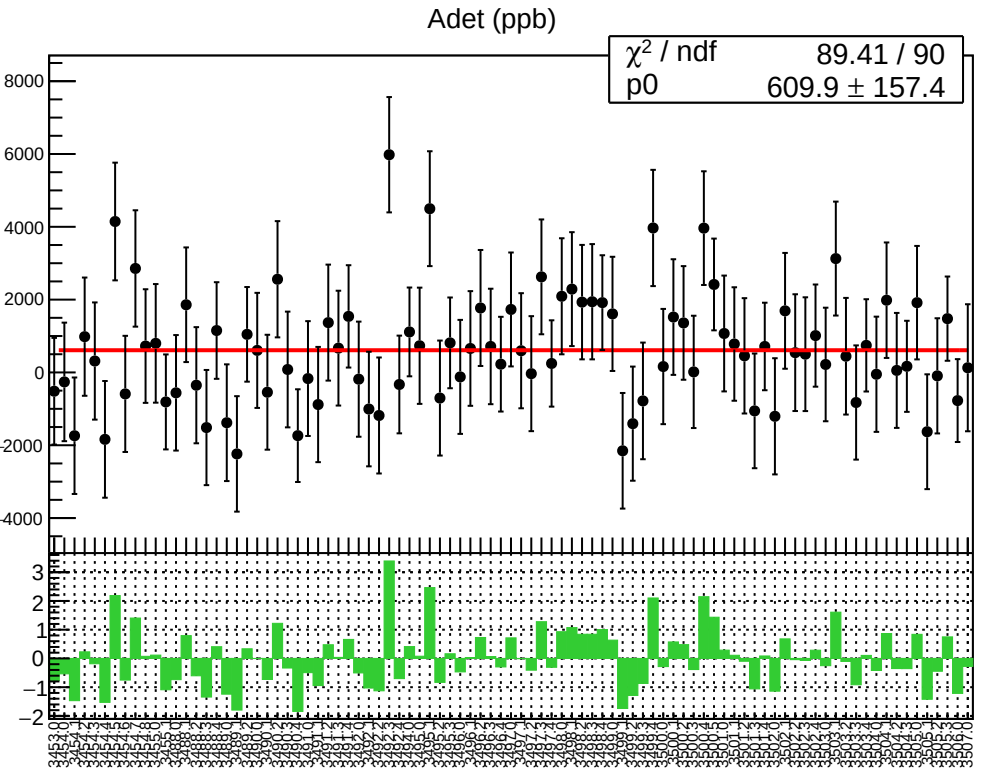
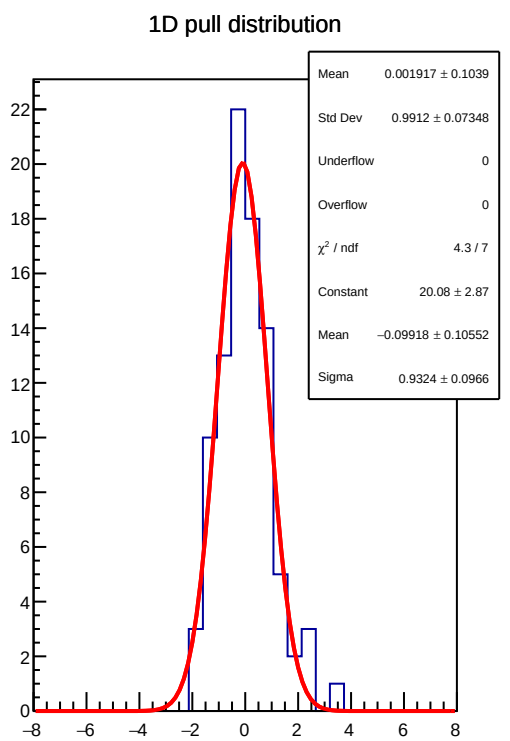
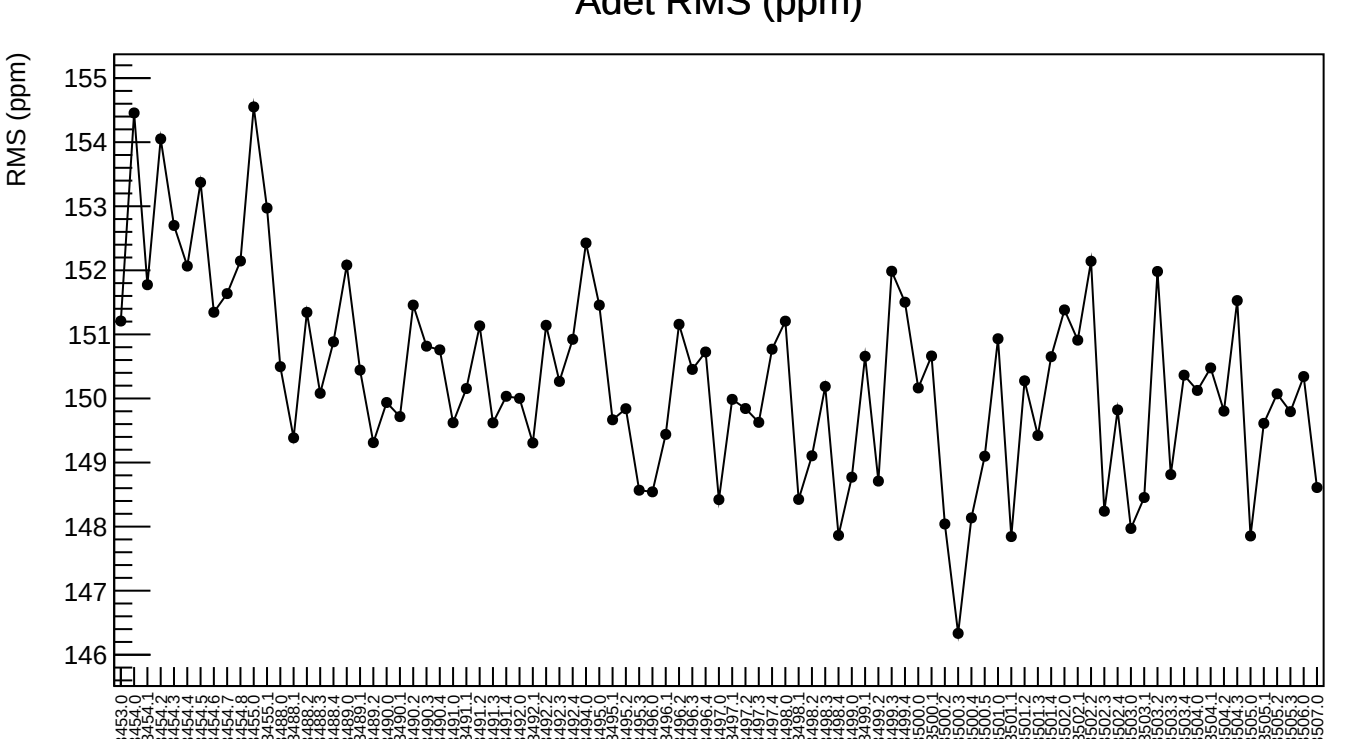
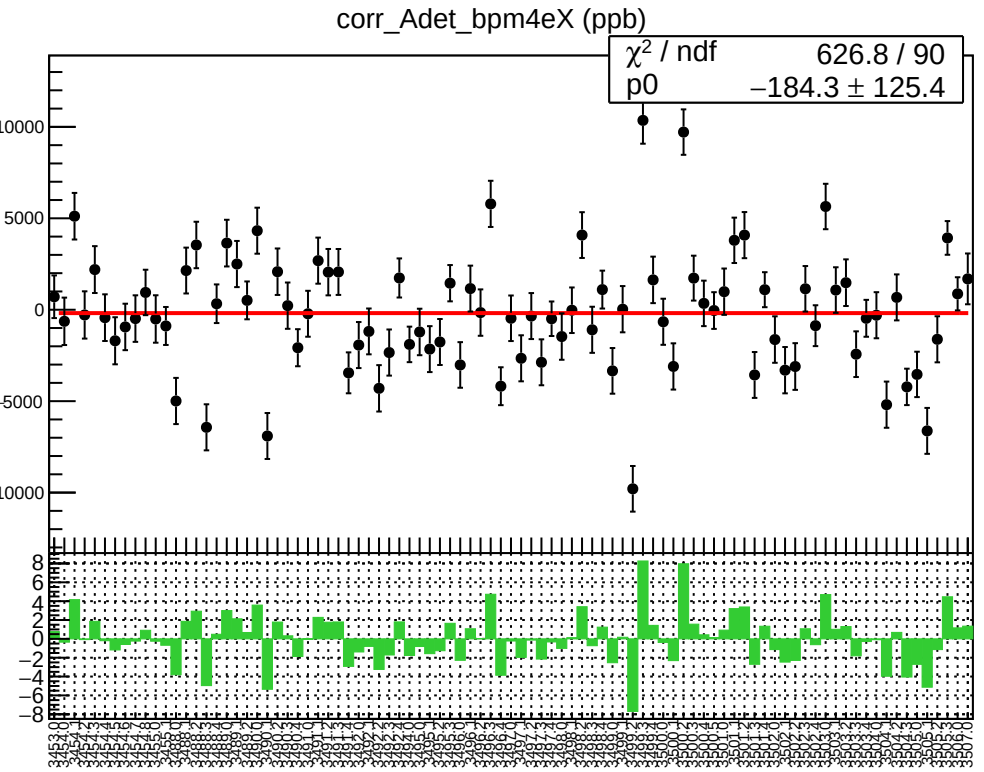
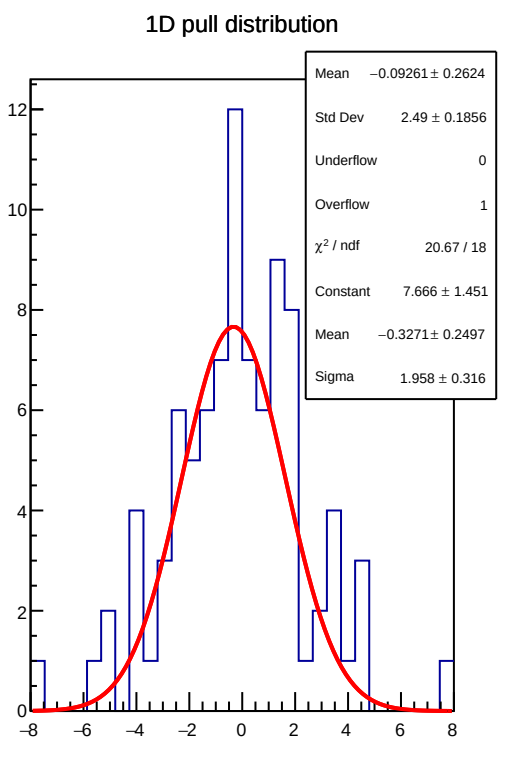
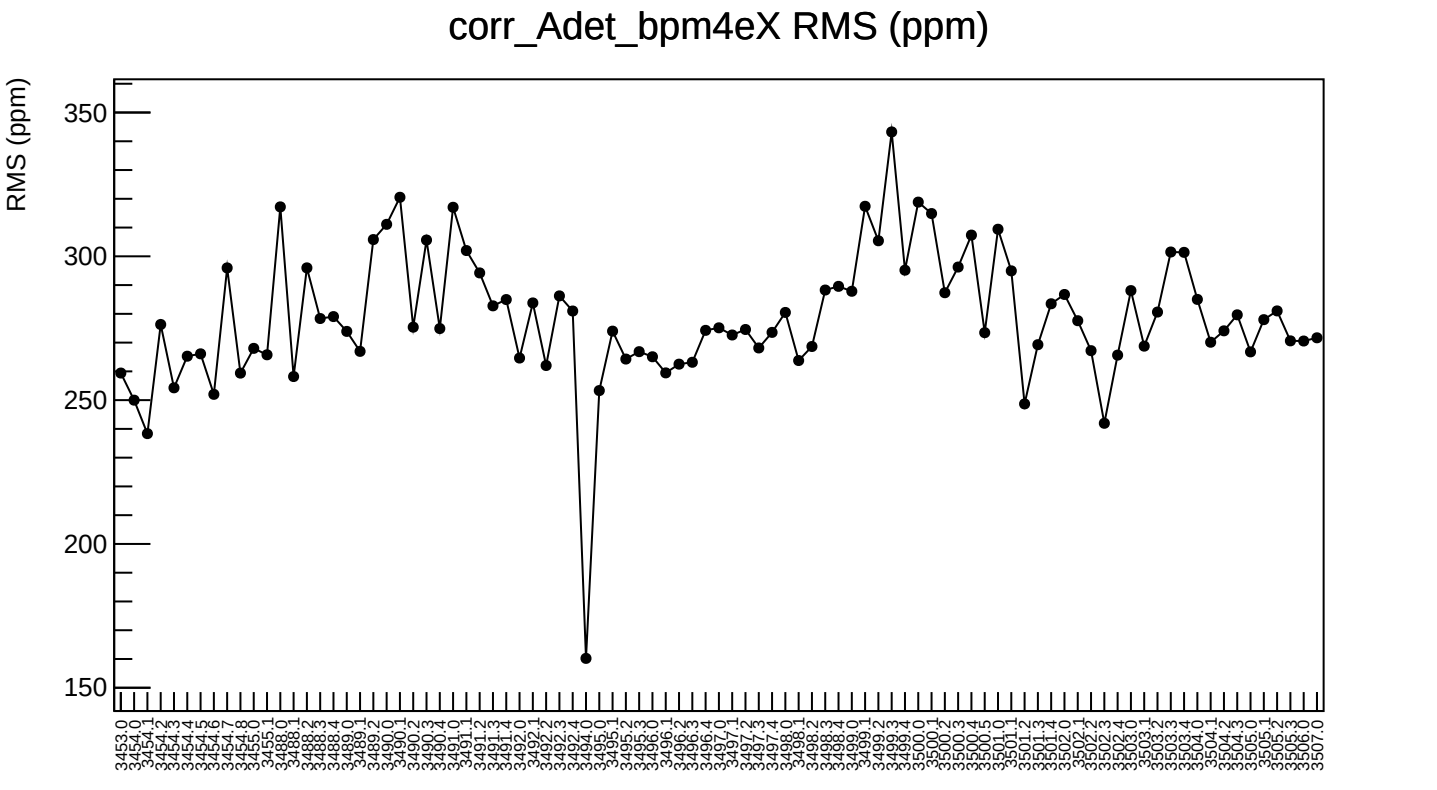

Adet (ppb)
χ² / ndf 89.41 / 90
p0 609.9 ± 157.4

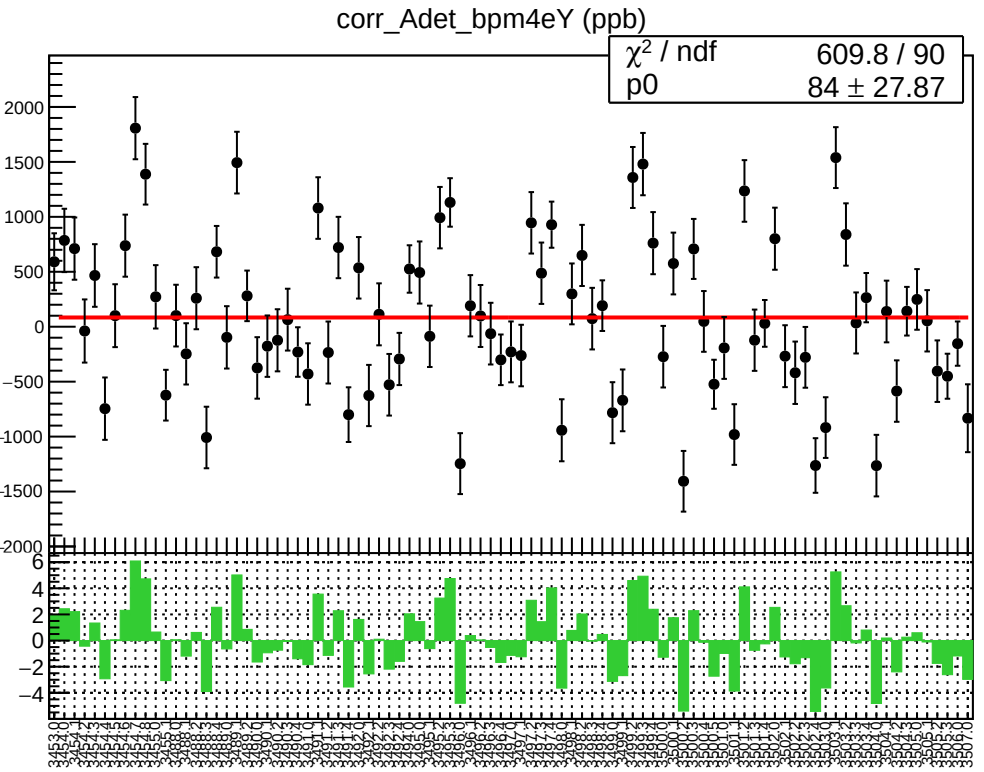

1D pull distribution
Mean 0.001917 ± 0.1039
Std Dev 0.9912 ± 0.07348
Underflow 0
Overflow 0
χ² / ndf 4.3 / 7
Constant 20.08 ± 2.87
Mean −0.09918 ± 0.10552
Sigma 0.9324 ± 0.0966

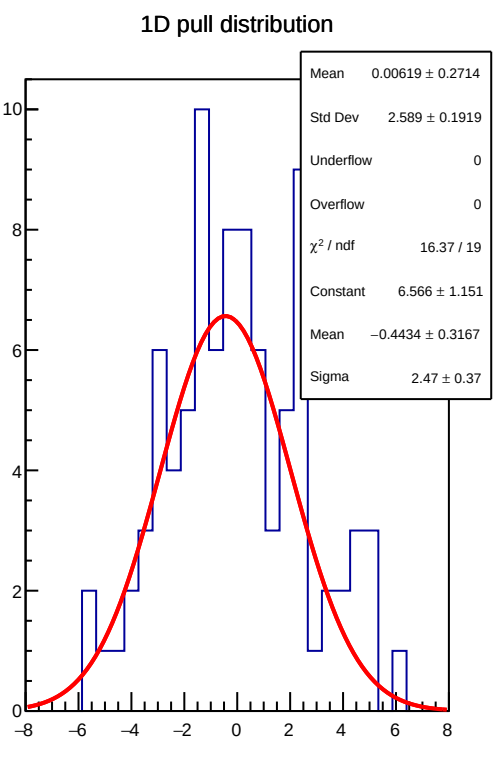

Adet RMS (ppm)
RMS (ppm)
155
154
153
152
151
150
149
148
147
146
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

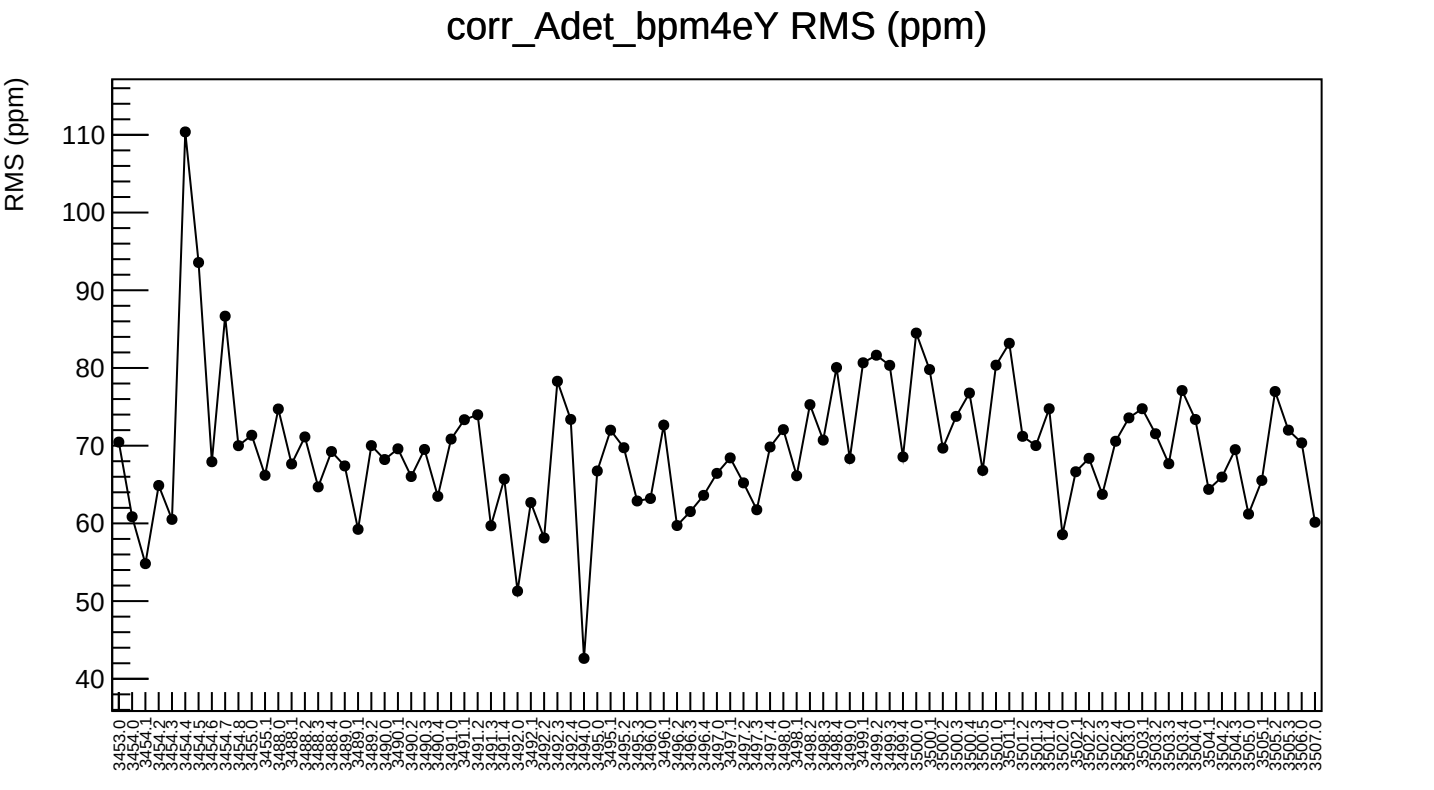

corr_Adet_bpm4eX (ppb)
χ² / ndf 626.8 / 90
p0 −184.3 ± 125.4
10000
5000
0
−5000
−10000
8
6
4
2
0
−2
−4
−6
−8

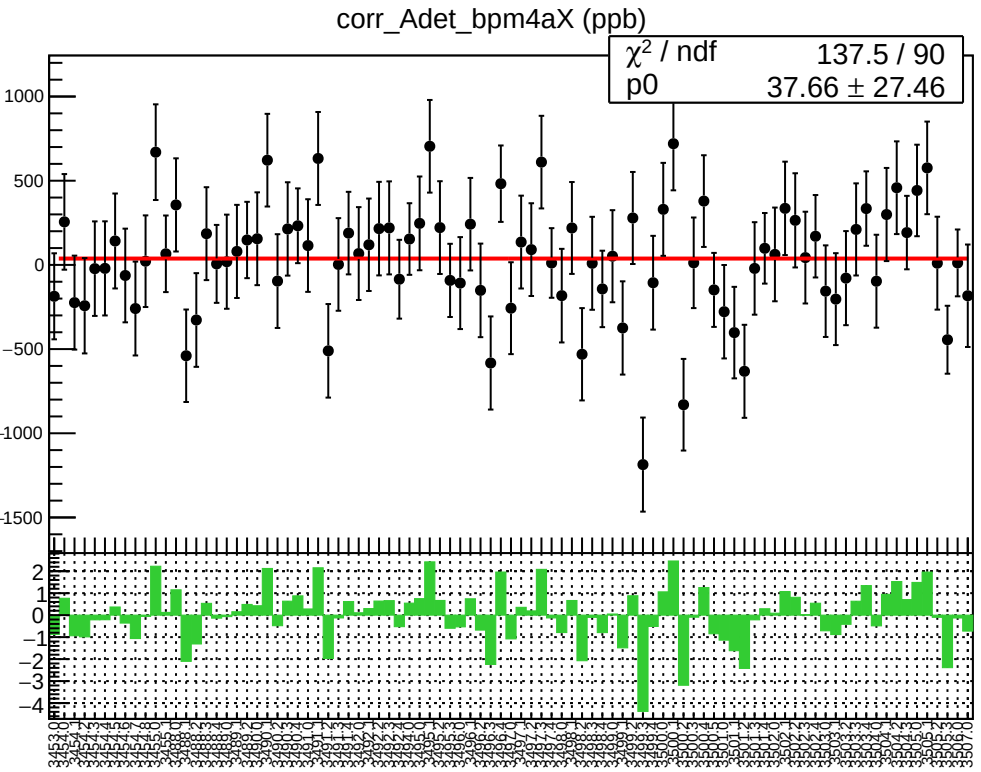

1D pull distribution
Mean −0.09261 ± 0.2624
Std Dev 2.49 ± 0.1856
Underflow 0
Overflow 1
χ² / ndf 20.67 / 18
Constant 7.666 ± 1.451
Mean −0.3271 ± 0.2497
Sigma 1.958 ± 0.316
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

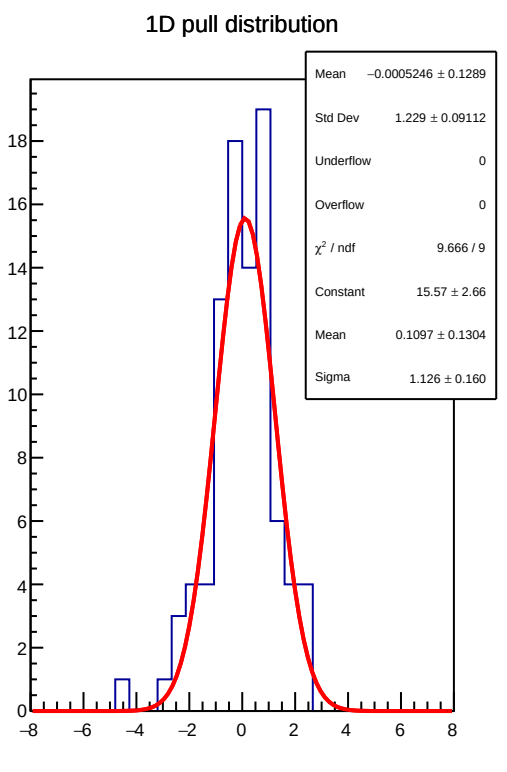

corr_Adet_bpm4eX RMS (ppm)
RMS (ppm)
350
300
250
200
150
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

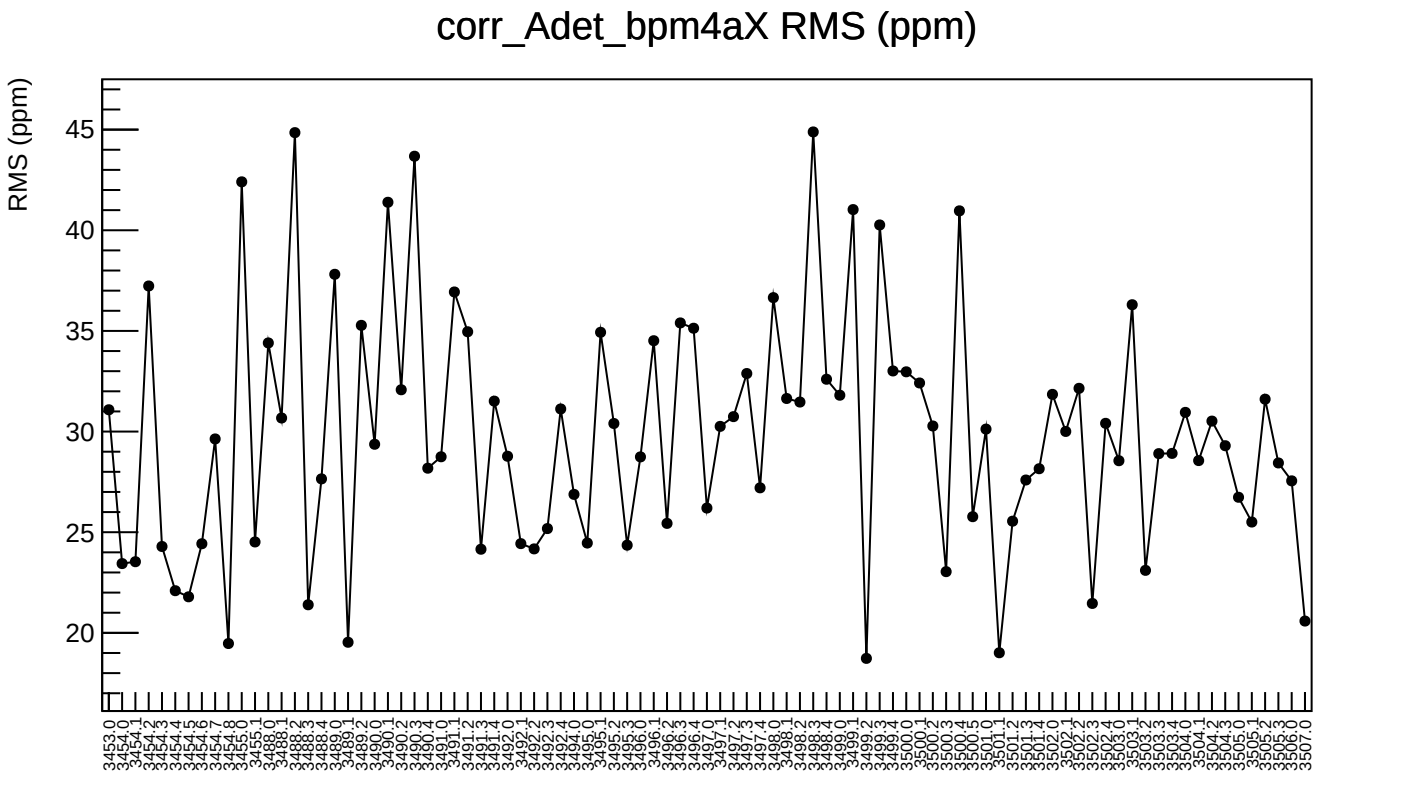

corr_Adet_bpm4eY (ppb)
χ² / ndf 609.8 / 90
p0 84 ± 27.87

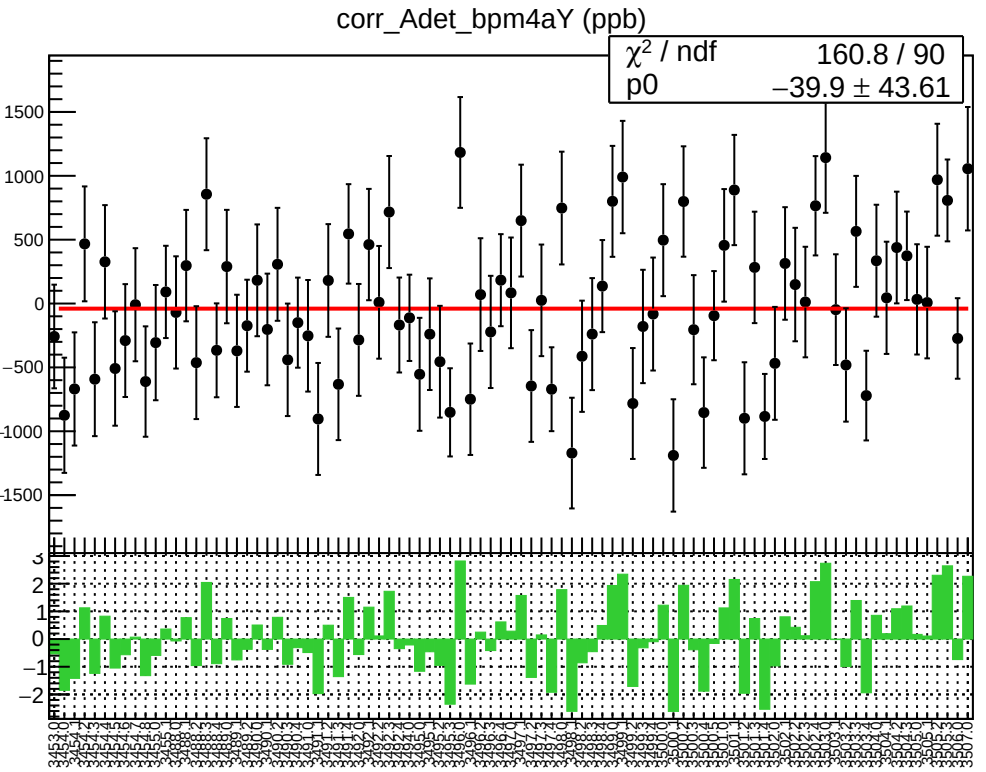

1D pull distribution
Mean 0.00619 ± 0.2714
Std Dev 2.589 ± 0.1919
Underflow 0
Overflow 0
χ² / ndf 16.37 / 19
Constant 6.566 ± 1.151
Mean −0.4434 ± 0.3167
Sigma 2.47 ± 0.37

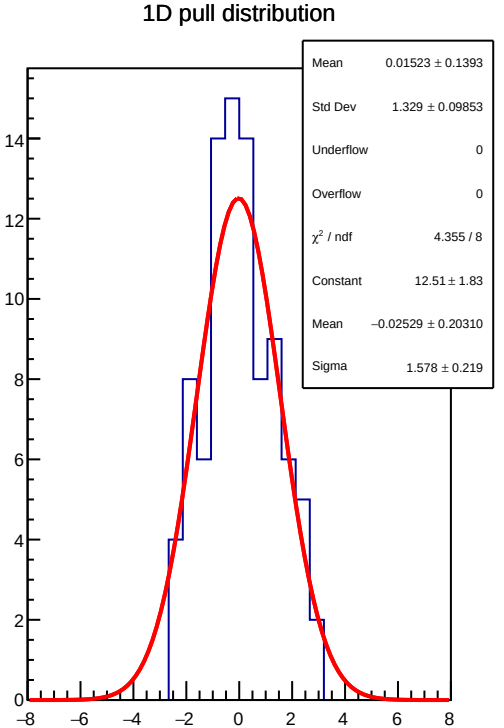

corr_Adet_bpm4eY RMS (ppm)
RMS (ppm)
110
100
90
80
70
60
50
40
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

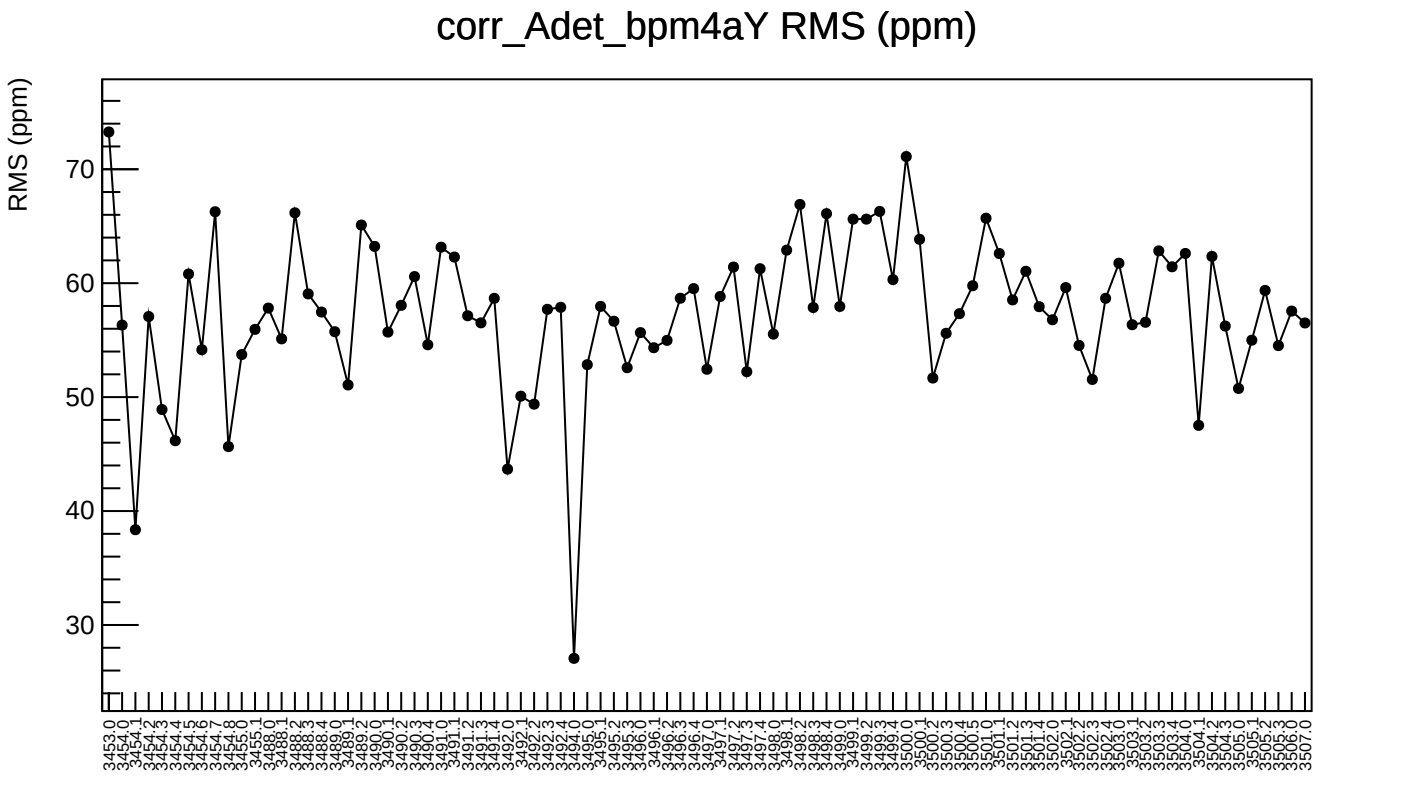

corr_Adet_bpm4aX (ppb)
χ² / ndf 137.5 / 90
p0 37.66 ± 27.46
1000
500
0
−500
−1000
−1500
2
1
0
−1
−2
−3
−4

