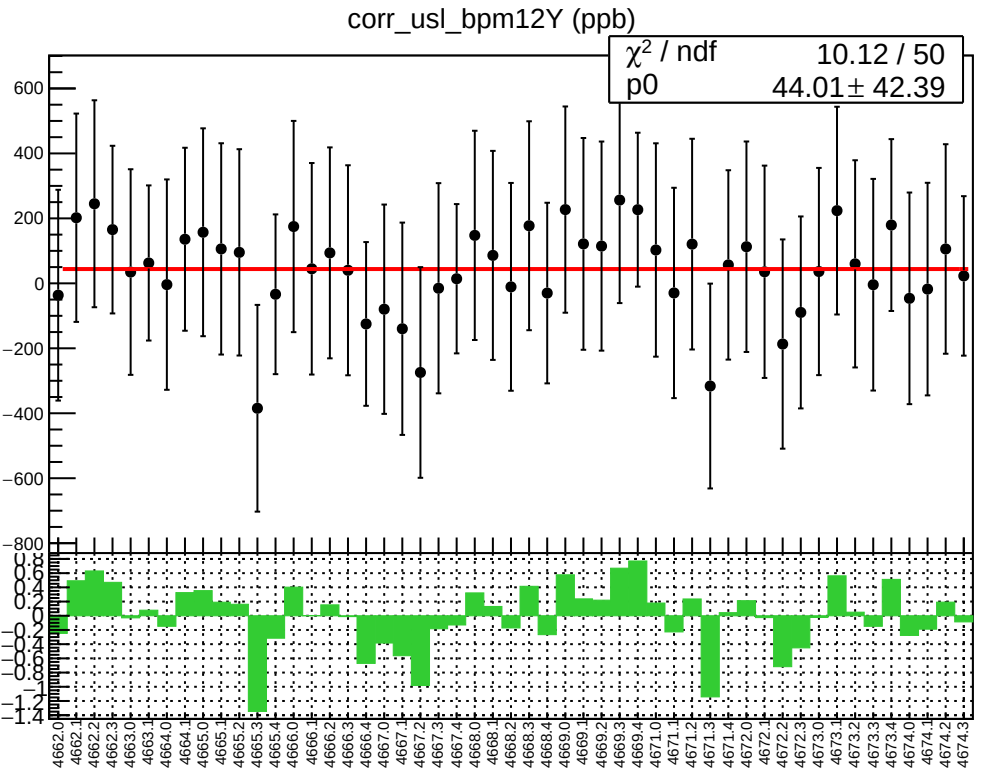

corr_usl_bpm16Y (ppb)
χ² / ndf 29.4 / 50
p0 −0.3689 ± 31.01
600
400
200
0
−200
−400
−600
1.5
1
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

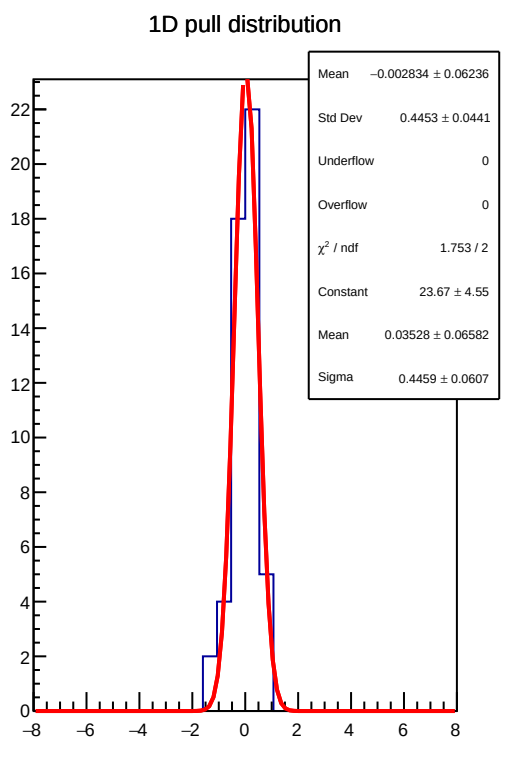

1D pull distribution
Mean 0.001681 ± 0.1063
Std Dev 0.7593 ± 0.07518
Underflow 0
Overflow 0
χ² / ndf 0.7763 / 4
Constant 12.77 ± 2.28
Mean −0.04454 ± 0.14100
Sigma 0.8724 ± 0.1202
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

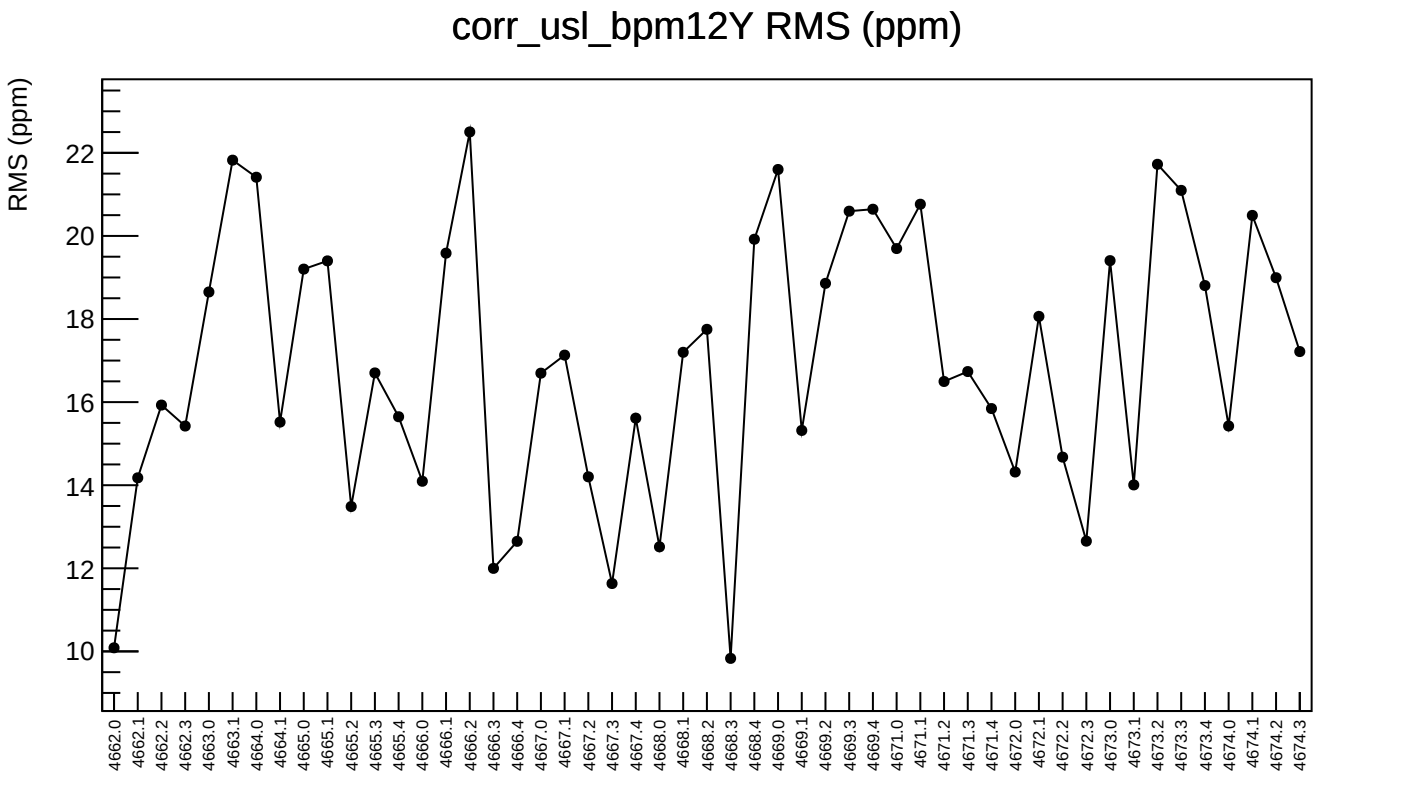

corr_usl_bpm16Y RMS (ppm)
RMS (ppm)
24
22
20
18
16
14
12
10
8
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

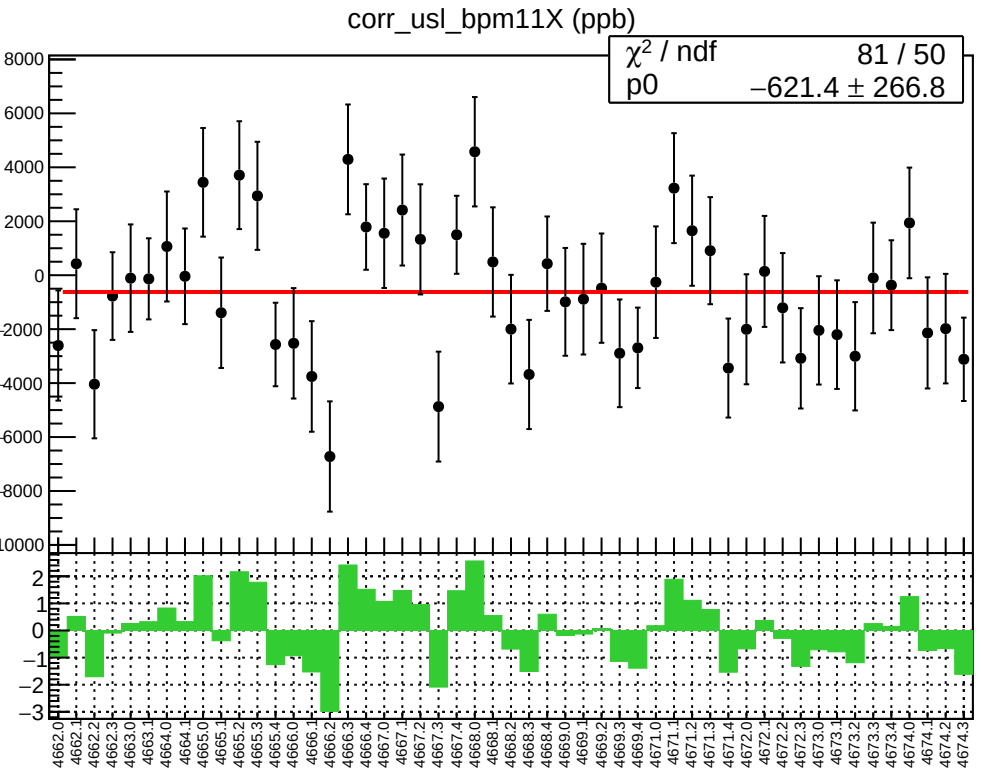

corr_usl_bpm12X (ppb)
χ² / ndf 36.64 / 50
p0 −216.6 ± 157.1
1D pull distribution
Mean 0.003063 ± 0.1187
Std Dev 0.8476 ± 0.08392
Underflow 0
Overflow 0
χ² / ndf 3.415 / 6
Constant 12.44 ± 2.46
Mean −0.05145 ± 0.12463
Sigma 0.8178 ± 0.1141

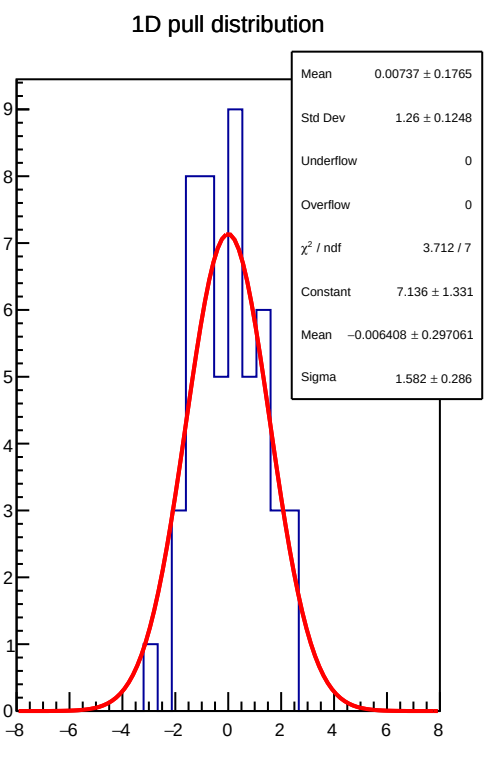

corr_usl_bpm12X RMS (ppm)
RMS (ppm)
160
140
120
100
80
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

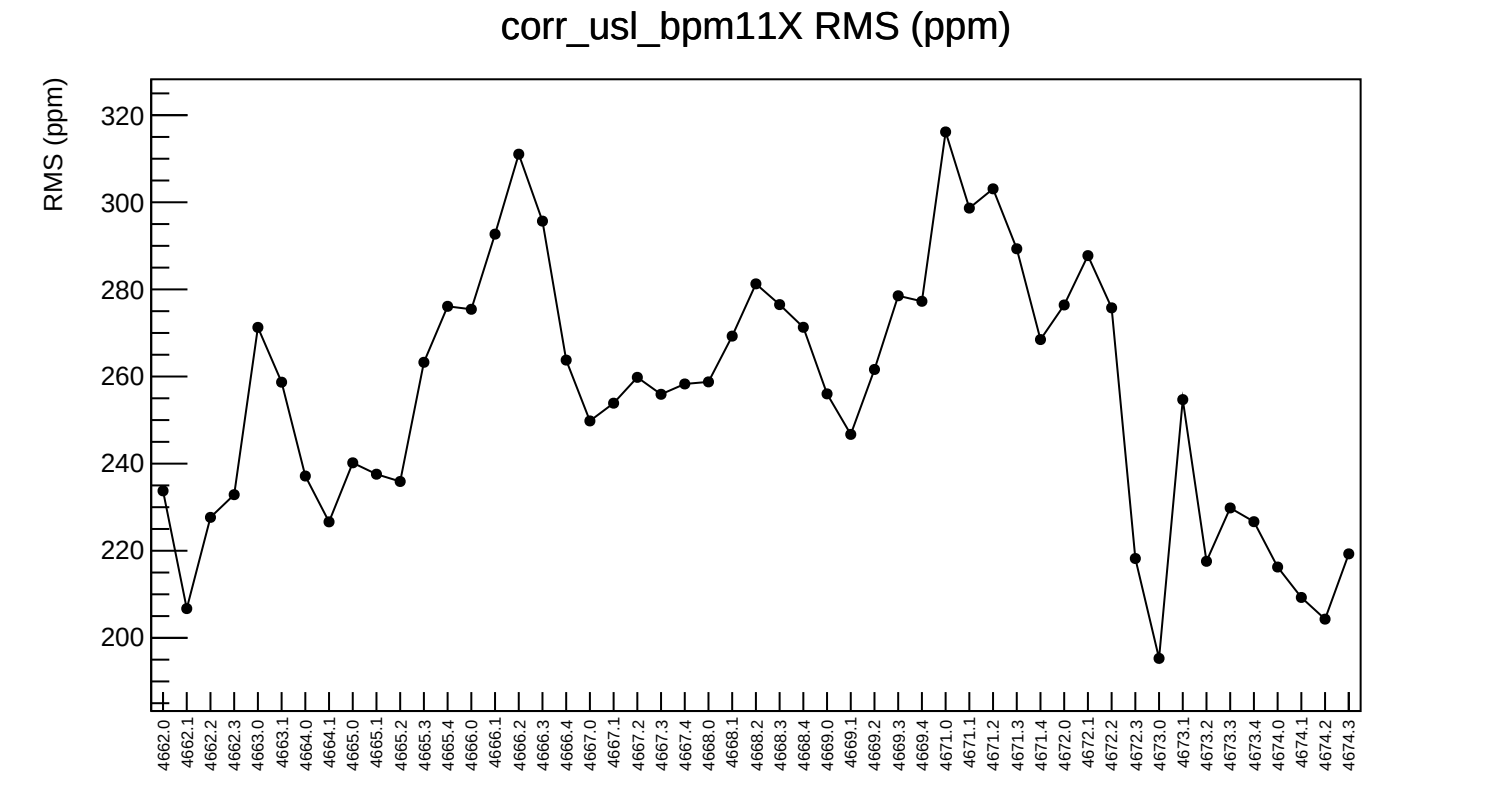

corr_usl_bpm12Y (ppb)
χ² / ndf 10.12 / 50
p0 44.01 ± 42.39

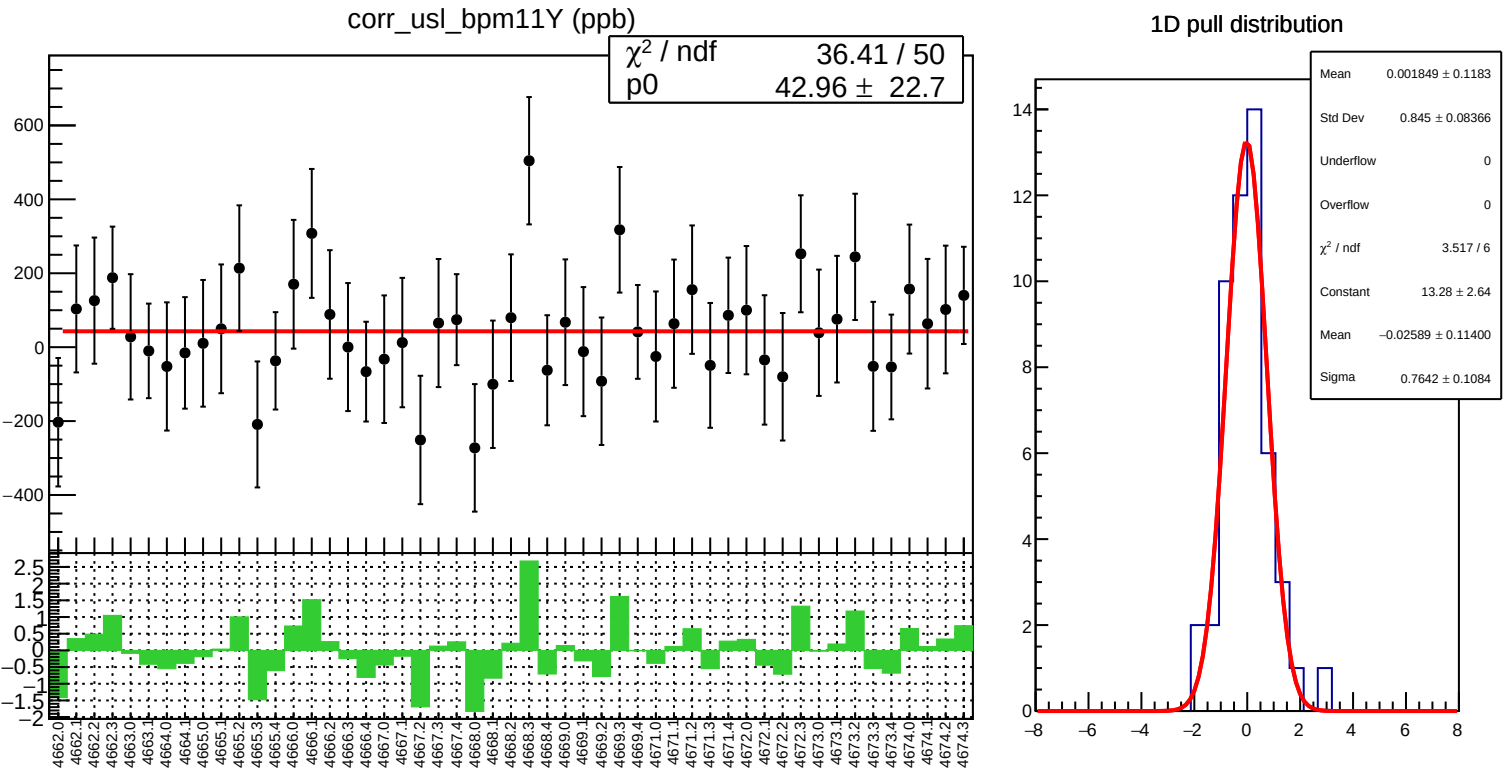

1D pull distribution
Mean −0.002834 ± 0.06236
Std Dev 0.4453 ± 0.0441
Underflow 0
Overflow 0
χ² / ndf 1.753 / 2
Constant 23.67 ± 4.55
Mean 0.03528 ± 0.06582
Sigma 0.4459 ± 0.0607

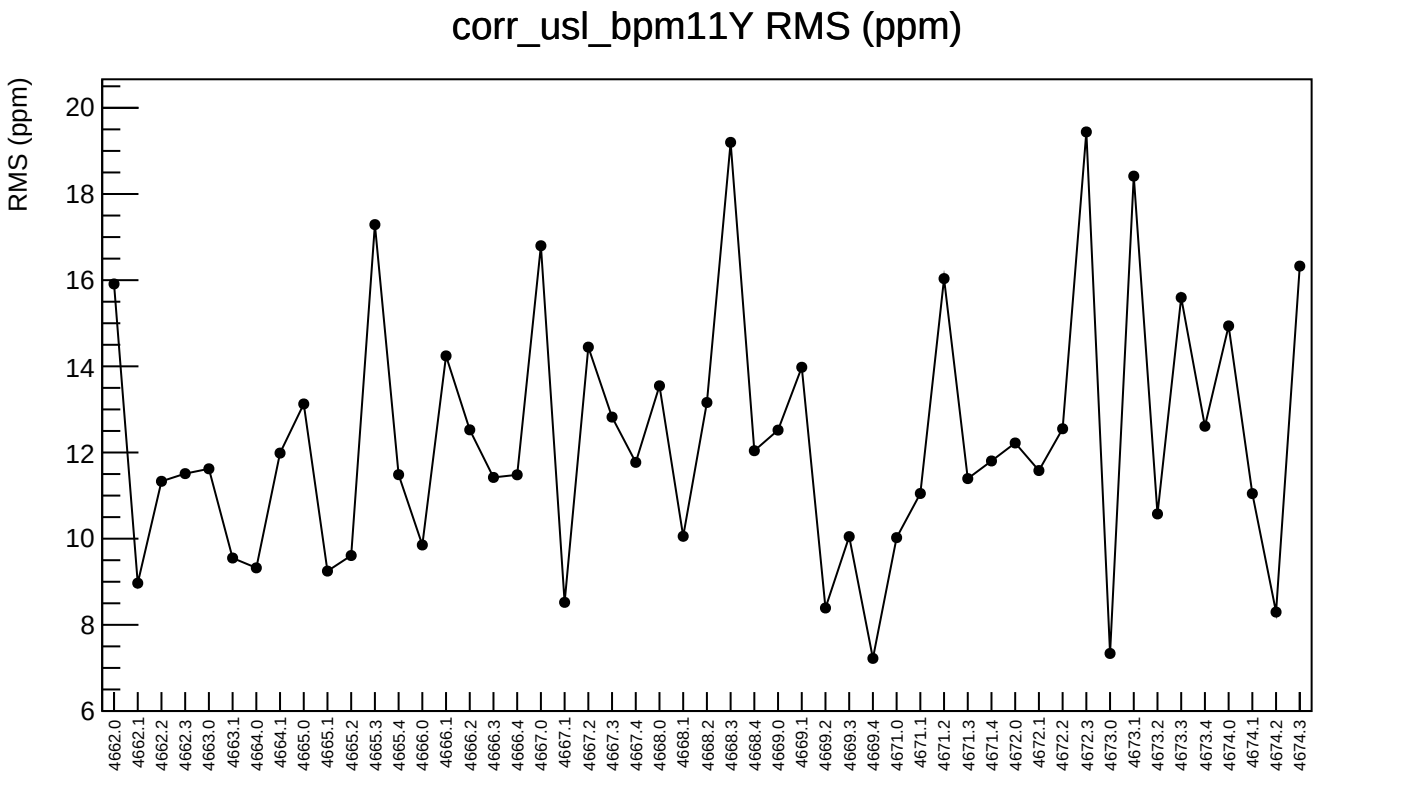

corr_usl_bpm12Y RMS (ppm)
RMS (ppm)
22
20
18
16
14
12
10
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

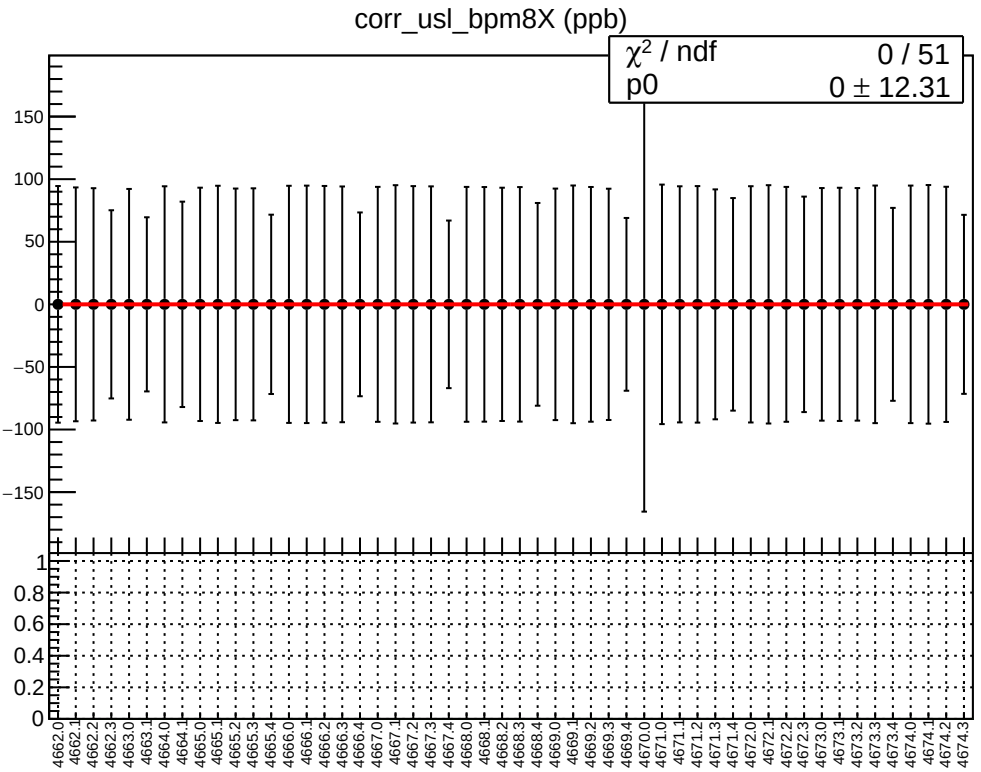

corr_usl_bpm11X (ppb)
χ² / ndf 81 / 50
p0 −621.4 ± 266.8

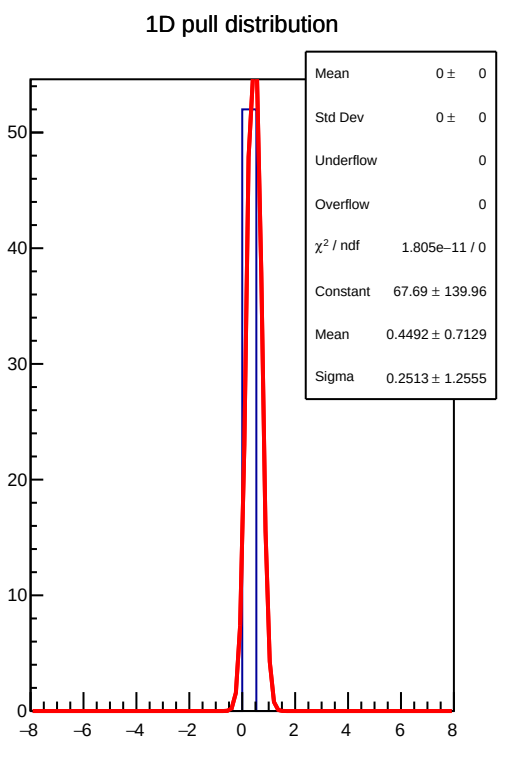

1D pull distribution
Mean 0.00737 ± 0.1765
Std Dev 1.26 ± 0.1248
Underflow 0
Overflow 0
χ² / ndf 3.712 / 7
Constant 7.136 ± 1.331
Mean −0.006408 ± 0.297061
Sigma 1.582 ± 0.286

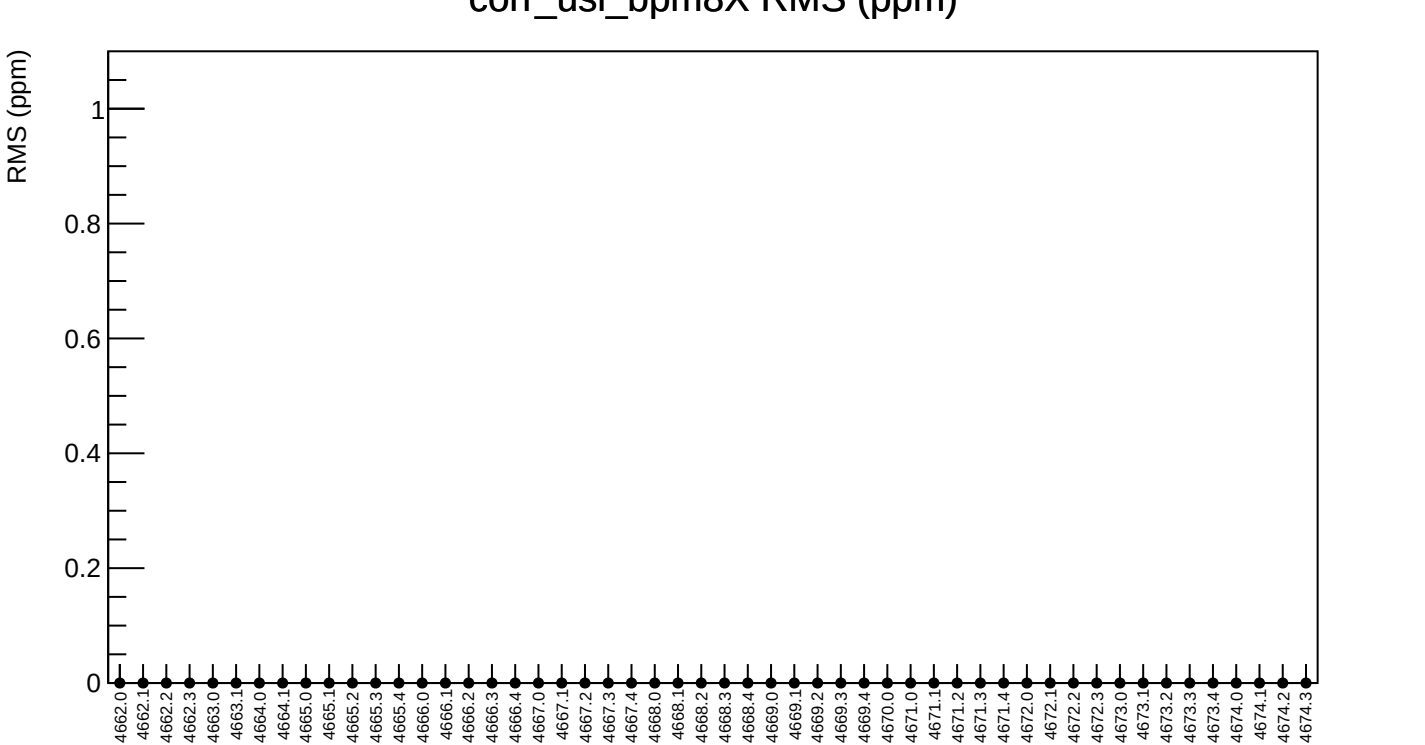

corr_usl_bpm11X RMS (ppm)
RMS (ppm)
320
300
280
260
240
220
200
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

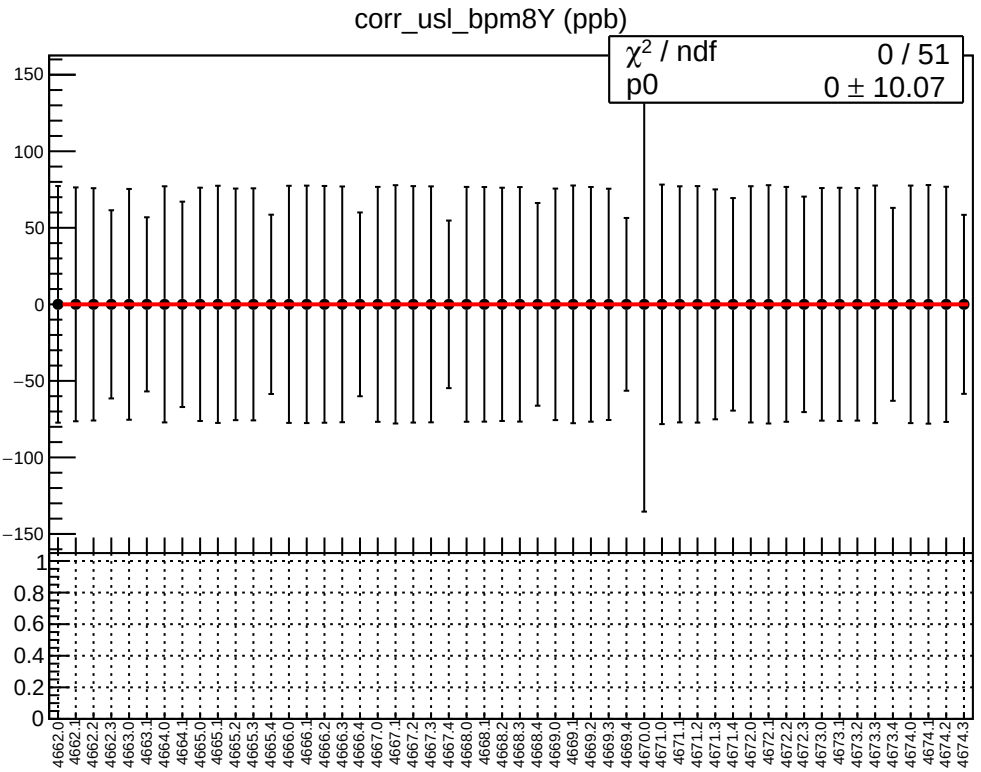

corr_usl_bpm11Y (ppb)
χ² / ndf 36.41 / 50
p0 42.96 ± 22.7
1D pull distribution
Mean 0.001849 ± 0.1183
Std Dev 0.845 ± 0.08366
Underflow 0
Overflow 0
χ² / ndf 3.517 / 6
Constant 13.28 ± 2.64
Mean −0.02589 ± 0.11400
Sigma 0.7642 ± 0.1084

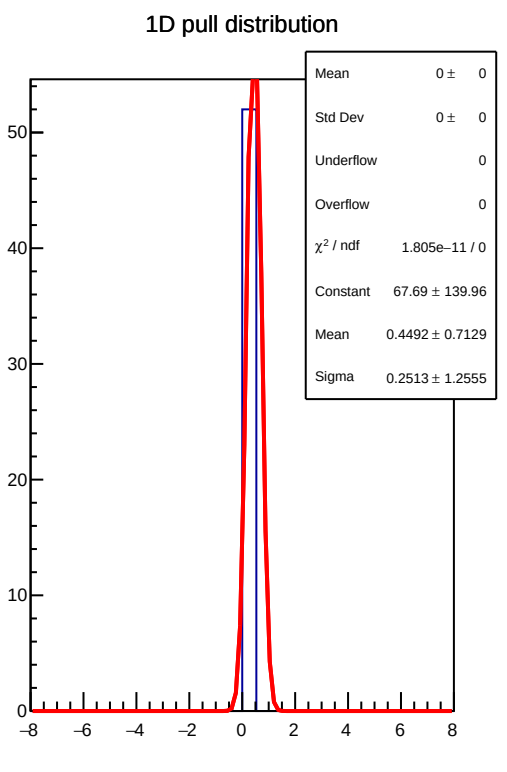

corr_usl_bpm11Y RMS (ppm)
RMS (ppm)
20
18
16
14
12
10
8
6
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