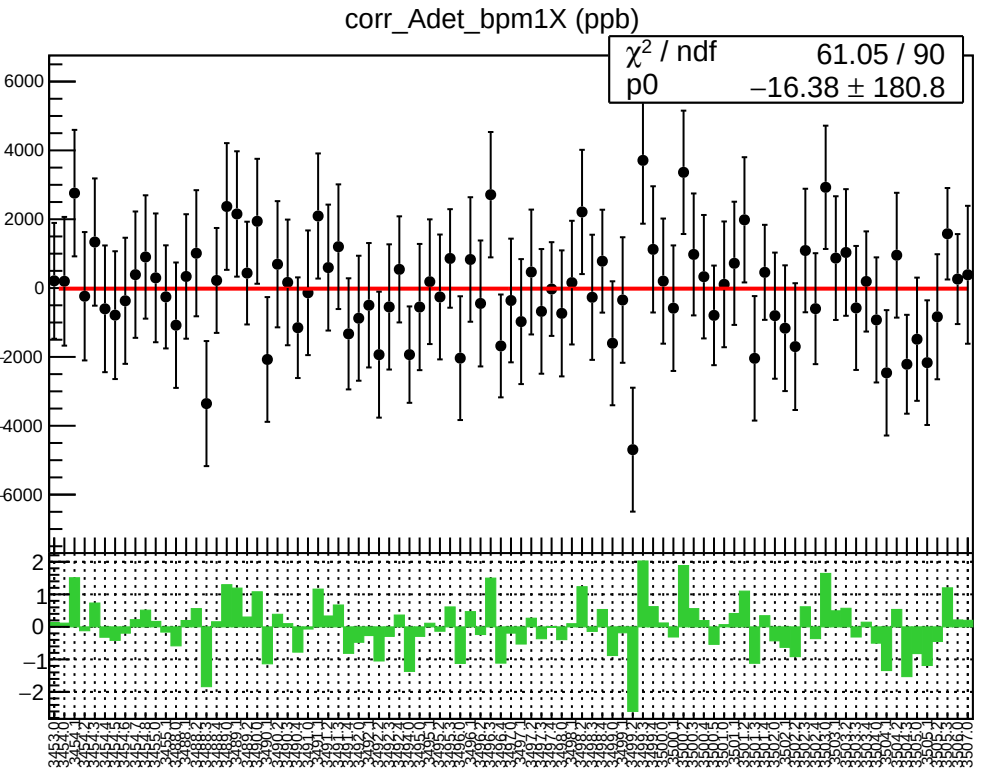

1D pull distribution
Mean −0.0005246 ± 0.1289
Std Dev 1.229 ± 0.09112
Underflow 0
Overflow 0
χ² / ndf 9.666 / 9
Constant 15.57 ± 2.66
Mean 0.1097 ± 0.1304
Sigma 1.126 ± 0.160
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

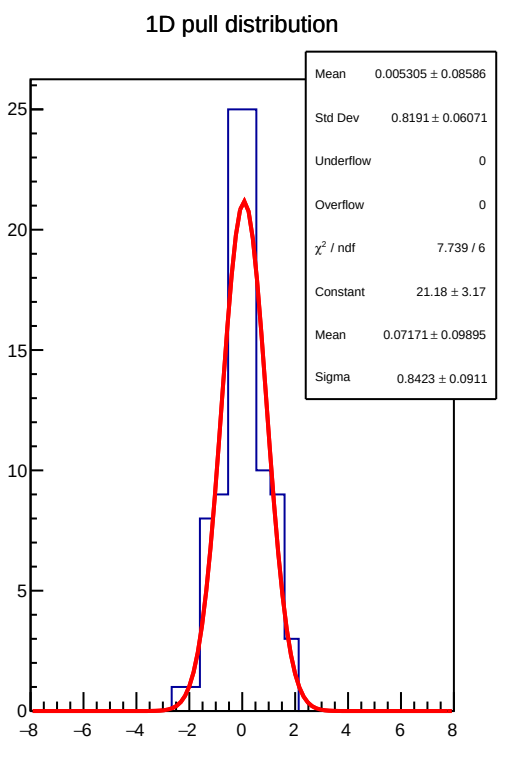

corr_Adet_bpm4aX RMS (ppm)
RMS (ppm)
45
40
35
30
25
20
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

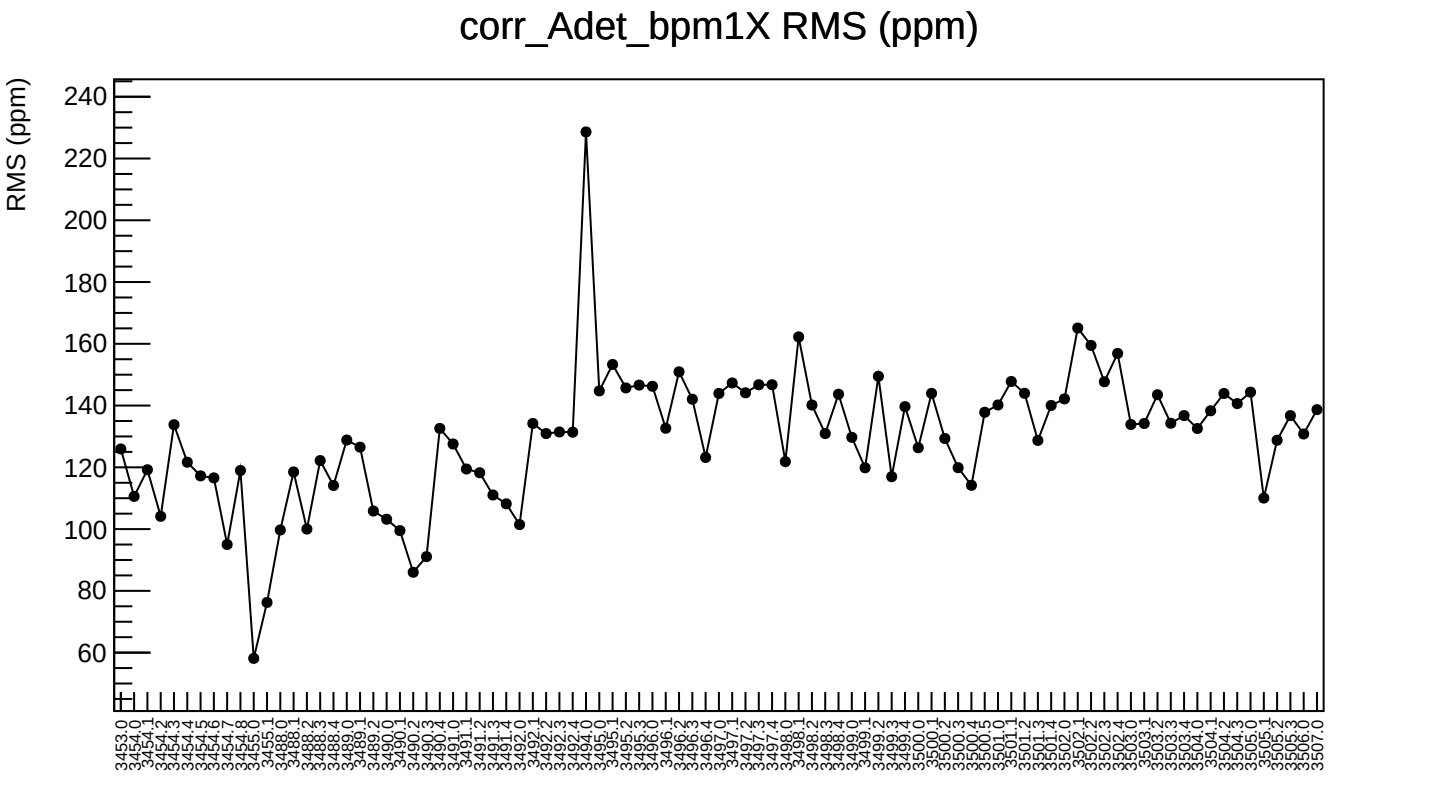

corr_Adet_bpm4aY (ppb)
χ² / ndf 160.8 / 90
p0 −39.9 ± 43.61
1500
1000
500
0
−500
−1000
−1500
3
2
1
0
−1
−2

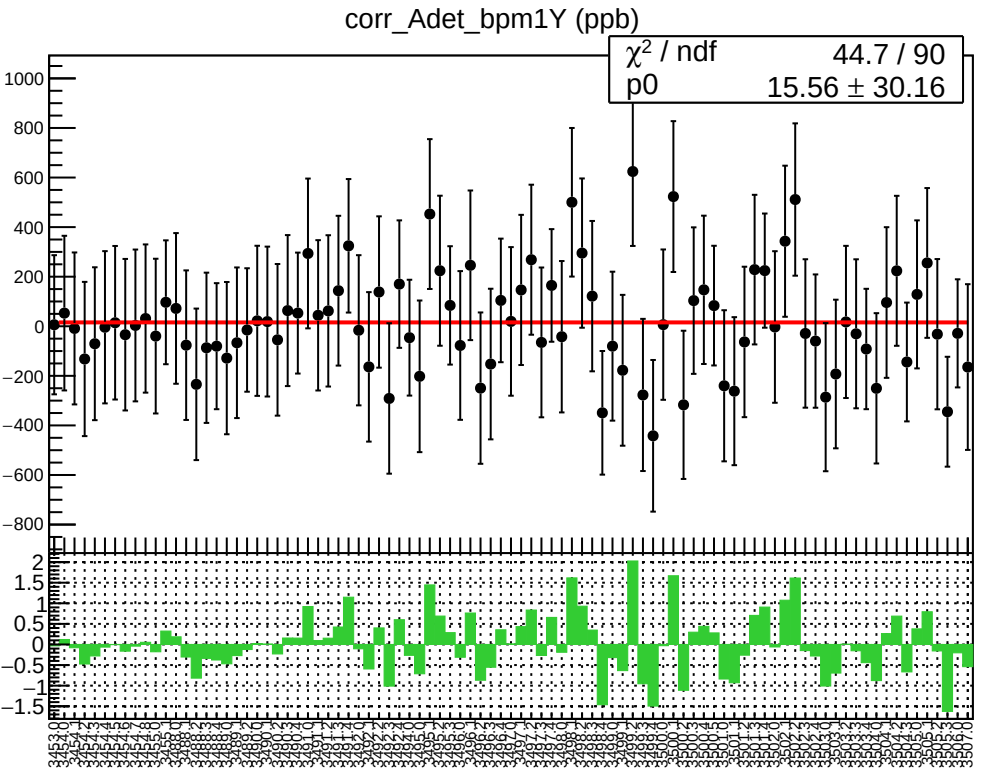

1D pull distribution
Mean 0.01523 ± 0.1393
Std Dev 1.329 ± 0.09853
Underflow 0
Overflow 0
χ² / ndf 4.355 / 8
Constant 12.51 ± 1.83
Mean −0.02529 ± 0.20310
Sigma 1.578 ± 0.219
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

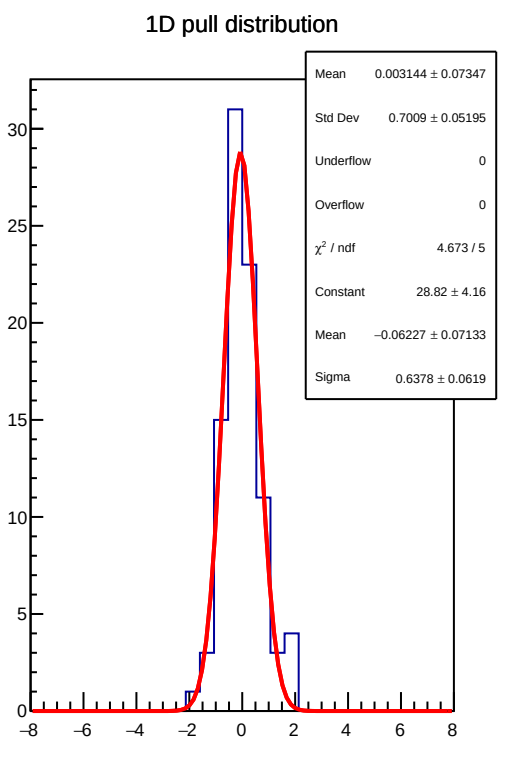

corr_Adet_bpm4aY RMS (ppm)
RMS (ppm)
70
60
50
40
30
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

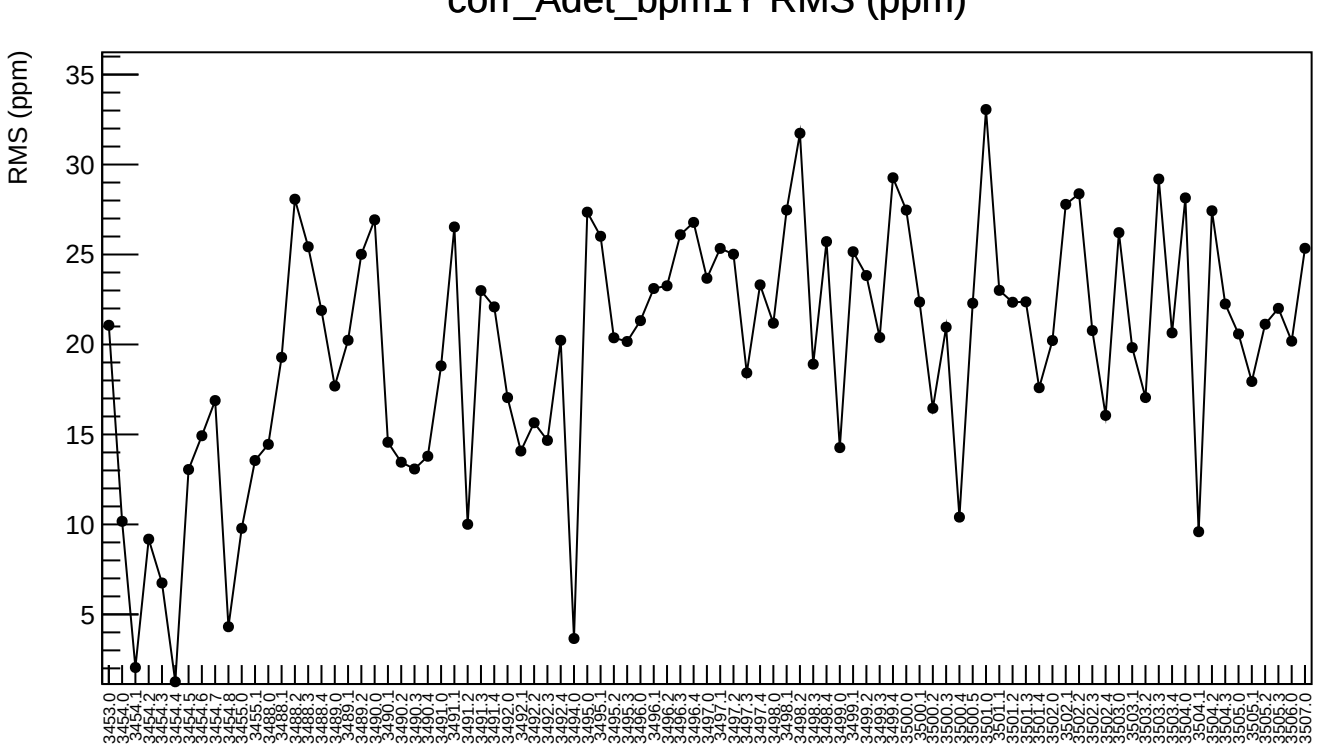

corr_Adet_bpm1X (ppb)
χ² / ndf 61.05 / 90
p0 −16.38 ± 180.8

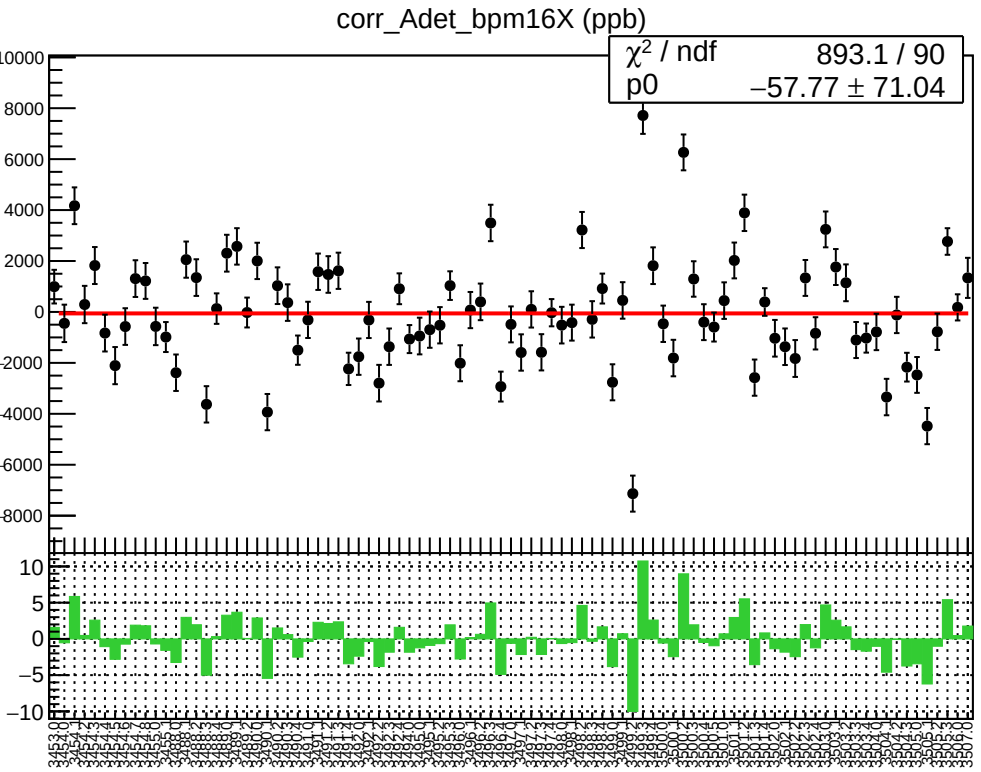

1D pull distribution
Mean 0.005305 ± 0.08586
Std Dev 0.8191 ± 0.06071
Underflow 0
Overflow 0
χ² / ndf 7.739 / 6
Constant 21.18 ± 3.17
Mean 0.07171 ± 0.09895
Sigma 0.8423 ± 0.0911

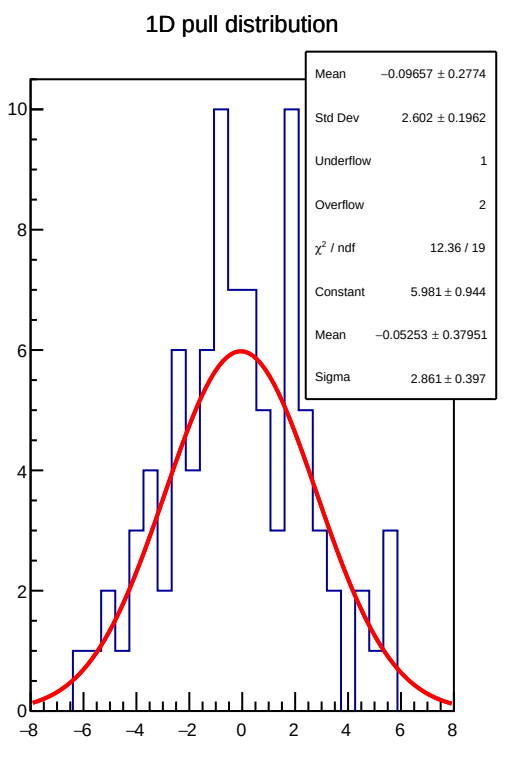

corr_Adet_bpm1X RMS (ppm)
RMS (ppm)
240
220
200
180
160
140
120
100
80
60
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

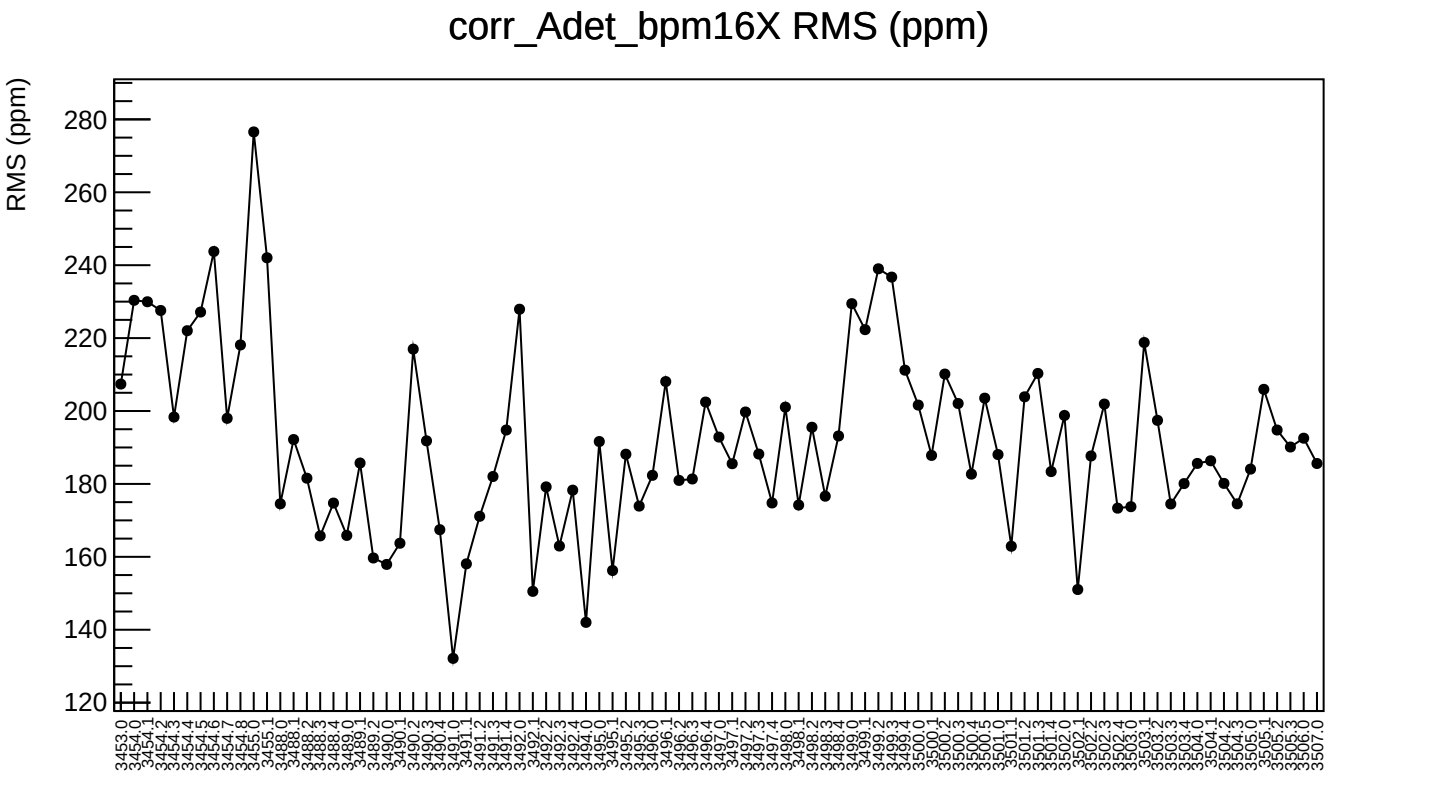

corr_Adet_bpm1Y (ppb)
χ² / ndf 44.7 / 90
p0 15.56 ± 30.16

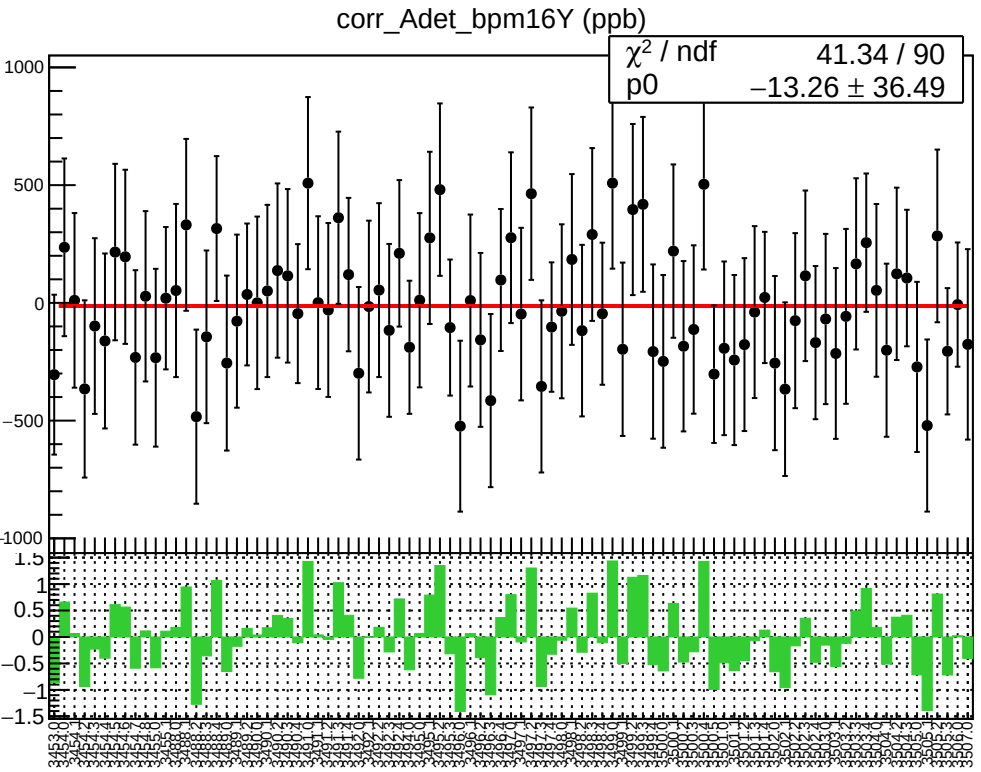

1D pull distribution
Mean 0.003144 ± 0.07347
Std Dev 0.7009 ± 0.05195
Underflow 0
Overflow 0
χ² / ndf 4.673 / 5
Constant 28.82 ± 4.16
Mean −0.06227 ± 0.07133
Sigma 0.6378 ± 0.0619

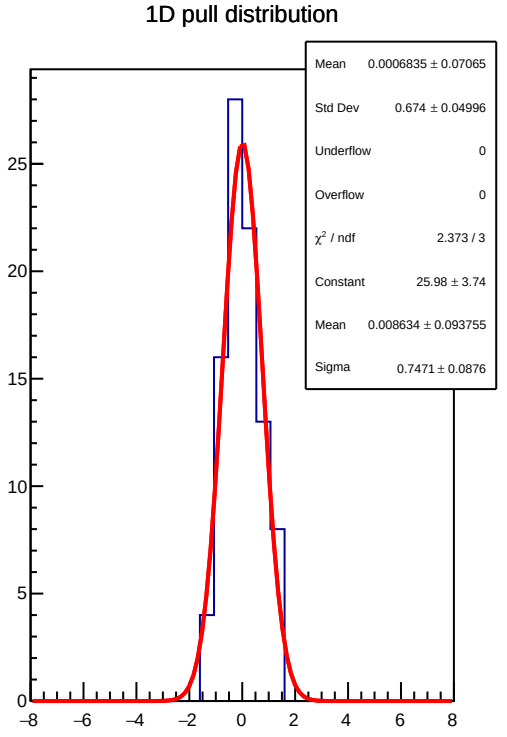

corr_Adet_bpm1Y RMS (ppm)
RMS (ppm)
35
30
25
20
15
10
5
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

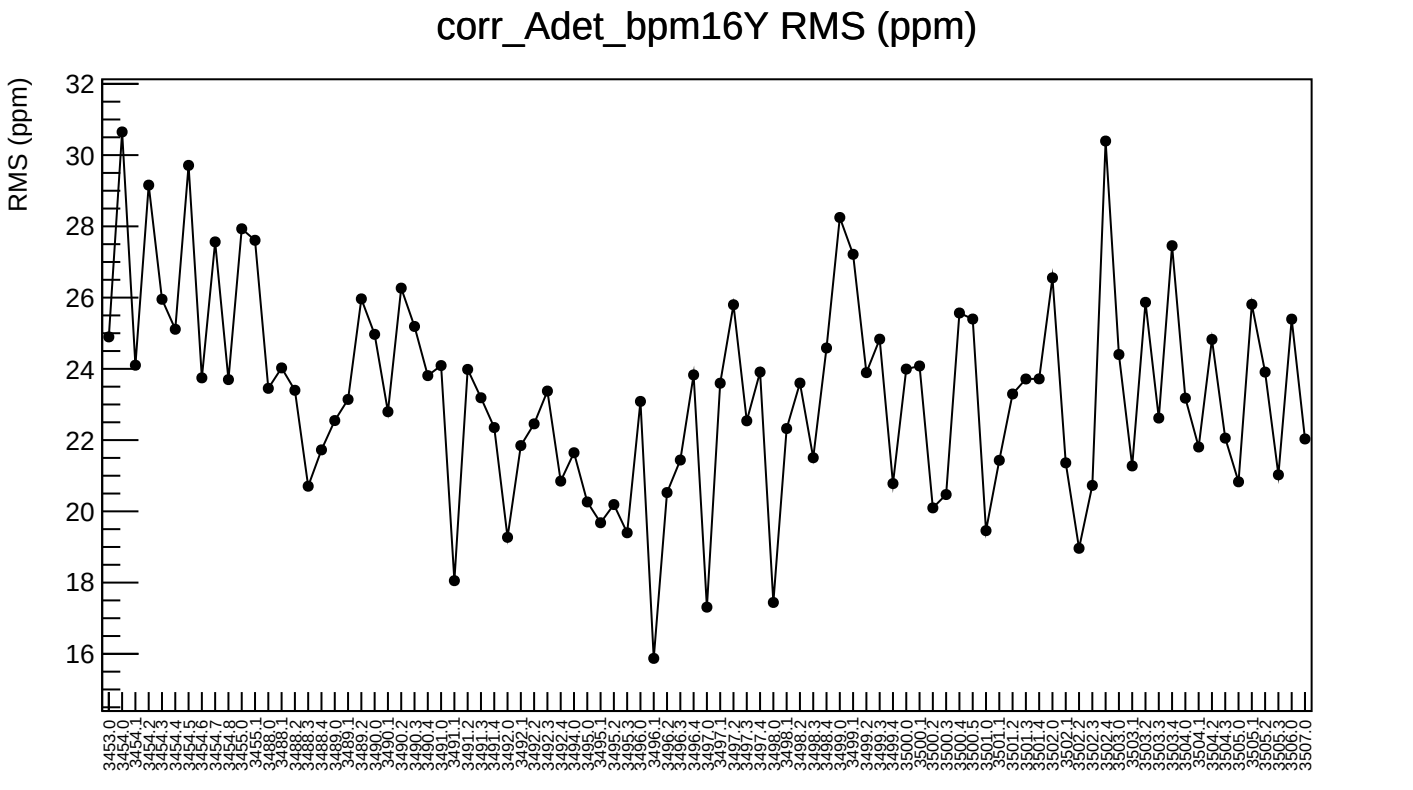

corr_Adet_bpm16X (ppb)
χ² / ndf 893.1 / 90
p0 −57.77 ± 71.04

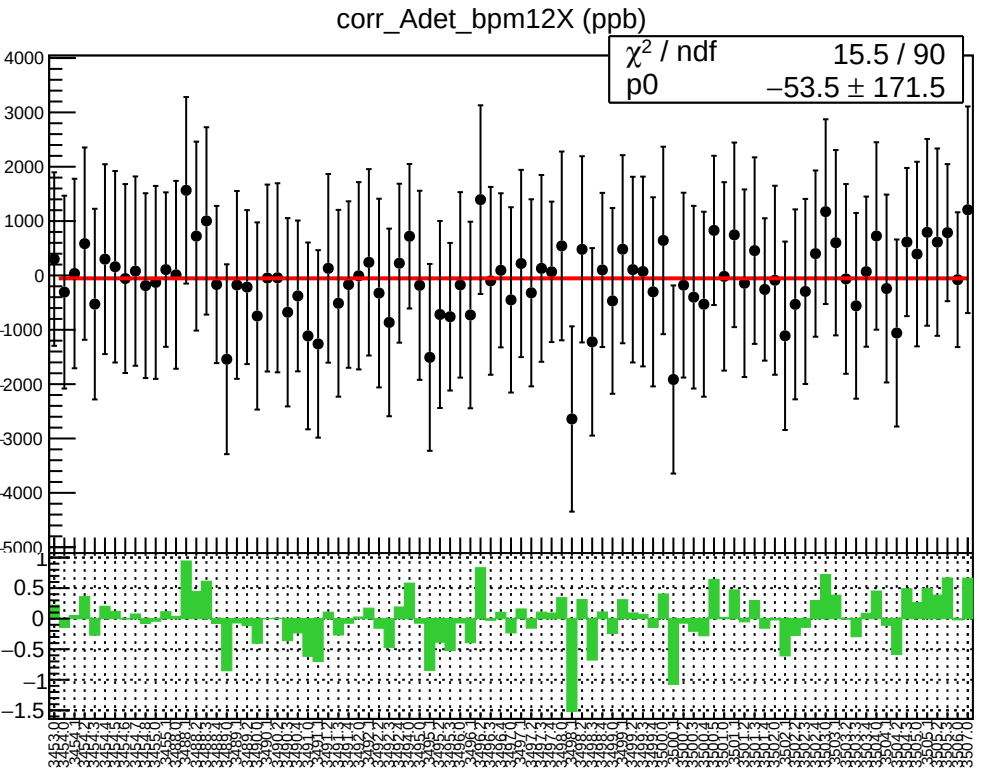

1D pull distribution
Mean −0.09657 ± 0.2774
Std Dev 2.602 ± 0.1962
Underflow 1
Overflow 2
χ² / ndf 12.36 / 19
Constant 5.981 ± 0.944
Mean −0.05253 ± 0.37951
Sigma 2.861 ± 0.397

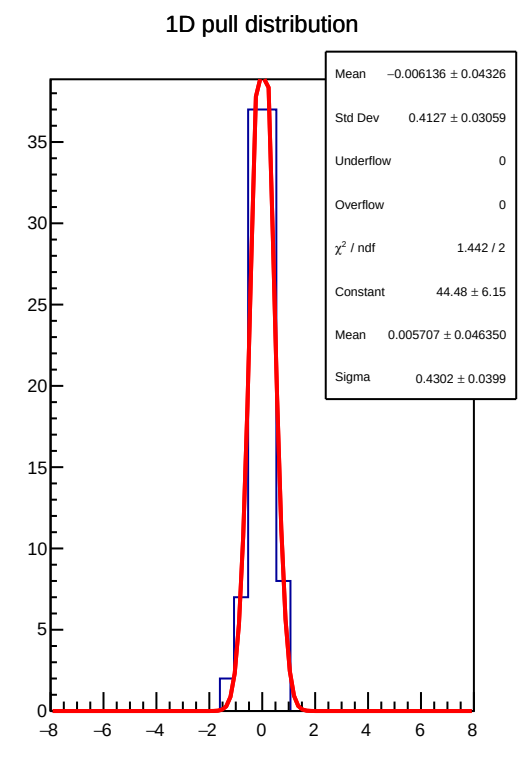

corr_Adet_bpm16X RMS (ppm)
RMS (ppm)
280
260
240
220
200
180
160
140
120
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.6
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3506.1
3507.0

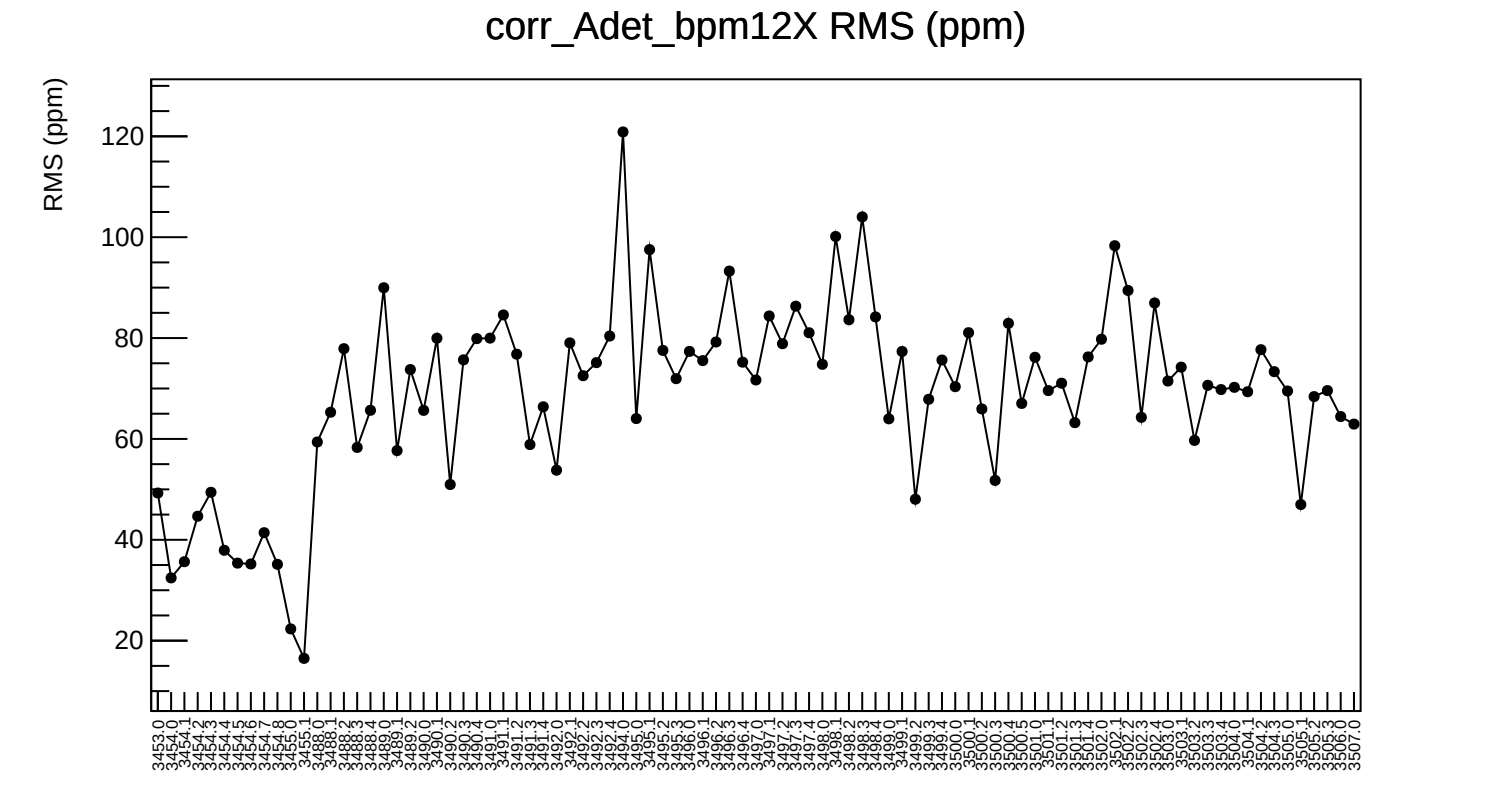

corr_Adet_bpm16Y (ppb)
χ² / ndf 41.34 / 90
p0 −13.26 ± 36.49
1000
500
0
−500
−1000
1.5
1
0.5
0
−0.5
−1
−1.5