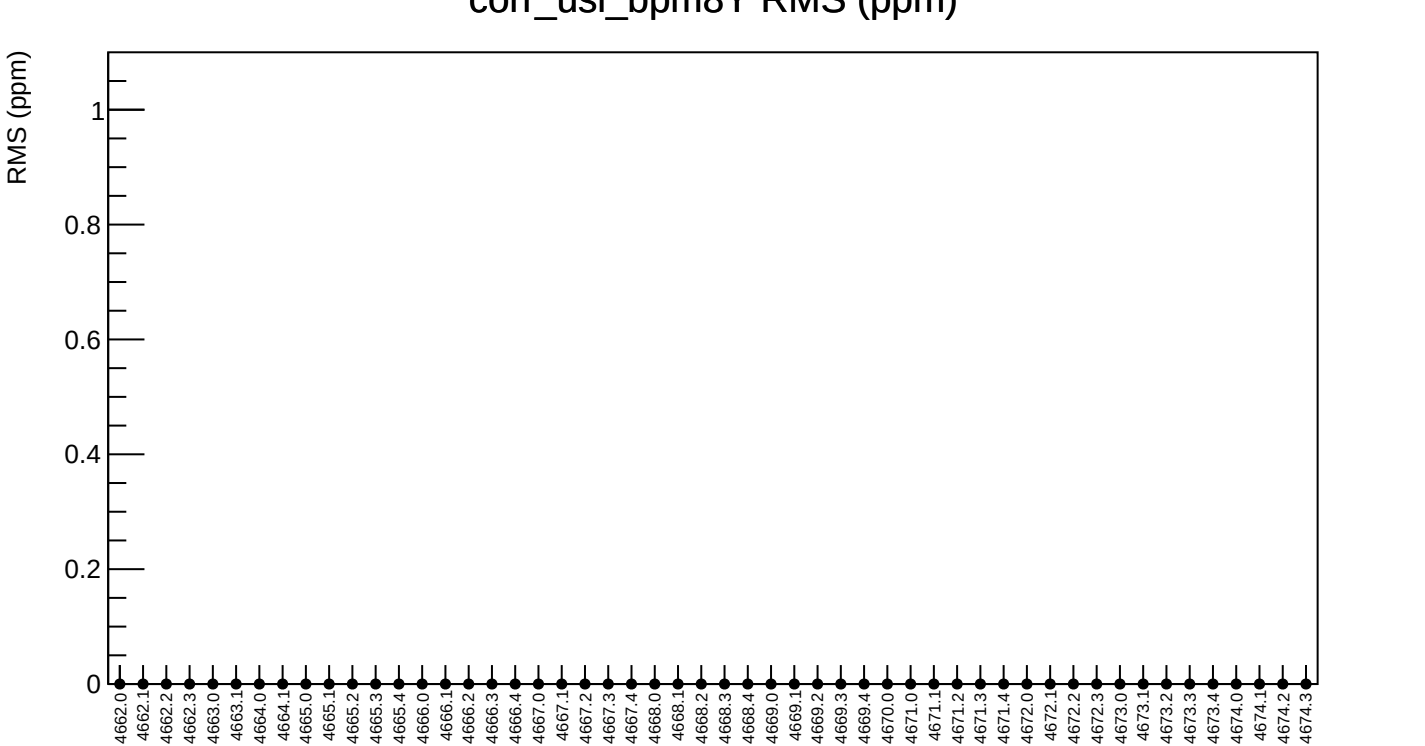

corr_usl_bpm8X (ppb)
χ² / ndf 0 / 51
p0 0 ± 12.31
150
100
50
0
−50
−100
−150
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

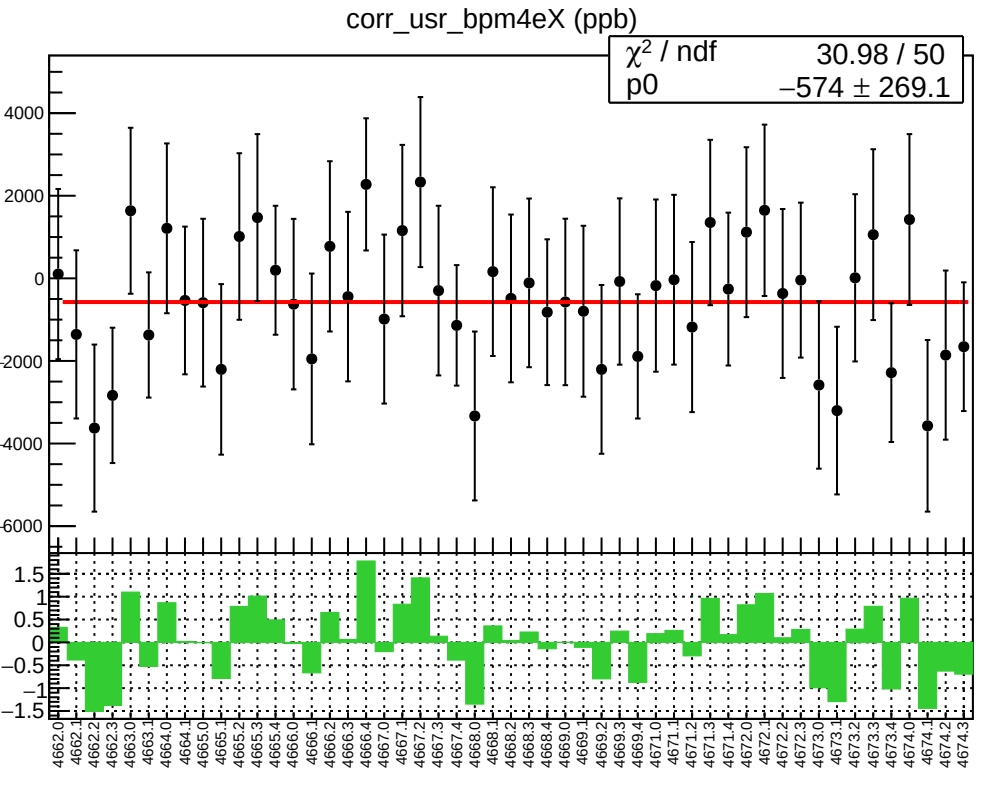

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

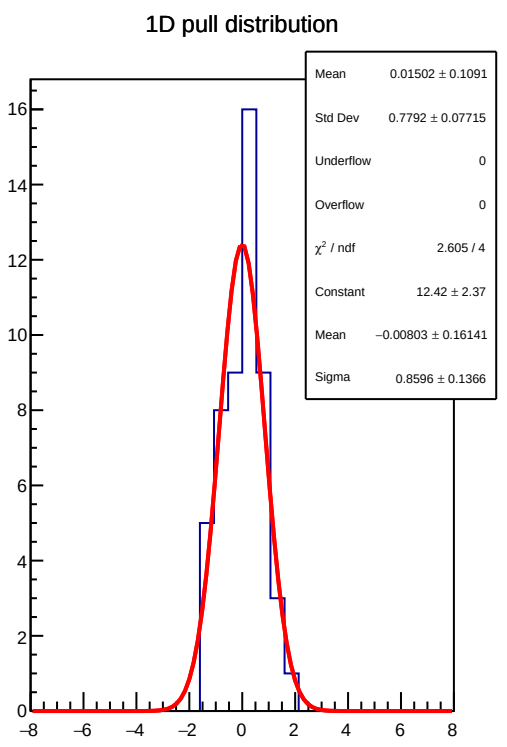

corr_usl_bpm8X RMS (ppm)
RMS (ppm)
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

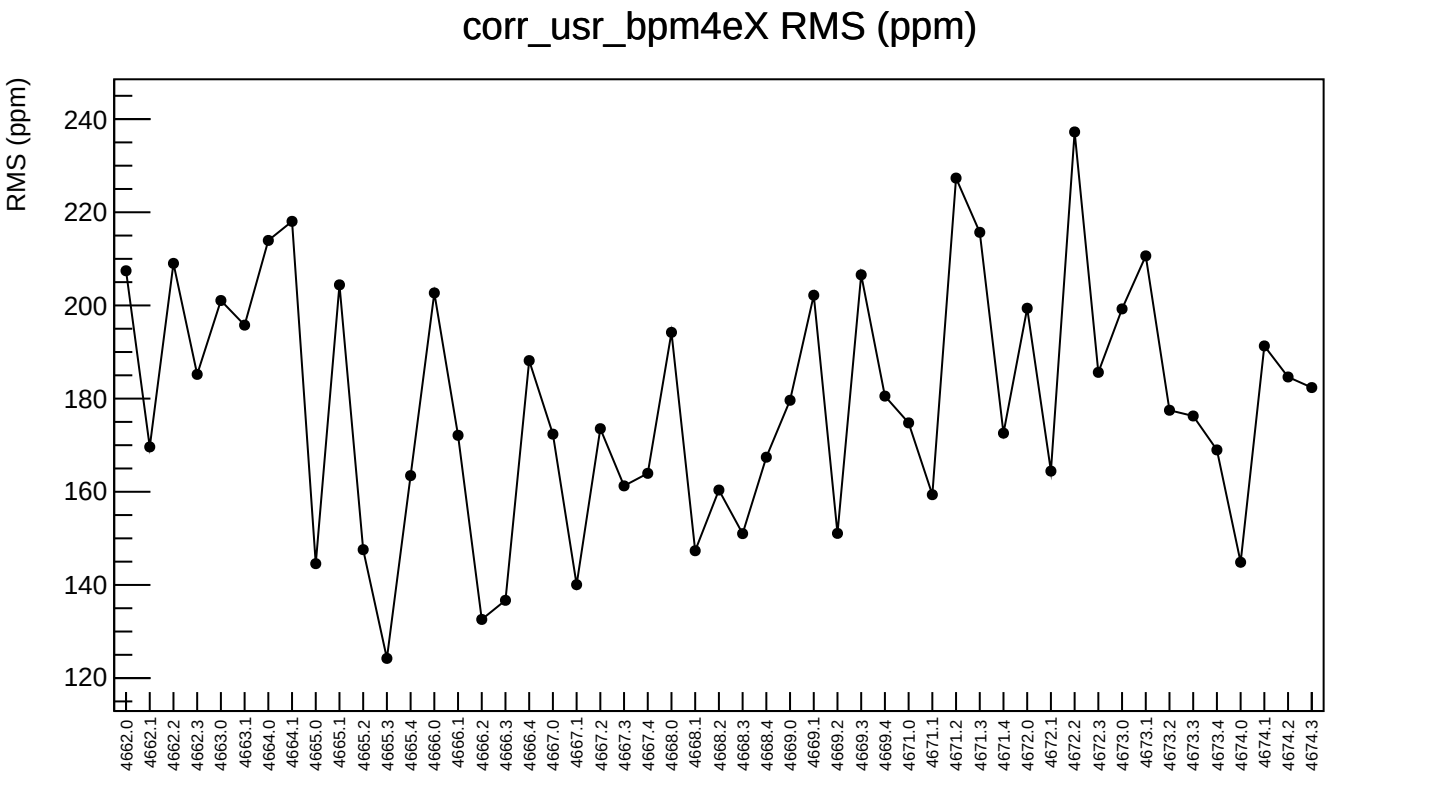

corr_usl_bpm8Y (ppb)
χ² / ndf 0 / 51
p0 0 ± 10.07
150
100
50
0
−50
−100
−150
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

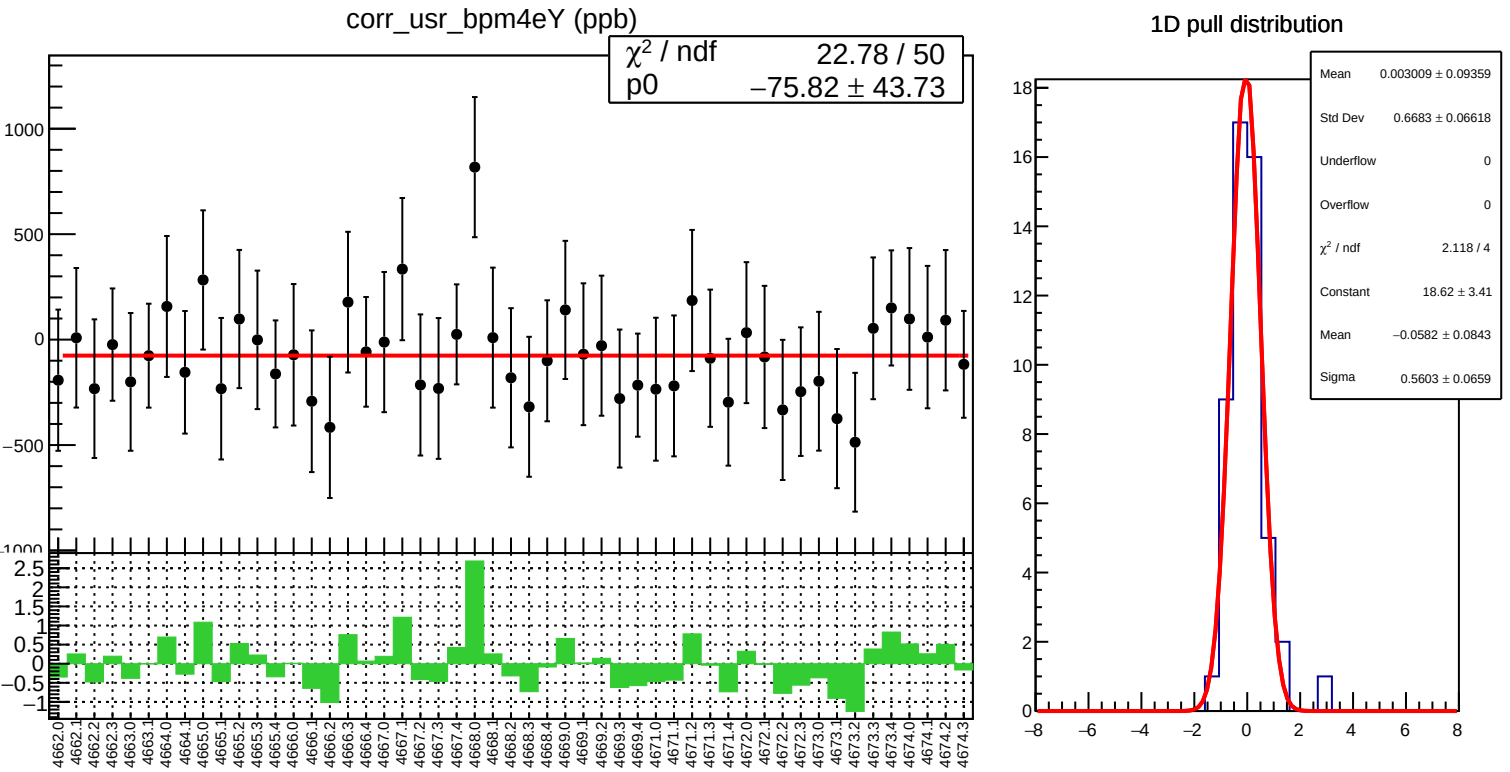

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

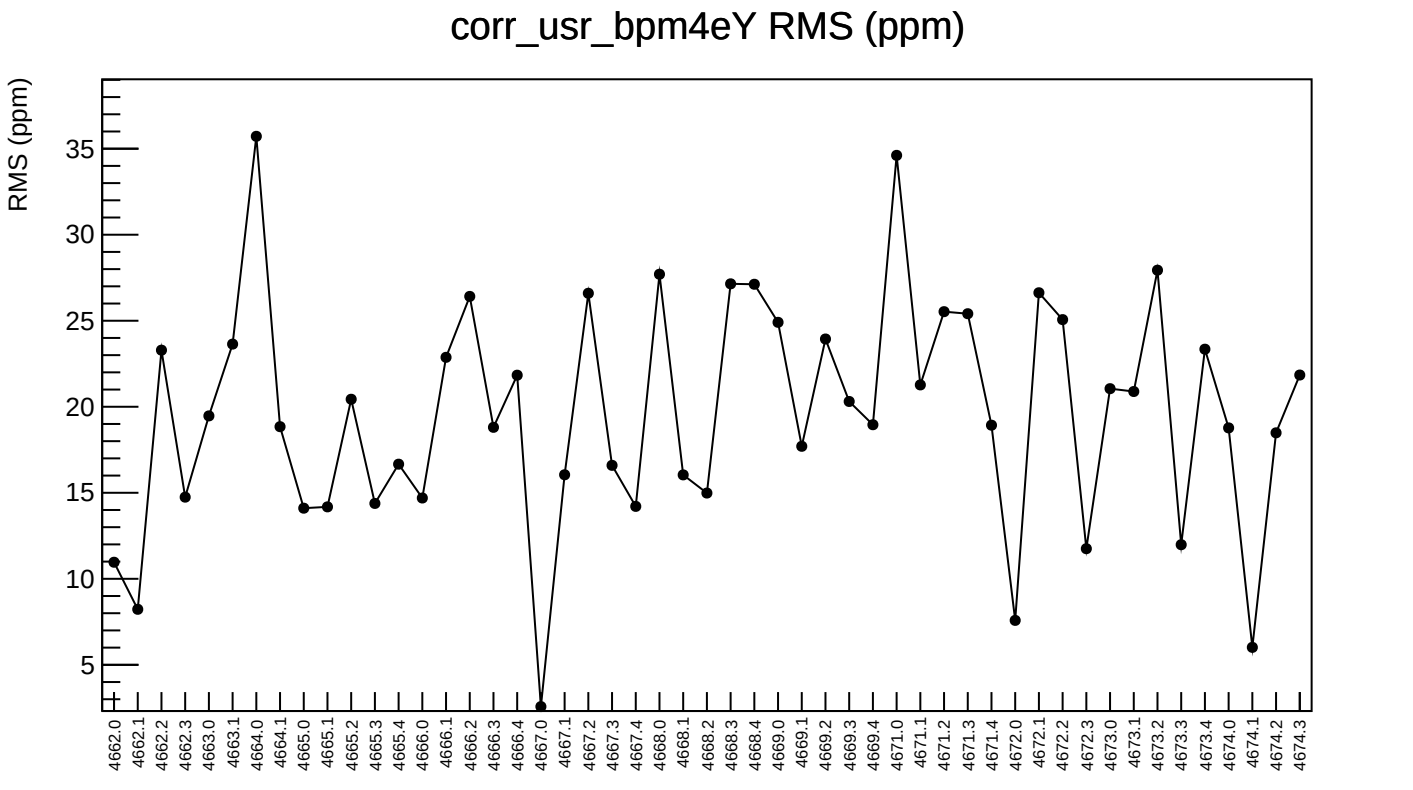

corr_usl_bpm8Y RMS (ppm)
RMS (ppm)
0
0.2
0.4
0.6
0.8
1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

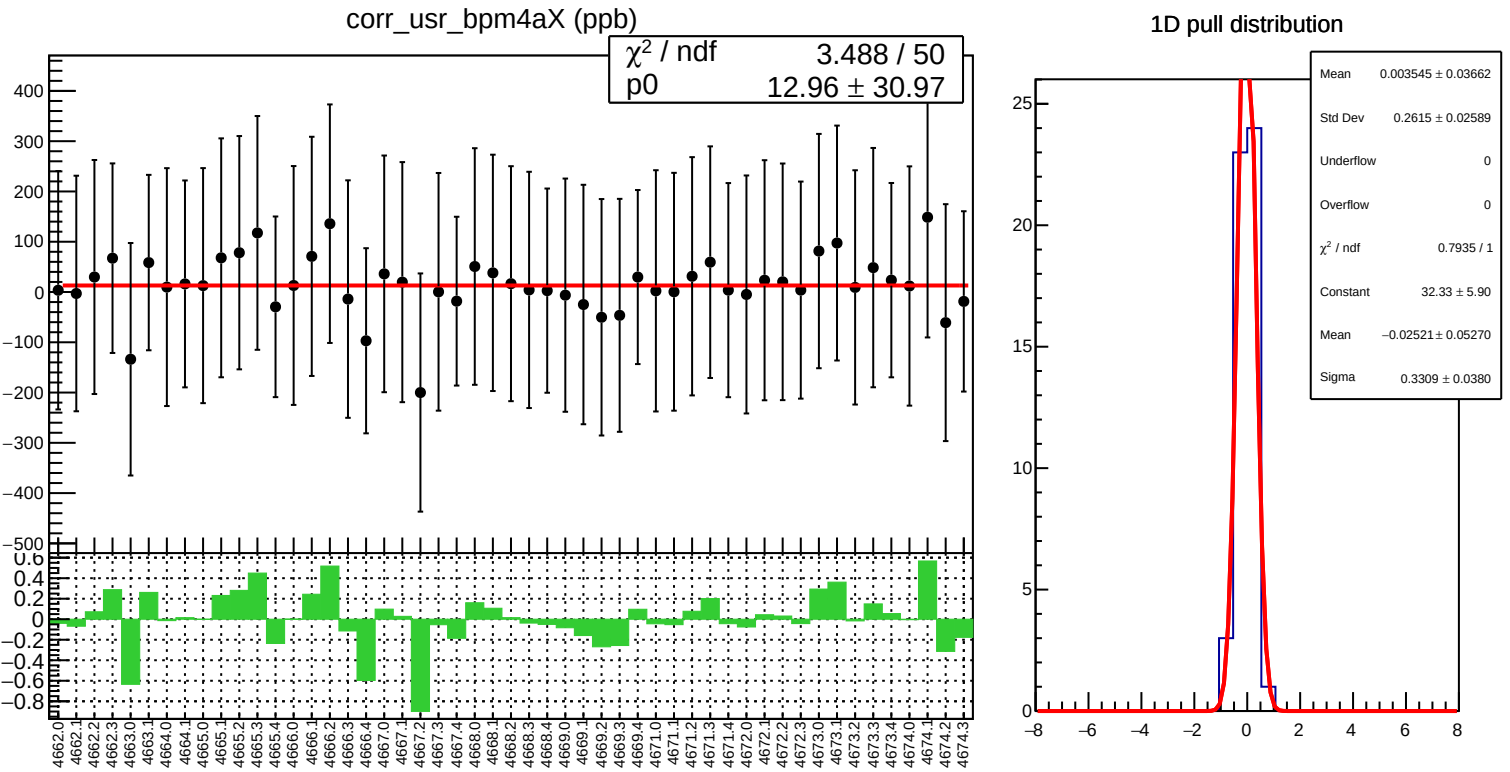

corr_usr_bpm4eX (ppb)
χ² / ndf 30.98 / 50
p0 −574 ± 269.1
4000
2000
0
-2000
-4000
-6000
1.5
1
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

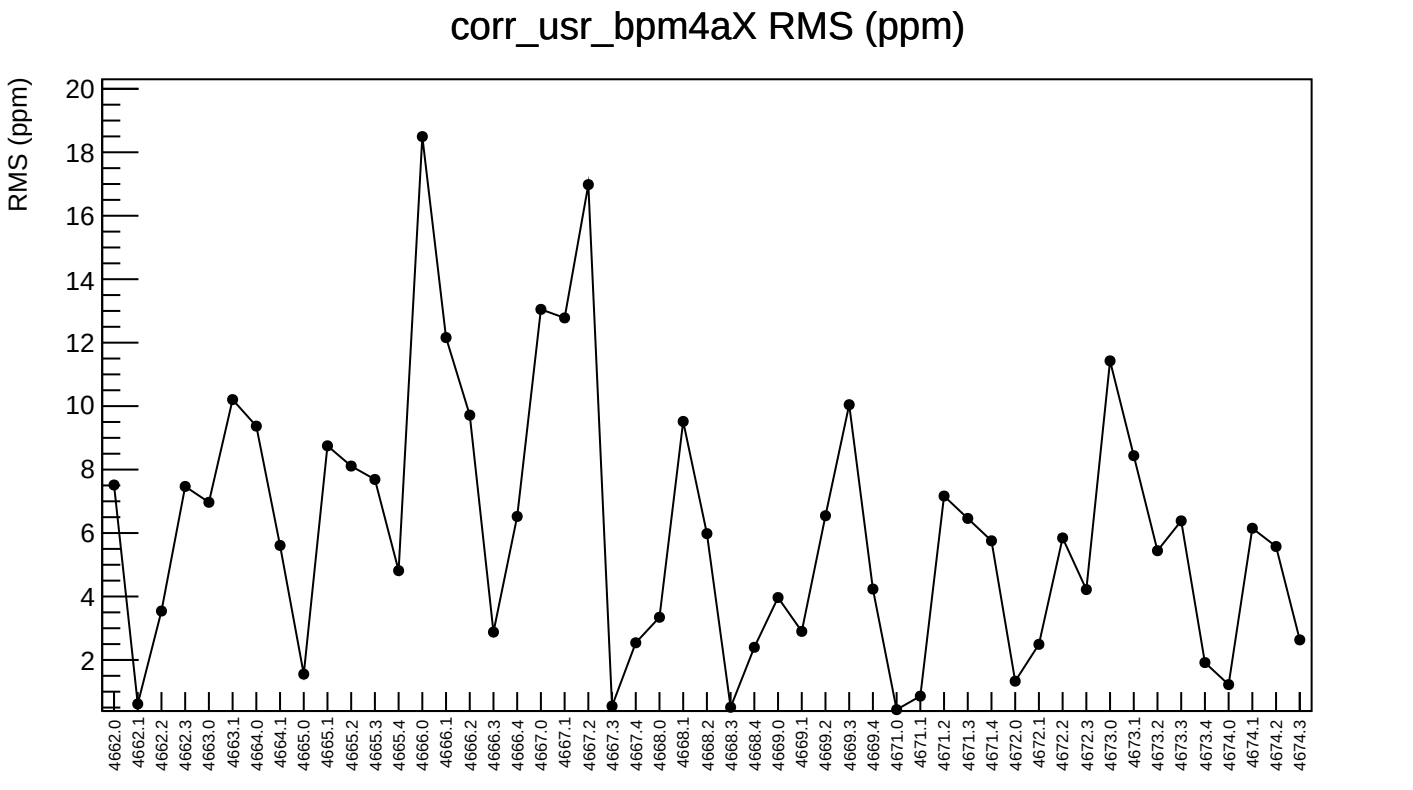

1D pull distribution
Mean 0.01502 ± 0.1091
Std Dev 0.7792 ± 0.07715
Underflow 0
Overflow 0
χ² / ndf 2.605 / 4
Constant 12.42 ± 2.37
Mean −0.00803 ± 0.16141
Sigma 0.8596 ± 0.1366
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

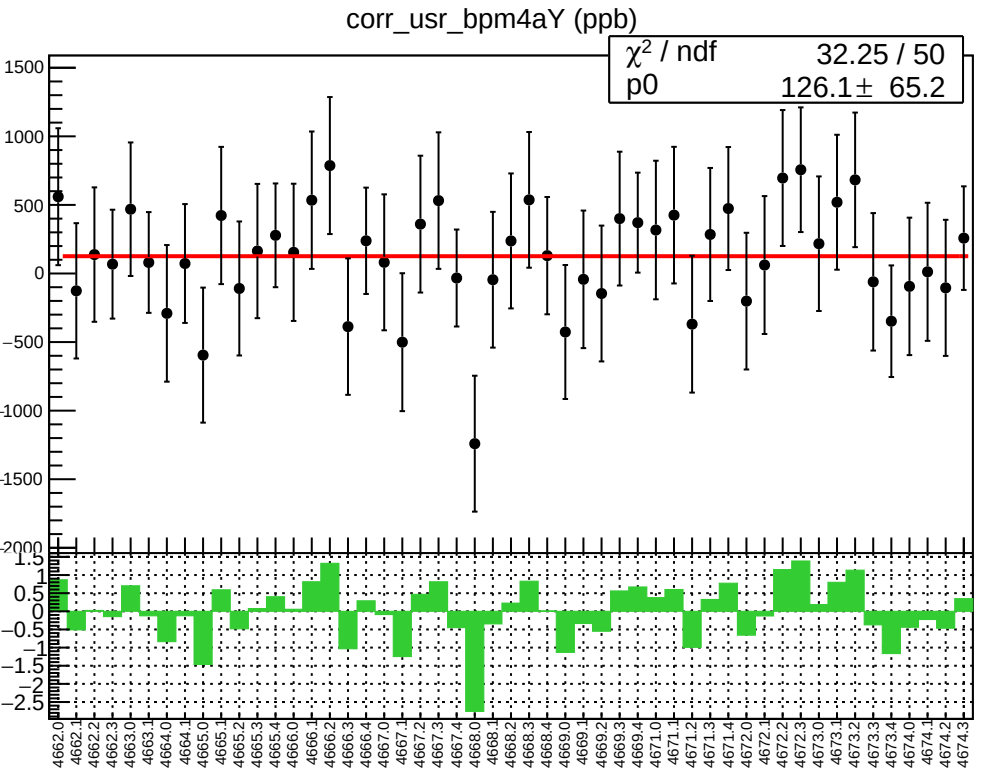

corr_usr_bpm4eX RMS (ppm)
RMS (ppm)
240
220
200
180
160
140
120
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

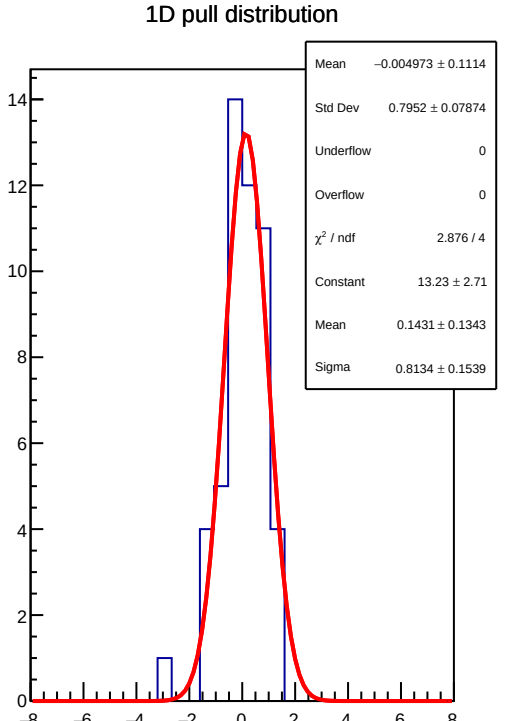

corr_usr_bpm4eY (ppb)
χ² / ndf 22.78 / 50
p0 −75.82 ± 43.73
1000
500
0
−500
−1000
2.5
2
1.5
1
0.5
0
−0.5
−1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3
1D pull distribution
Mean 0.003009 ± 0.09359
Std Dev 0.6683 ± 0.06618
Underflow 0
Overflow 0
χ² / ndf 2.118 / 4
Constant 18.62 ± 3.41
Mean −0.0582 ± 0.0843
Sigma 0.5603 ± 0.0659
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

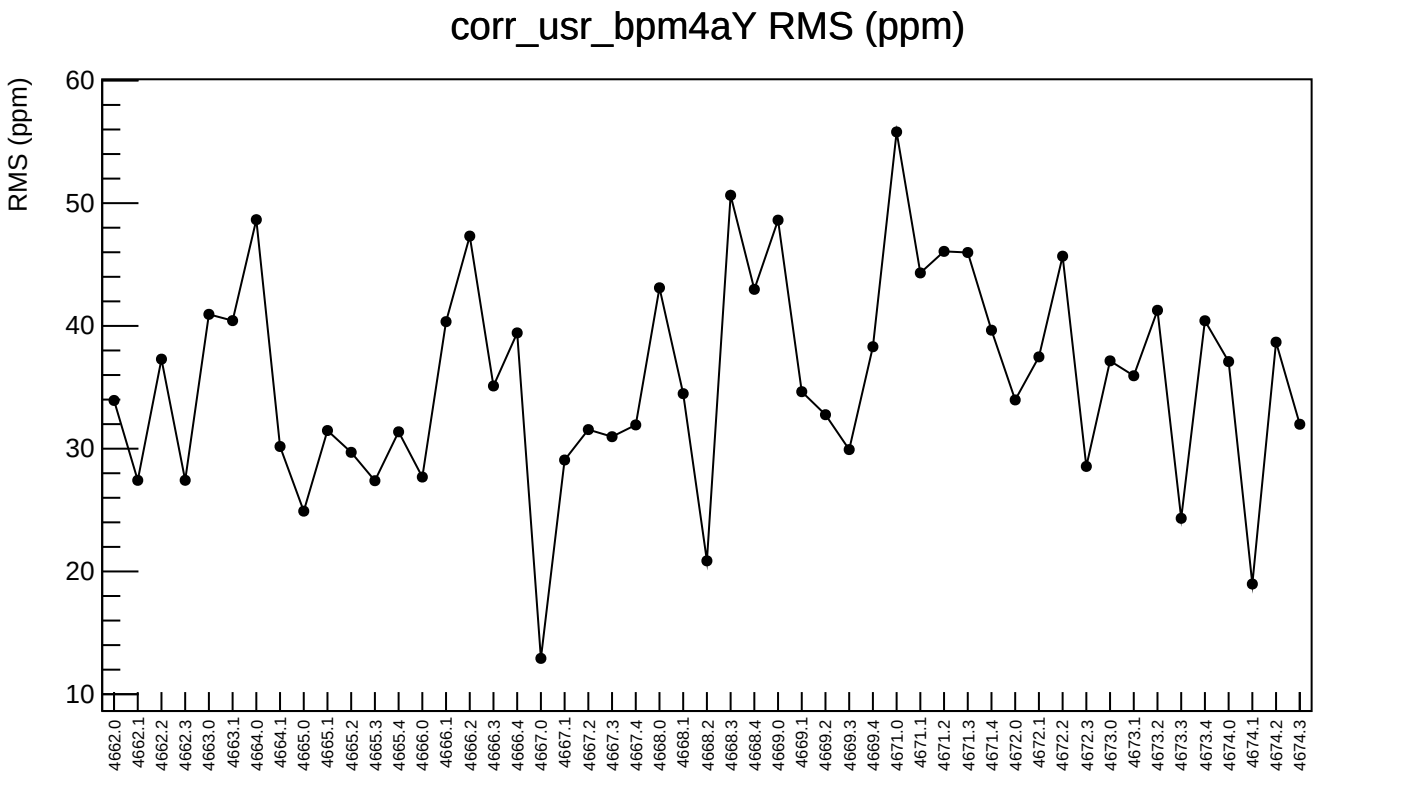

corr_usr_bpm4eY RMS (ppm)
RMS (ppm)
35
30
25
20
15
10
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

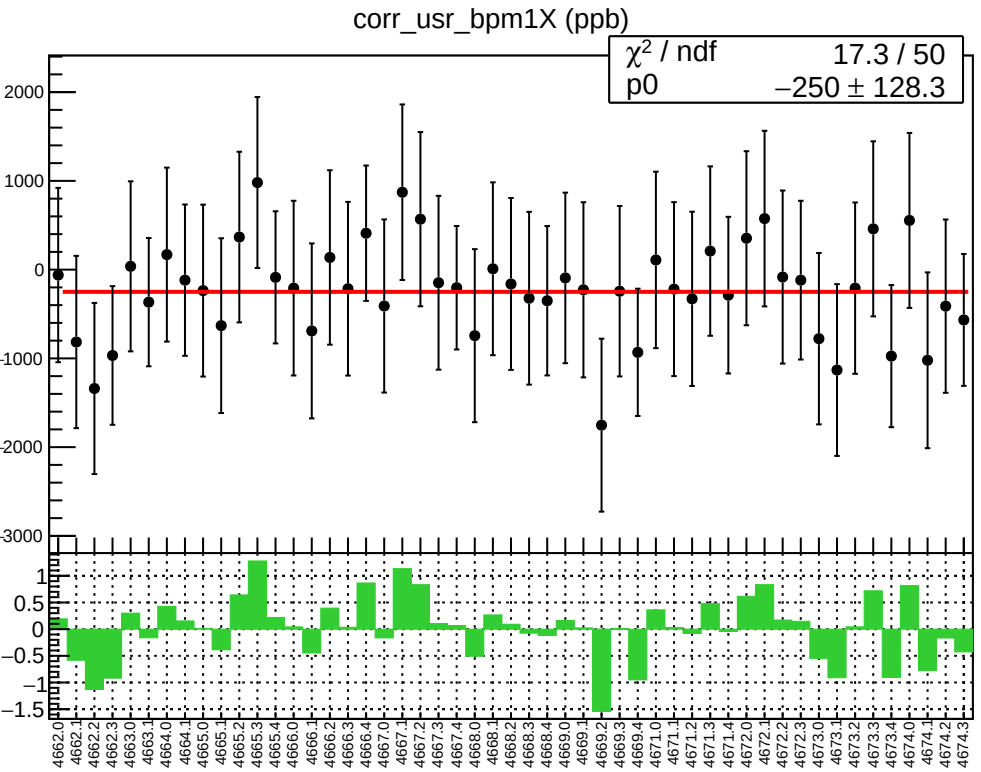

corr_usr_bpm4aX (ppb)
χ² / ndf 3.488 / 50
p0 12.96 ± 30.97
1D pull distribution
Mean 0.003545 ± 0.03662
Std Dev 0.2615 ± 0.02589
Underflow 0
Overflow 0
χ² / ndf 0.7935 / 1
Constant 32.33 ± 5.90
Mean −0.02521 ± 0.05270
Sigma 0.3309 ± 0.0380

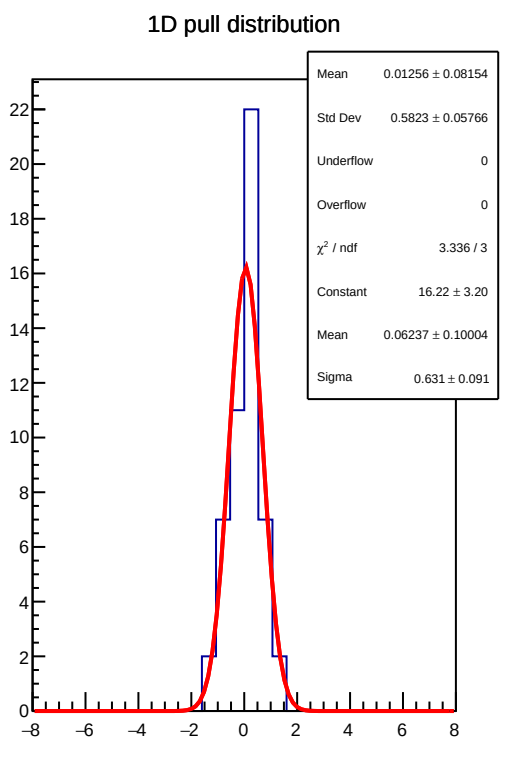

corr_usr_bpm4aX RMS (ppm)
RMS (ppm)
20
18
16
14
12
10
8
6
4
2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