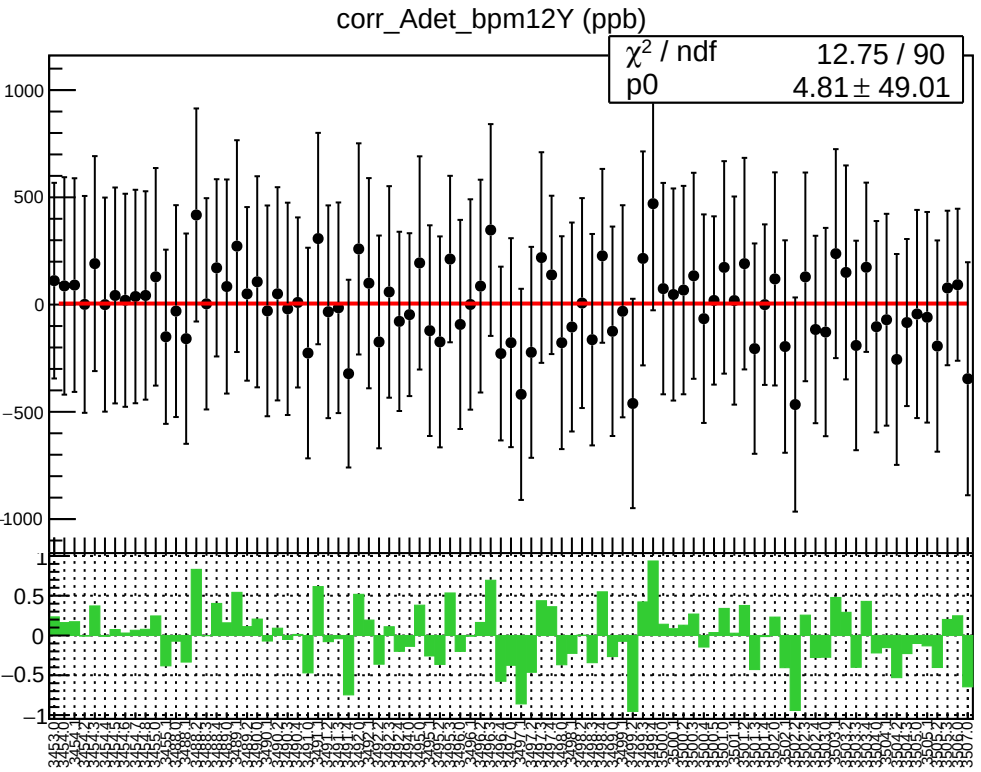

1D pull distribution
Mean 0.0006835 ± 0.07065
Std Dev 0.674 ± 0.04996
Underflow 0
Overflow 0
χ² / ndf 2.373 / 3
Constant 25.98 ± 3.74
Mean 0.008634 ± 0.093755
Sigma 0.7471 ± 0.0876
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

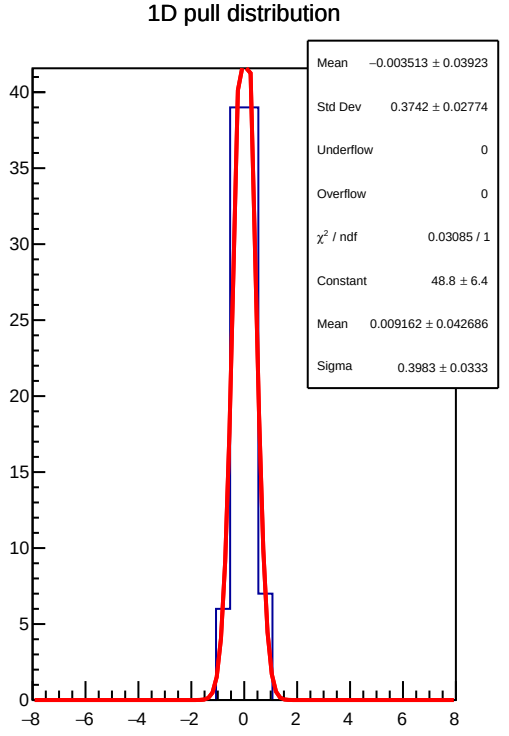

corr_Adet_bpm16Y RMS (ppm)
RMS (ppm)
32
30
28
26
24
22
20
18
16
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

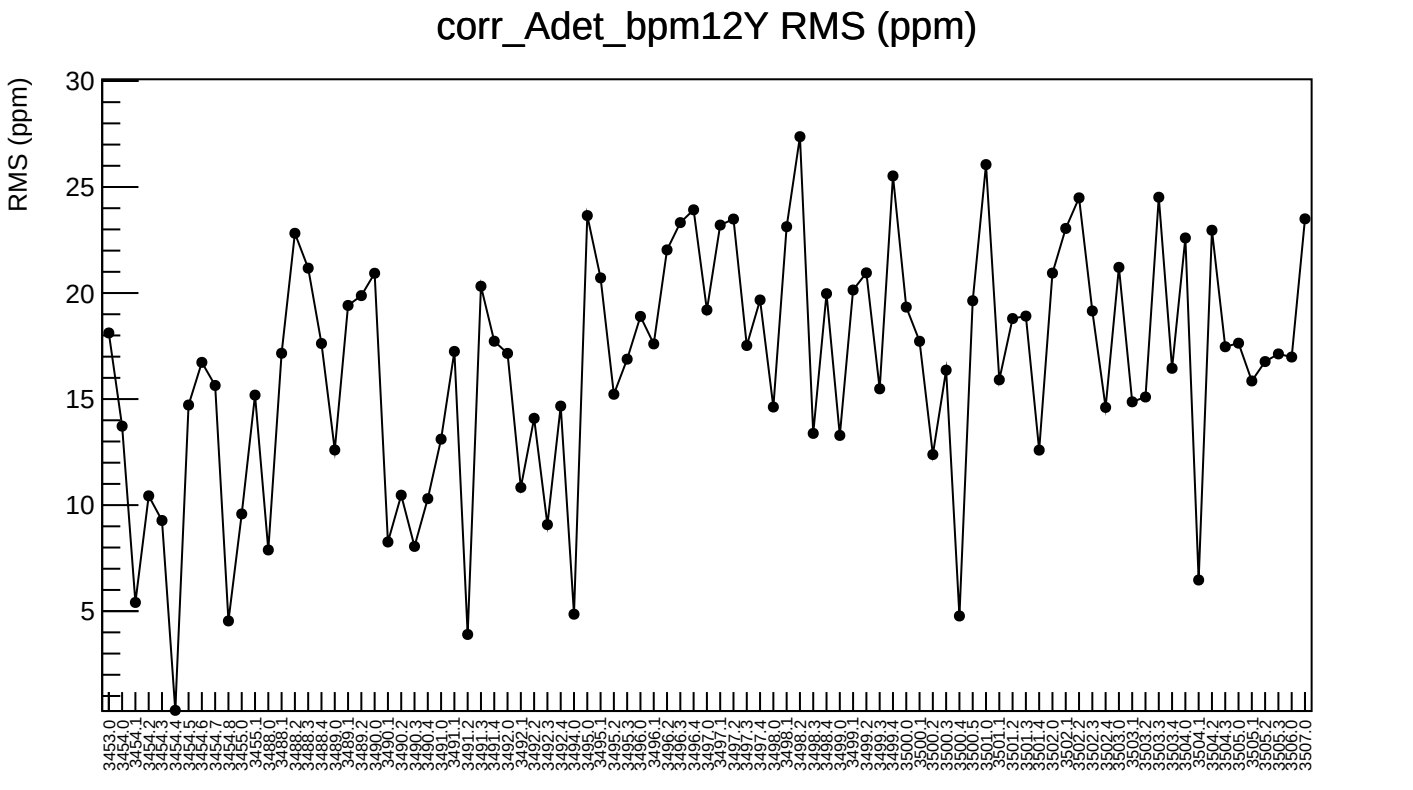

corr_Adet_bpm12X (ppb)
χ² / ndf 15.5 / 90
p0 −53.5 ± 171.5

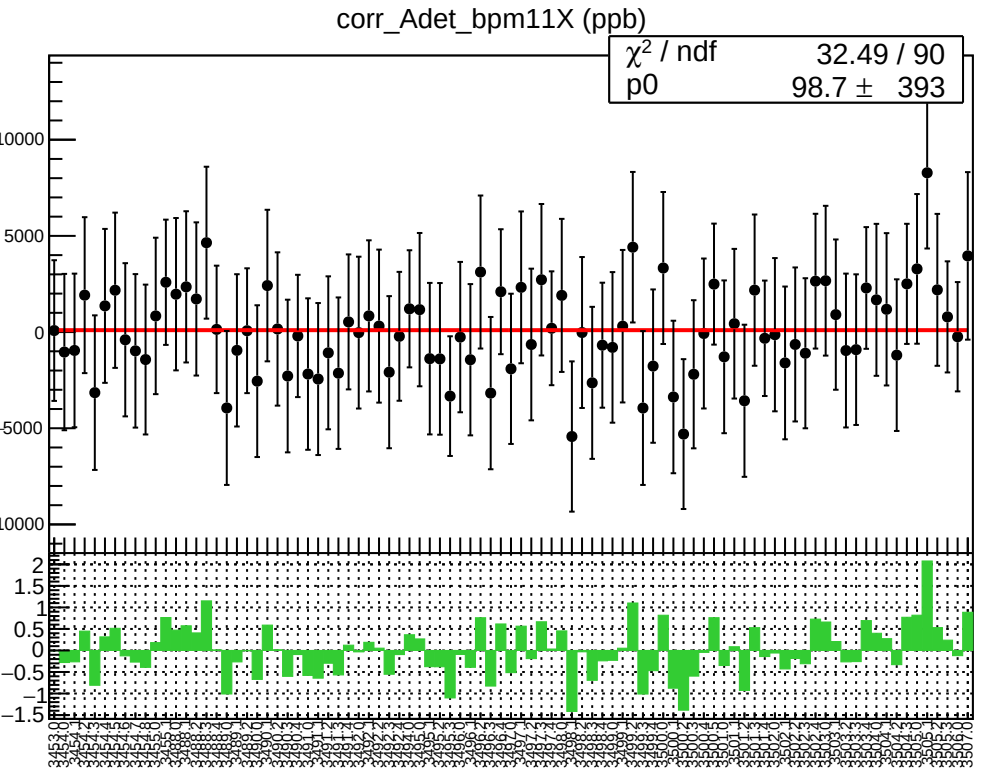

1D pull distribution
Mean −0.006136 ± 0.04326
Std Dev 0.4127 ± 0.03059
Underflow 0
Overflow 0
χ² / ndf 1.442 / 2
Constant 44.48 ± 6.15
Mean 0.005707 ± 0.046350
Sigma 0.4302 ± 0.0399

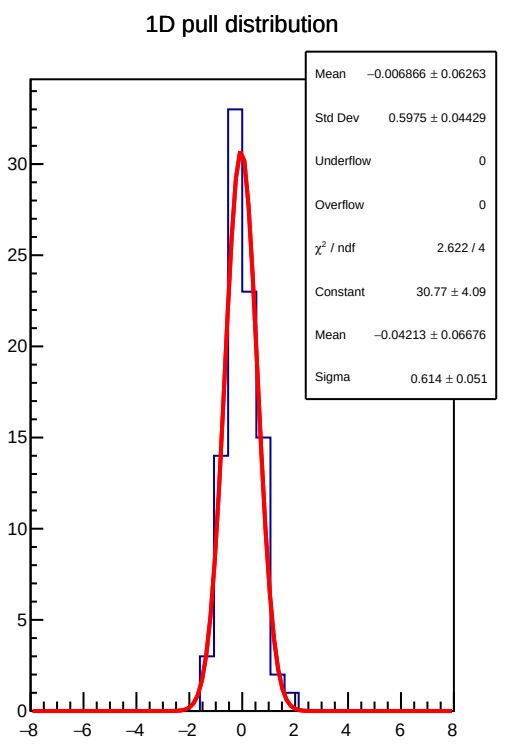

corr_Adet_bpm12X RMS (ppm)
RMS (ppm)
120
100
80
60
40
20
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

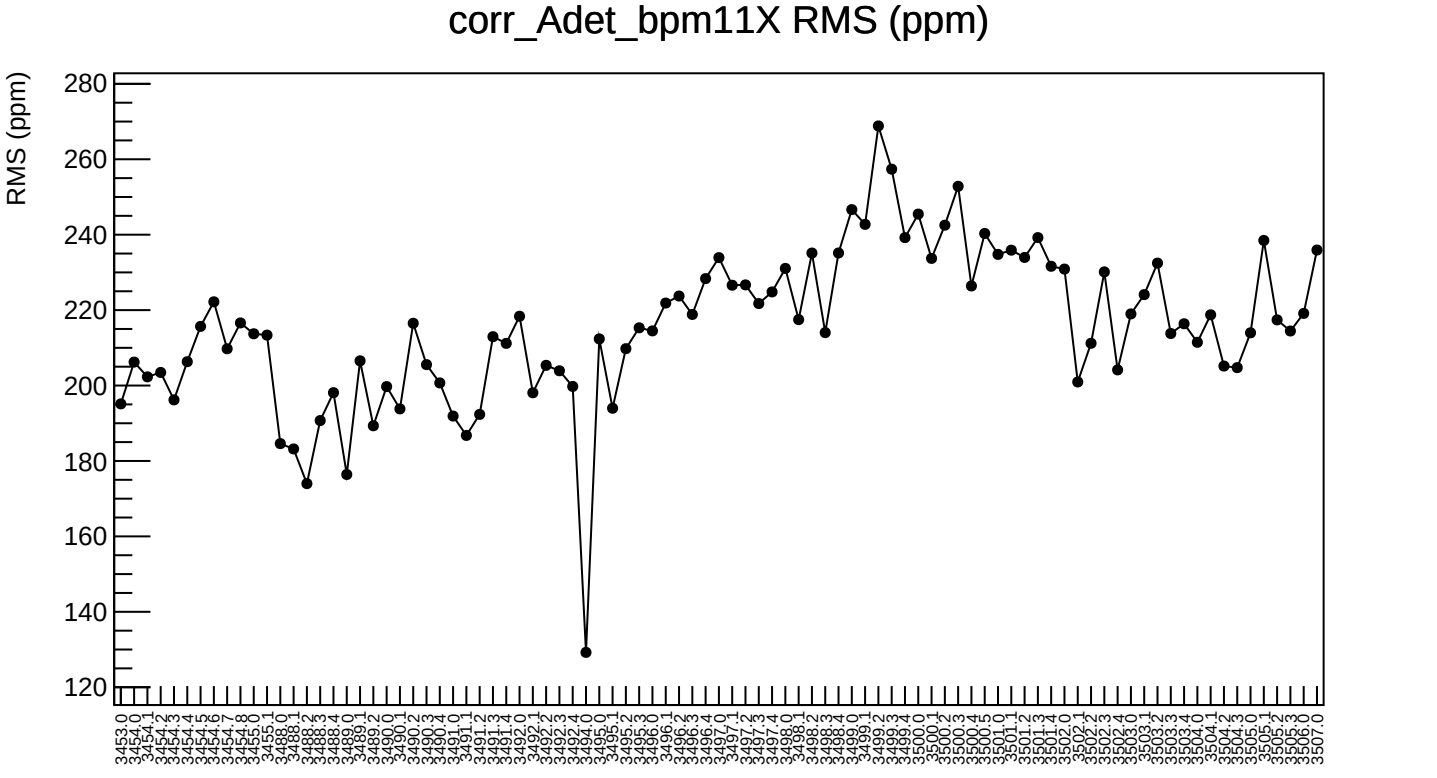

corr_Adet_bpm12Y (ppb)
χ² / ndf 12.75 / 90
p0 4.81 ± 49.01
1000
500
0
−500
−1000
1
0.5
0
−0.5
−1

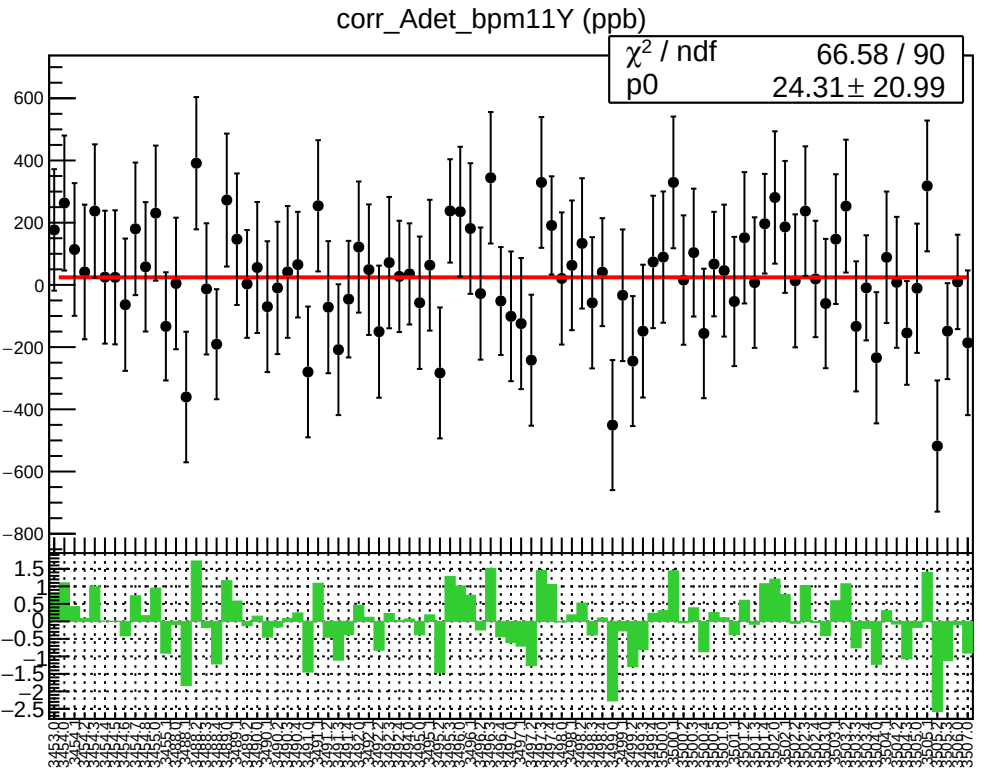

1D pull distribution
Mean −0.003513 ± 0.03923
Std Dev 0.3742 ± 0.02774
Underflow 0
Overflow 0
χ² / ndf 0.03085 / 1
Constant 48.8 ± 6.4
Mean 0.009162 ± 0.042686
Sigma 0.3983 ± 0.0333
40
35
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

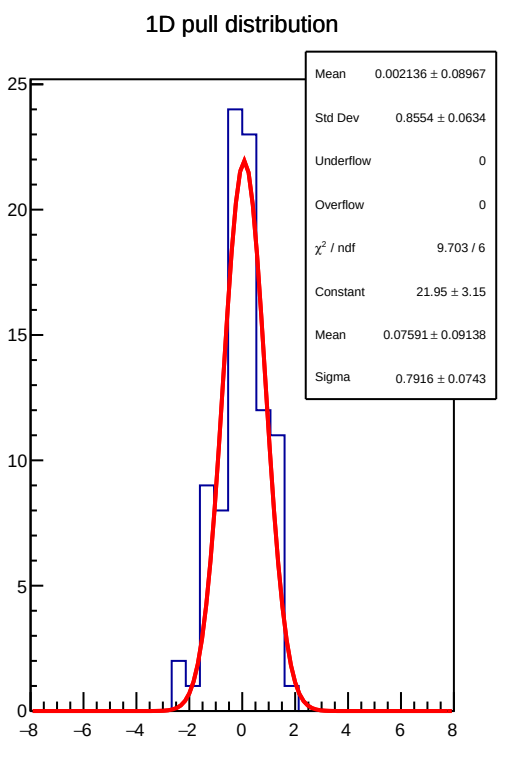

corr_Adet_bpm12Y RMS (ppm)
RMS (ppm)
30
25
20
15
10
5
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3506.2
3506.3
3507.0

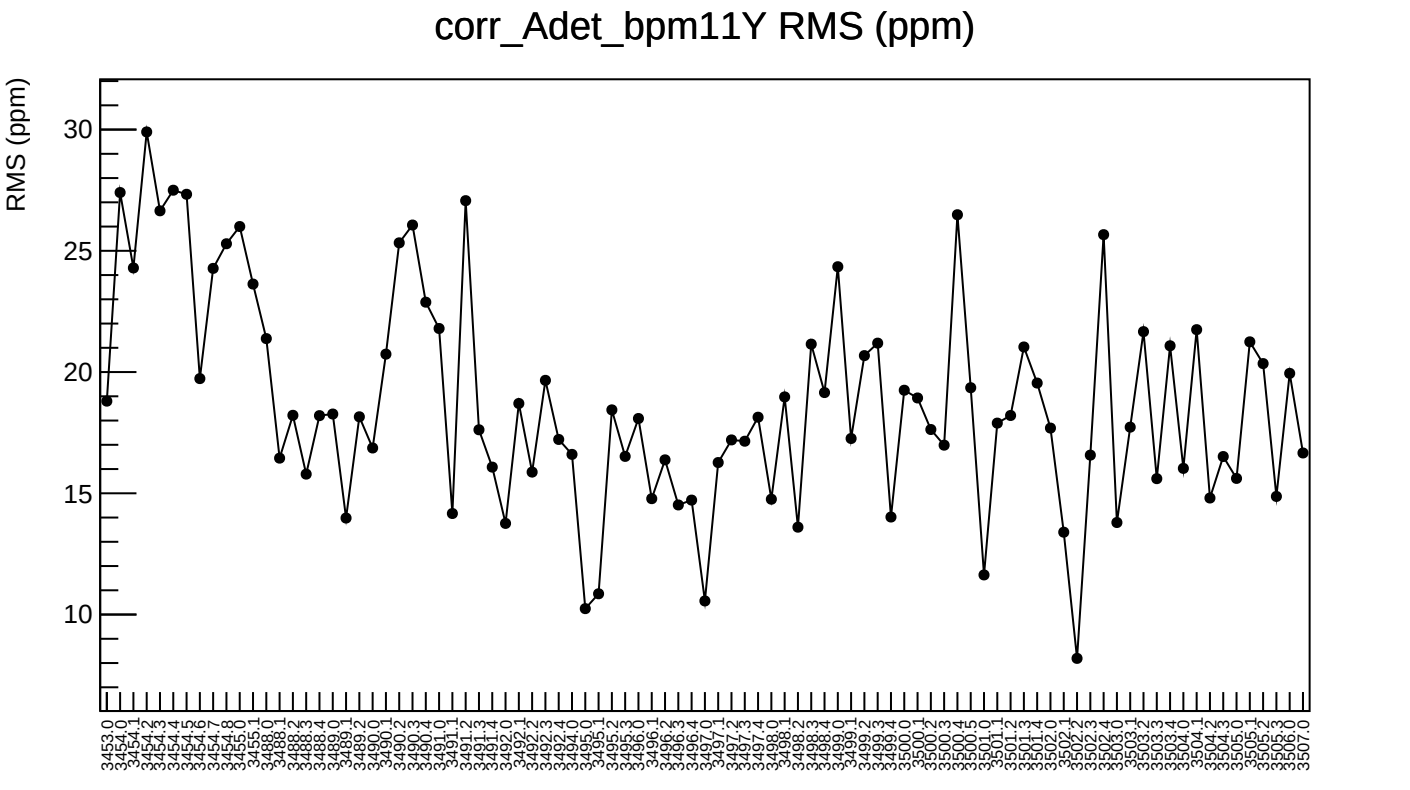

corr_Adet_bpm11X (ppb)
χ² / ndf 32.49 / 90
p0 98.7 ± 393

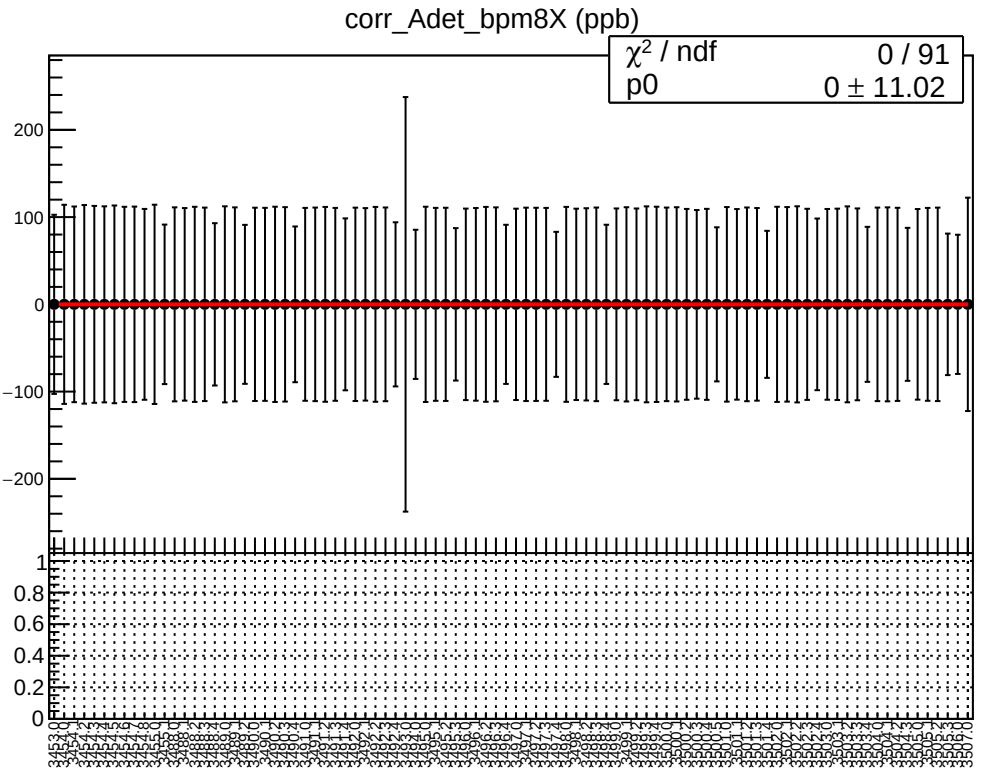

1D pull distribution
Mean −0.006866 ± 0.06263
Std Dev 0.5975 ± 0.04429
Underflow 0
Overflow 0
χ² / ndf 2.622 / 4
Constant 30.77 ± 4.09
Mean −0.04213 ± 0.06676
Sigma 0.614 ± 0.051

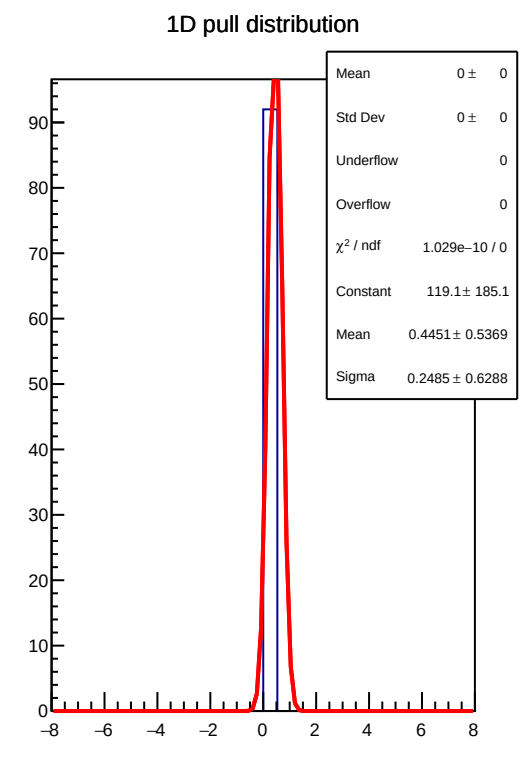

corr_Adet_bpm11X RMS (ppm)
RMS (ppm)
280
260
240
220
200
180
160
140
120
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

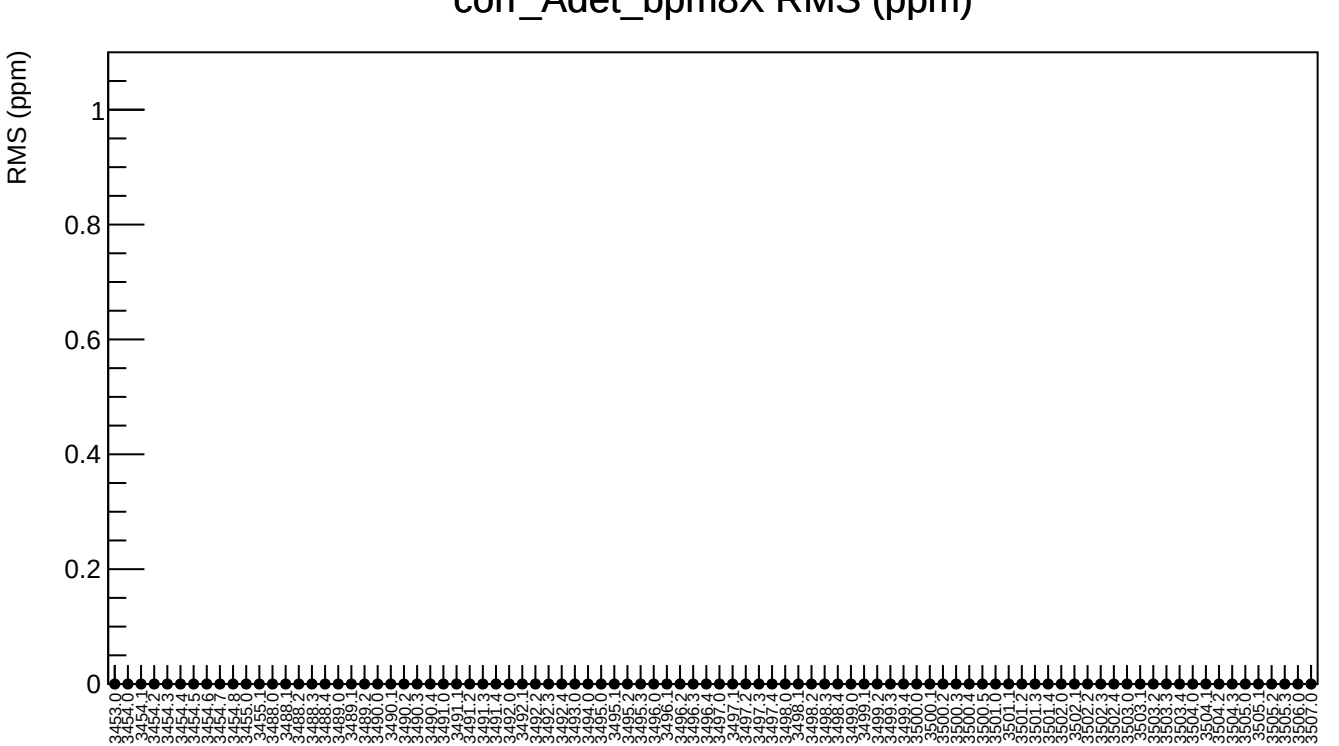

corr_Adet_bpm11Y (ppb)
χ² / ndf 66.58 / 90
p0 24.31 ± 20.99

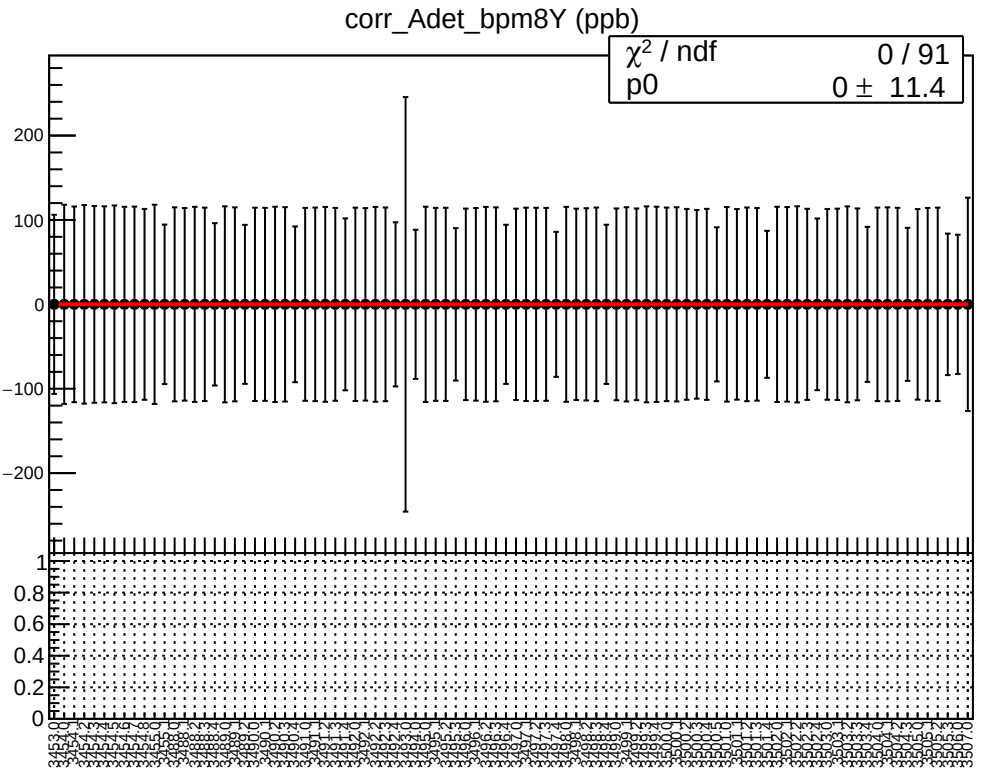

1D pull distribution
Mean 0.002136 ± 0.08967
Std Dev 0.8554 ± 0.0634
Underflow 0
Overflow 0
χ² / ndf 9.703 / 6
Constant 21.95 ± 3.15
Mean 0.07591 ± 0.09138
Sigma 0.7916 ± 0.0743

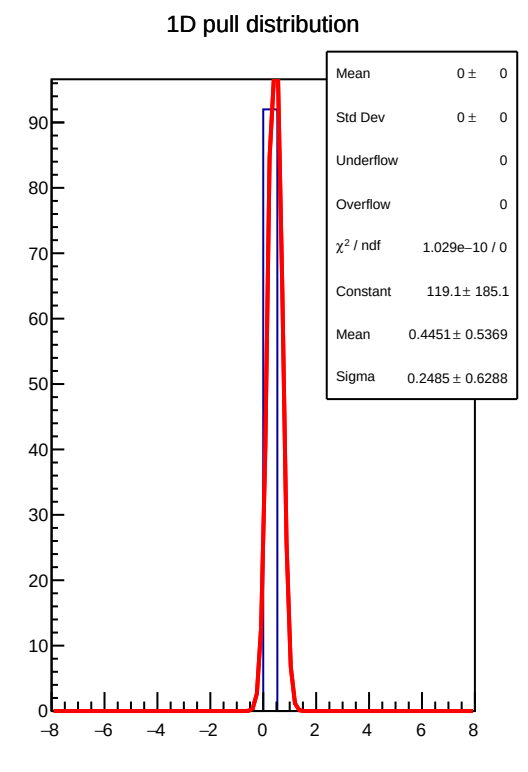

corr_Adet_bpm11Y RMS (ppm)
RMS (ppm)
30
25
20
15
10
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