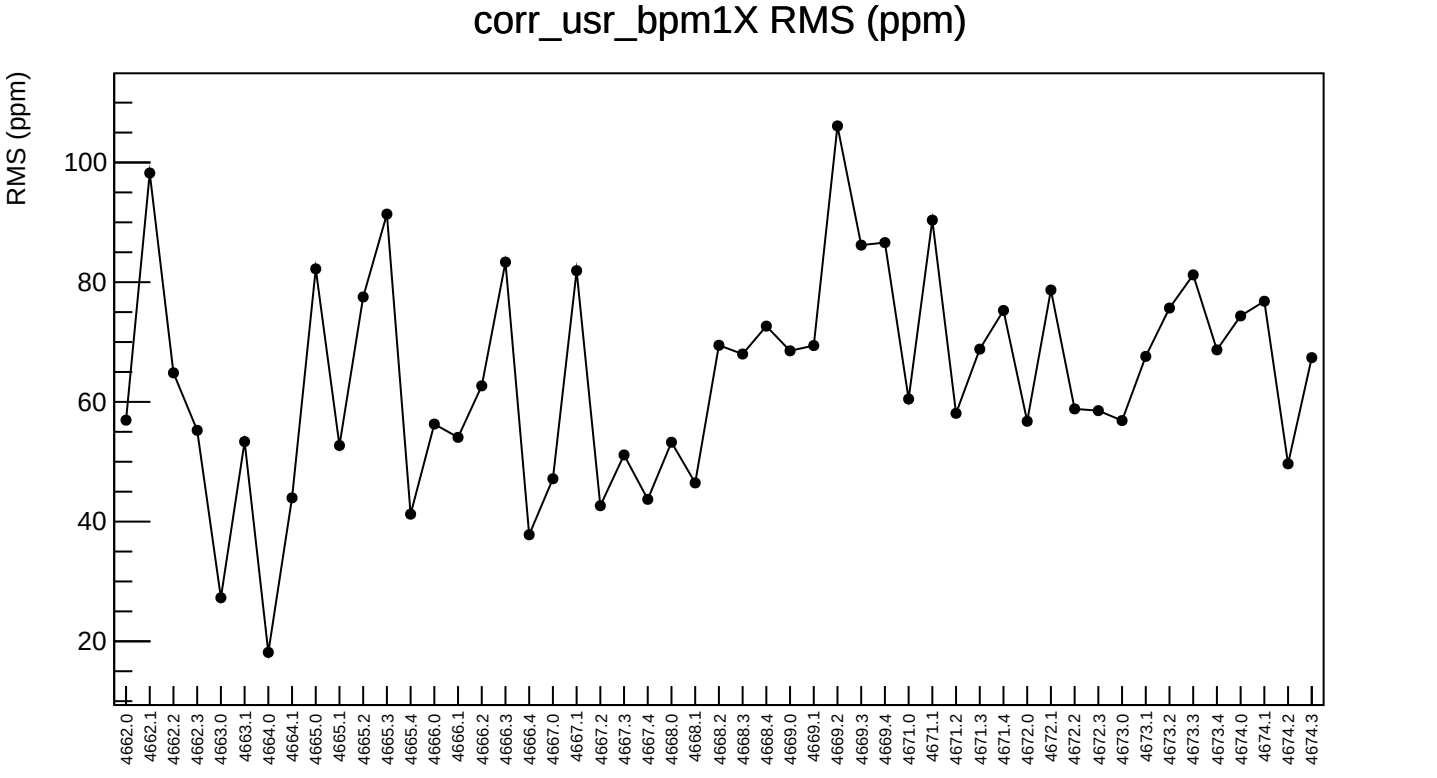

corr_usr_bpm4aY (ppb)
χ² / ndf 32.25 / 50
p0 126.1 ± 65.2
1500
1000
500
0
−500
−1000
−1500
−2000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

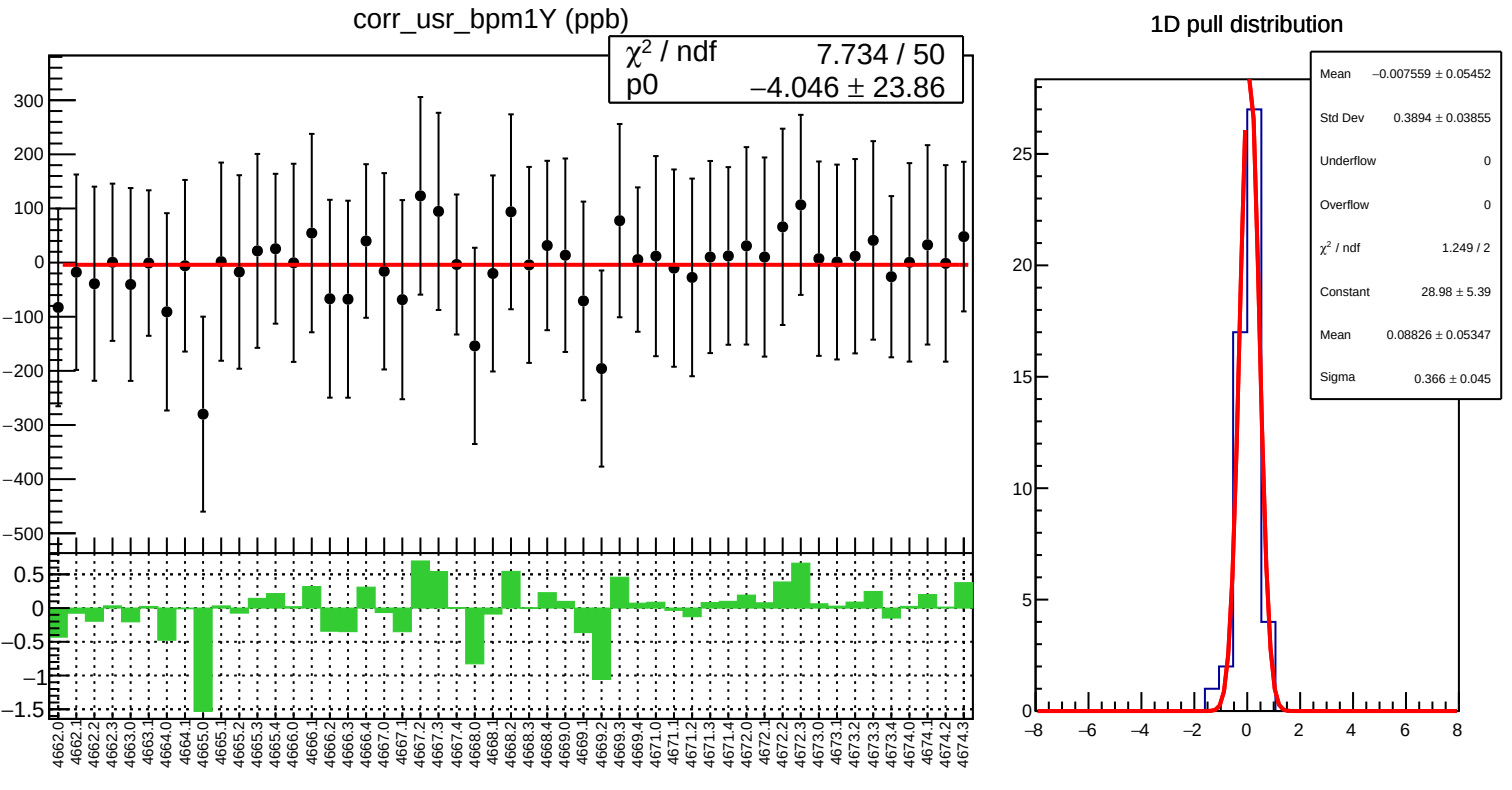

1D pull distribution
Mean −0.004973 ± 0.1114
Std Dev 0.7952 ± 0.07874
Underflow 0
Overflow 0
χ² / ndf 2.876 / 4
Constant 13.23 ± 2.71
Mean 0.1431 ± 0.1343
Sigma 0.8134 ± 0.1539
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

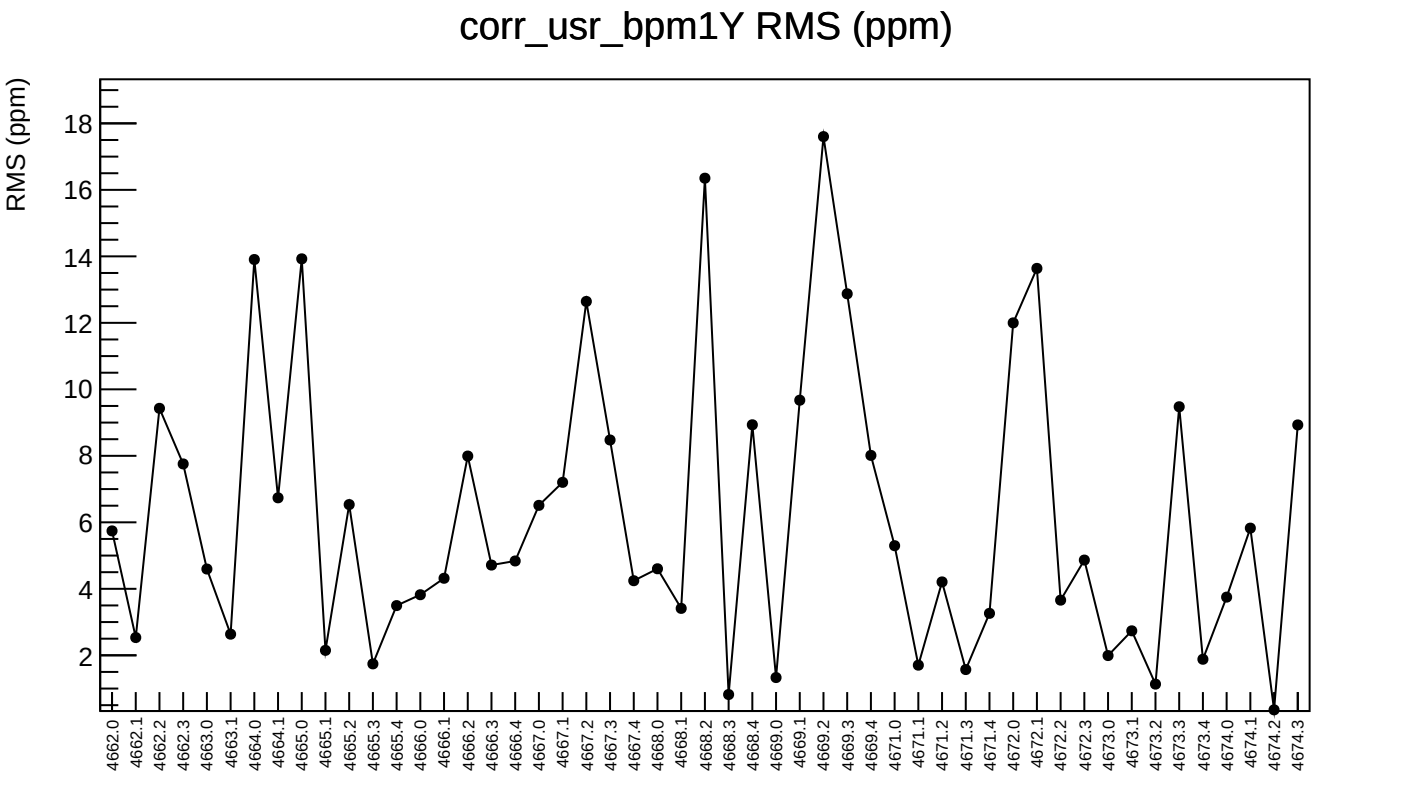

corr_usr_bpm4aY RMS (ppm)
RMS (ppm)
60
50
40
30
20
10
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

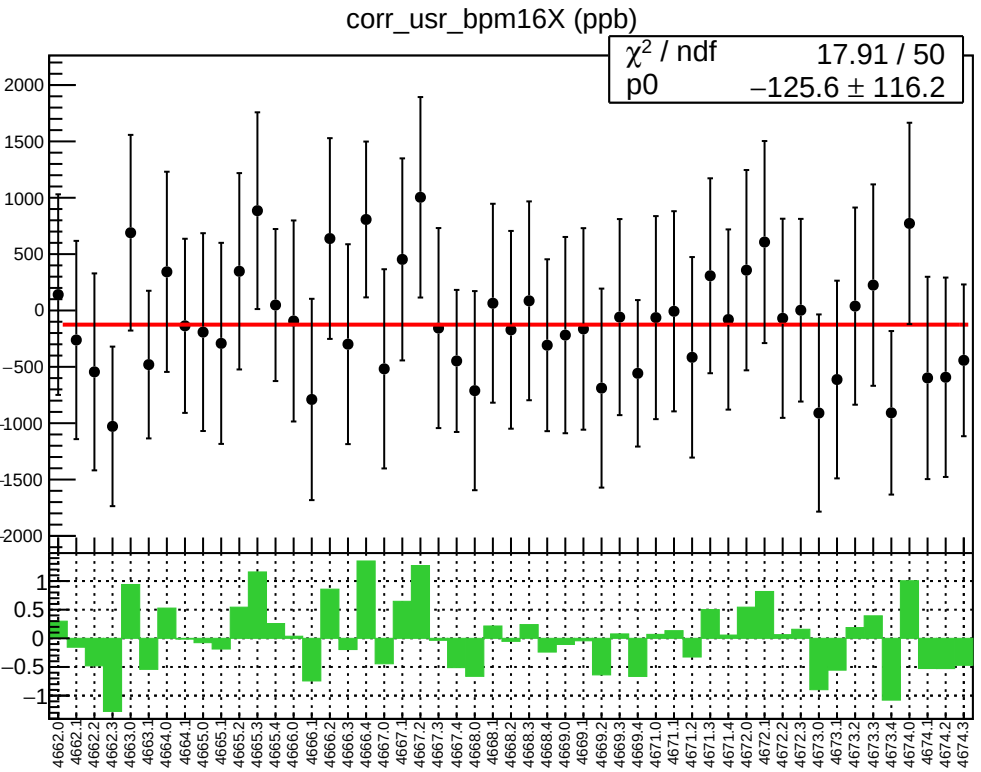

corr_usr_bpm1X (ppb)
χ² / ndf 17.3 / 50
p0 −250 ± 128.3
2000
1000
0
-1000
-2000
-3000
1
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

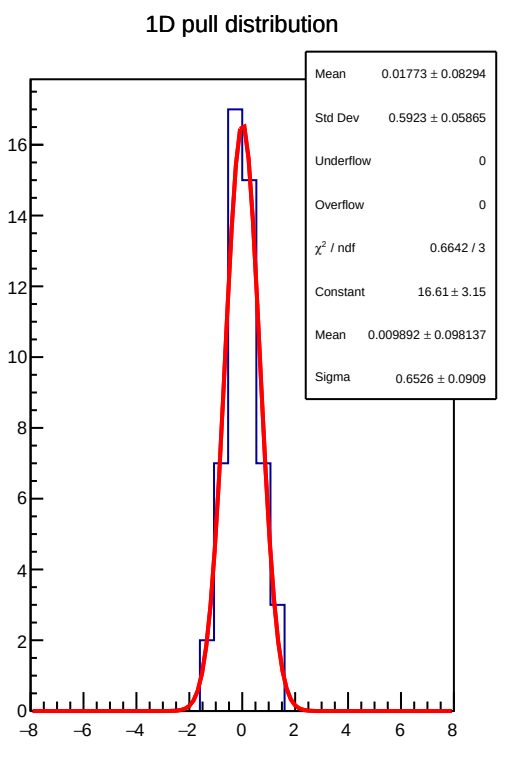

1D pull distribution
Mean 0.01256 ± 0.08154
Std Dev 0.5823 ± 0.05766
Underflow 0
Overflow 0
χ² / ndf 3.336 / 3
Constant 16.22 ± 3.20
Mean 0.06237 ± 0.10004
Sigma 0.631 ± 0.091
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

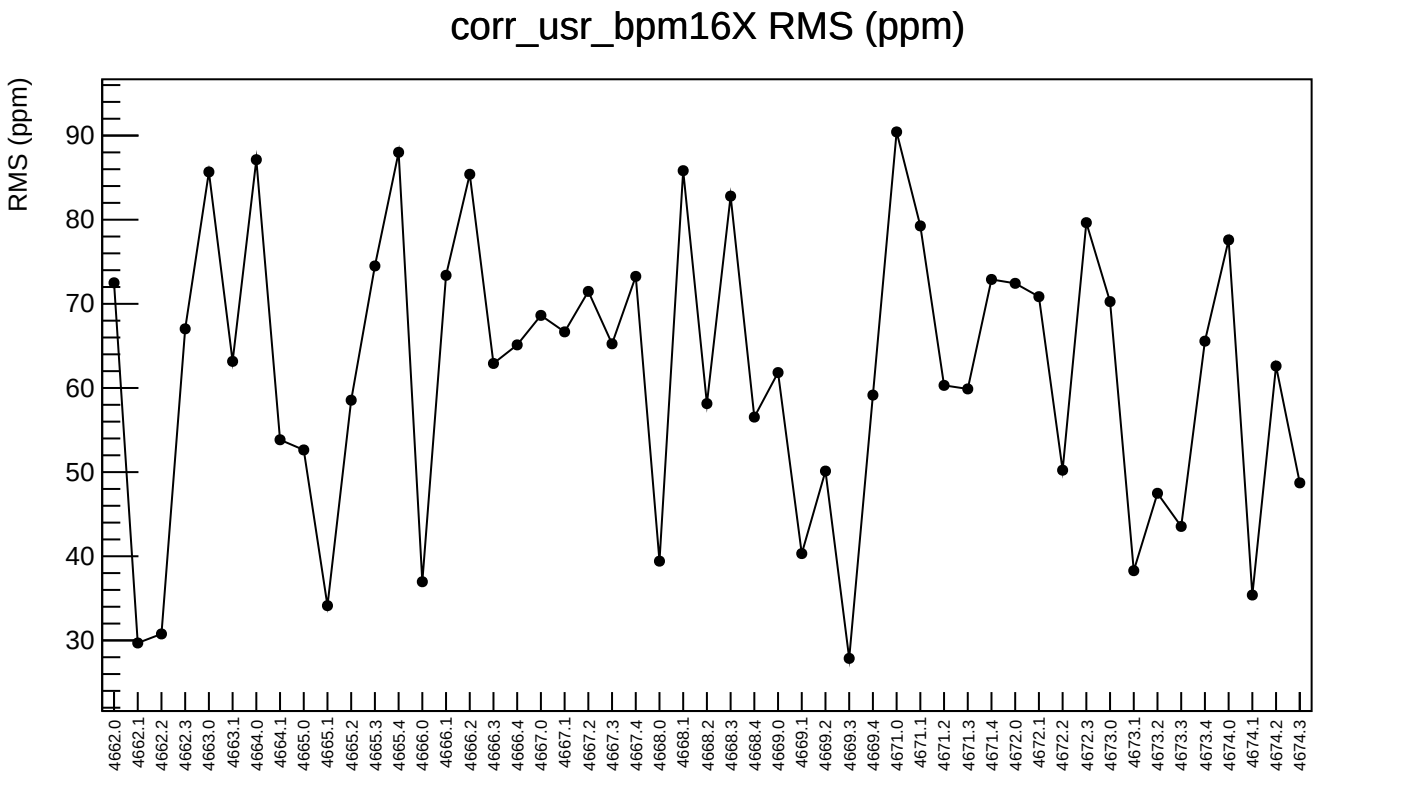

corr_usr_bpm1X RMS (ppm)
RMS (ppm)
100
80
60
40
20
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

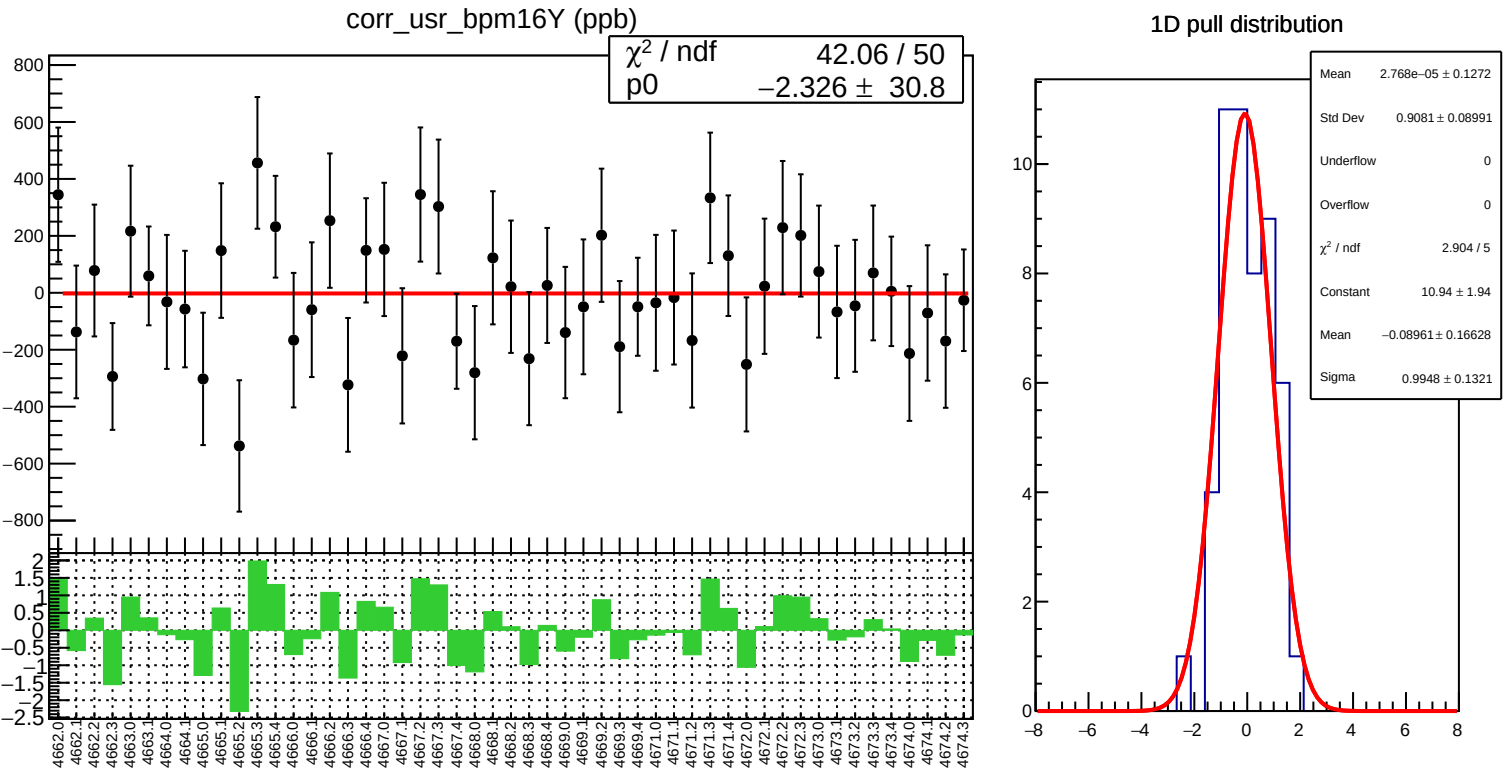

corr_usr_bpm1Y (ppb)
χ² / ndf 7.734 / 50
p0 −4.046 ± 23.86
1D pull distribution
Mean −0.007559 ± 0.05452
Std Dev 0.3894 ± 0.03855
Underflow 0
Overflow 0
χ² / ndf 1.249 / 2
Constant 28.98 ± 5.39
Mean 0.08826 ± 0.05347
Sigma 0.366 ± 0.045

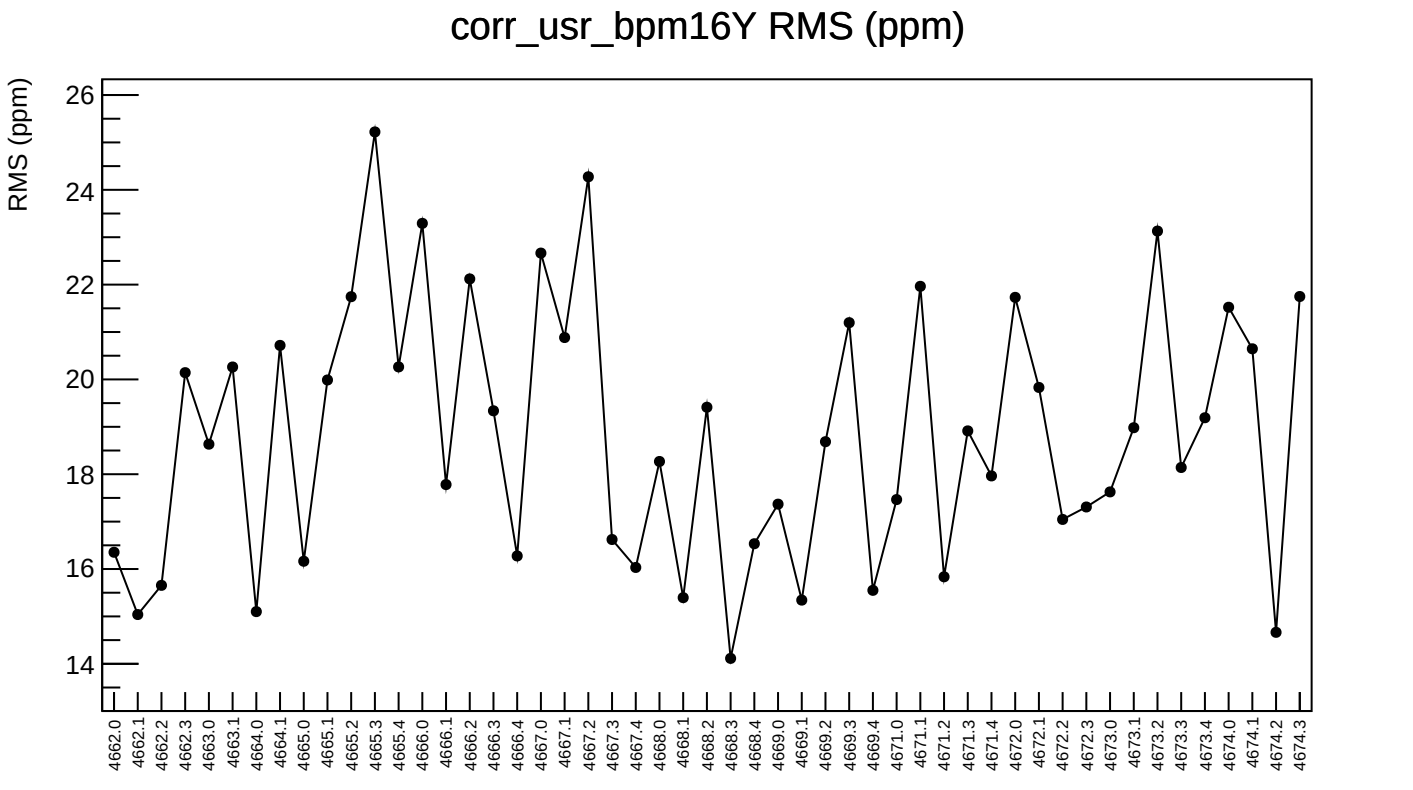

corr_usr_bpm1Y RMS (ppm)
RMS (ppm)
18
16
14
12
10
8
6
4
2
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

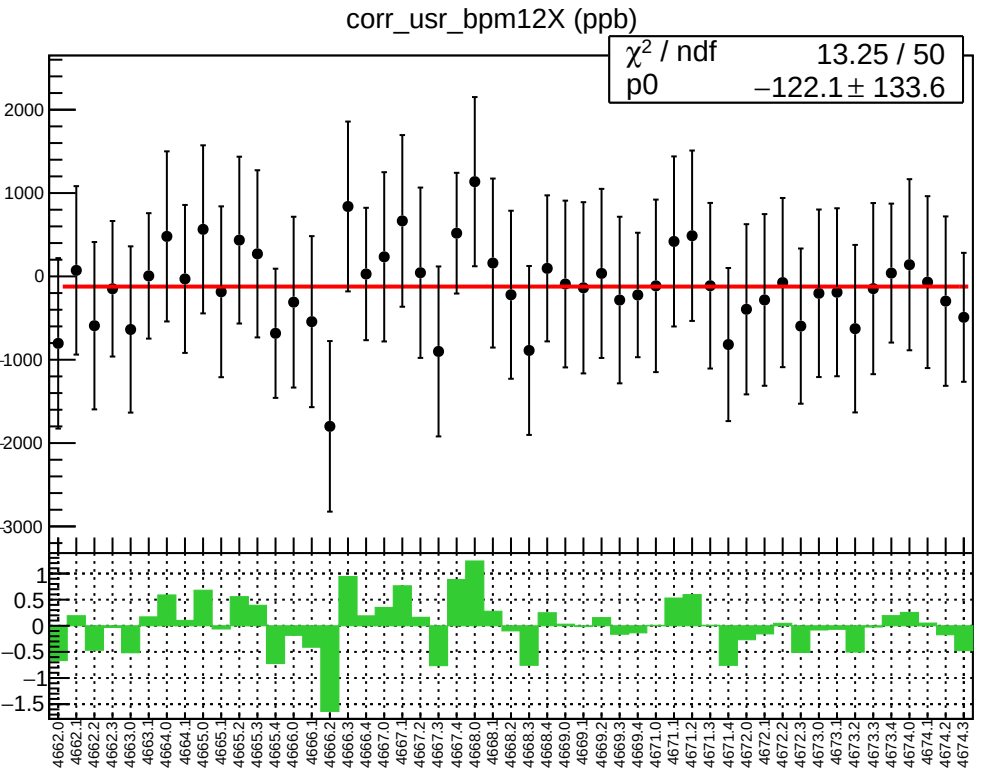

corr_usr_bpm16X (ppb)
χ² / ndf 17.91 / 50
p0 −125.6 ± 116.2
2000
1500
1000
500
0
−500
−1000
−1500
−2000
1
0.5
0
−0.5
−1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

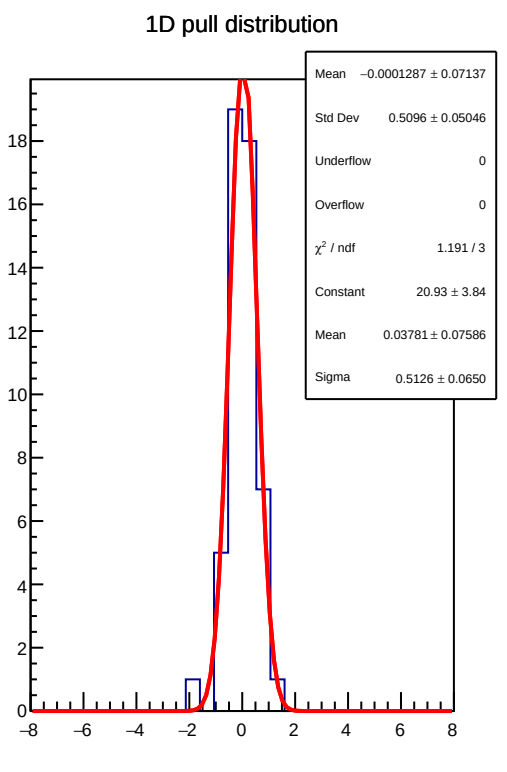

1D pull distribution
Mean 0.01773 ± 0.08294
Std Dev 0.5923 ± 0.05865
Underflow 0
Overflow 0
χ² / ndf 0.6642 / 3
Constant 16.61 ± 3.15
Mean 0.009892 ± 0.098137
Sigma 0.6526 ± 0.0909
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

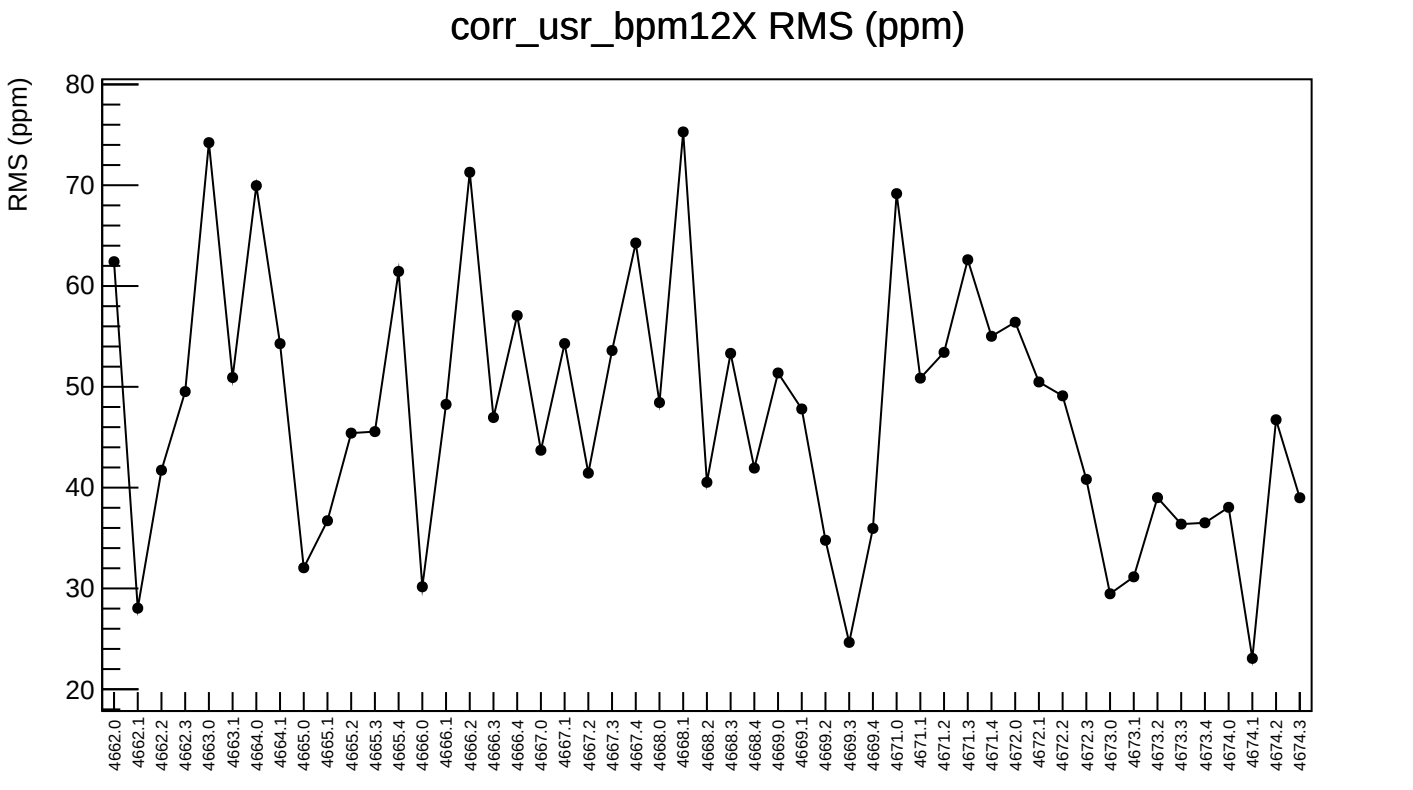

corr_usr_bpm16X RMS (ppm)
RMS (ppm)
90
80
70
60
50
40
30
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

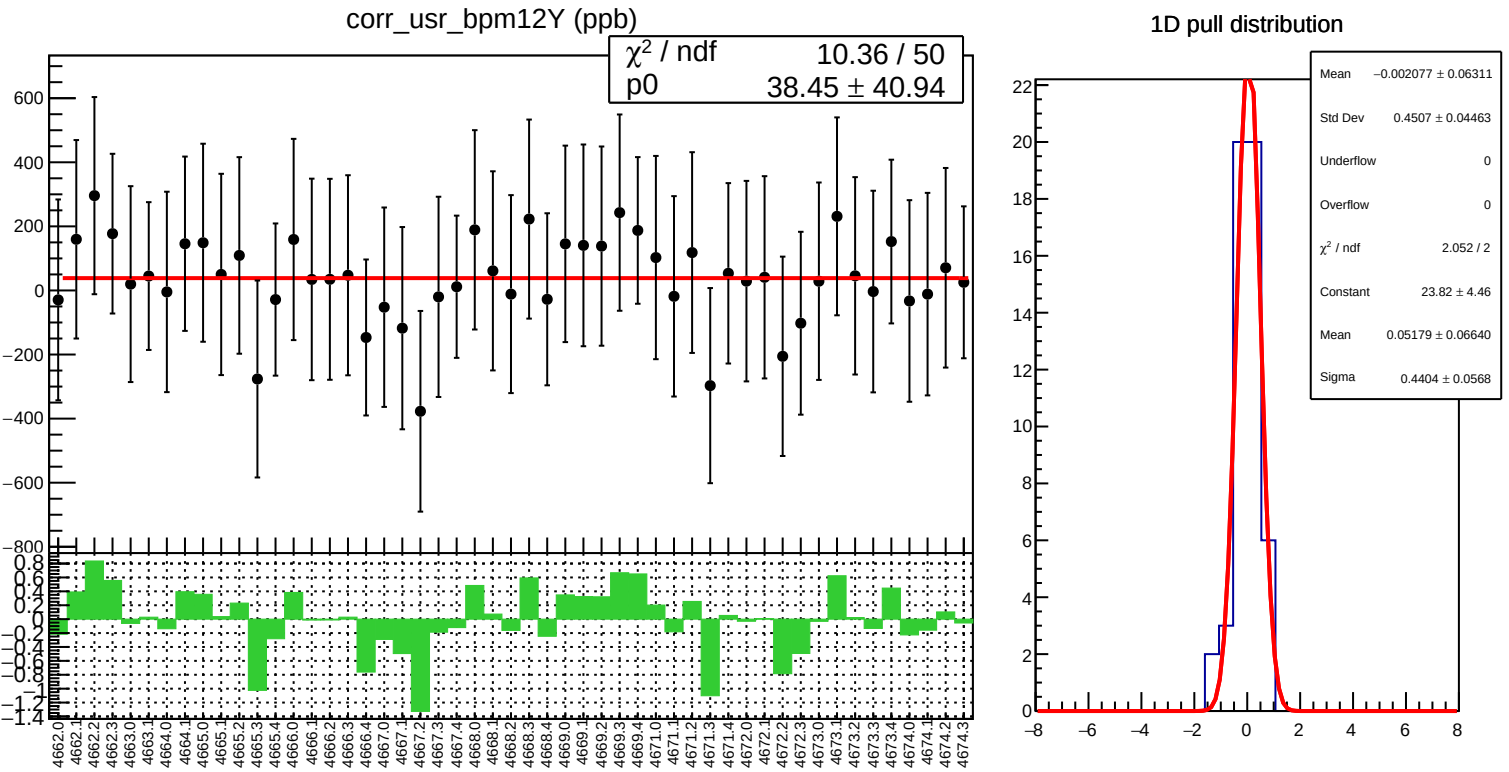

corr_usr_bpm16Y (ppb)
χ² / ndf 42.06 / 50
p0 −2.326 ± 30.8
1D pull distribution
Mean 2.768e−05 ± 0.1272
Std Dev 0.9081 ± 0.08991
Underflow 0
Overflow 0
χ² / ndf 2.904 / 5
Constant 10.94 ± 1.94
Mean −0.08961 ± 0.16628
Sigma 0.9948 ± 0.1321