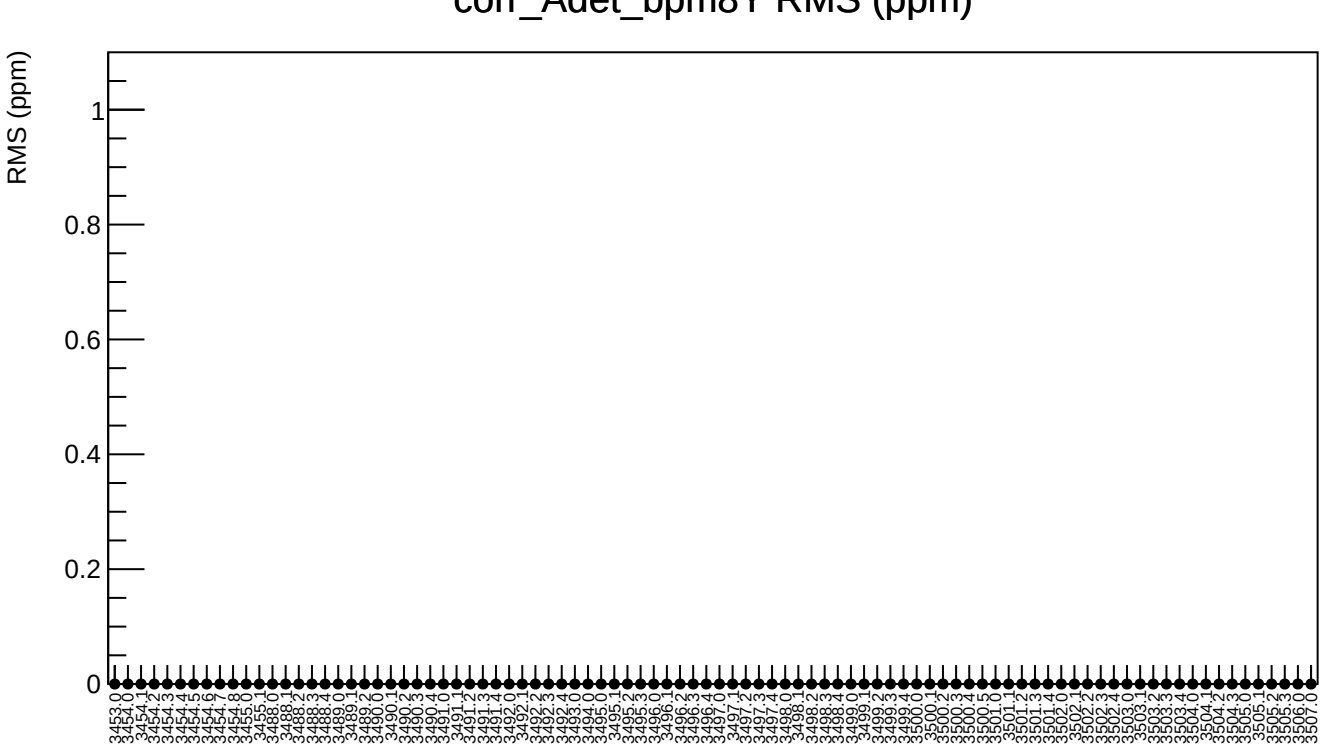

corr_Adet_bpm8X (ppb)
χ² / ndf 0 / 91
p0 0 ± 11.02
200
100
0
−100
−200
1
0.8
0.6
0.4
0.2
0

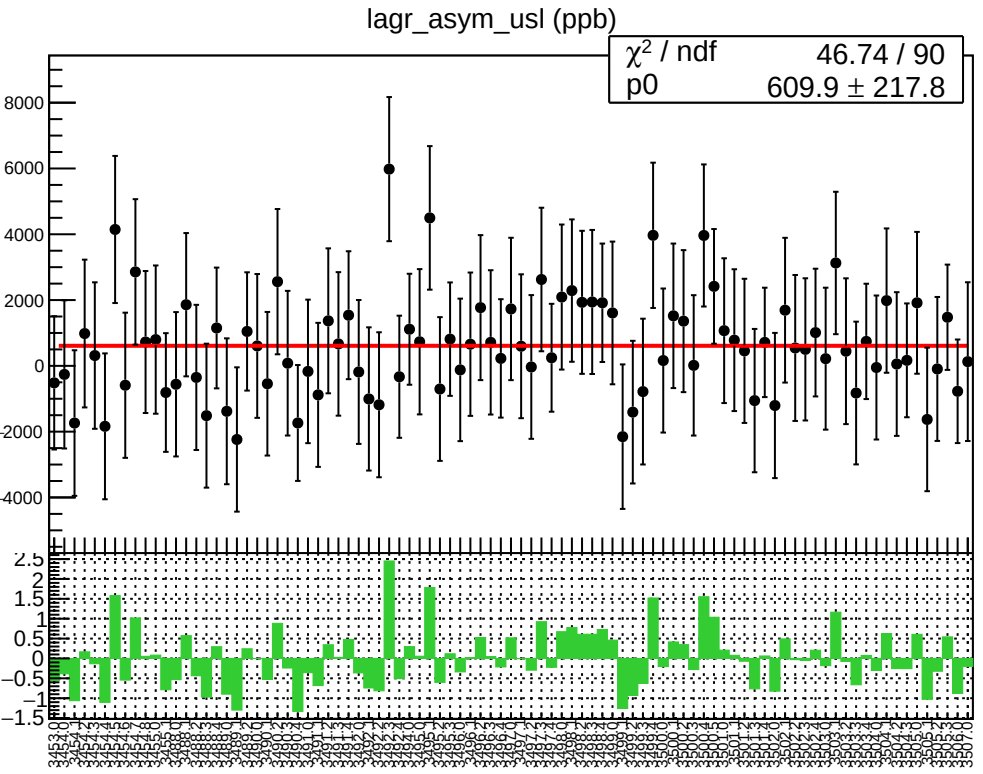

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.029e−10 / 0
Constant 119.1 ± 185.1
Mean 0.4451 ± 0.5369
Sigma 0.2485 ± 0.6288
90
80
70
60
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

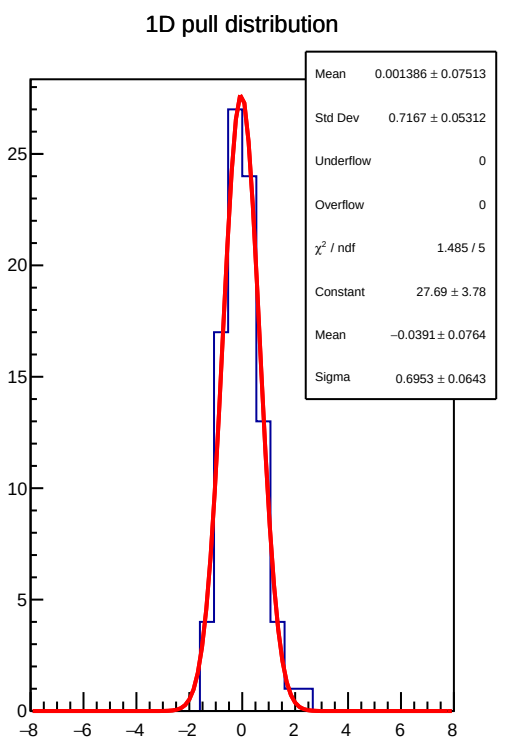

corr_Adet_bpm8X RMS (ppm)
RMS (ppm)
0
0.2
0.4
0.6
0.8
1
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3493.0
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.1
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0

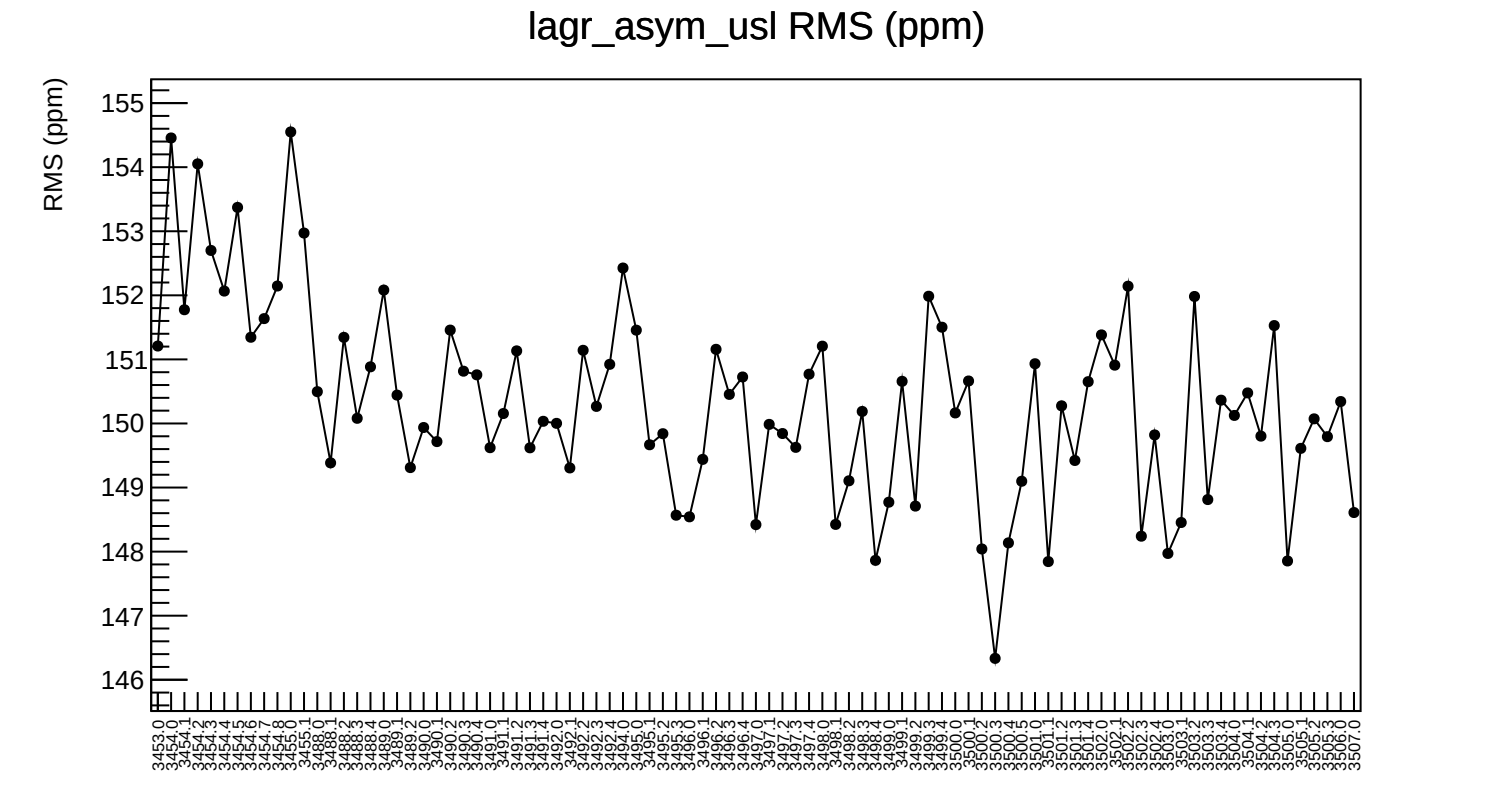

corr_Adet_bpm8Y (ppb)
χ² / ndf 0 / 91
p0 0 ± 11.4
200
100
0
−100
−200
1
0.8
0.6
0.4
0.2
0

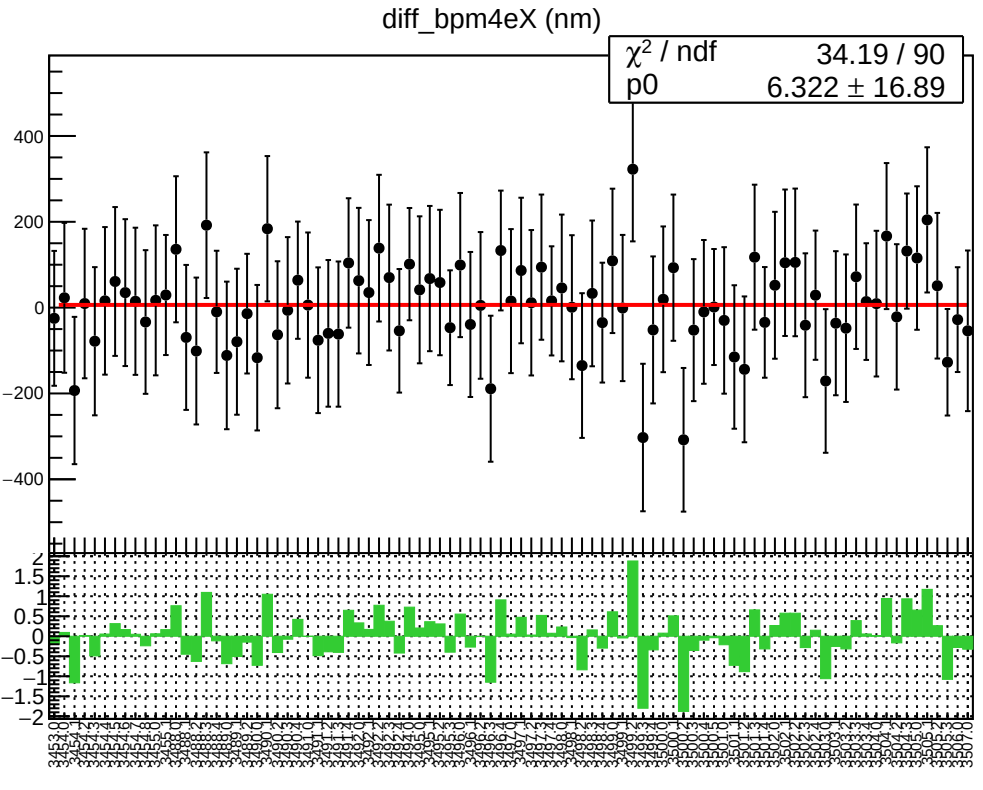

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.029e−10 / 0
Constant 119.1 ± 185.1
Mean 0.4451 ± 0.5369
Sigma 0.2485 ± 0.6288
90
80
70
60
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

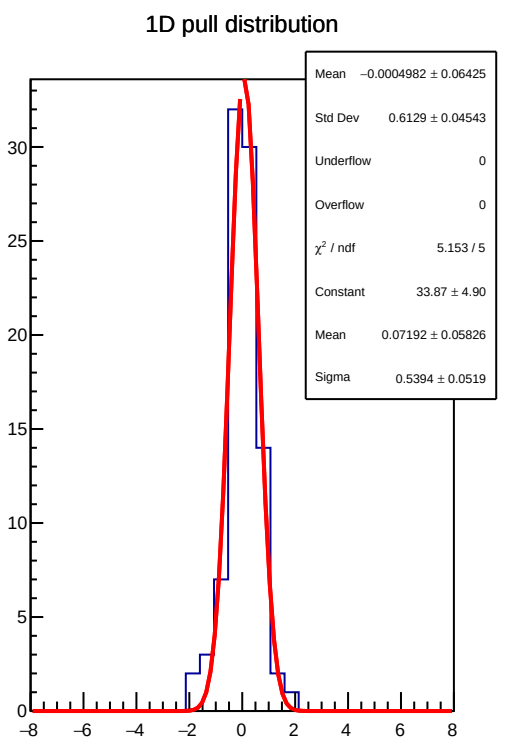

corr_Adet_bpm8Y RMS (ppm)
RMS (ppm)
0
0.2
0.4
0.6
0.8
1
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3493.0
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.1
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0

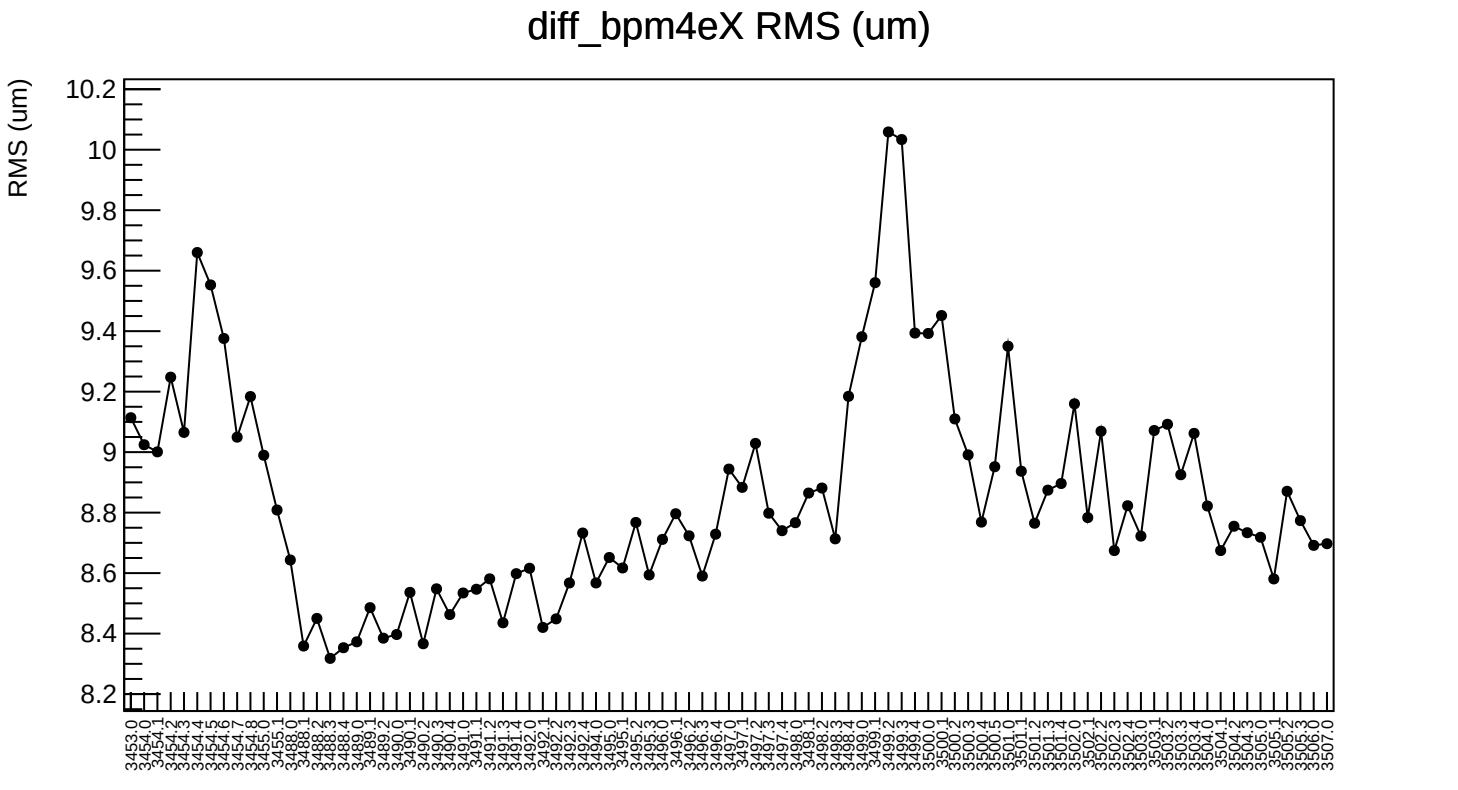

lagr_asym_usl (ppb)
χ² / ndf 46.74 / 90
p0 609.9 ± 217.8

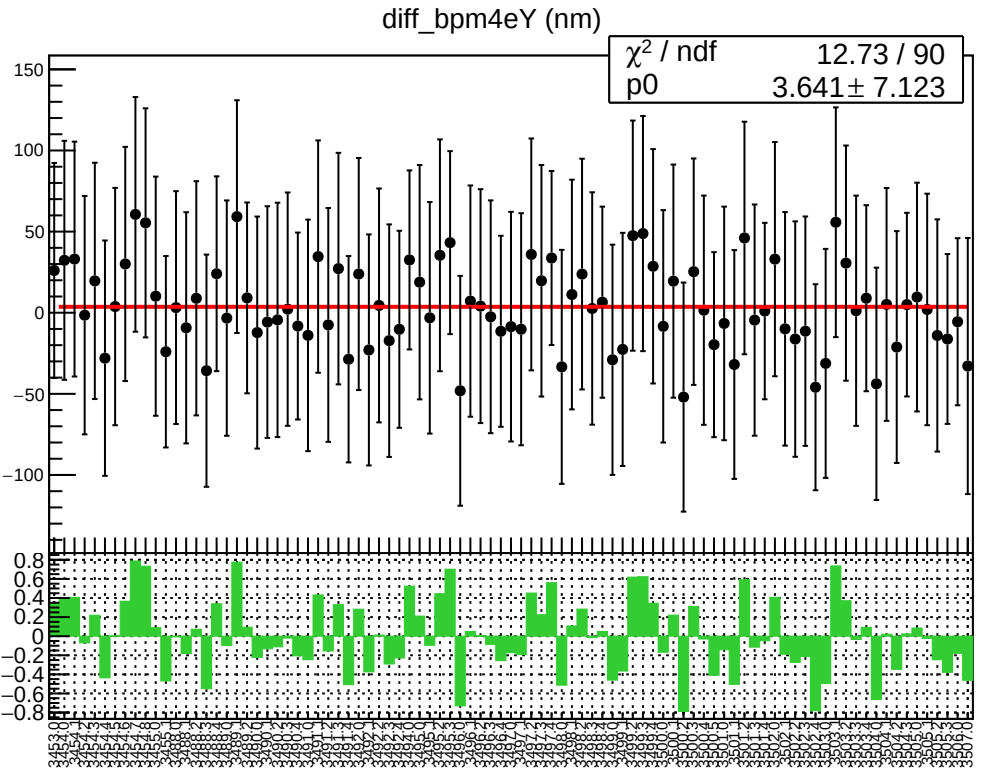

1D pull distribution
Mean 0.001386 ± 0.07513
Std Dev 0.7167 ± 0.05312
Underflow 0
Overflow 0
χ² / ndf 1.485 / 5
Constant 27.69 ± 3.78
Mean −0.0391 ± 0.0764
Sigma 0.6953 ± 0.0643

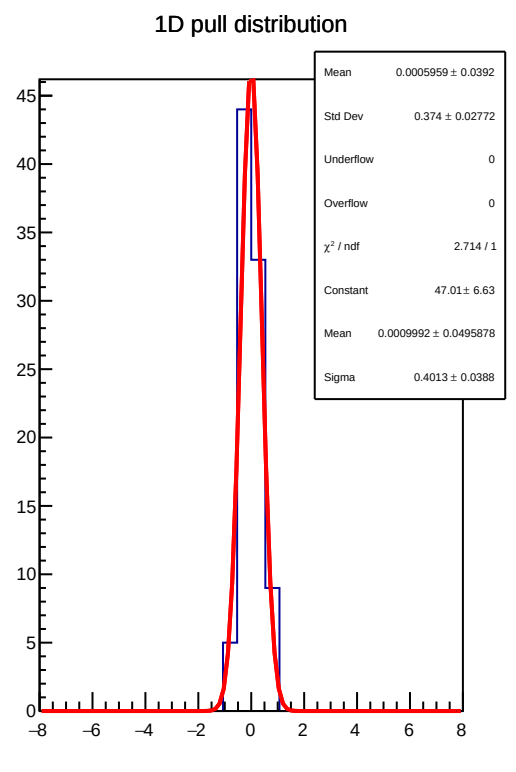

lagr_asym_usl RMS (ppm)
RMS (ppm)
155
154
153
152
151
150
149
148
147
146
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

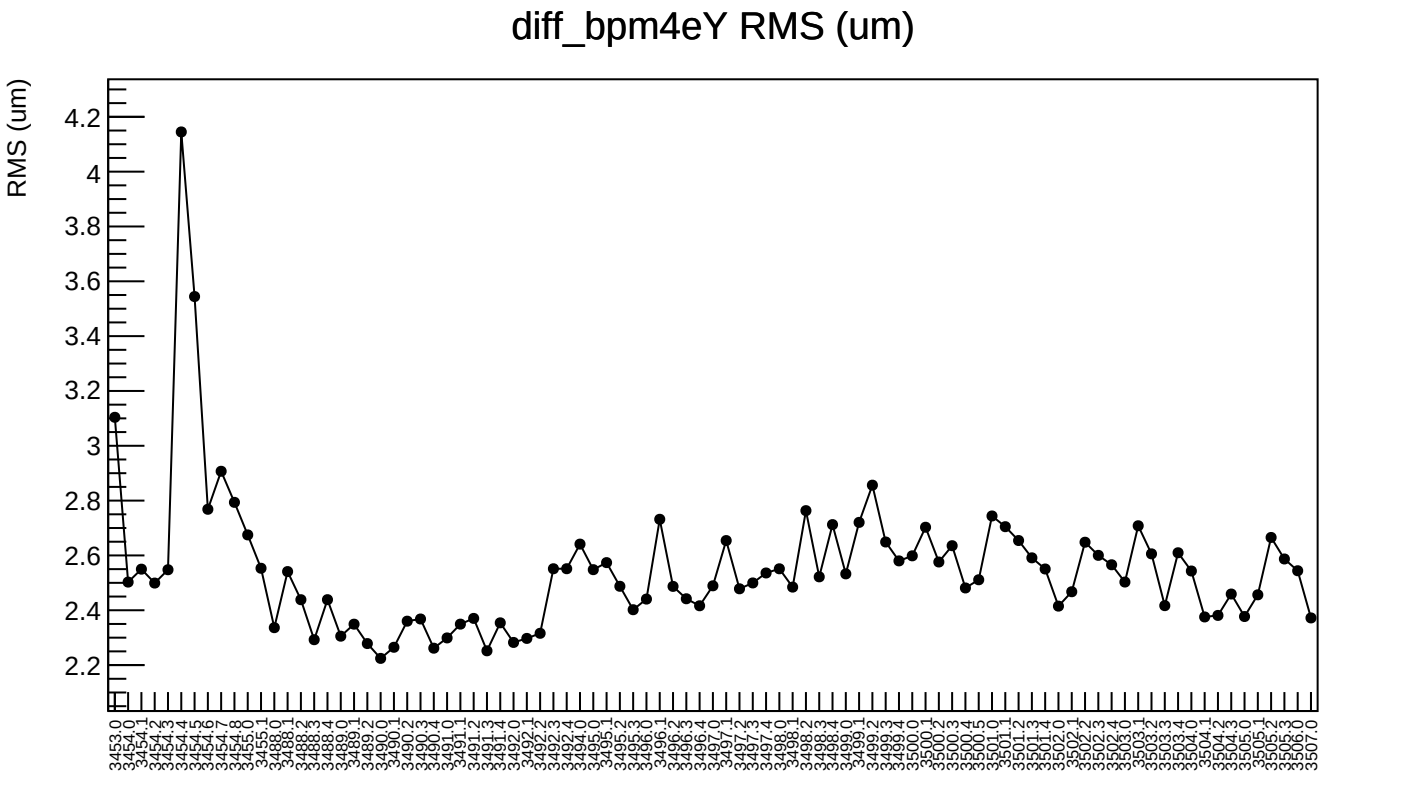

diff_bpm4eX (nm)
χ² / ndf 34.19 / 90
p0 6.322 ± 16.89
400
200
0
−200
−400
1.5
1
0.5
0
−0.5
−1
−1.5
−2

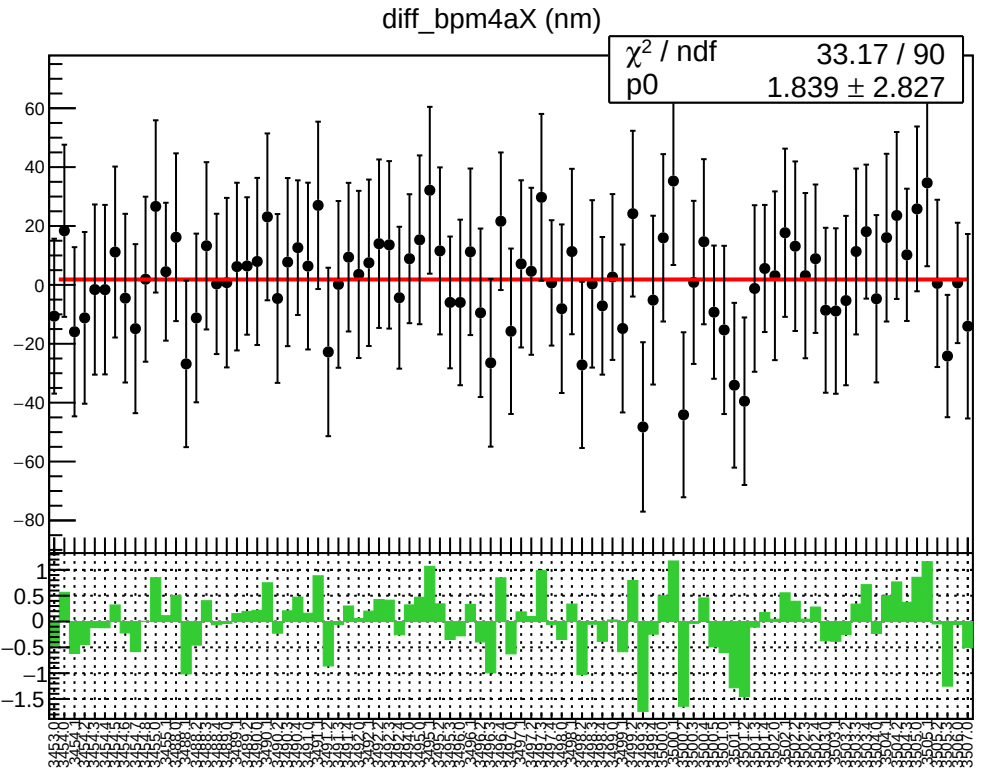

1D pull distribution
Mean −0.0004982 ± 0.06425
Std Dev 0.6129 ± 0.04543
Underflow 0
Overflow 0
χ² / ndf 5.153 / 5
Constant 33.87 ± 4.90
Mean 0.07192 ± 0.05826
Sigma 0.5394 ± 0.0519
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

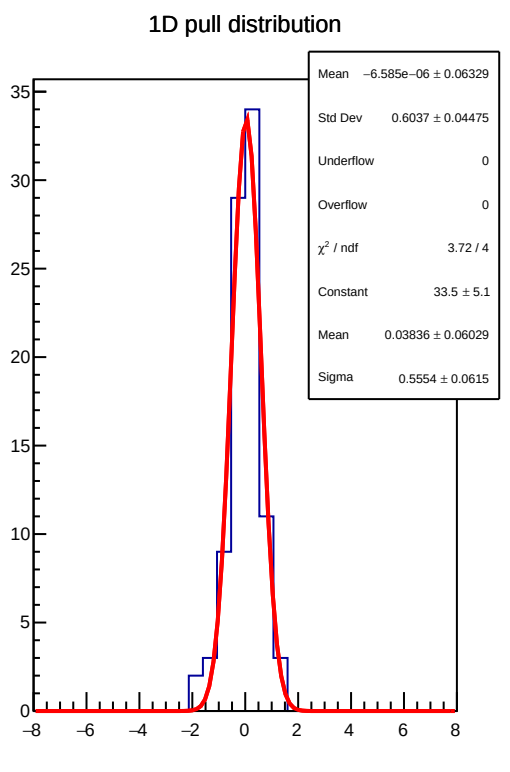

diff_bpm4eX RMS (um)
RMS (um)
10.2
10
9.8
9.6
9.4
9.2
9
8.8
8.6
8.4
8.2
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.6
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

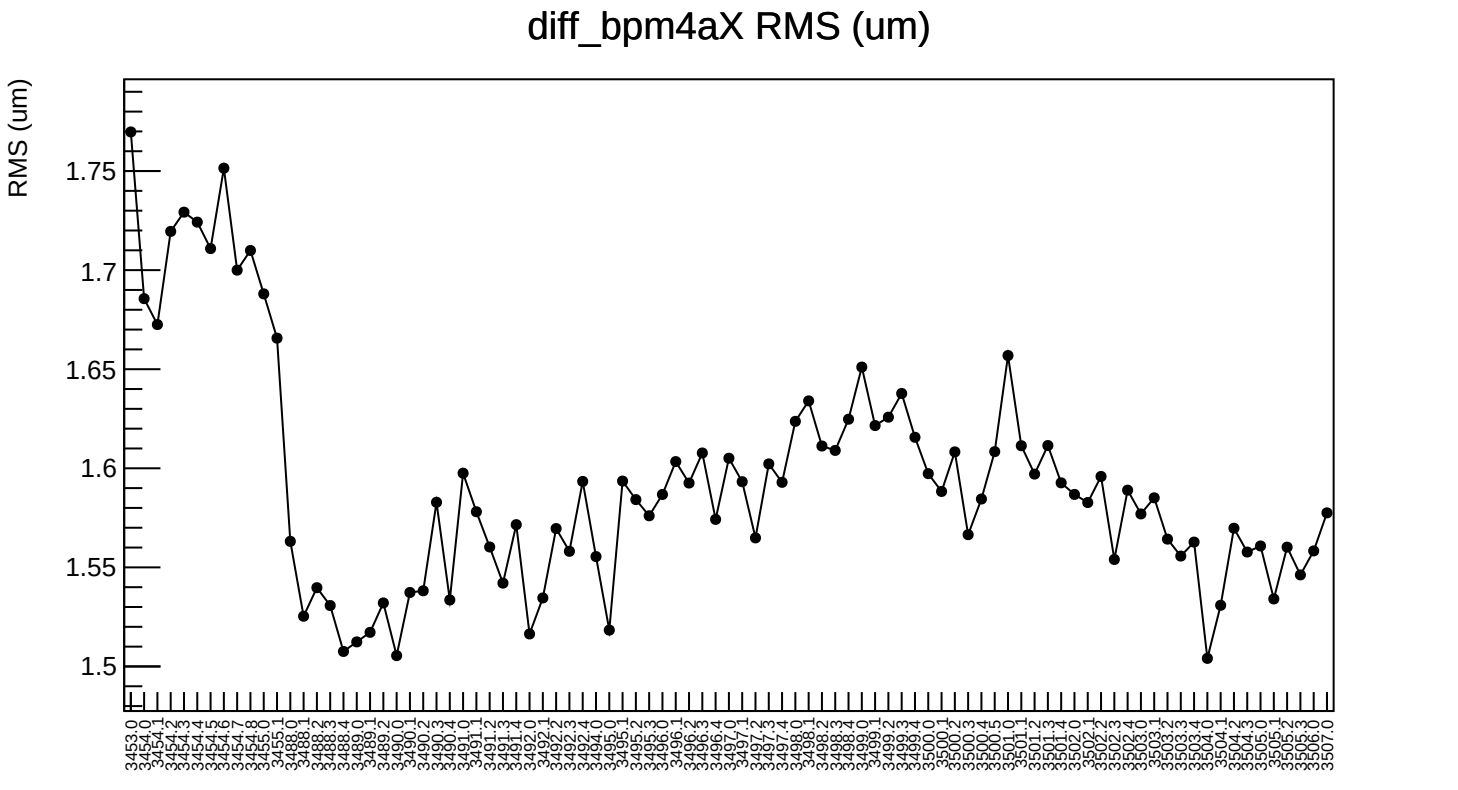

diff_bpm4eY (nm)
χ² / ndf 12.73 / 90
p0 3.641± 7.123

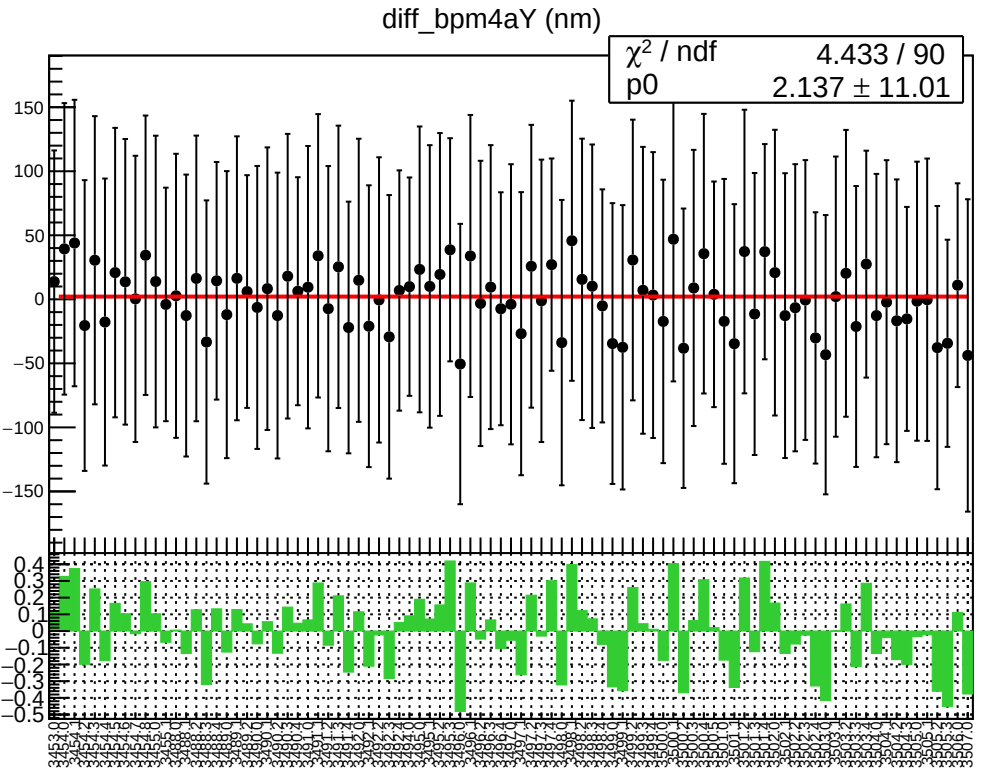

1D pull distribution
Mean 0.0005959 ± 0.0392
Std Dev 0.374 ± 0.02772
Underflow 0
Overflow 0
χ² / ndf 2.714 / 1
Constant 47.01± 6.63
Mean 0.0009992 ± 0.0495878
Sigma 0.4013 ± 0.0388