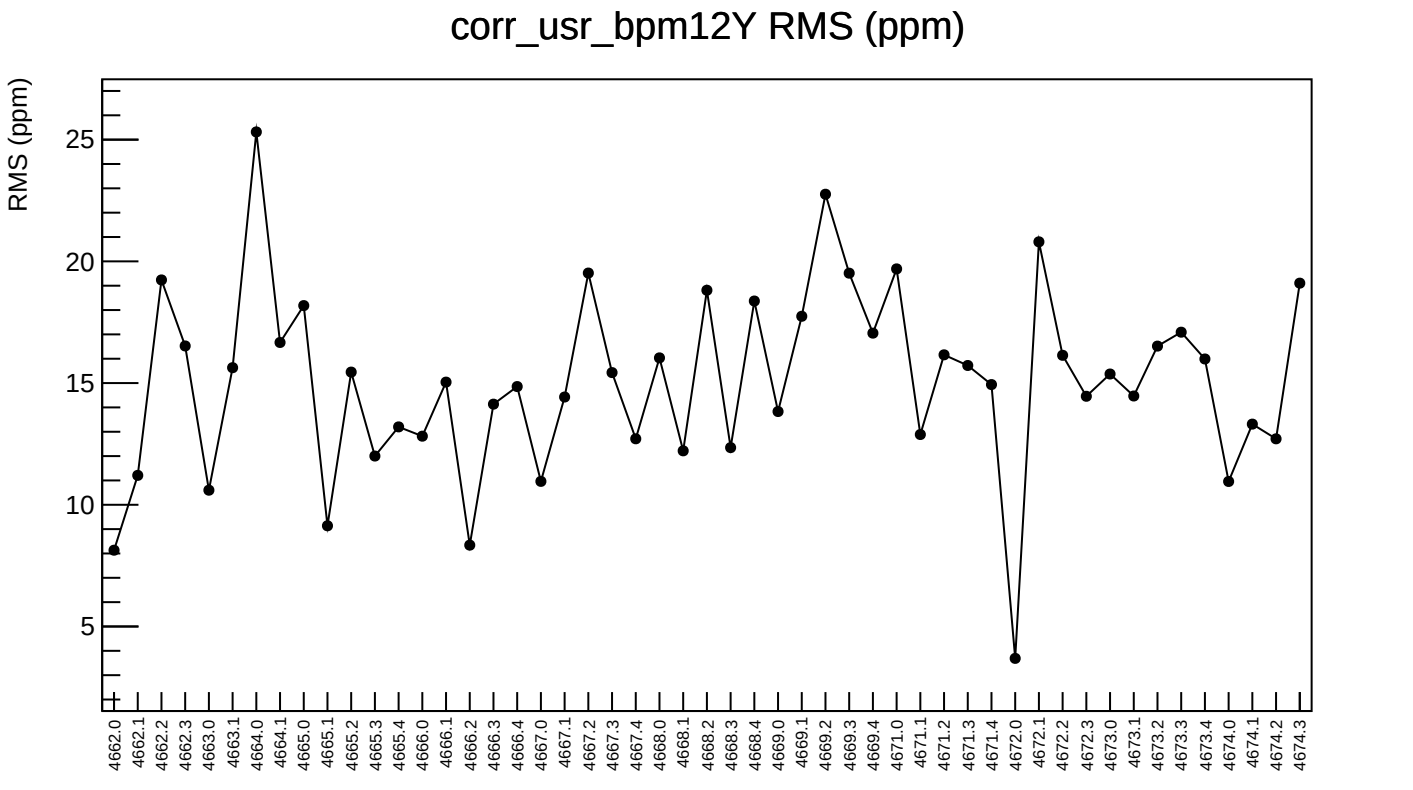

corr_usr_bpm16Y RMS (ppm)
RMS (ppm)
26
24
22
20
18
16
14
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

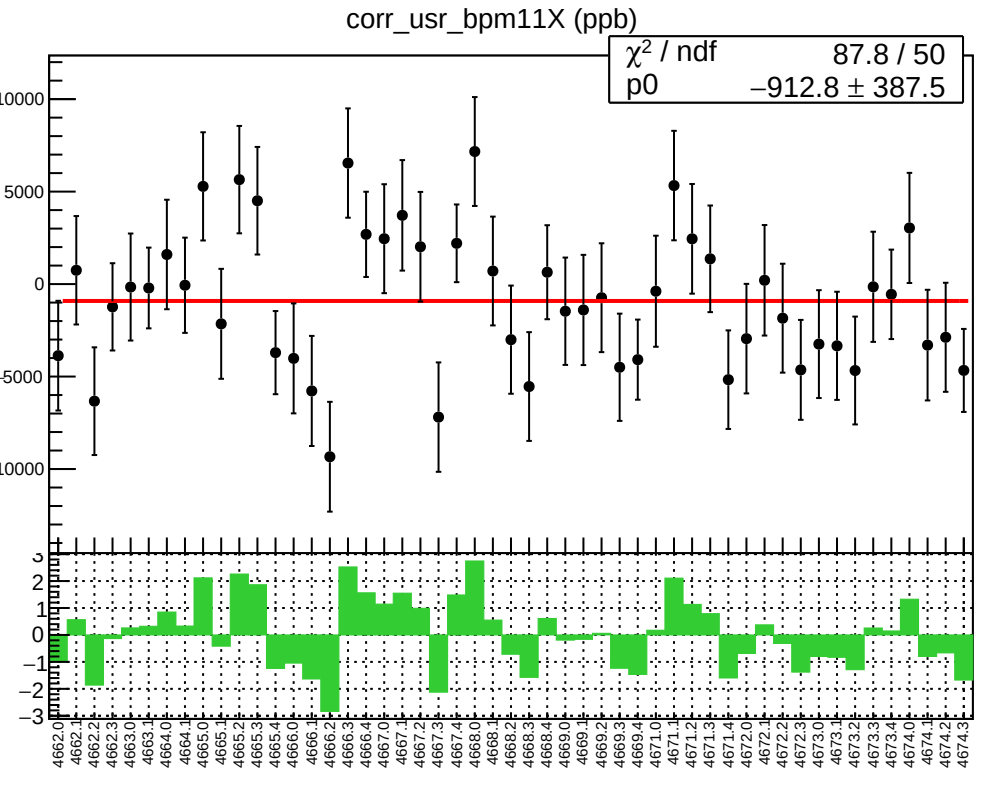

corr_usr_bpm12X (ppb)
χ² / ndf 13.25 / 50
p0 −122.1 ± 133.6
2000
1000
0
-1000
-2000
-3000
1
0.5
0
−0.5
−1
−1.5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

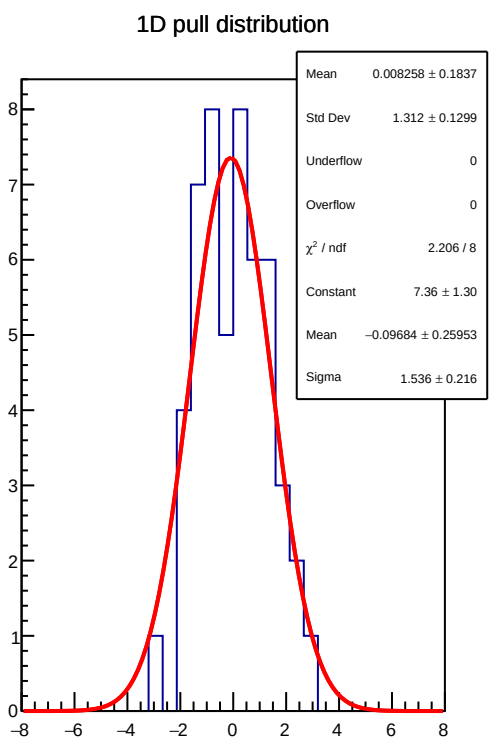

1D pull distribution
Mean −0.0001287 ± 0.07137
Std Dev 0.5096 ± 0.05046
Underflow 0
Overflow 0
χ² / ndf 1.191 / 3
Constant 20.93 ± 3.84
Mean 0.03781 ± 0.07586
Sigma 0.5126 ± 0.0650
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

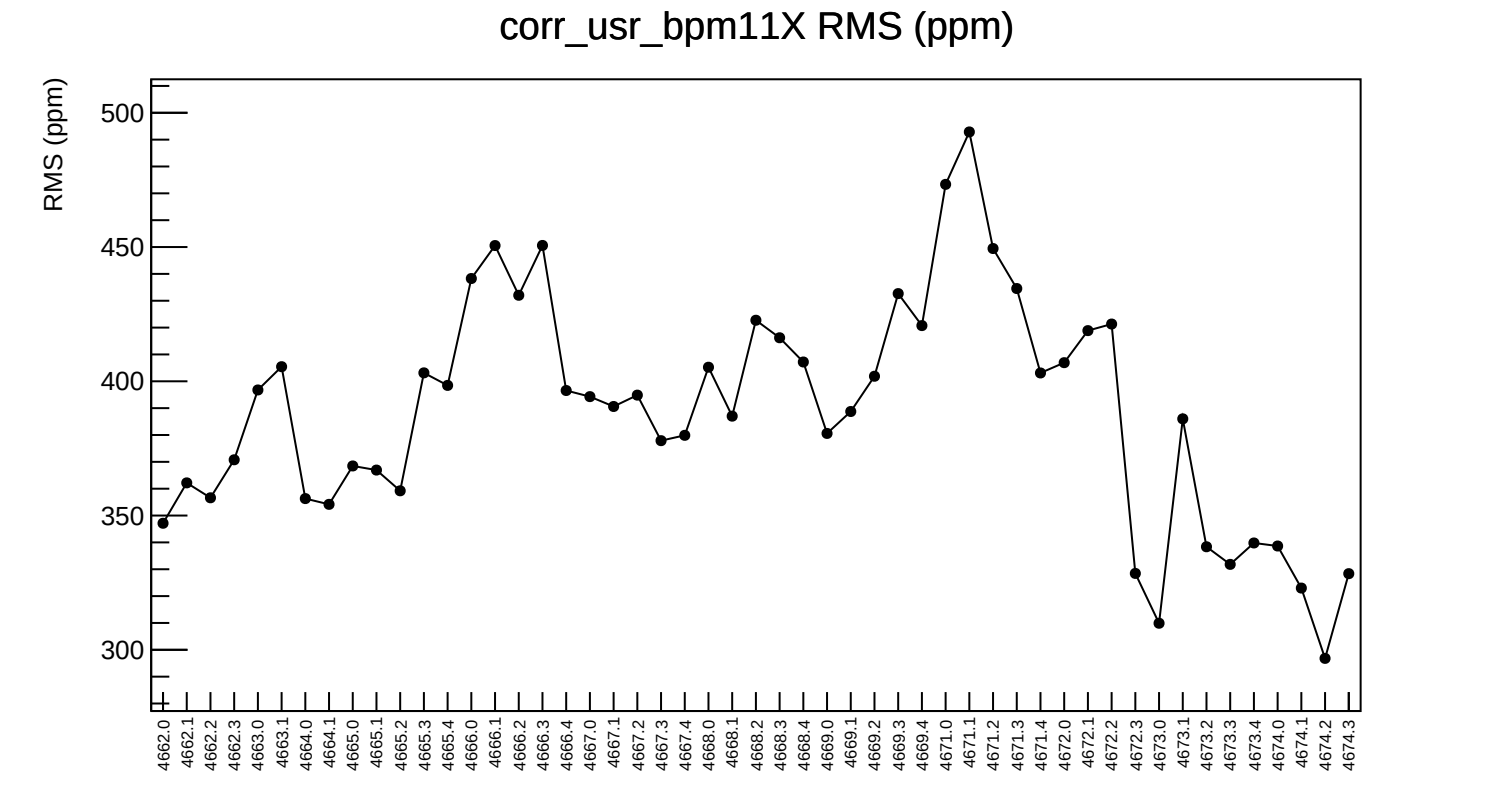

corr_usr_bpm12X RMS (ppm)
RMS (ppm)
80
70
60
50
40
30
20
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

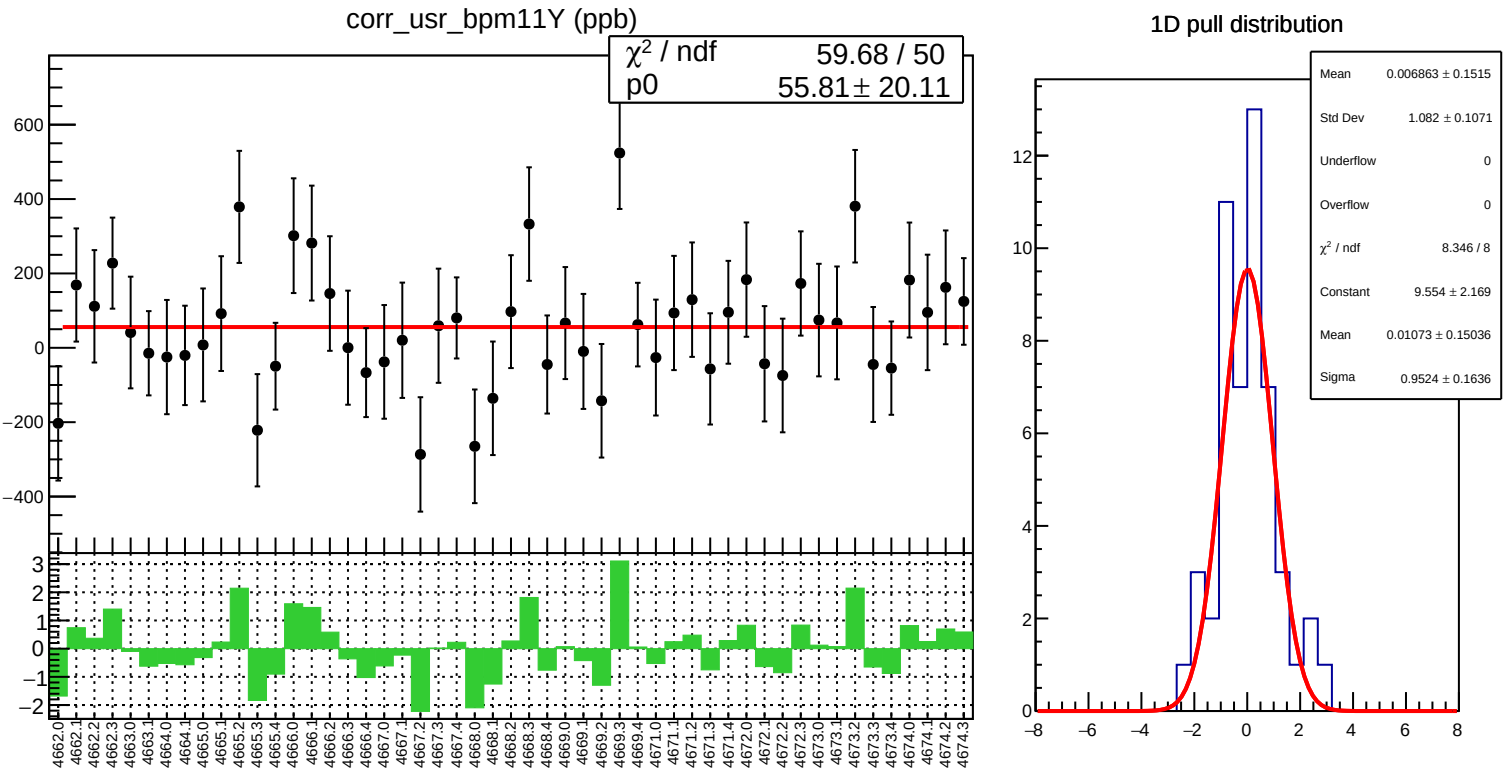

corr_usr_bpm12Y (ppb)
χ² / ndf 10.36 / 50
p0 38.45 ± 40.94
1D pull distribution
Mean −0.002077 ± 0.06311
Std Dev 0.4507 ± 0.04463
Underflow 0
Overflow 0
χ² / ndf 2.052 / 2
Constant 23.82 ± 4.46
Mean 0.05179 ± 0.06640
Sigma 0.4404 ± 0.0568