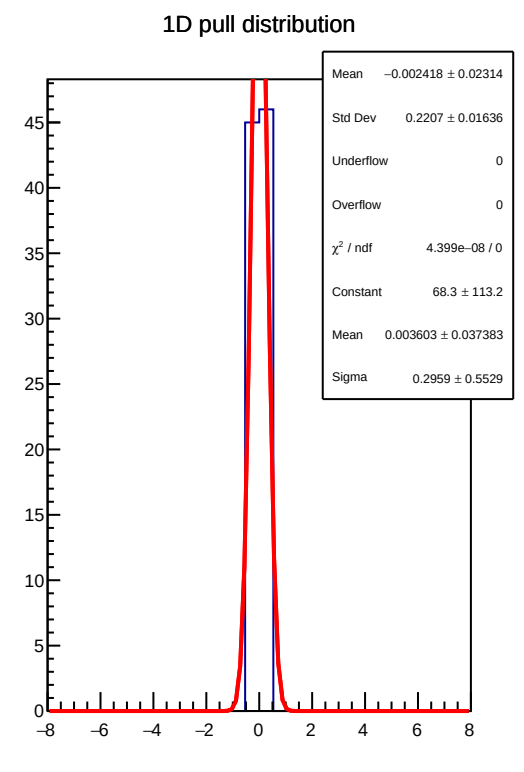

diff_bpm4eY RMS (um)
RMS (um)
4.2
4
3.8
3.6
3.4
3.2
3
2.8
2.6
2.4
2.2
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0

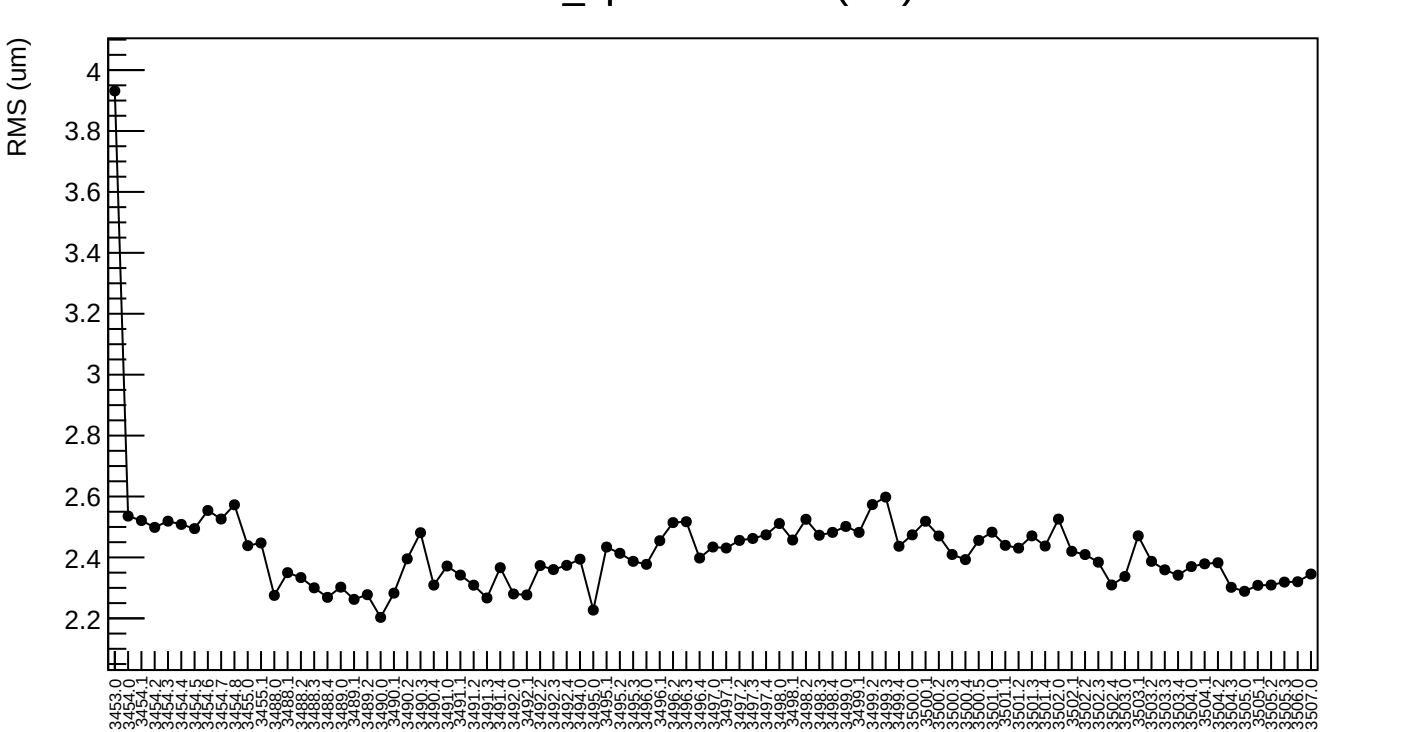

diff_bpm4aX (nm)
χ² / ndf 33.17 / 90
p0 1.839 ± 2.827

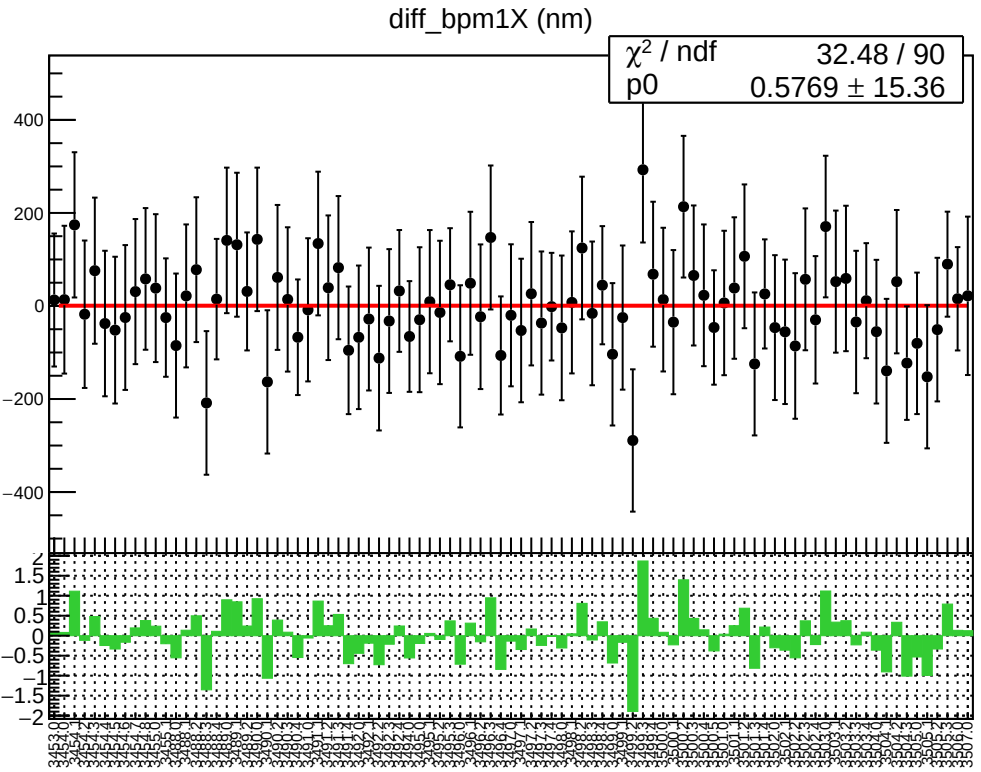

1D pull distribution
Mean −6.585e−06 ± 0.06329
Std Dev 0.6037 ± 0.04475
Underflow 0
Overflow 0
χ² / ndf 3.72 / 4
Constant 33.5 ± 5.1
Mean 0.03836 ± 0.06029
Sigma 0.5554 ± 0.0615

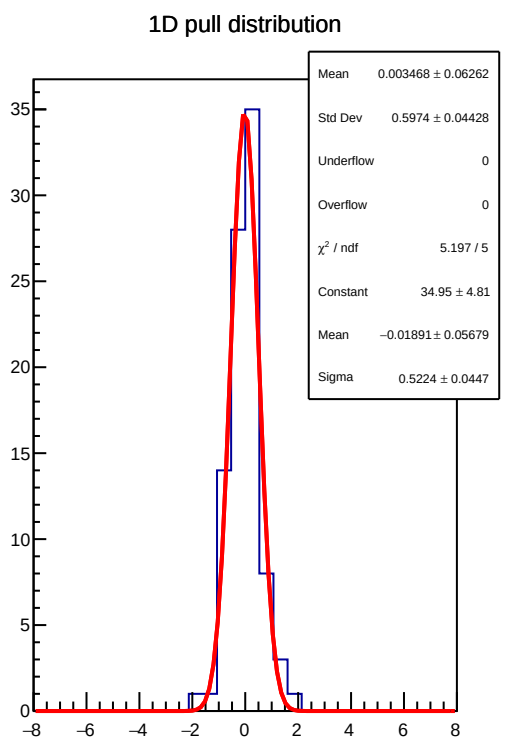

diff_bpm4aX RMS (um)
RMS (um)
1.75
1.7
1.65
1.6
1.55
1.5
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.6
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3506.1
3507.0

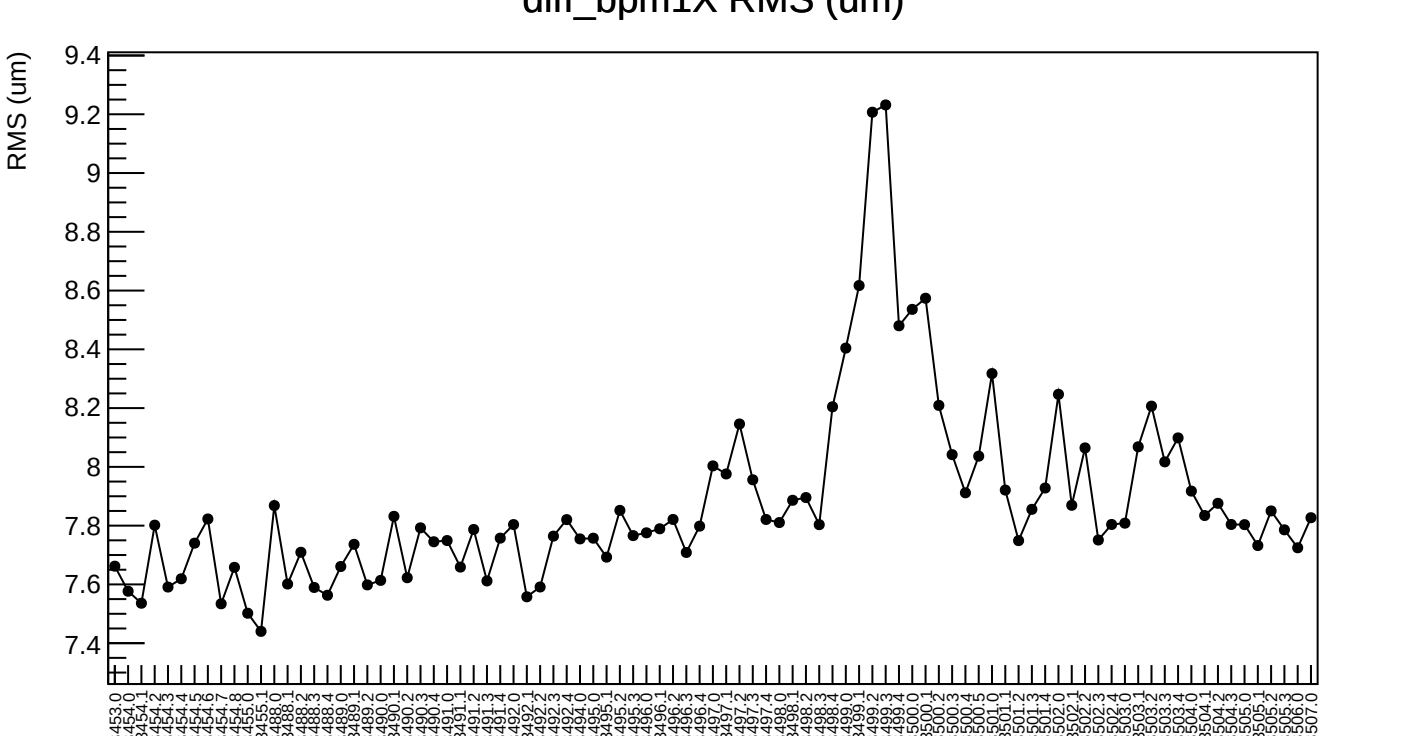

diff_bpm4aY (nm)
χ² / ndf 4.433 / 90
p0 2.137 ± 11.01

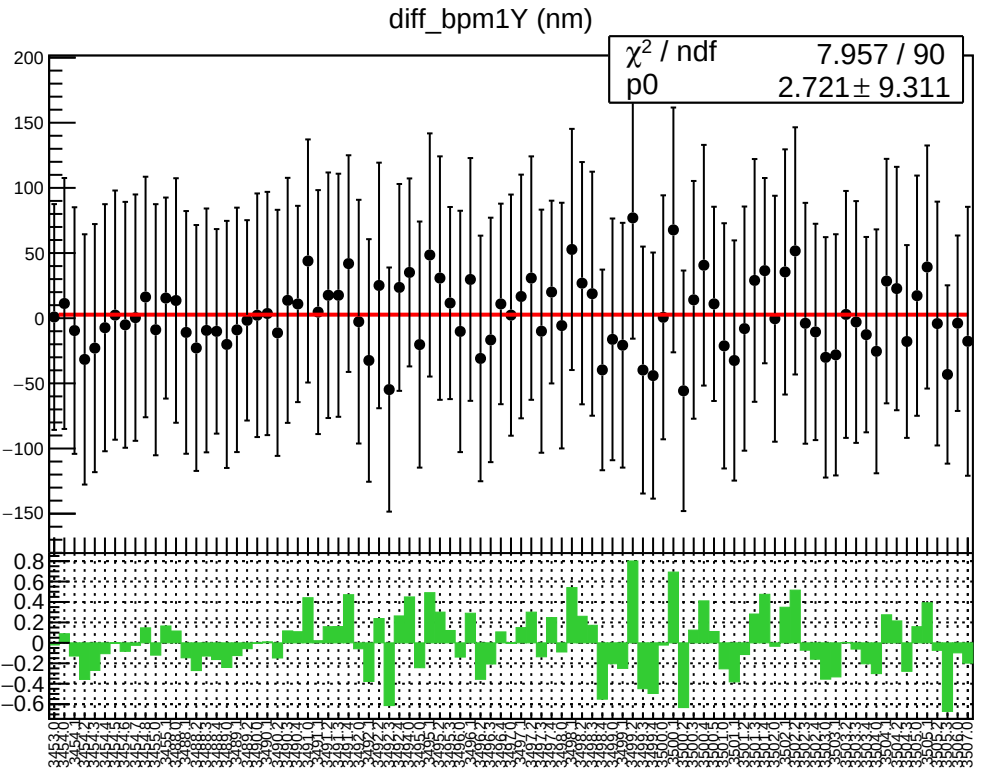

1D pull distribution
Mean −0.002418 ± 0.02314
Std Dev 0.2207 ± 0.01636
Underflow 0
Overflow 0
χ² / ndf 4.399e−08 / 0
Constant 68.3 ± 113.2
Mean 0.003603 ± 0.037383
Sigma 0.2959 ± 0.5529

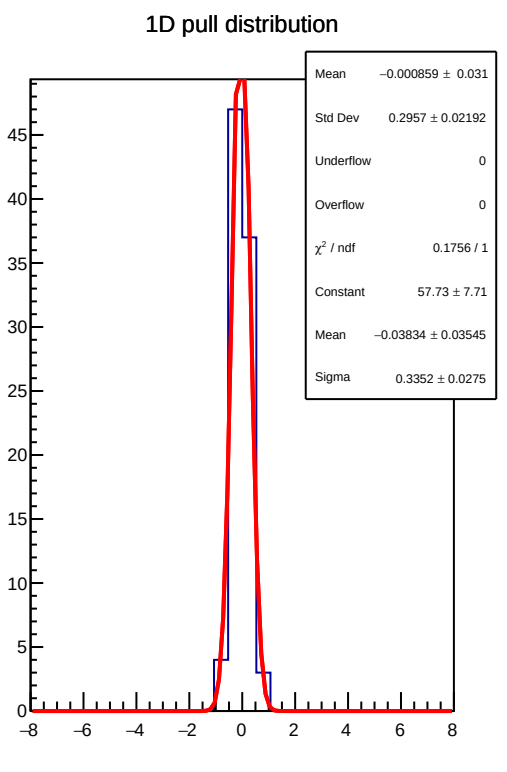

diff_bpm4aY RMS (um)
RMS (um)
4
3.8
3.6
3.4
3.2
3
2.8
2.6
2.4
2.2
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

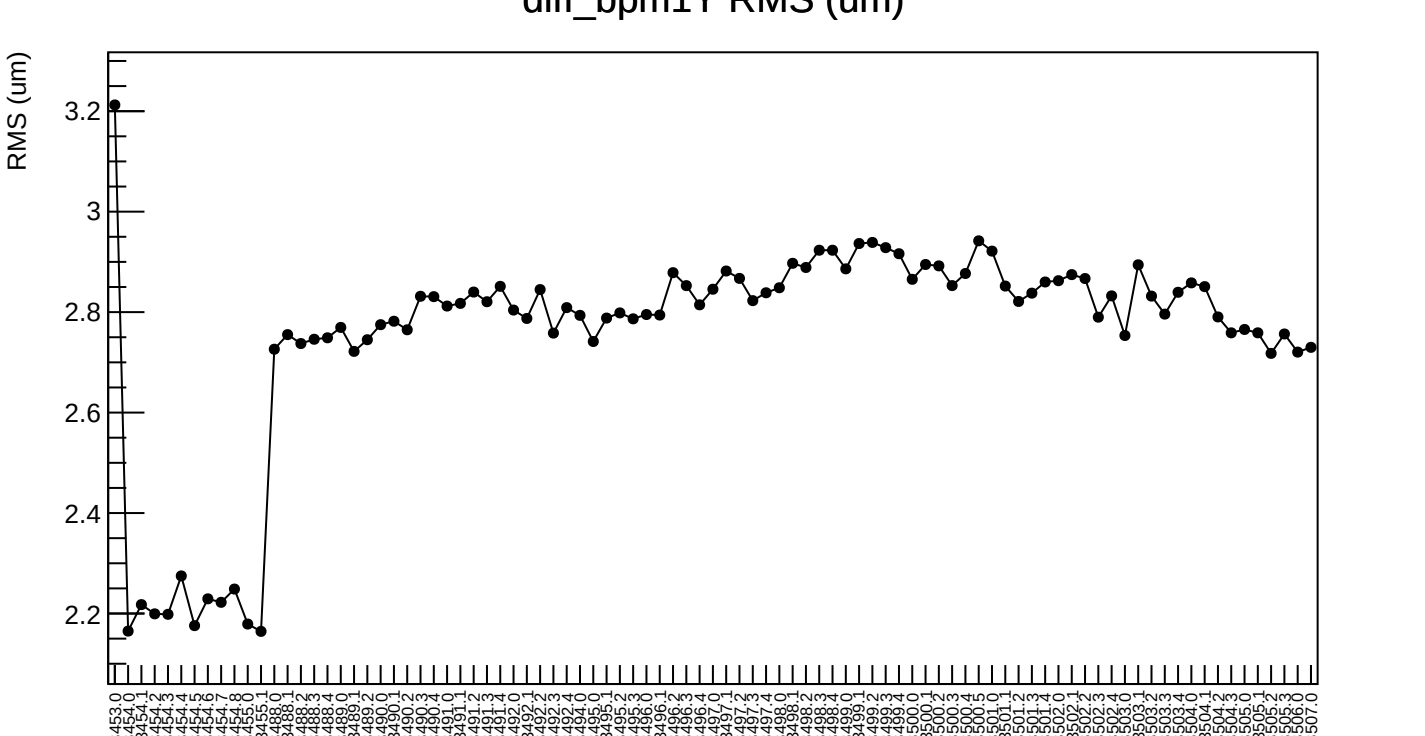

diff_bpm1X (nm)
χ² / ndf 32.48 / 90
p0 0.5769 ± 15.36

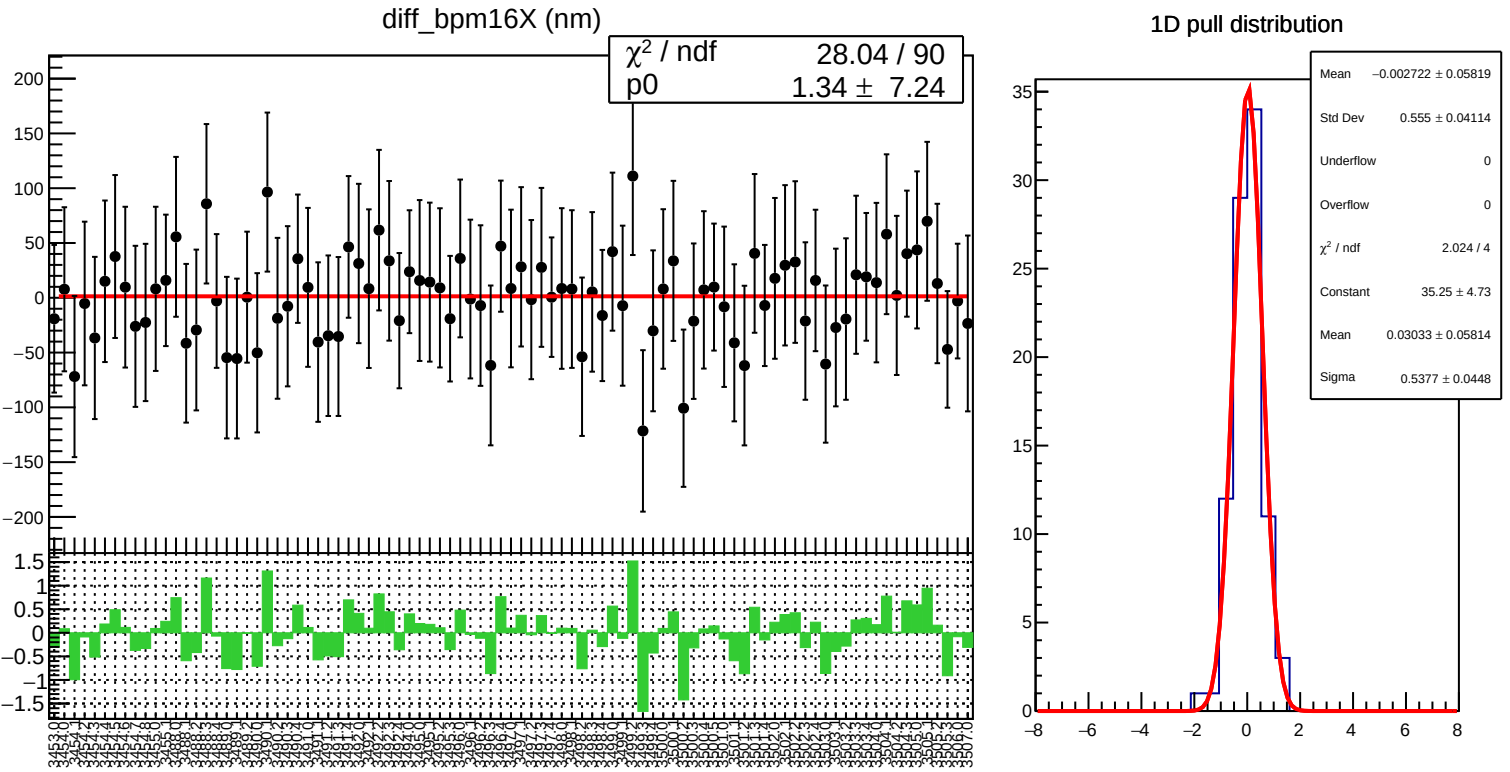

1D pull distribution
Mean 0.003468 ± 0.06262
Std Dev 0.5974 ± 0.04428
Underflow 0
Overflow 0
χ² / ndf 5.197 / 5
Constant 34.95 ± 4.81
Mean −0.01891 ± 0.05679
Sigma 0.5224 ± 0.0447

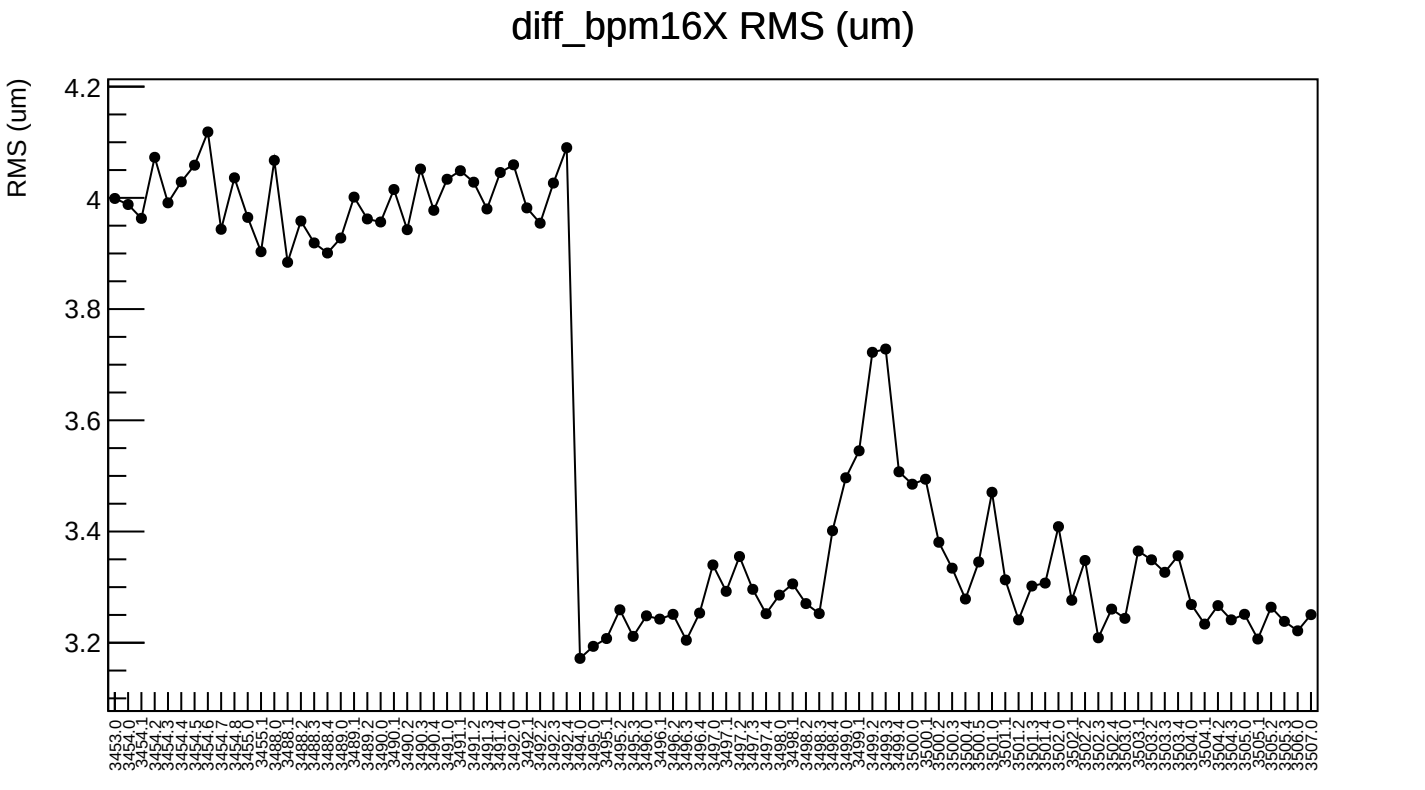

diff_bpm1X RMS (um)
RMS (um)
9.4
9.2
9
8.8
8.6
8.4
8.2
8
7.8
7.6
7.4
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.1
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3506.1
3507.0

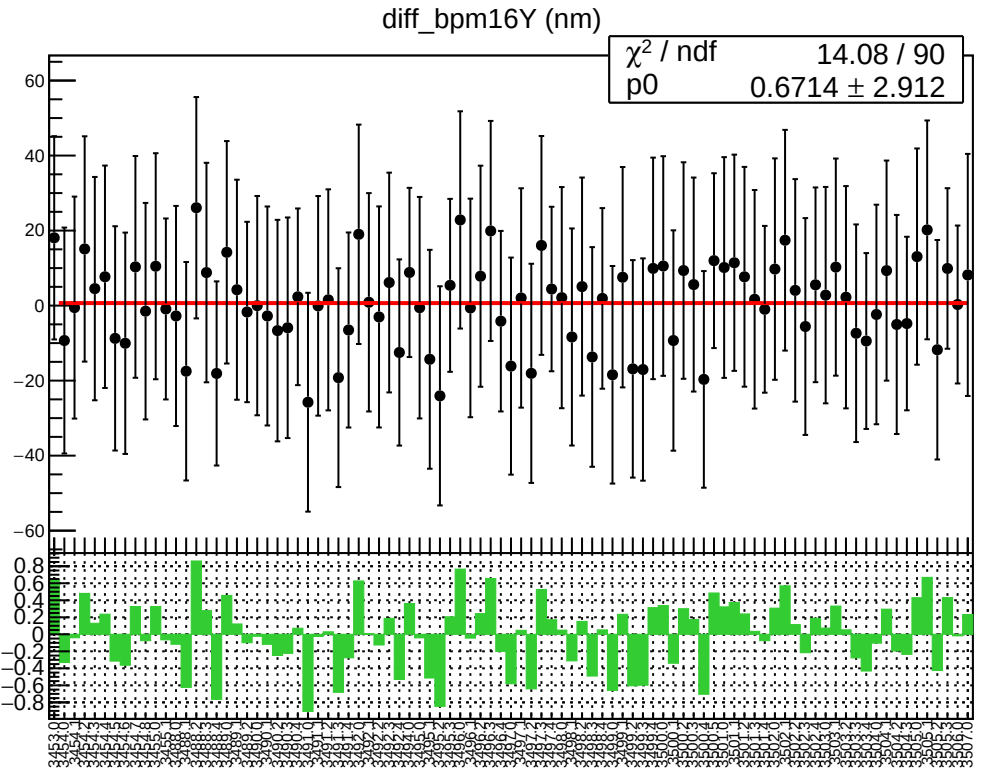

diff_bpm1Y (nm)
χ² / ndf 7.957 / 90
p0 2.721± 9.311

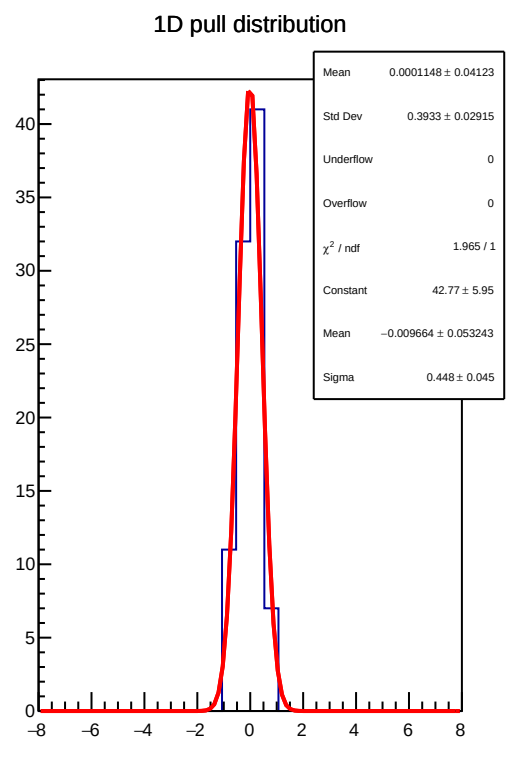

1D pull distribution
Mean −0.000859 ± 0.031
Std Dev 0.2957 ± 0.02192
Underflow 0
Overflow 0
χ² / ndf 0.1756 / 1
Constant 57.73 ± 7.71
Mean −0.03834 ± 0.03545
Sigma 0.3352 ± 0.0275

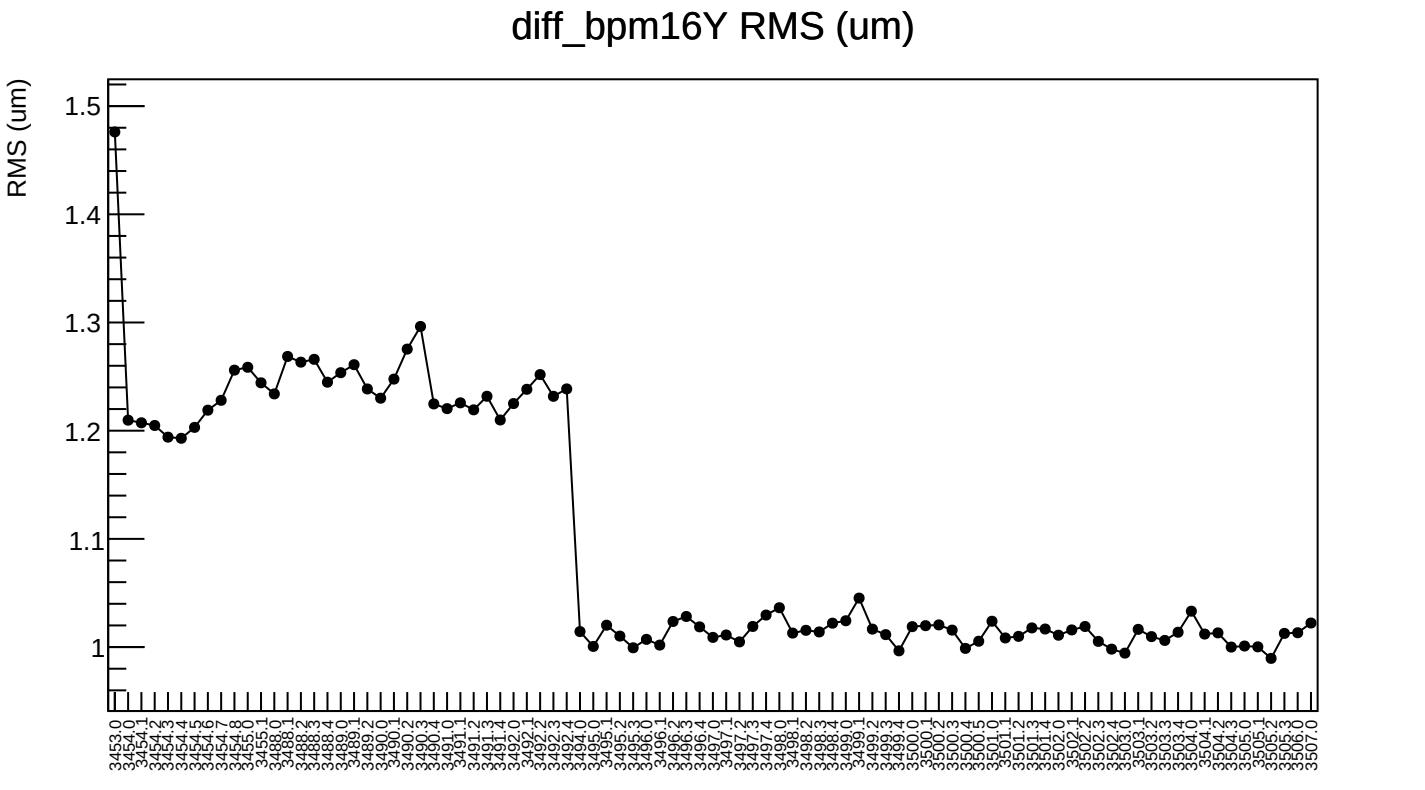

diff_bpm1Y RMS (um)
RMS (um)
3.2
3
2.8
2.6
2.4
2.2
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.6
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3506.1
3507.0

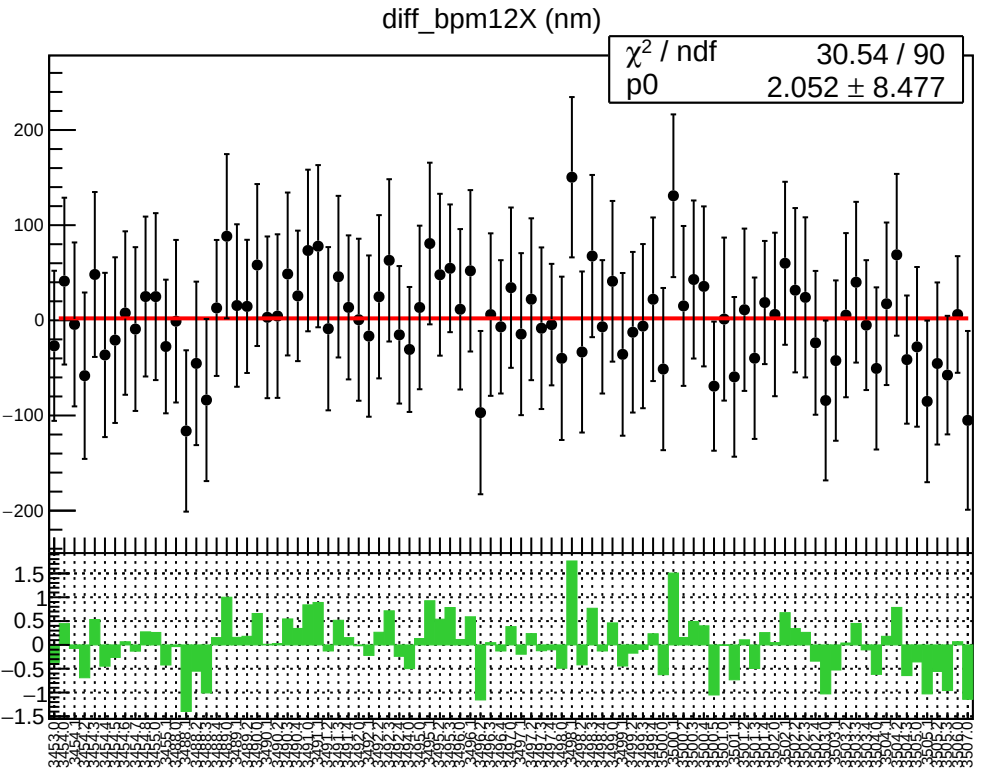

diff_bpm16X (nm)
χ² / ndf 28.04 / 90
p0 1.34 ± 7.24
1D pull distribution
Mean −0.002722 ± 0.05819
Std Dev 0.555 ± 0.04114
Underflow 0
Overflow 0
χ² / ndf 2.024 / 4
Constant 35.25 ± 4.73
Mean 0.03033 ± 0.05814
Sigma 0.5377 ± 0.0448

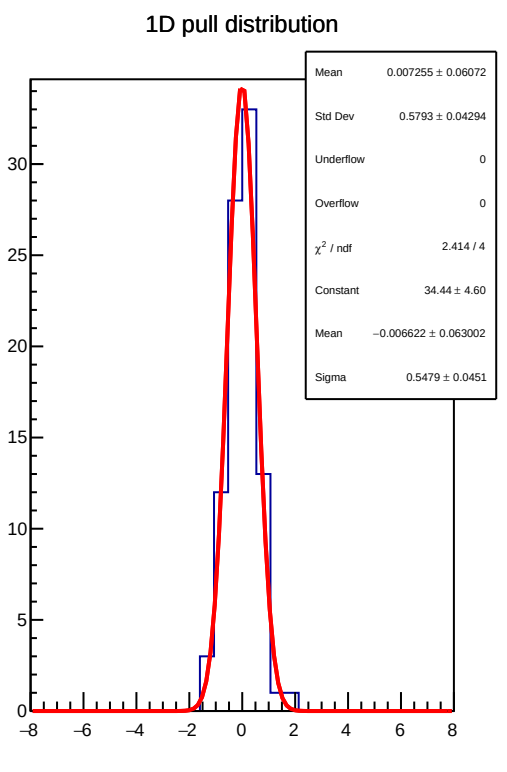

diff_bpm16X RMS (um)
RMS (um)
4.2
4
3.8
3.6
3.4
3.2
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0

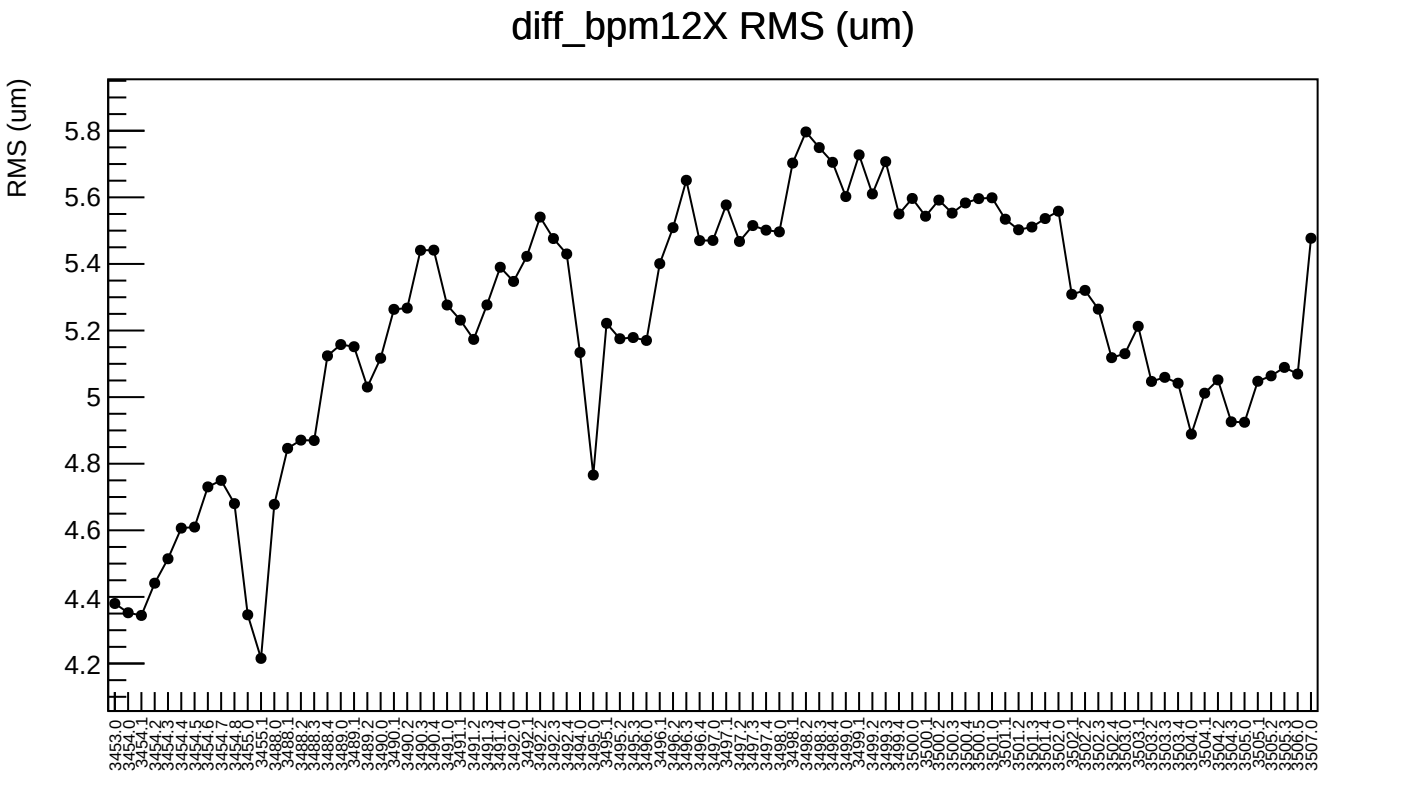

diff_bpm16Y (nm)
χ² / ndf 14.08 / 90
p0 0.6714 ± 2.912

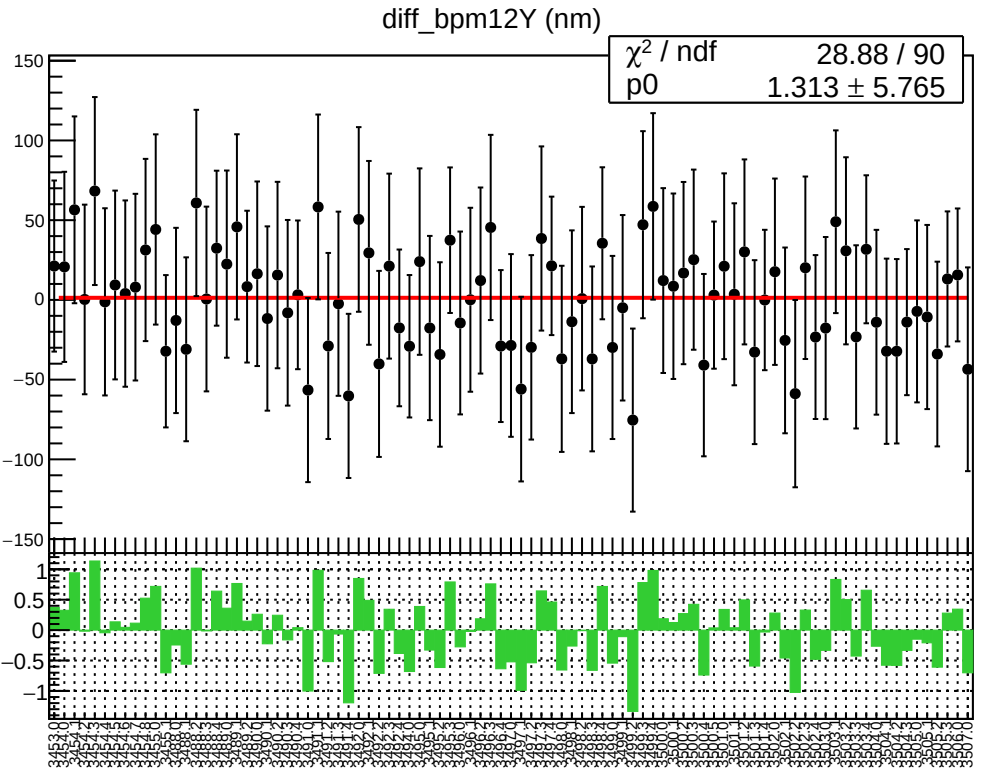

1D pull distribution
Mean 0.0001148 ± 0.04123
Std Dev 0.3933 ± 0.02915
Underflow 0
Overflow 0
χ² / ndf 1.965 / 1
Constant 42.77 ± 5.95
Mean −0.009664 ± 0.053243
Sigma 0.448 ± 0.045

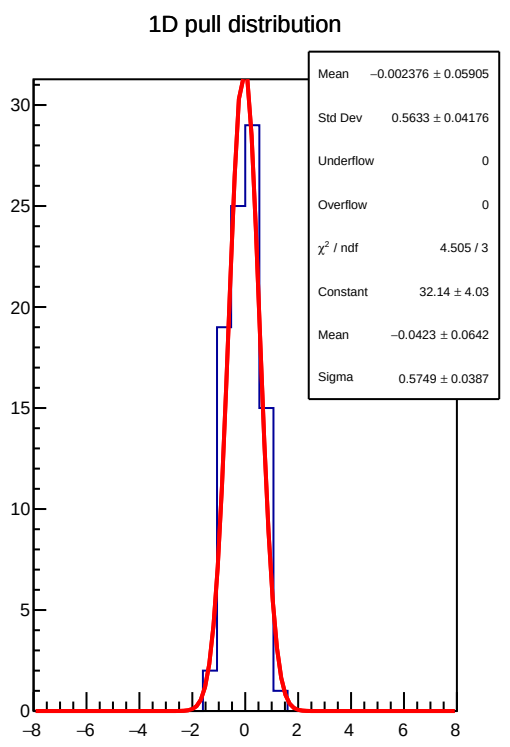

diff_bpm16Y RMS (um)
RMS (um)
1.5
1.4
1.3
1.2
1.1
1
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.6
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3506.1
3507.0

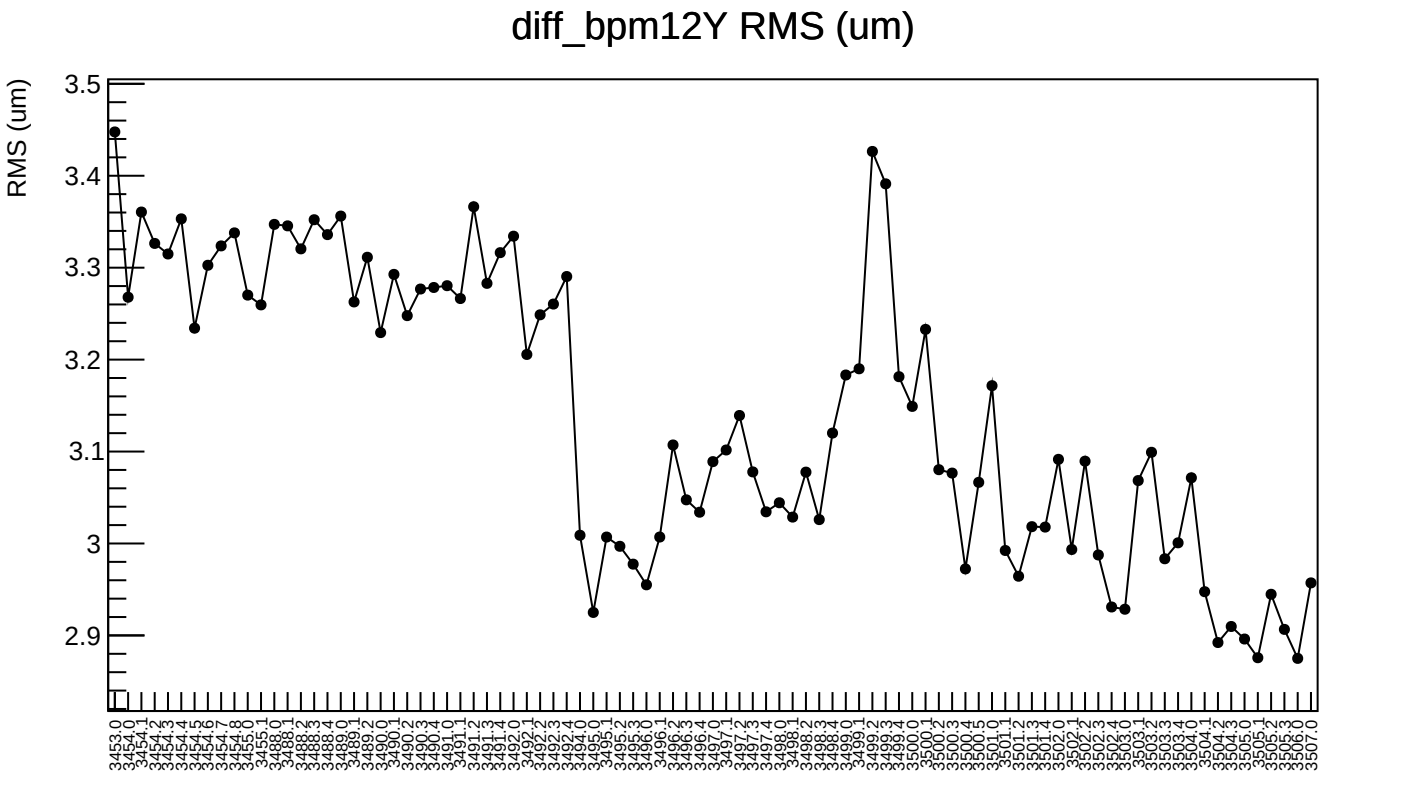

diff_bpm12X (nm)
χ² / ndf 30.54 / 90
p0 2.052 ± 8.477

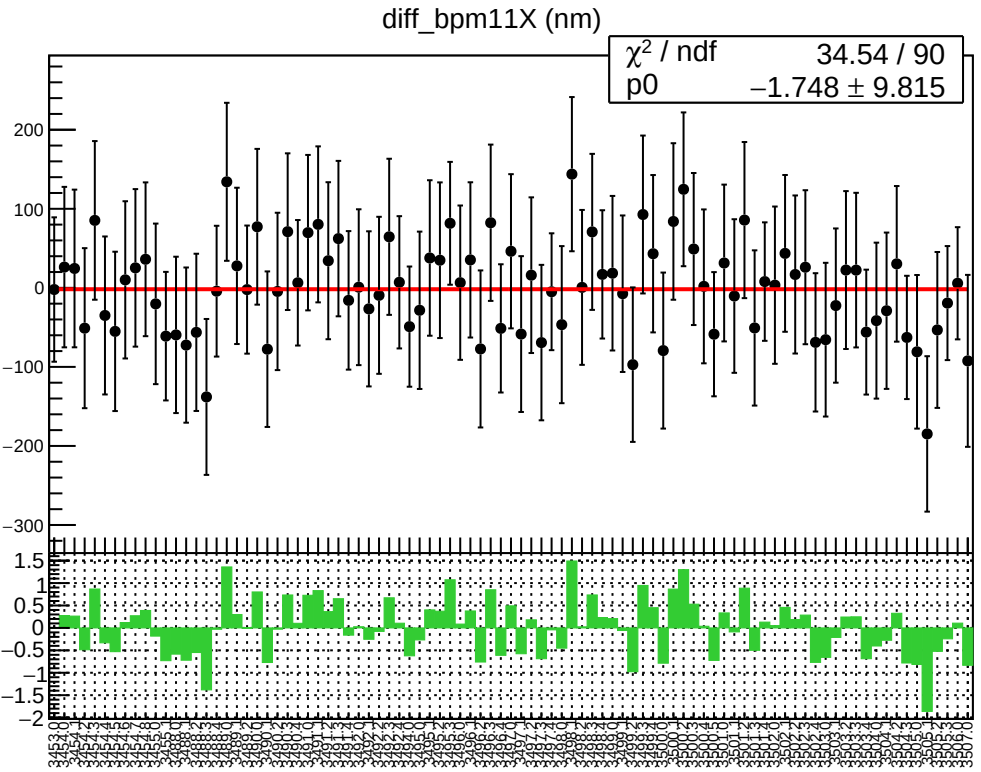

1D pull distribution
Mean 0.007255 ± 0.06072
Std Dev 0.5793 ± 0.04294
Underflow 0
Overflow 0
χ² / ndf 2.414 / 4
Constant 34.44 ± 4.60
Mean −0.006622 ± 0.063002
Sigma 0.5479 ± 0.0451

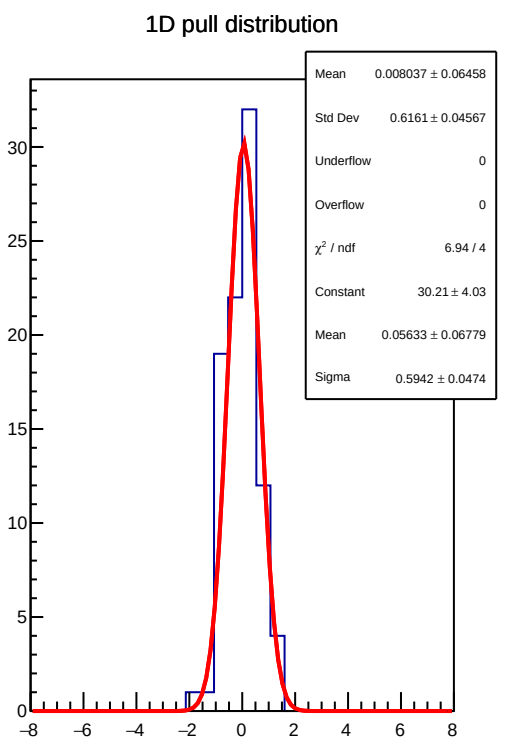

diff_bpm12X RMS (um)
RMS (um)
5.8
5.6
5.4
5.2
5
4.8
4.6
4.4
4.2
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0

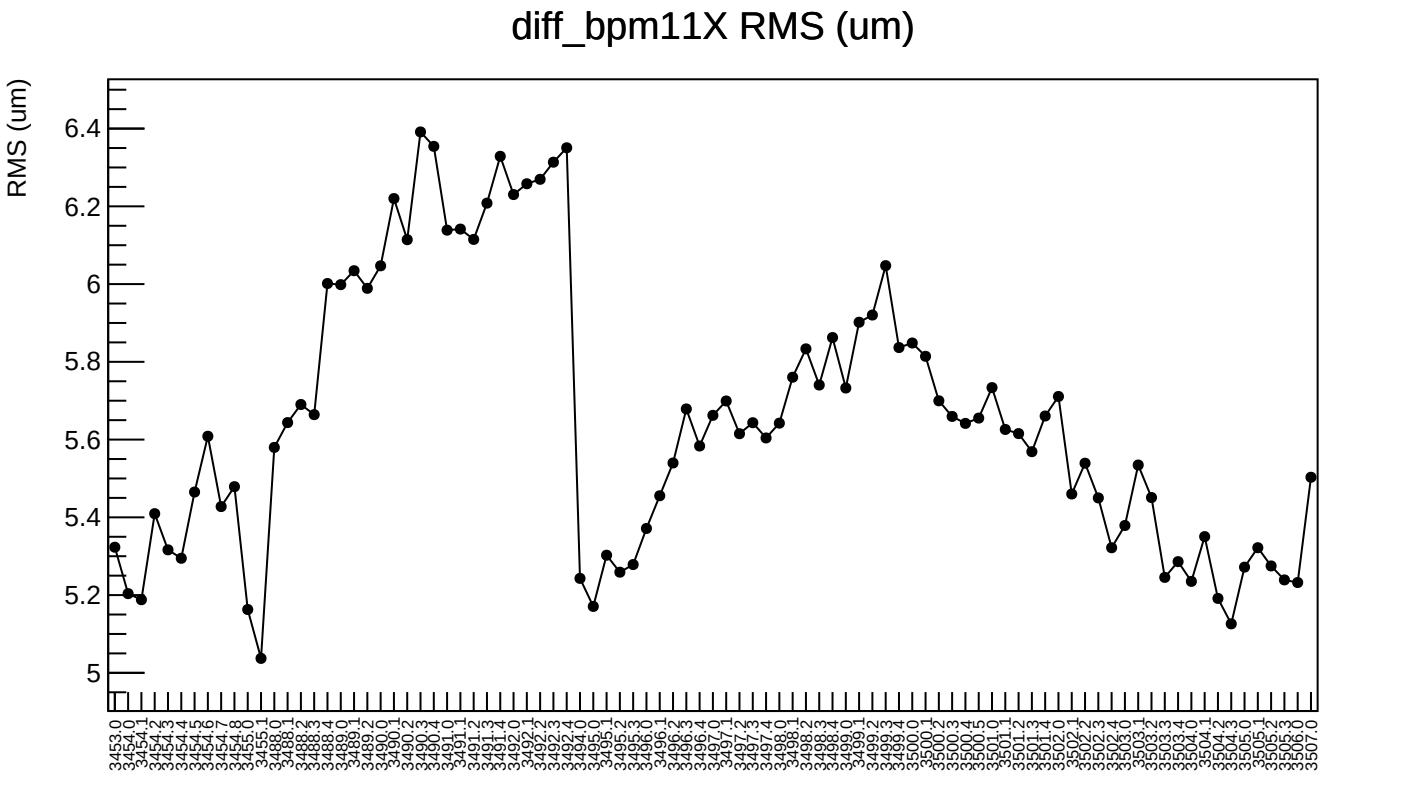

diff_bpm12Y (nm)
χ² / ndf 28.88 / 90
p0 1.313 ± 5.765

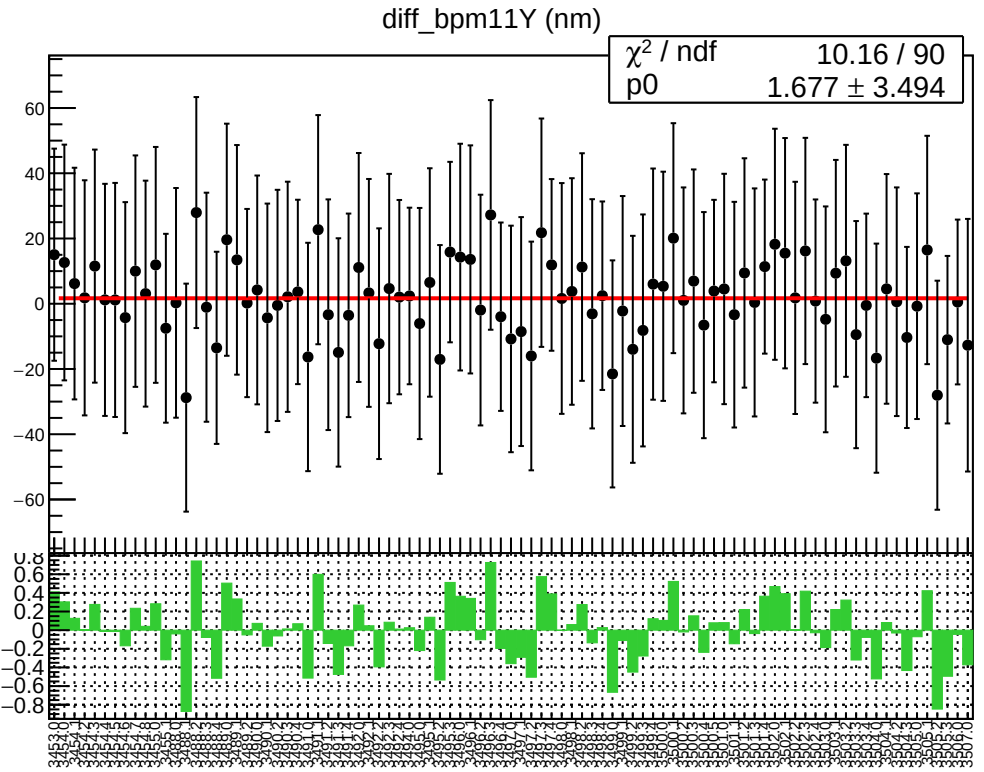

1D pull distribution
Mean −0.002376 ± 0.05905
Std Dev 0.5633 ± 0.04176
Underflow 0
Overflow 0
χ² / ndf 4.505 / 3
Constant 32.14 ± 4.03
Mean −0.0423 ± 0.0642
Sigma 0.5749 ± 0.0387

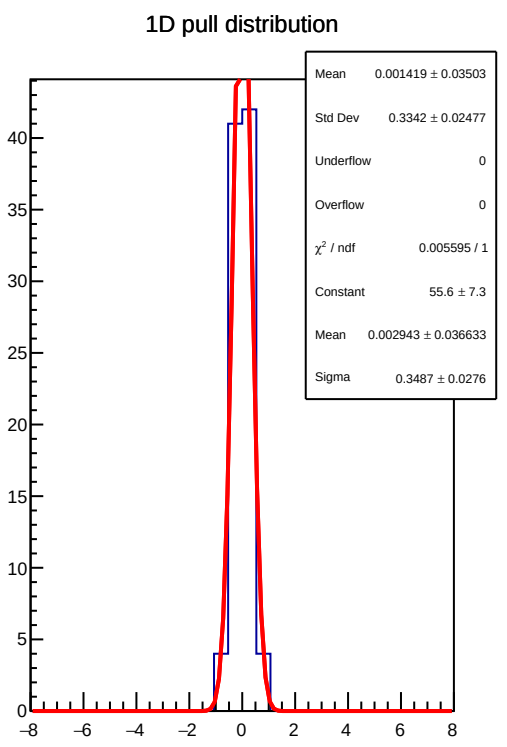

diff_bpm12Y RMS (um)
RMS (um)
3.5
3.4
3.3
3.2
3.1
3
2.9
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3506.1
3507.0

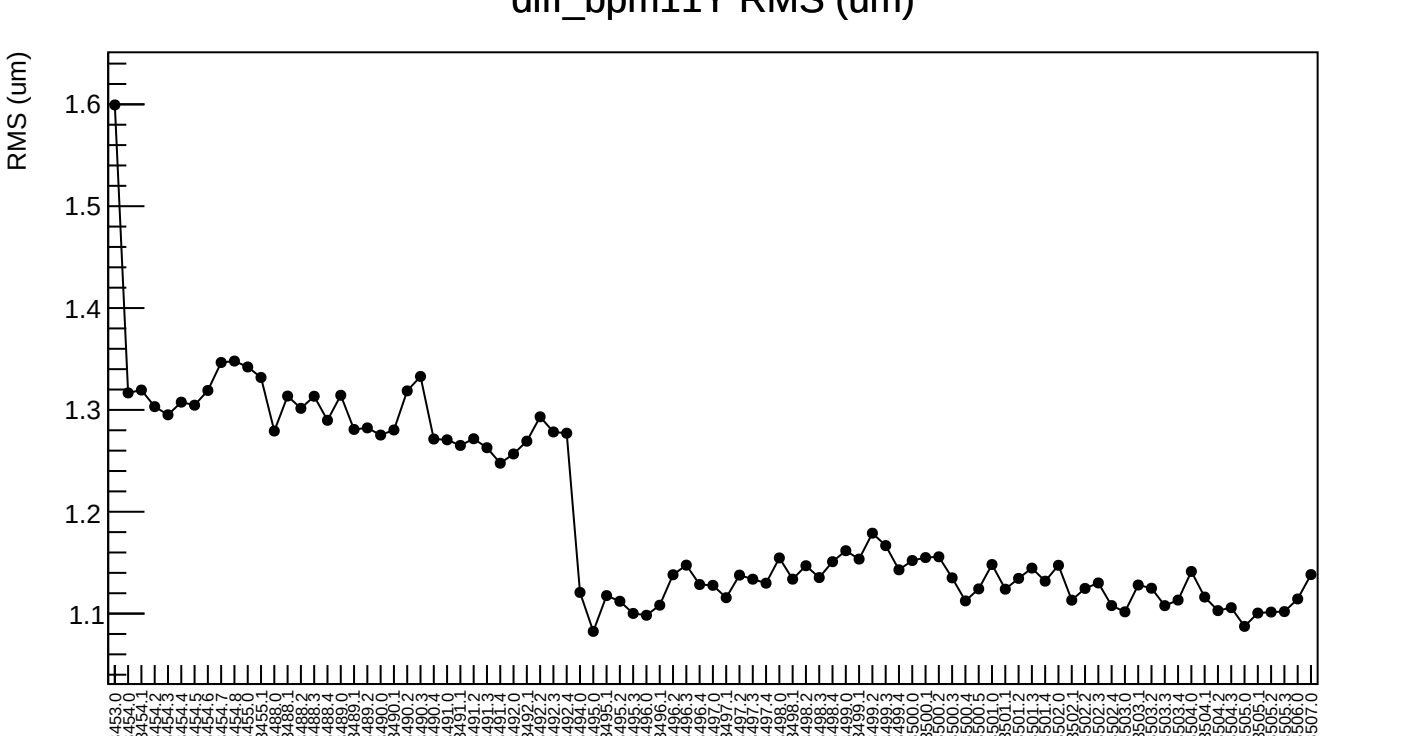

diff_bpm11X (nm)
χ² / ndf 34.54 / 90
p0 −1.748 ± 9.815

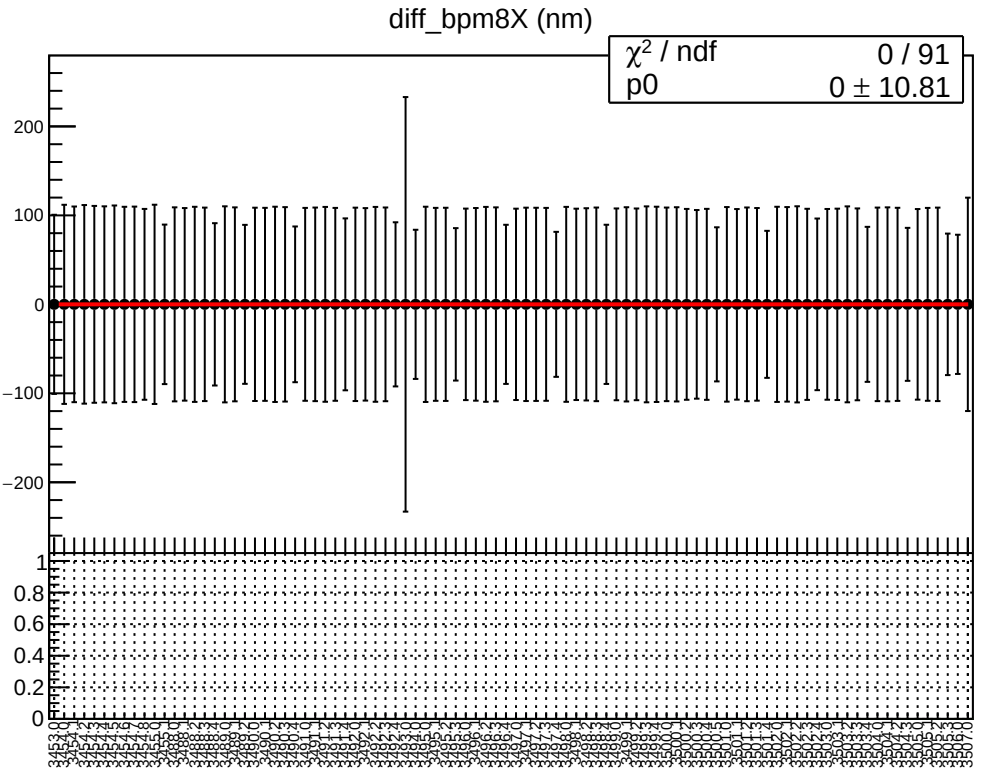

1D pull distribution
Mean 0.008037 ± 0.06458
Std Dev 0.6161 ± 0.04567
Underflow 0
Overflow 0
χ² / ndf 6.94 / 4
Constant 30.21 ± 4.03
Mean 0.05633 ± 0.06779
Sigma 0.5942 ± 0.0474

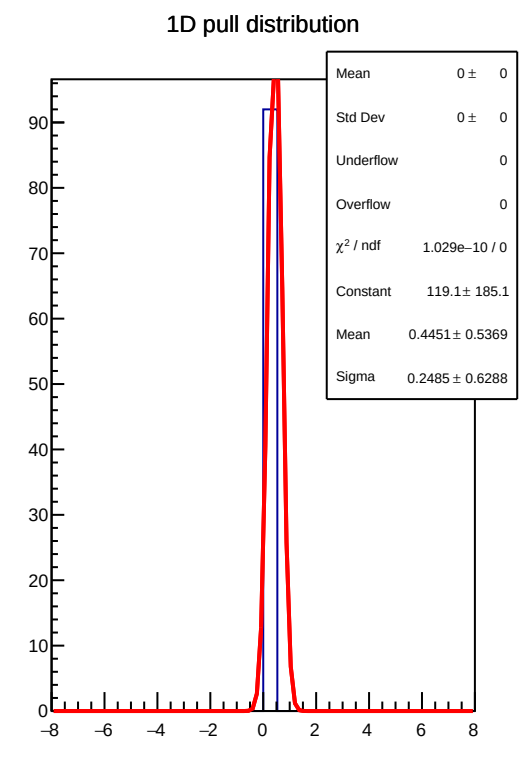

diff_bpm11X RMS (um)
RMS (um)
6.4
6.2
6
5.8
5.6
5.4
5.2
5
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

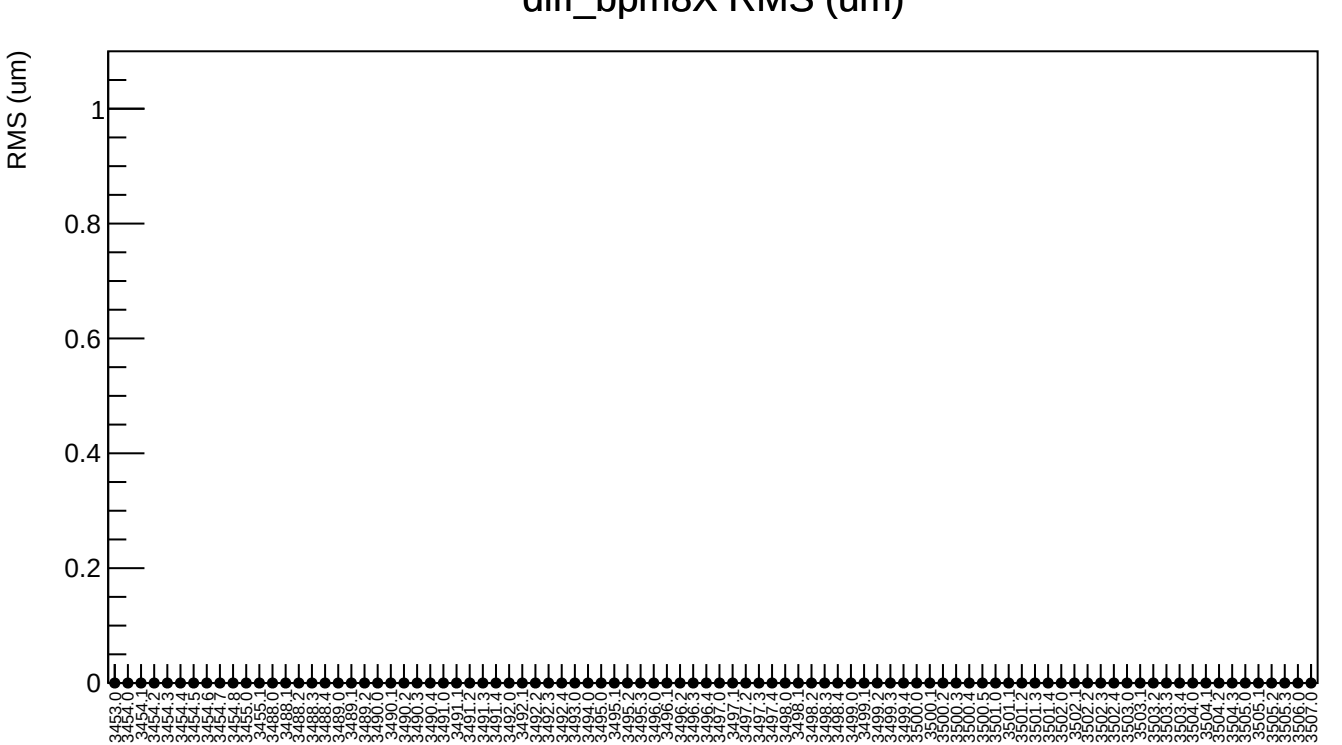

diff_bpm11Y (nm)
χ² / ndf 10.16 / 90
p0 1.677 ± 3.494

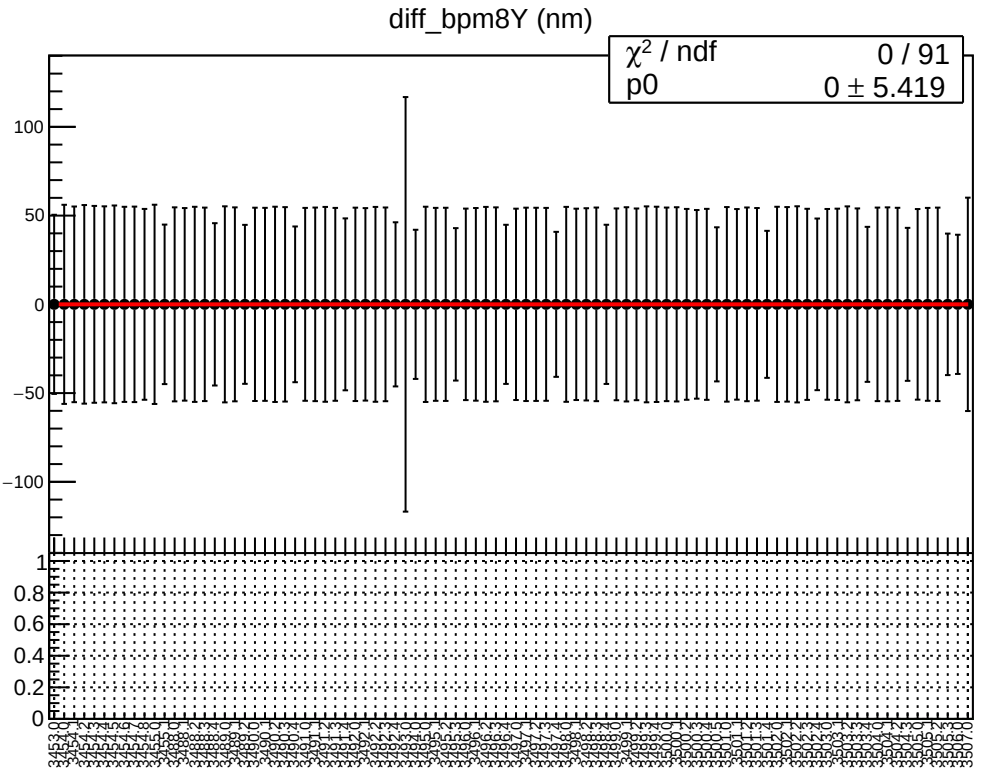

1D pull distribution
Mean 0.001419 ± 0.03503
Std Dev 0.3342 ± 0.02477
Underflow 0
Overflow 0
χ² / ndf 0.005595 / 1
Constant 55.6 ± 7.3
Mean 0.002943 ± 0.036633
Sigma 0.3487 ± 0.0276