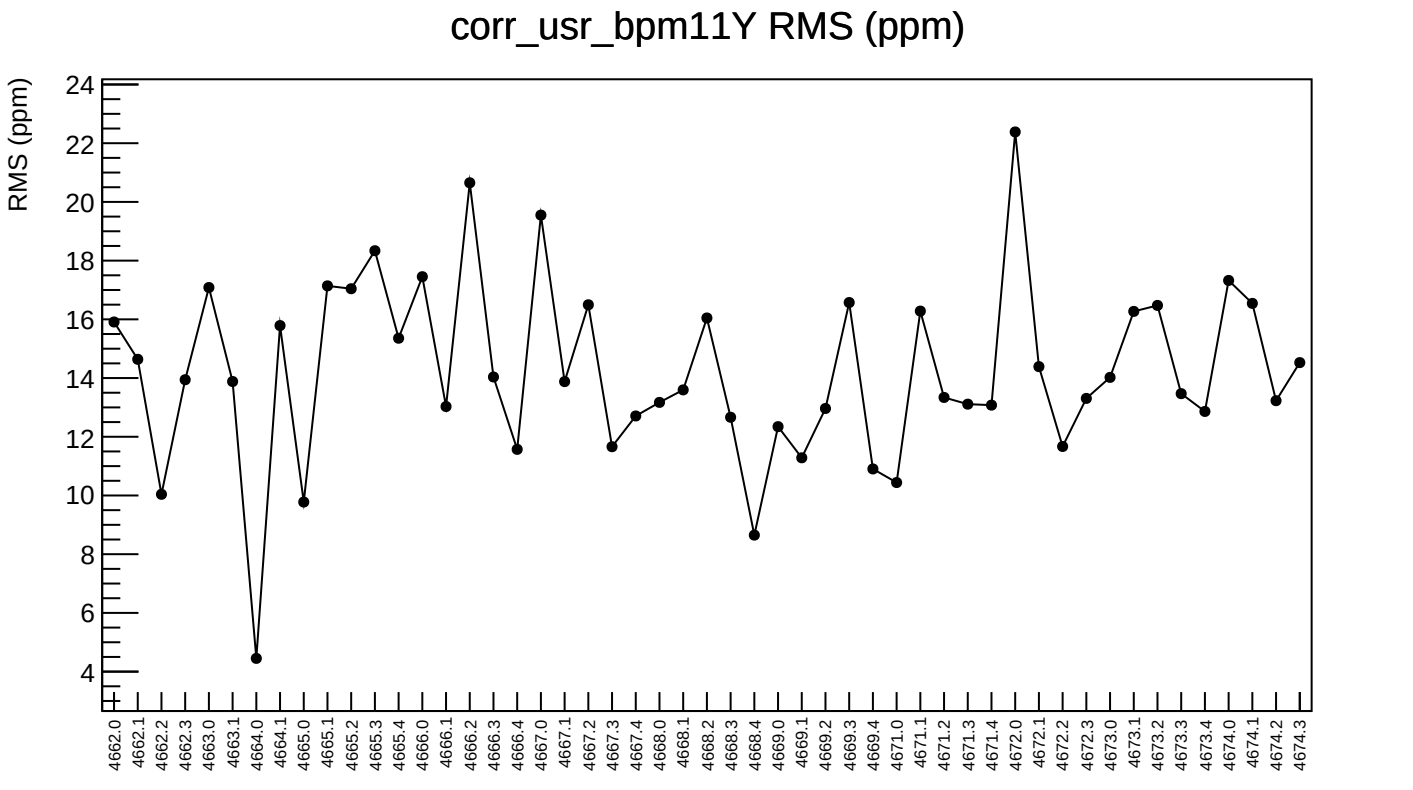

corr_usr_bpm12Y RMS (ppm)
RMS (ppm)
25
20
15
10
5
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

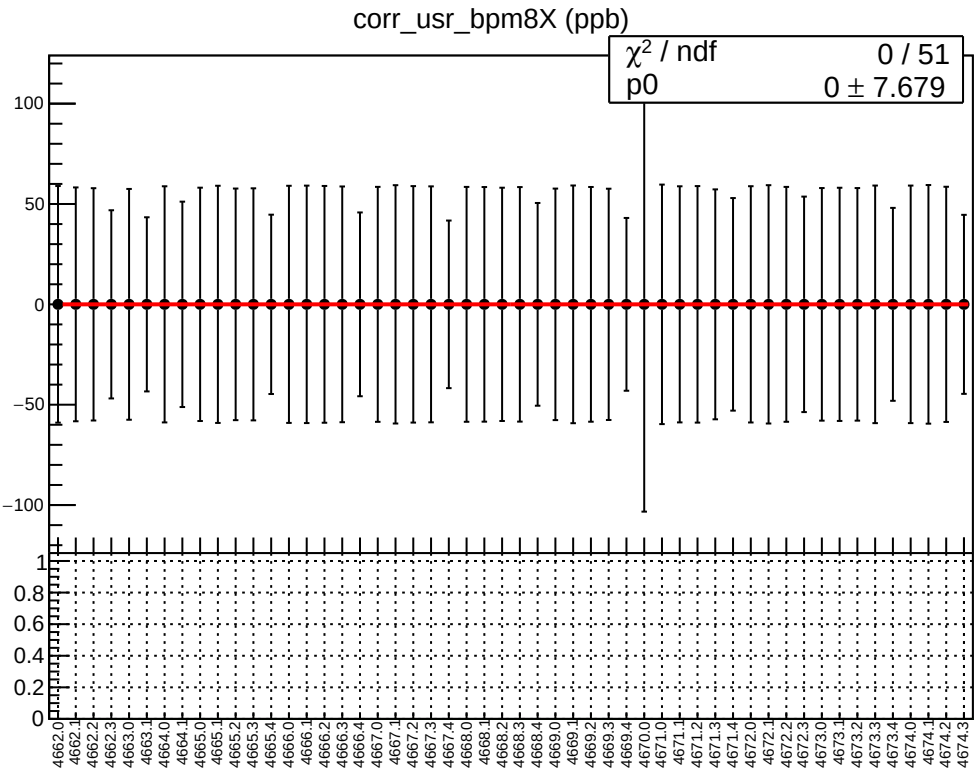

corr_usr_bpm11X (ppb)
χ² / ndf 87.8 / 50
p0 −912.8 ± 387.5
10000
5000
0
-5000
-10000
3
2
1
0
−1
−2
−3
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

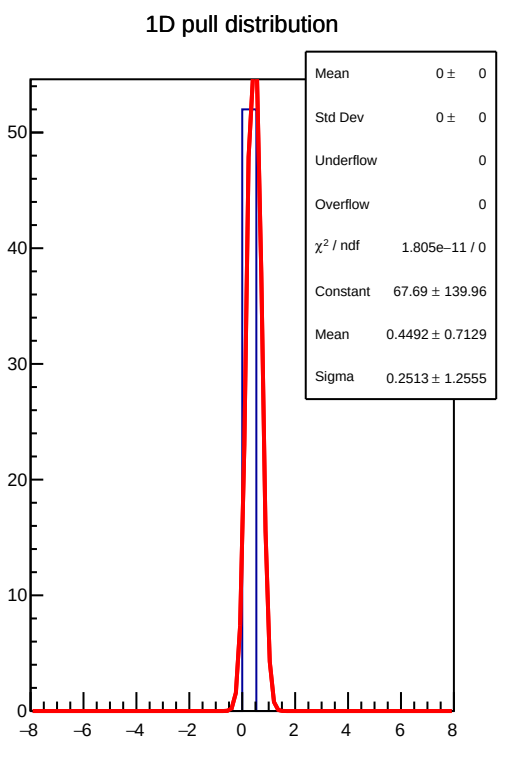

1D pull distribution
Mean 0.008258 ± 0.1837
Std Dev 1.312 ± 0.1299
Underflow 0
Overflow 0
χ² / ndf 2.206 / 8
Constant 7.36 ± 1.30
Mean −0.09684 ± 0.25953
Sigma 1.536 ± 0.216
8
7
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

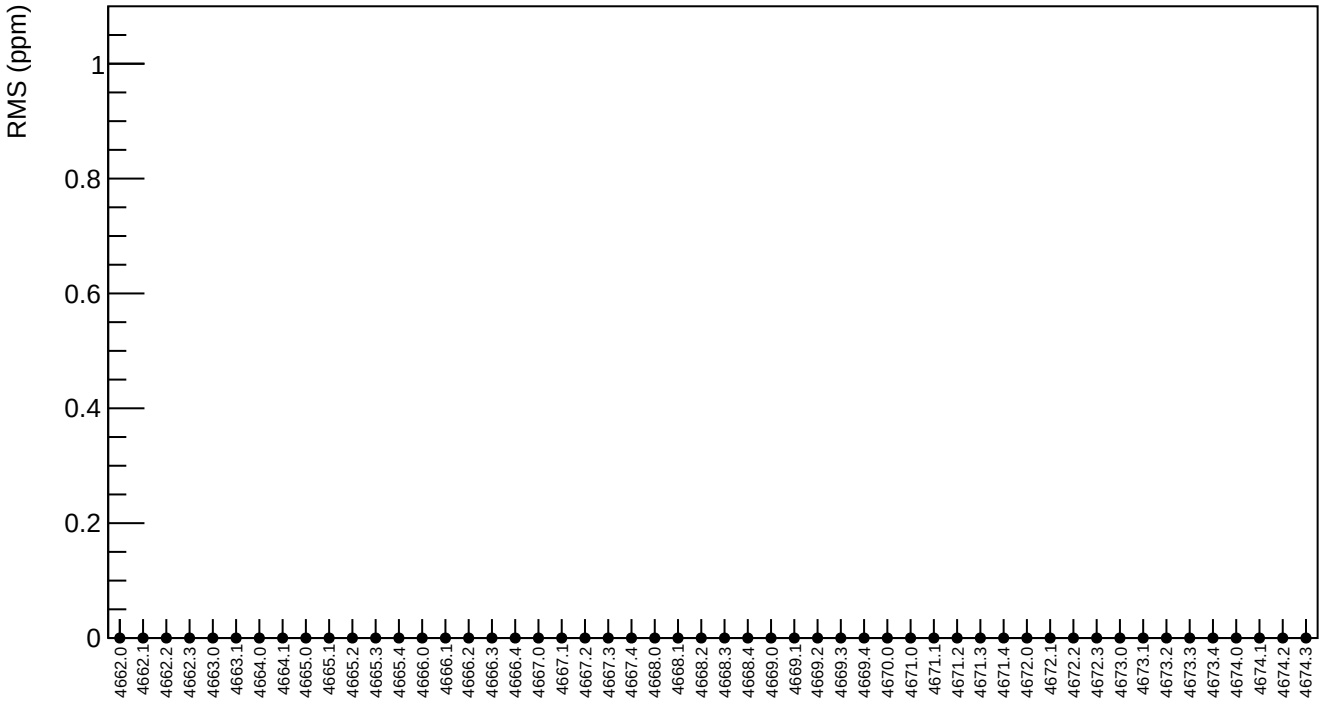

corr_usr_bpm11X RMS (ppm)
RMS (ppm)
500
450
400
350
300
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

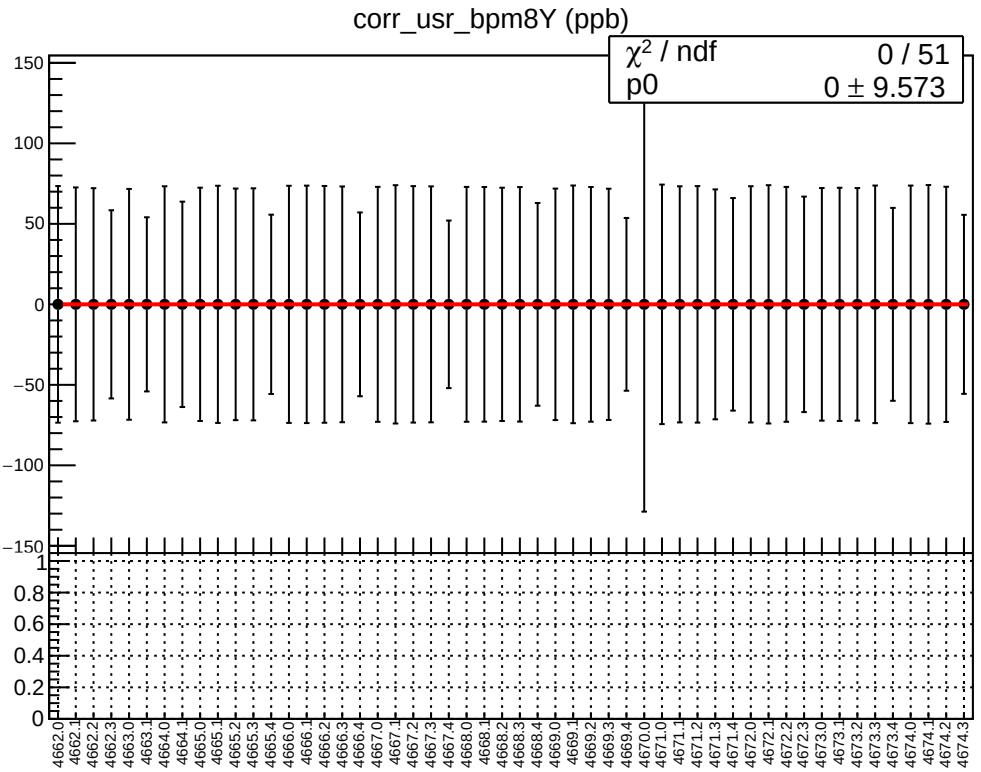

corr_usr_bpm11Y (ppb)
χ² / ndf 59.68 / 50
p0 55.81 ± 20.11
1D pull distribution
Mean 0.006863 ± 0.1515
Std Dev 1.082 ± 0.1071
Underflow 0
Overflow 0
χ² / ndf 8.346 / 8
Constant 9.554 ± 2.169
Mean 0.01073 ± 0.15036
Sigma 0.9524 ± 0.1636

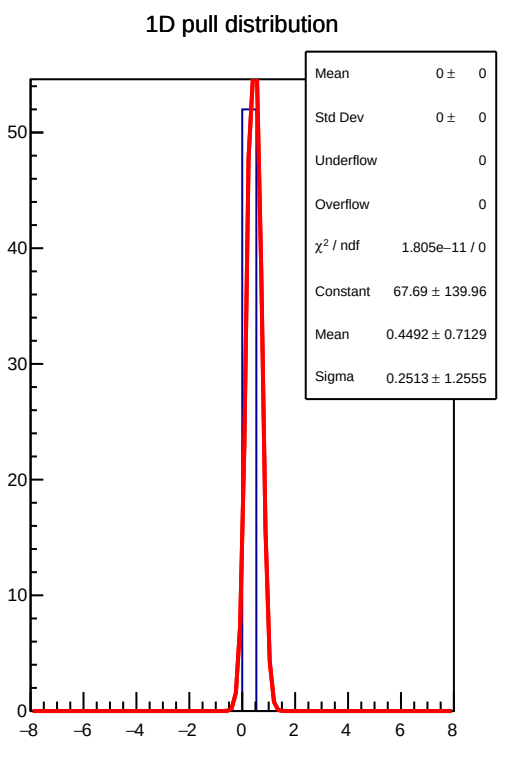

corr_usr_bpm11Y RMS (ppm)
RMS (ppm)
24
22
20
18
16
14
12
10
8
6
4
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3

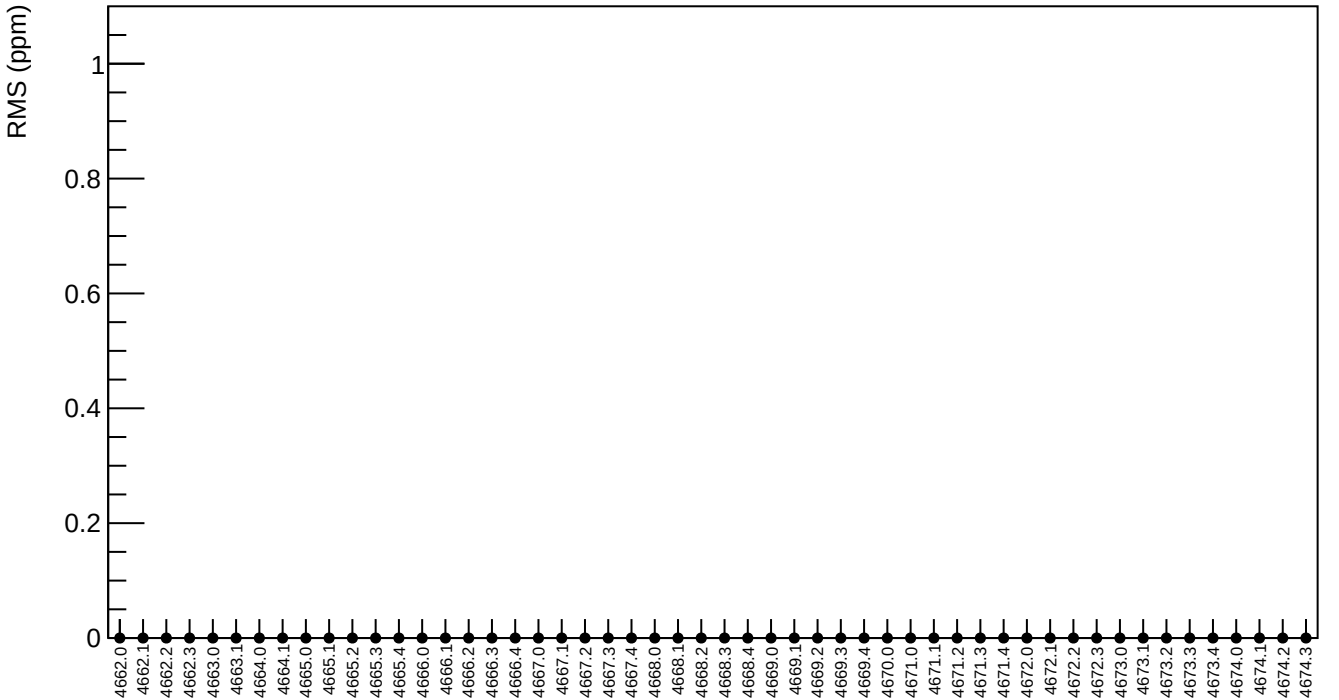

corr_usr_bpm8X (ppb)
χ² / ndf 0 / 51
p0 0 ± 7.679
100
50
0
−50
−100
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3


1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8


corr_usr_bpm8X RMS (ppm)
RMS (ppm)
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3


corr_usr_bpm8Y (ppb)
χ² / ndf 0 / 51
p0 0 ± 9.573
150
100
50
0
−50
−100
−150
1
0.8
0.6
0.4
0.2
0
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3


1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.805e−11 / 0
Constant 67.69 ± 139.96
Mean 0.4492 ± 0.7129
Sigma 0.2513 ± 1.2555
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8


corr_usr_bpm8Y RMS (ppm)
RMS (ppm)
0
0.2
0.4
0.6
0.8
1
4662.0
4662.1
4662.2
4662.3
4663.0
4663.1
4664.0
4664.1
4665.0
4665.1
4665.2
4665.3
4665.4
4666.0
4666.1
4666.2
4666.3
4666.4
4667.0
4667.1
4667.2
4667.3
4667.4
4668.0
4668.1
4668.2
4668.3
4668.4
4669.0
4669.1
4669.2
4669.3
4669.4
4670.0
4671.0
4671.1
4671.2
4671.3
4671.4
4672.0
4672.1
4672.2
4672.3
4673.0
4673.1
4673.2
4673.3
4673.4
4674.0
4674.1
4674.2
4674.3