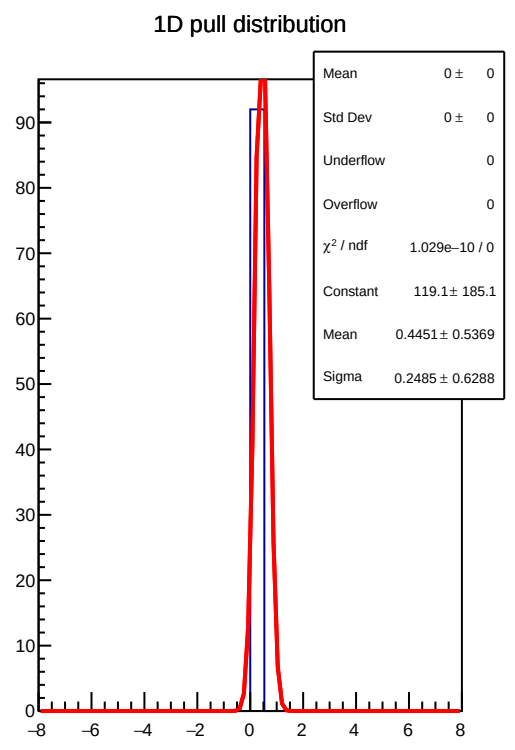

diff_bpm11Y RMS (um)
RMS (um)
1.6
1.5
1.4
1.3
1.2
1.1
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.6
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.1
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3506.1
3507.0

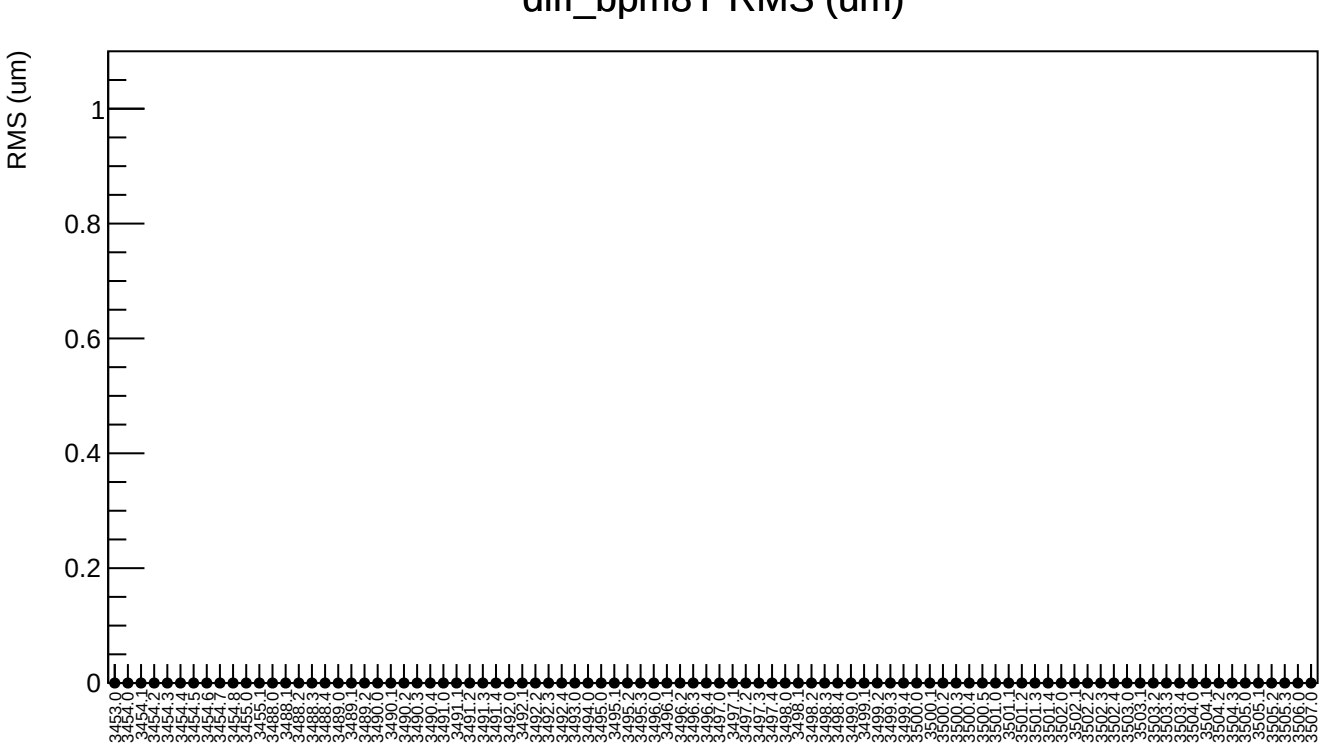

diff_bpm8X (nm)
χ² / ndf 0 / 91
p0 0 ± 10.81
200
100
0
−100
−200
1
0.8
0.6
0.4
0.2
0

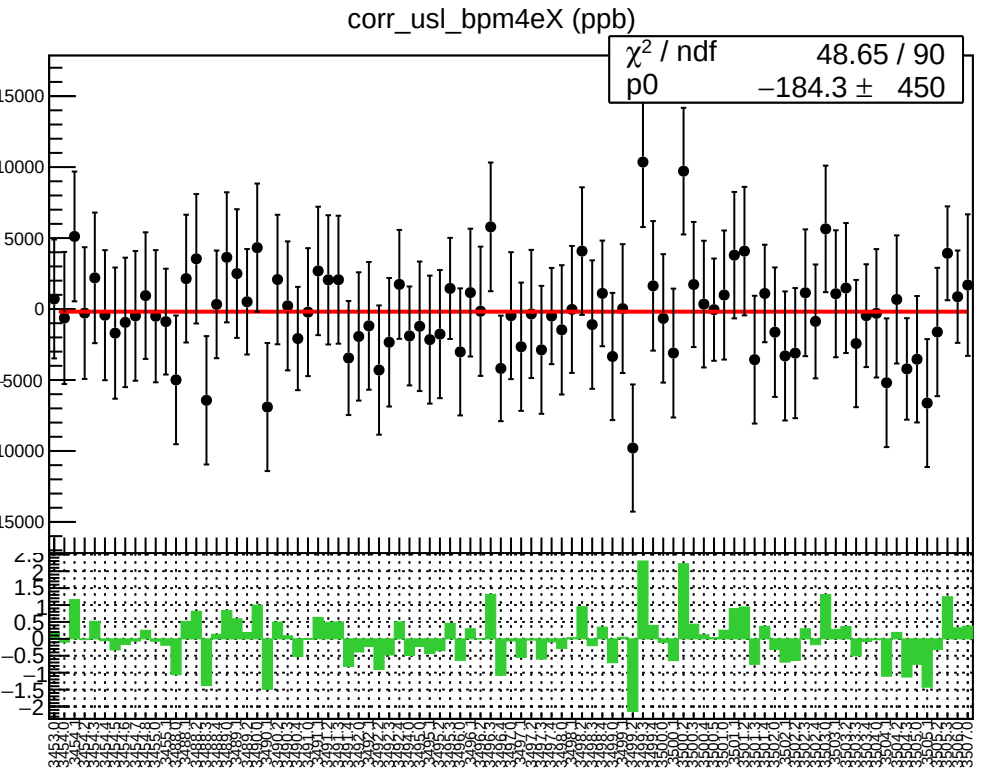

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.029e−10 / 0
Constant 119.1 ± 185.1
Mean 0.4451 ± 0.5369
Sigma 0.2485 ± 0.6288
90
80
70
60
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

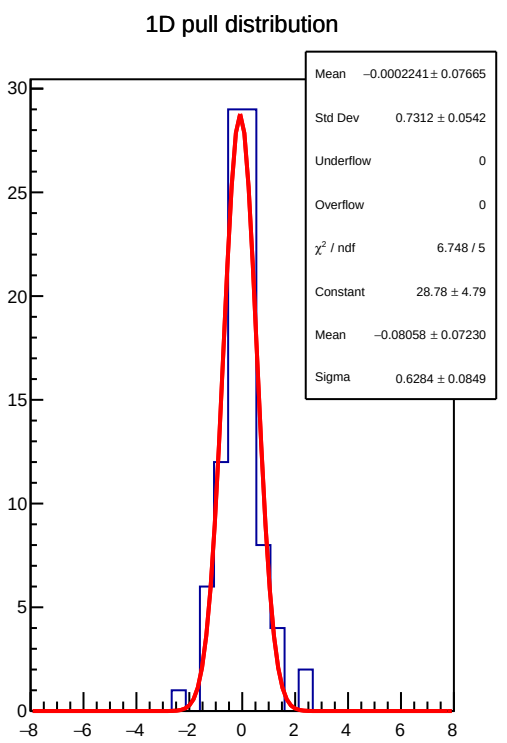

diff_bpm8X RMS (um)
RMS (um)
1
0.8
0.6
0.4
0.2
0
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3493.0
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.1
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0

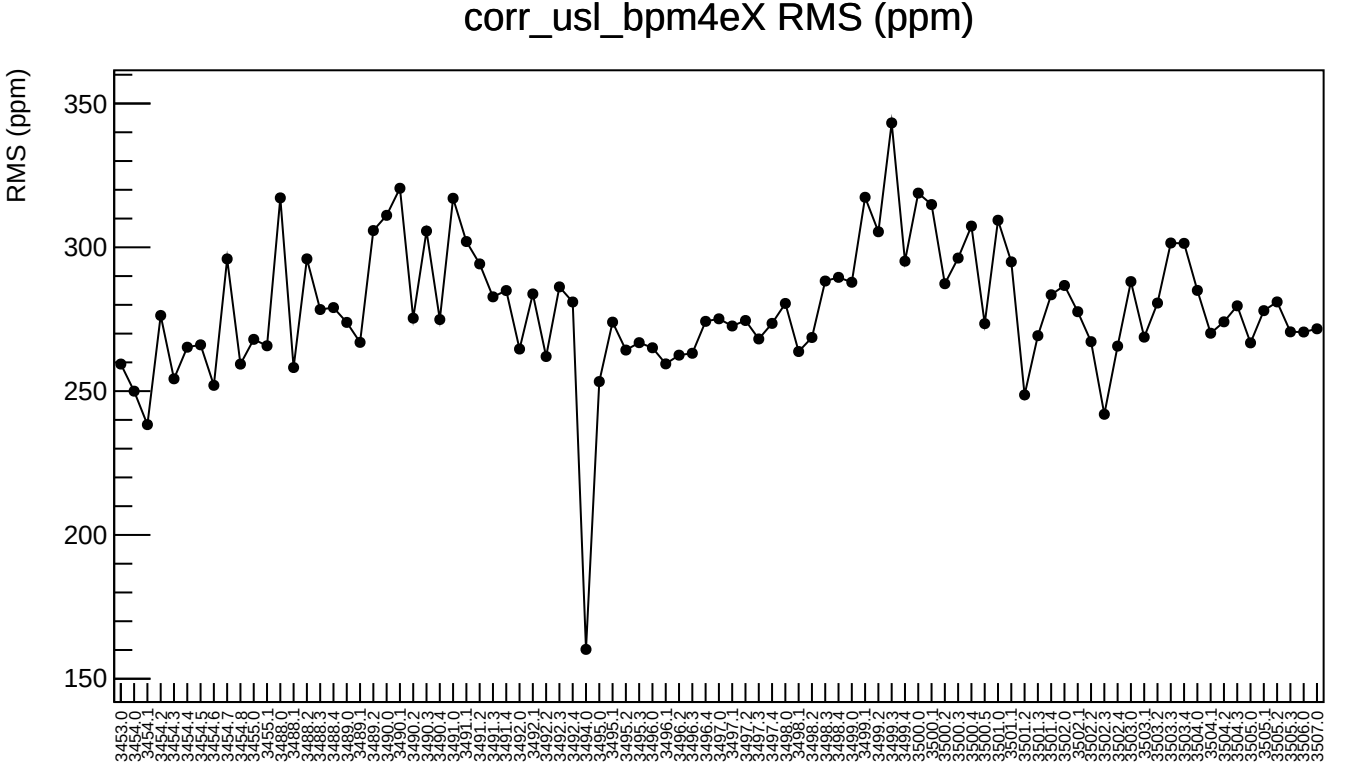

diff_bpm8Y (nm)
χ² / ndf 0 / 91
p0 0 ± 5.419
100
50
0
−50
−100
1
0.8
0.6
0.4
0.2
0

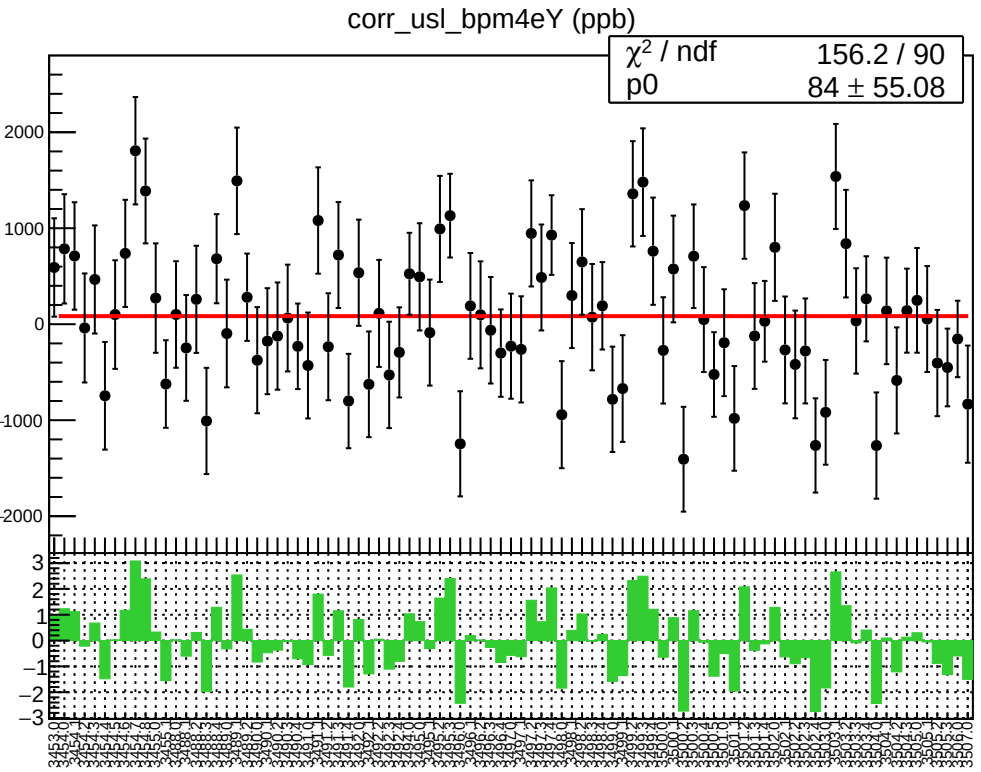

1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.029e−10 / 0
Constant 119.1 ± 185.1
Mean 0.4451 ± 0.5369
Sigma 0.2485 ± 0.6288
90
80
70
60
50
40
30
20
10
0
−8
−6
−4
−2
0
2
4
6
8

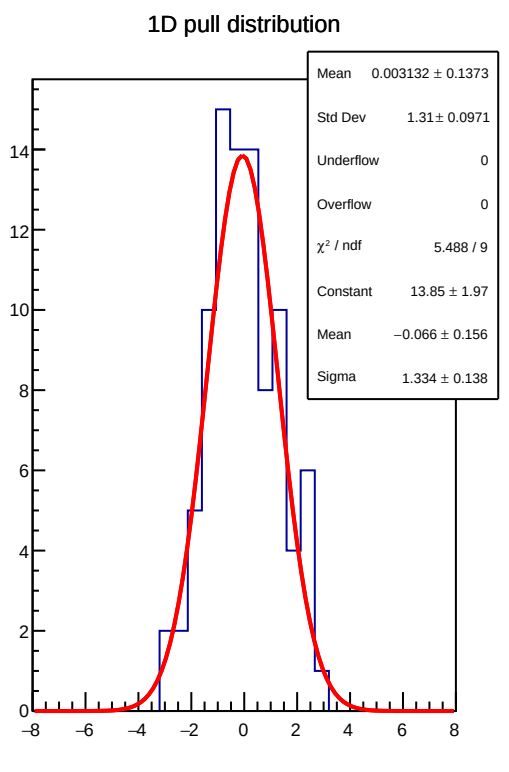

diff_bpm8Y RMS (um)
RMS (um)
1
0.8
0.6
0.4
0.2
0
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3493.0
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.1
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0

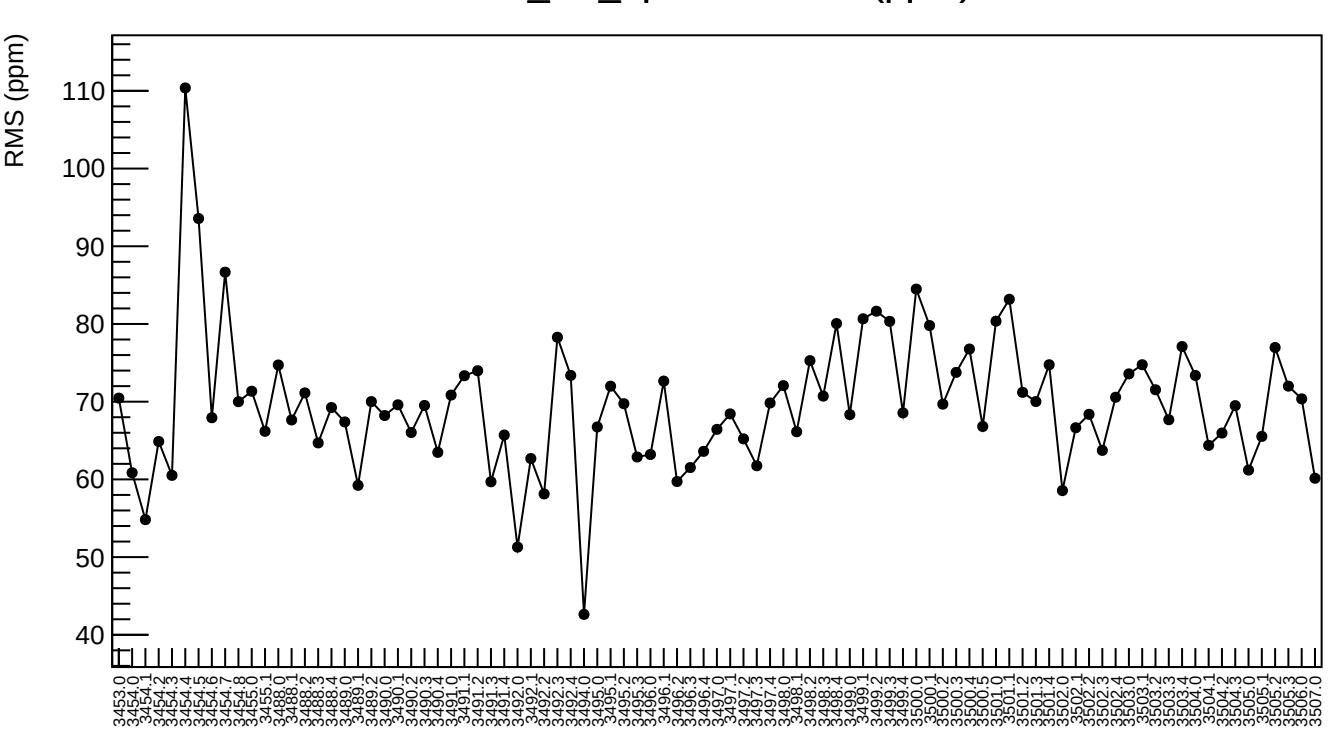

corr_usl_bpm4eX (ppb)
χ² / ndf 48.65 / 90
p0 −184.3 ± 450

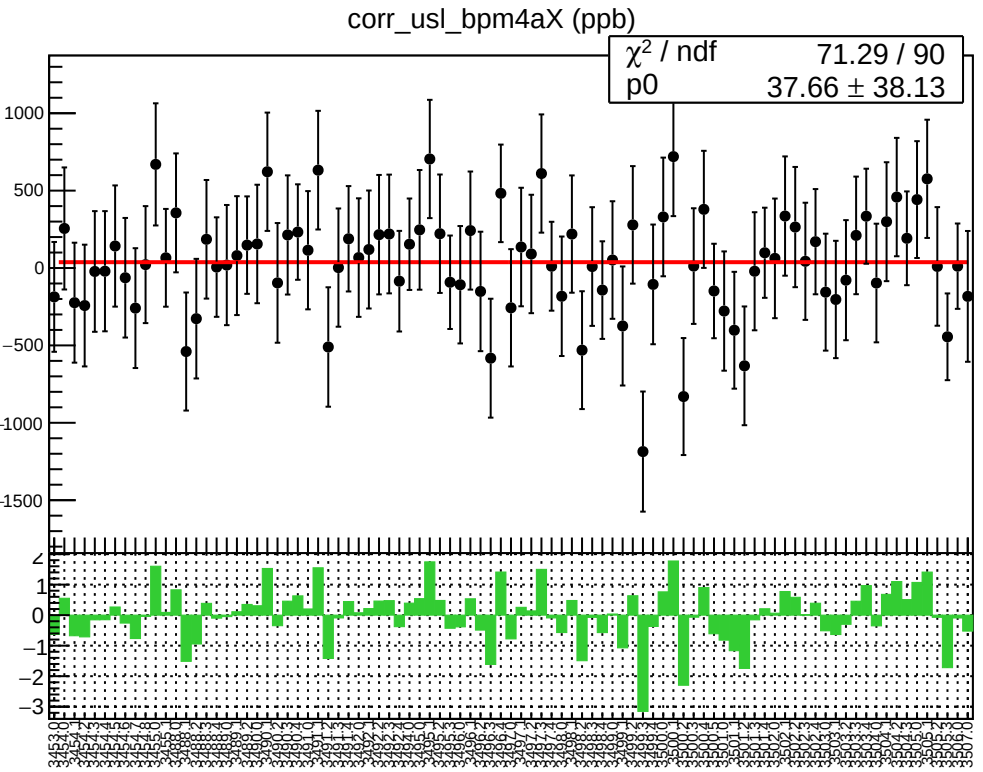

1D pull distribution
Mean −0.0002241 ± 0.07665
Std Dev 0.7312 ± 0.0542
Underflow 0
Overflow 0
χ² / ndf 6.748 / 5
Constant 28.78 ± 4.79
Mean −0.08058 ± 0.07230
Sigma 0.6284 ± 0.0849

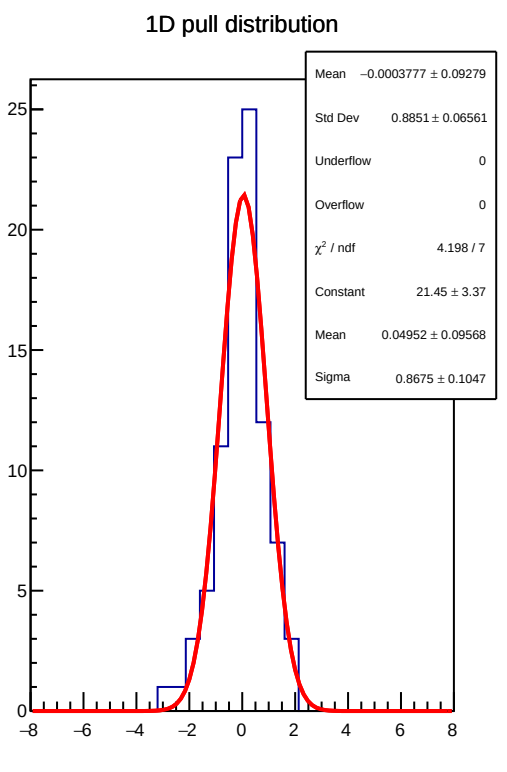

corr_usl_bpm4eX RMS (ppm)
RMS (ppm)
350
300
250
200
150
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0

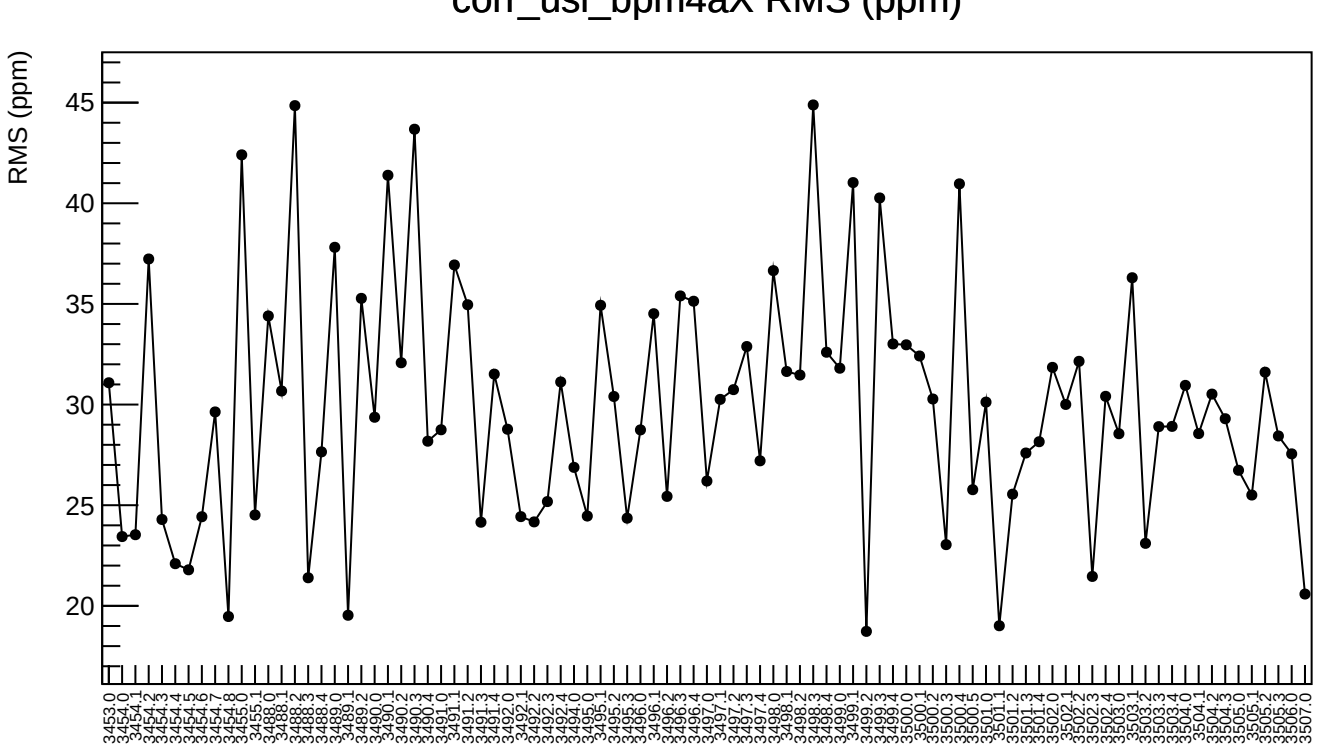

corr_usl_bpm4eY (ppb)
χ² / ndf 156.2 / 90
p0 84 ± 55.08
2000
1000
0
-1000
-2000
3
2
1
0
−1
−2
−3

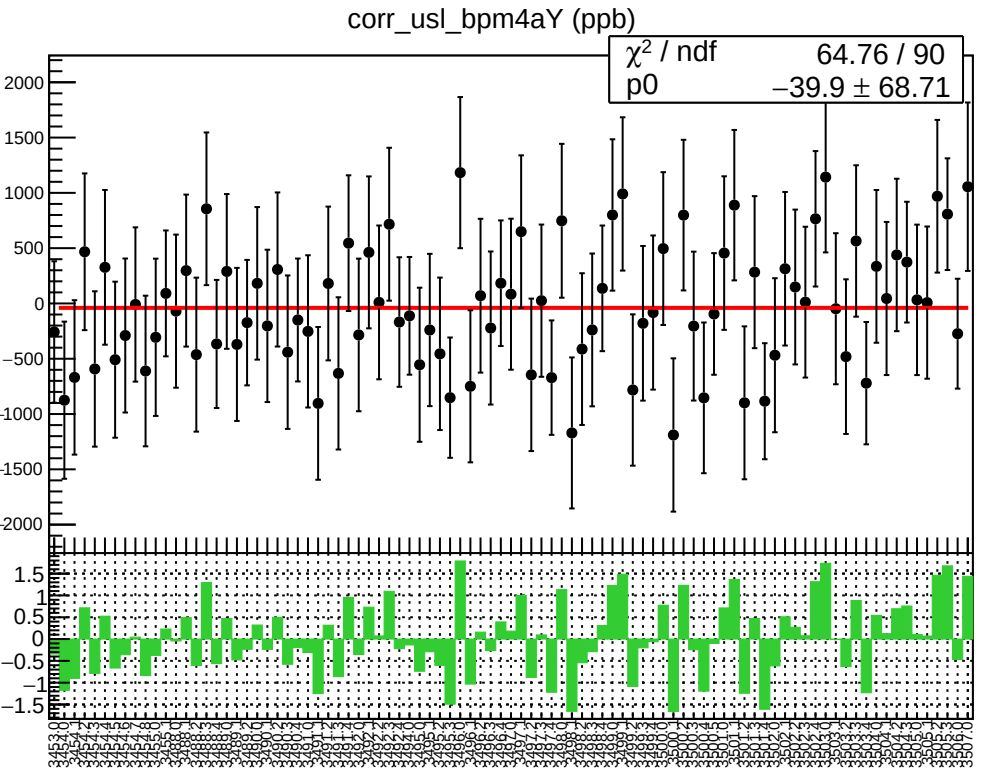

1D pull distribution
Mean 0.003132 ± 0.1373
Std Dev 1.31± 0.0971
Underflow 0
Overflow 0
χ² / ndf 5.488 / 9
Constant 13.85 ± 1.97
Mean −0.066 ± 0.156
Sigma 1.334 ± 0.138
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

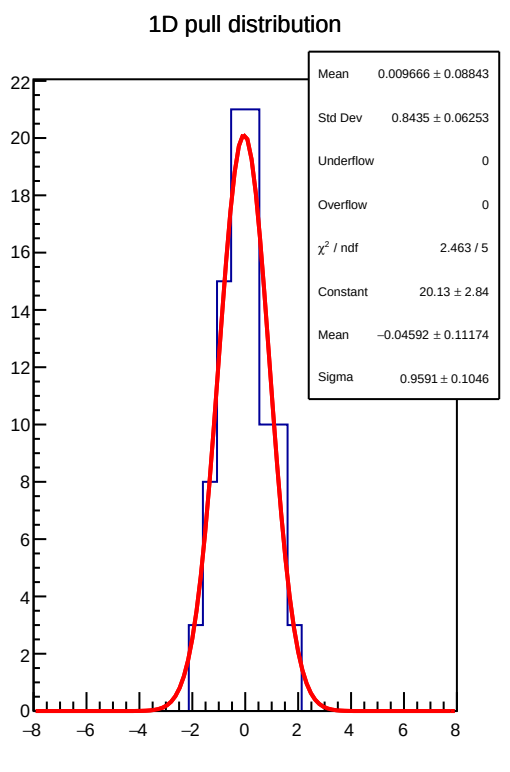

corr_usl_bpm4eY RMS (ppm)
RMS (ppm)
110
100
90
80
70
60
50
40
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0

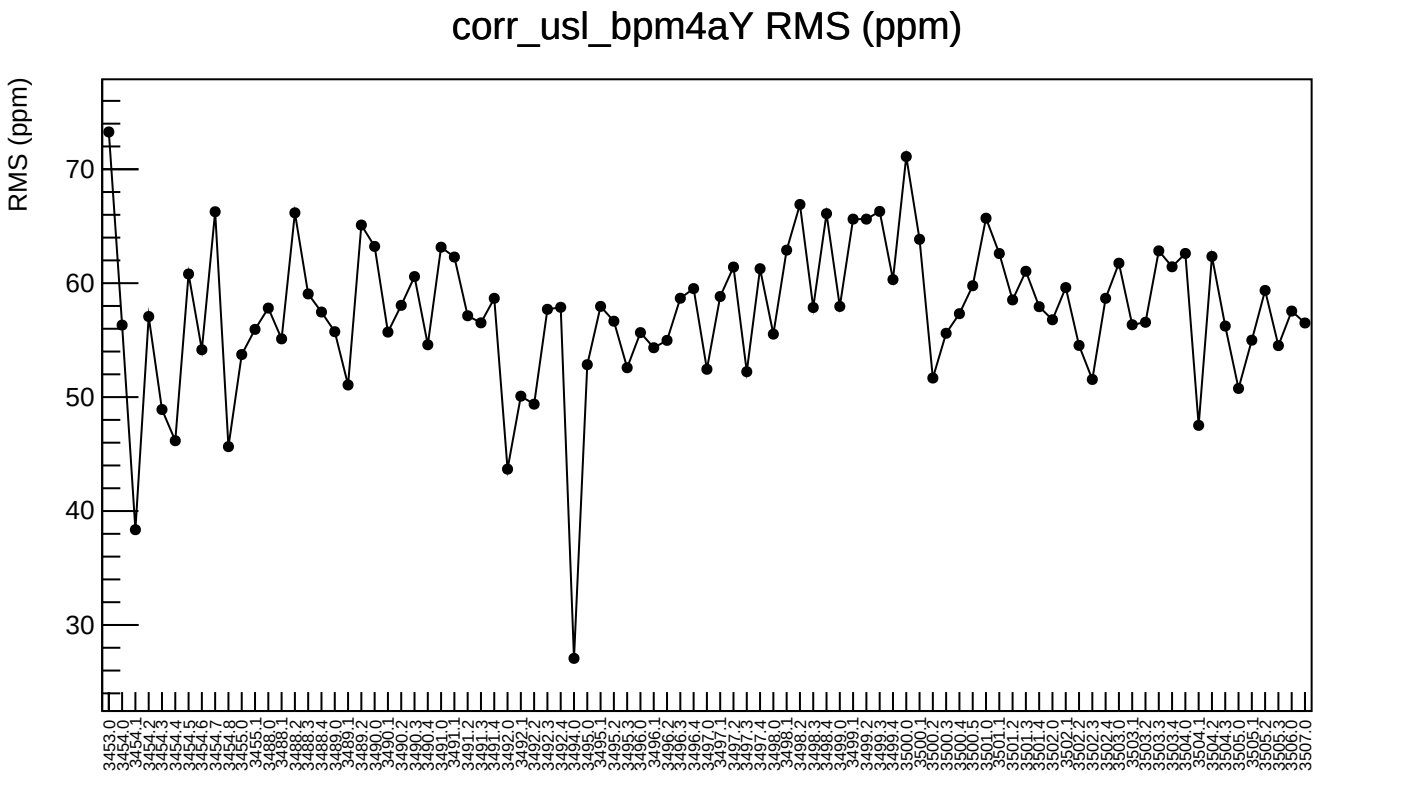

corr_usl_bpm4aX (ppb)
χ² / ndf 71.29 / 90
p0 37.66 ± 38.13
1000
500
0
−500
−1000
−1500
4
1
0
−1
−2
−3

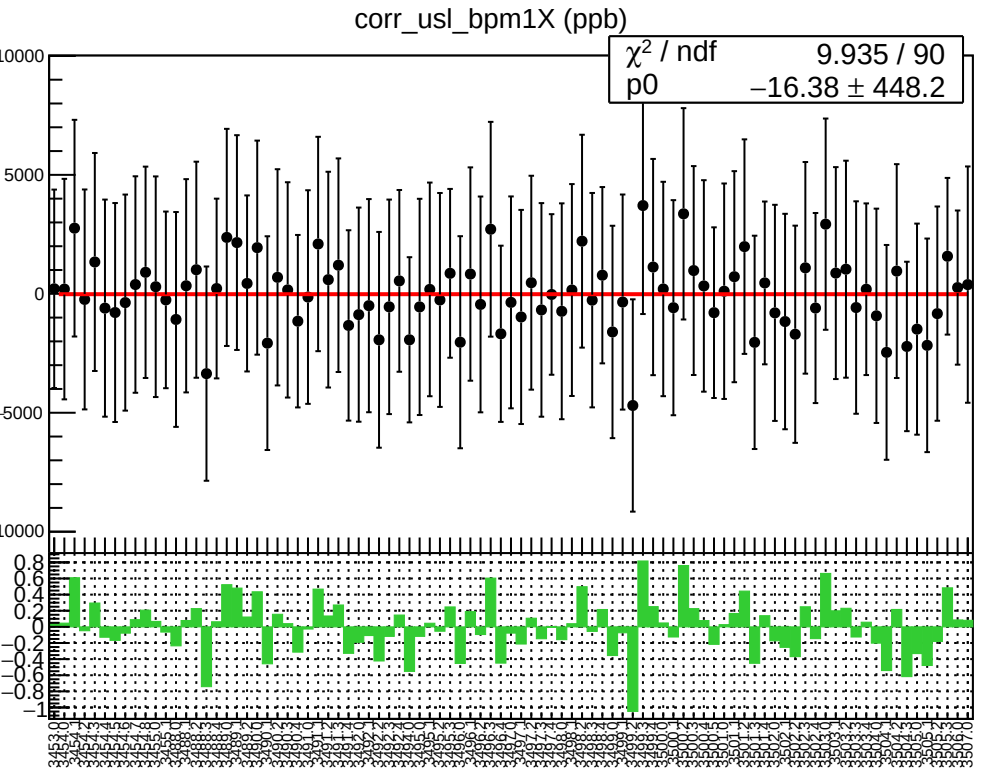

1D pull distribution
Mean −0.0003777 ± 0.09279
Std Dev 0.8851 ± 0.06561
Underflow 0
Overflow 0
χ² / ndf 4.198 / 7
Constant 21.45 ± 3.37
Mean 0.04952 ± 0.09568
Sigma 0.8675 ± 0.1047
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

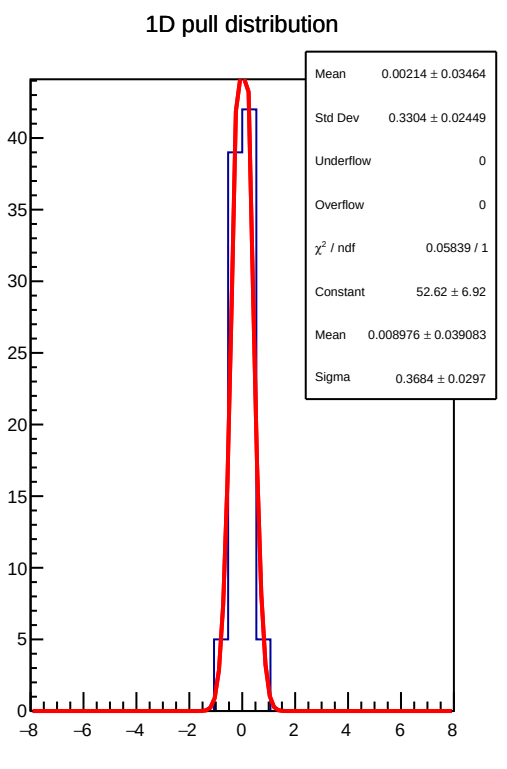

corr_usl_bpm4aX RMS (ppm)
RMS (ppm)
45
40
35
30
25
20
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3506.1
3507.0

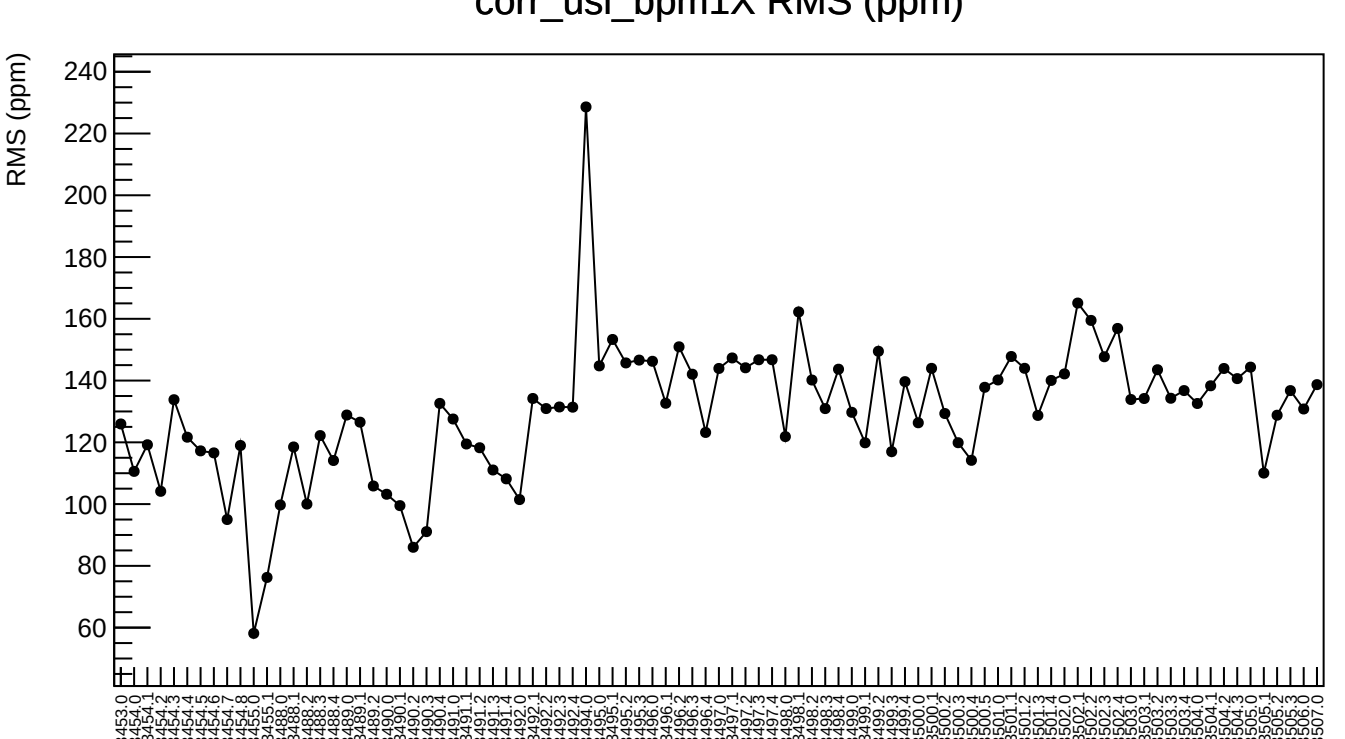

corr_usl_bpm4aY (ppb)
χ² / ndf 64.76 / 90
p0 −39.9 ± 68.71

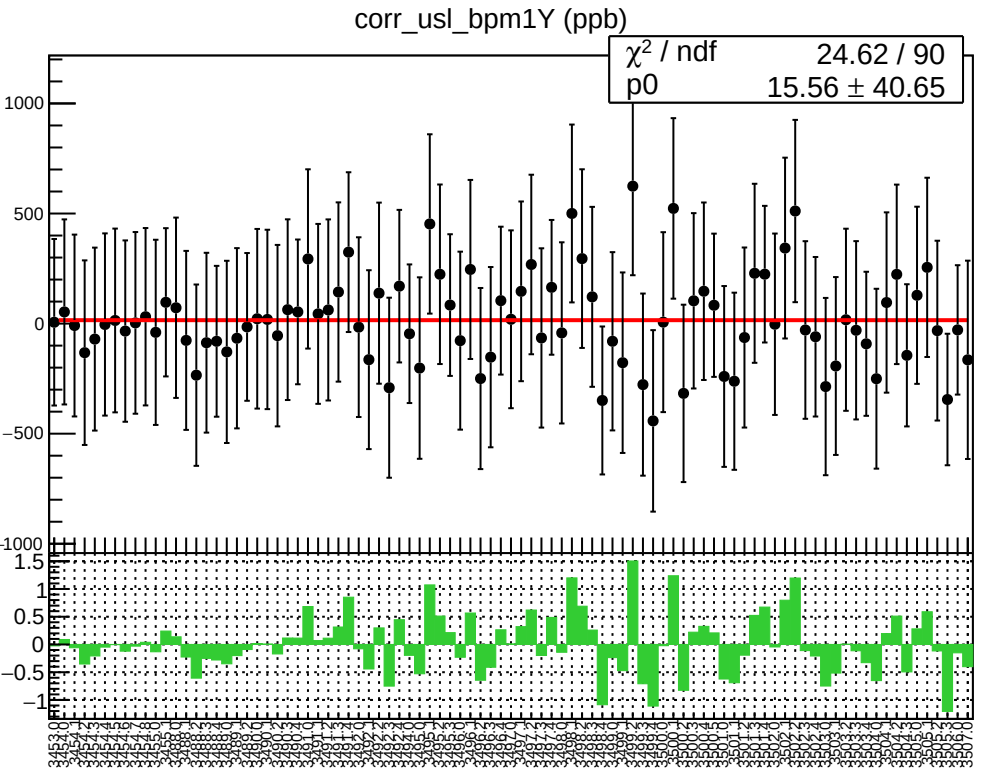

1D pull distribution
Mean 0.009666 ± 0.08843
Std Dev 0.8435 ± 0.06253
Underflow 0
Overflow 0
χ² / ndf 2.463 / 5
Constant 20.13 ± 2.84
Mean −0.04592 ± 0.11174
Sigma 0.9591 ± 0.1046

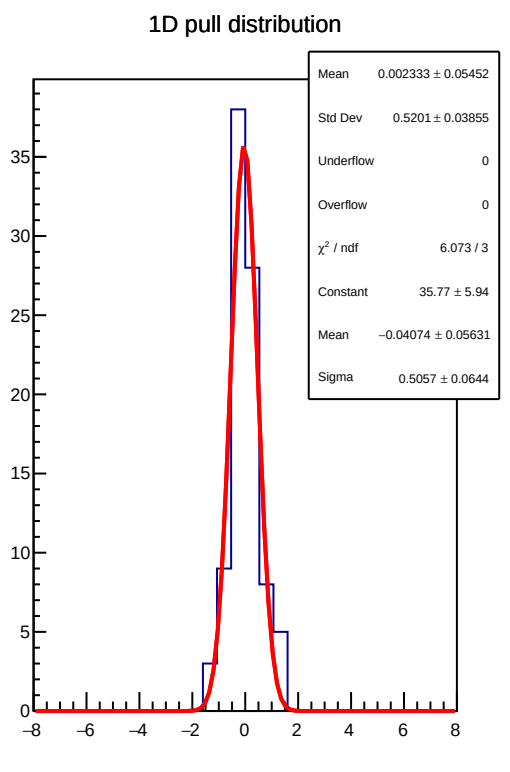

corr_usl_bpm4aY RMS (ppm)
RMS (ppm)
70
60
50
40
30
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

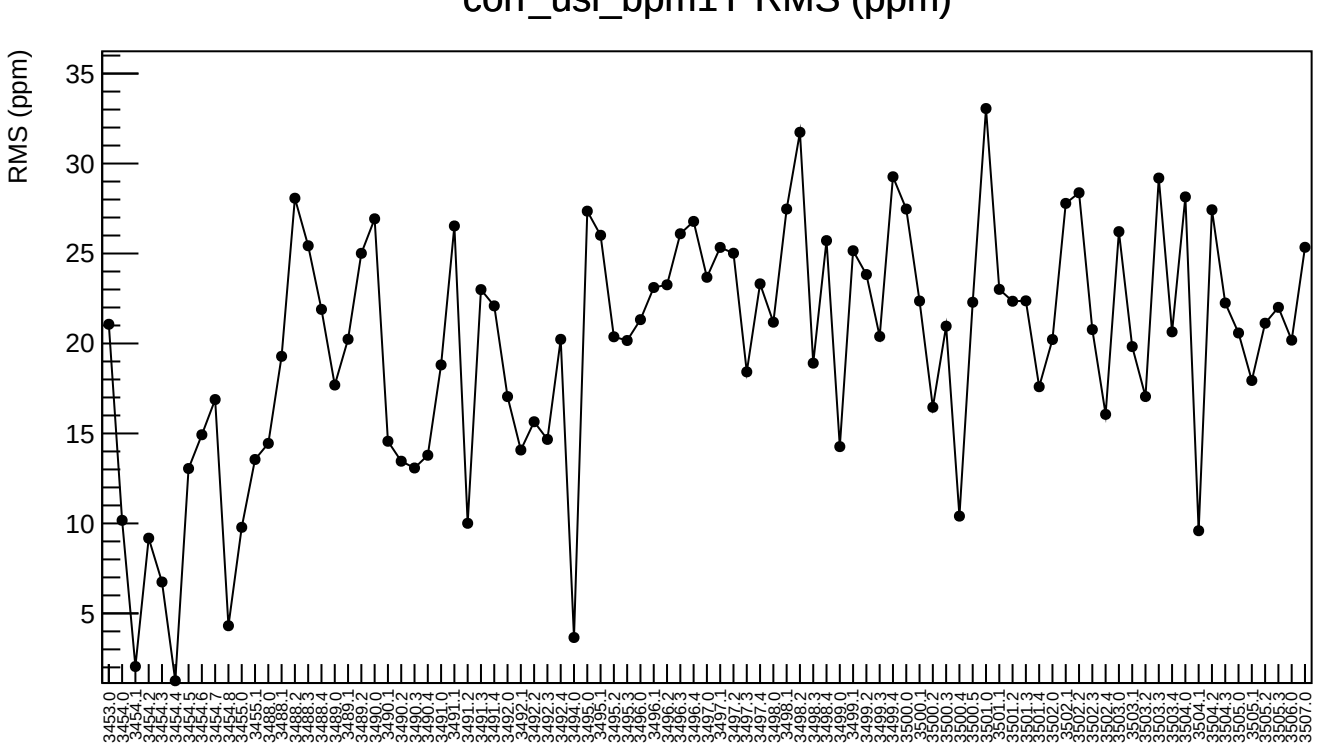

corr_usl_bpm1X (ppb)
χ² / ndf 9.935 / 90
p0 −16.38 ± 448.2
10000
5000
0
−5000
−10000
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
−1

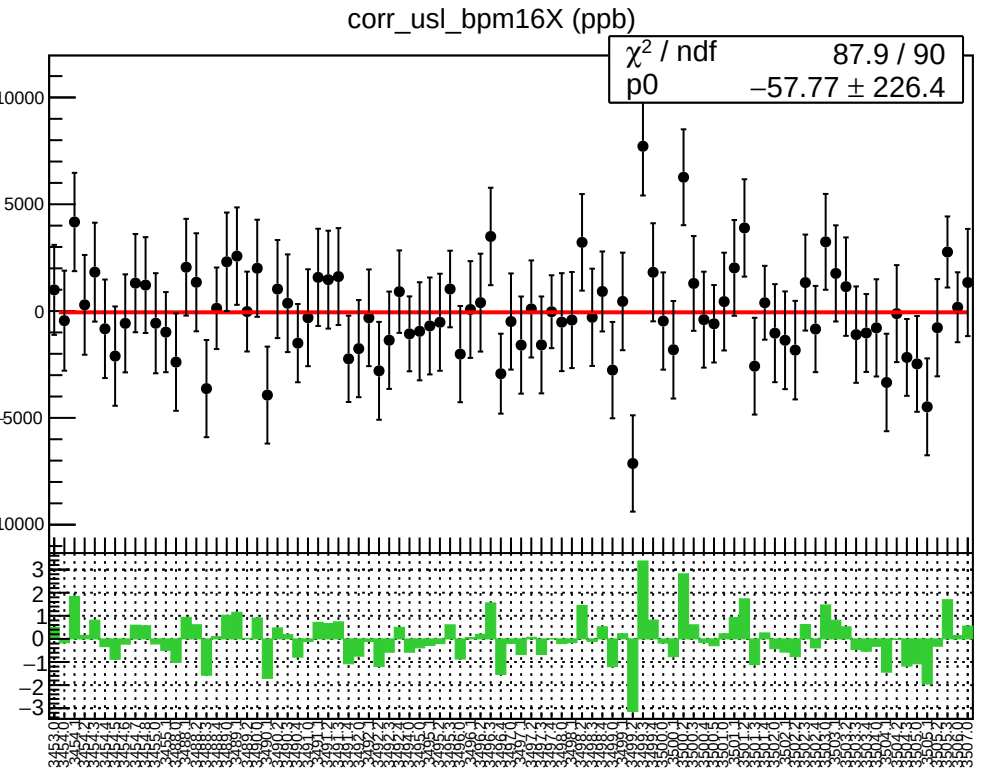

1D pull distribution
Mean 0.00214 ± 0.03464
Std Dev 0.3304 ± 0.02449
Underflow 0
Overflow 0
χ² / ndf 0.05839 / 1
Constant 52.62 ± 6.92
Mean 0.008976 ± 0.039083
Sigma 0.3684 ± 0.0297
40
35
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

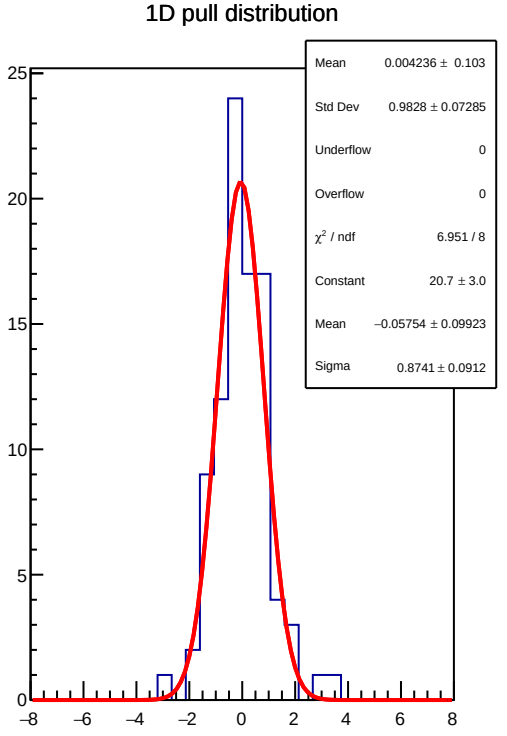

corr_usl_bpm1X RMS (ppm)
RMS (ppm)
240
220
200
180
160
140
120
100
80
60
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

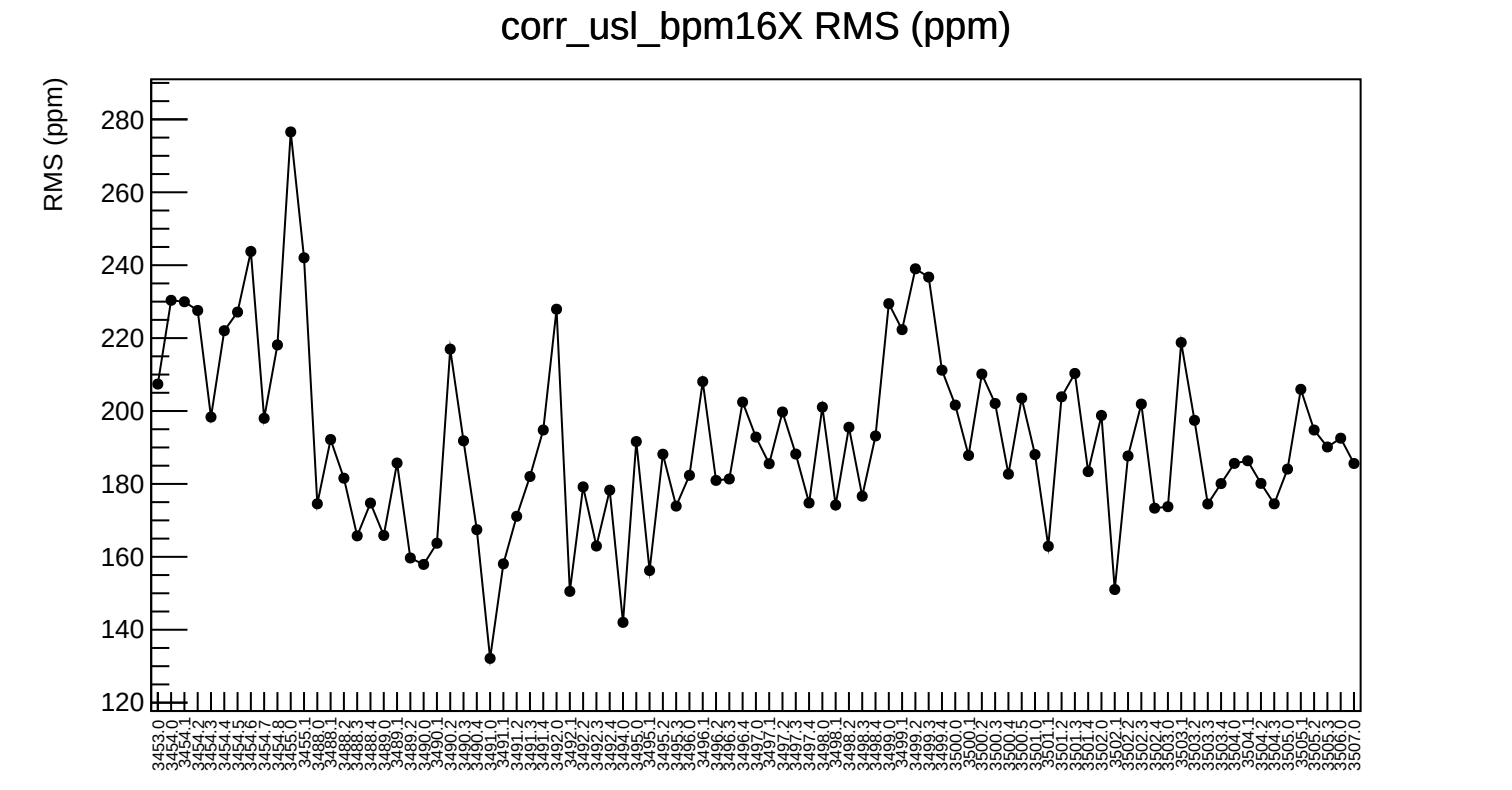

corr_usl_bpm1Y (ppb)
χ² / ndf 24.62 / 90
p0 15.56 ± 40.65
1000
500
0
−500
−1000
1.5
1
0.5
0
−0.5
−1

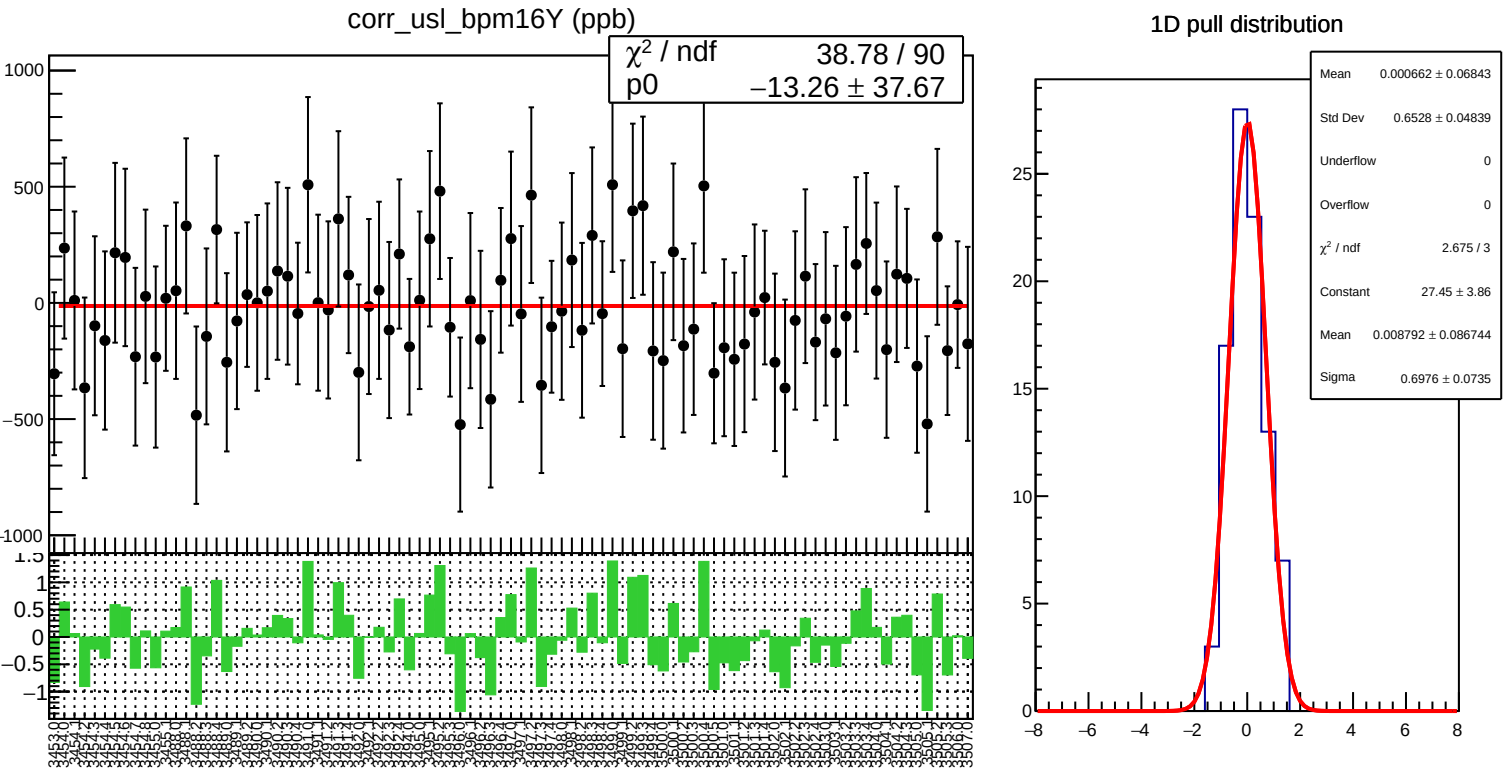

1D pull distribution
Mean 0.002333 ± 0.05452
Std Dev 0.5201 ± 0.03855
Underflow 0
Overflow 0
χ² / ndf 6.073 / 3
Constant 35.77 ± 5.94
Mean −0.04074 ± 0.05631
Sigma 0.5057 ± 0.0644
35
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

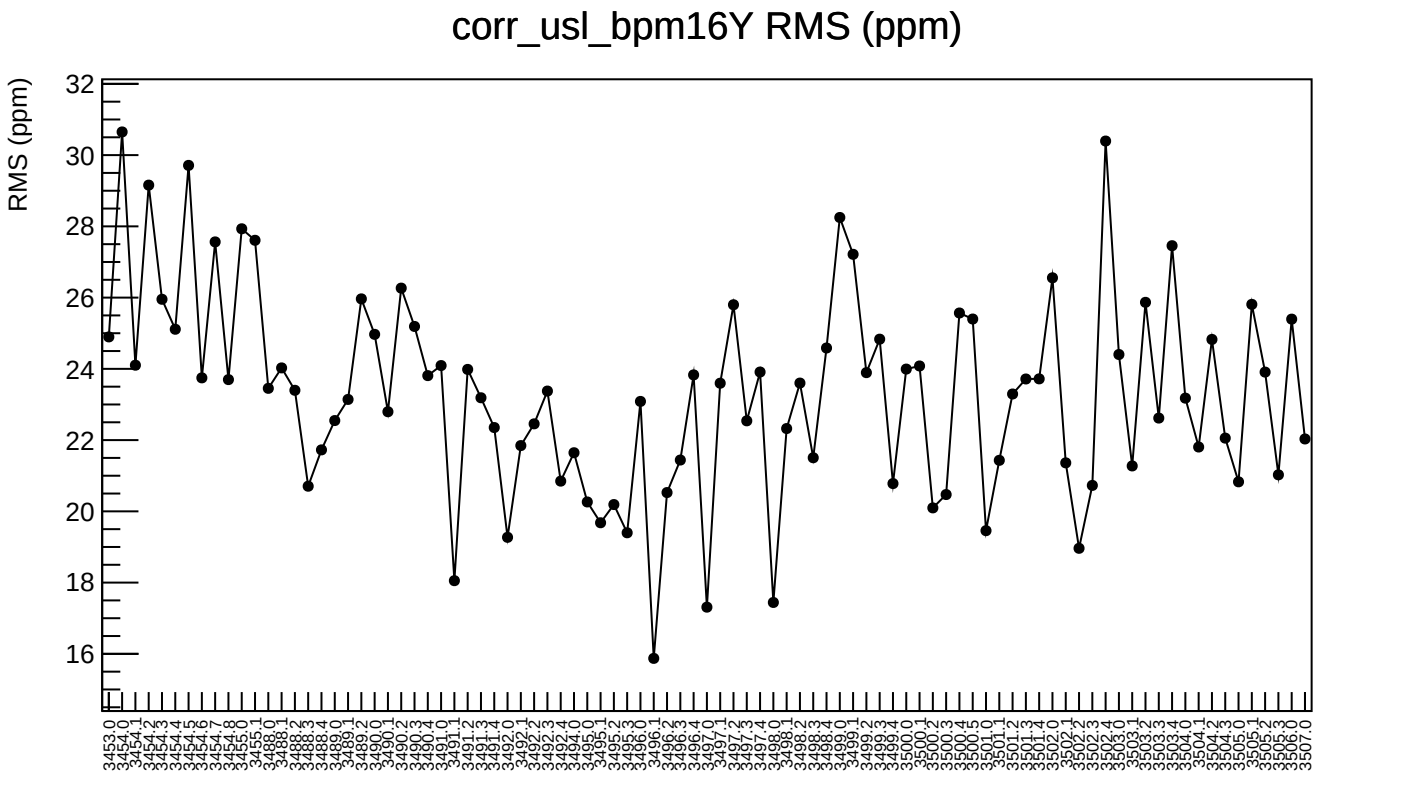

corr_usl_bpm1Y RMS (ppm)
RMS (ppm)
35
30
25
20
15
10
5
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3506.0
3506.3
3507.0

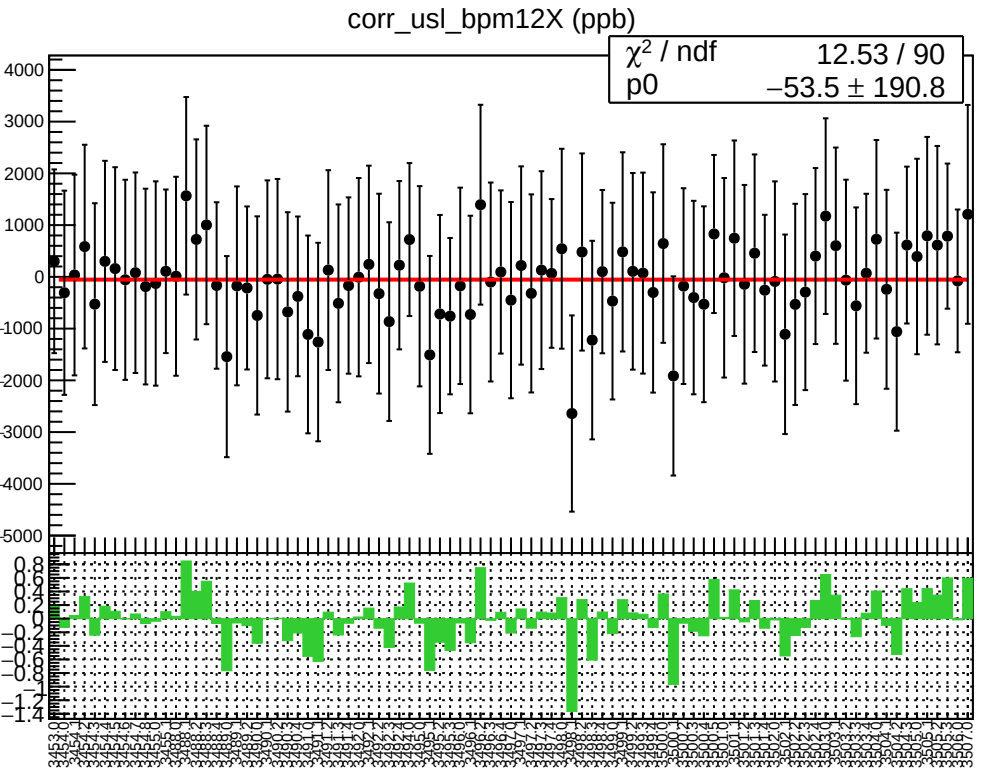

corr_usl_bpm16X (ppb)
χ² / ndf 87.9 / 90
p0 −57.77 ± 226.4
10000
5000
0
−5000
−10000
3
2
1
0
−1
−2
−3

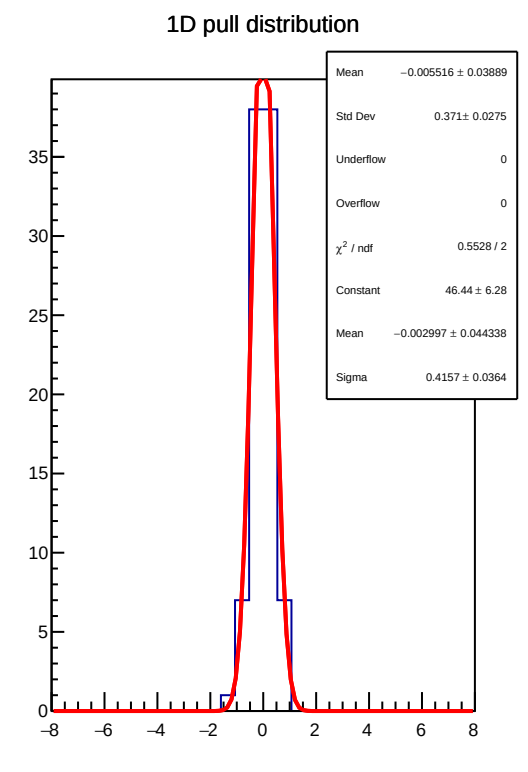

1D pull distribution
Mean 0.004236 ± 0.103
Std Dev 0.9828 ± 0.07285
Underflow 0
Overflow 0
χ² / ndf 6.951 / 8
Constant 20.7 ± 3.0
Mean −0.05754 ± 0.09923
Sigma 0.8741 ± 0.0912
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

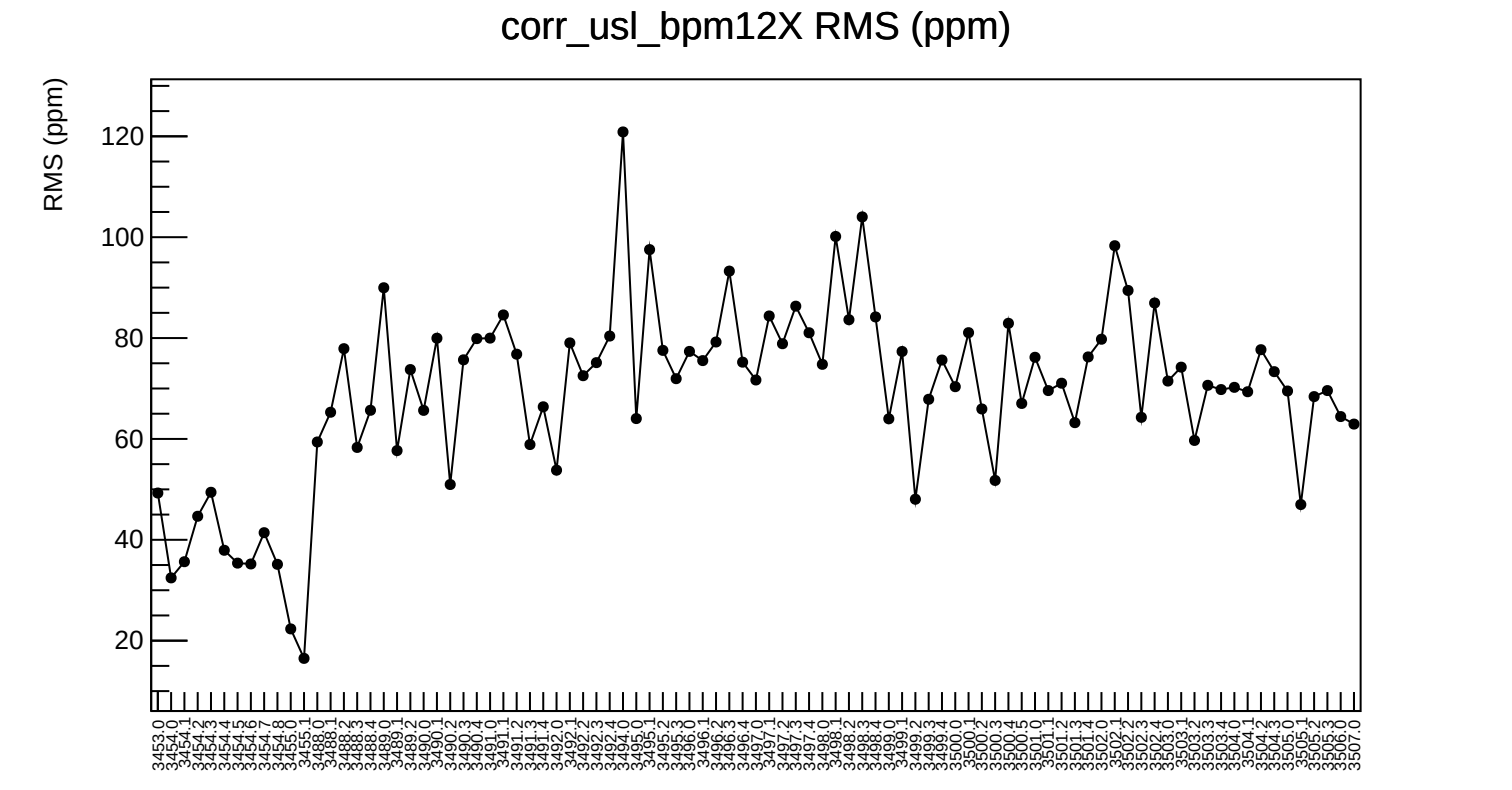

corr_usl_bpm16X RMS (ppm)
RMS (ppm)
280
260
240
220
200
180
160
140
120
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

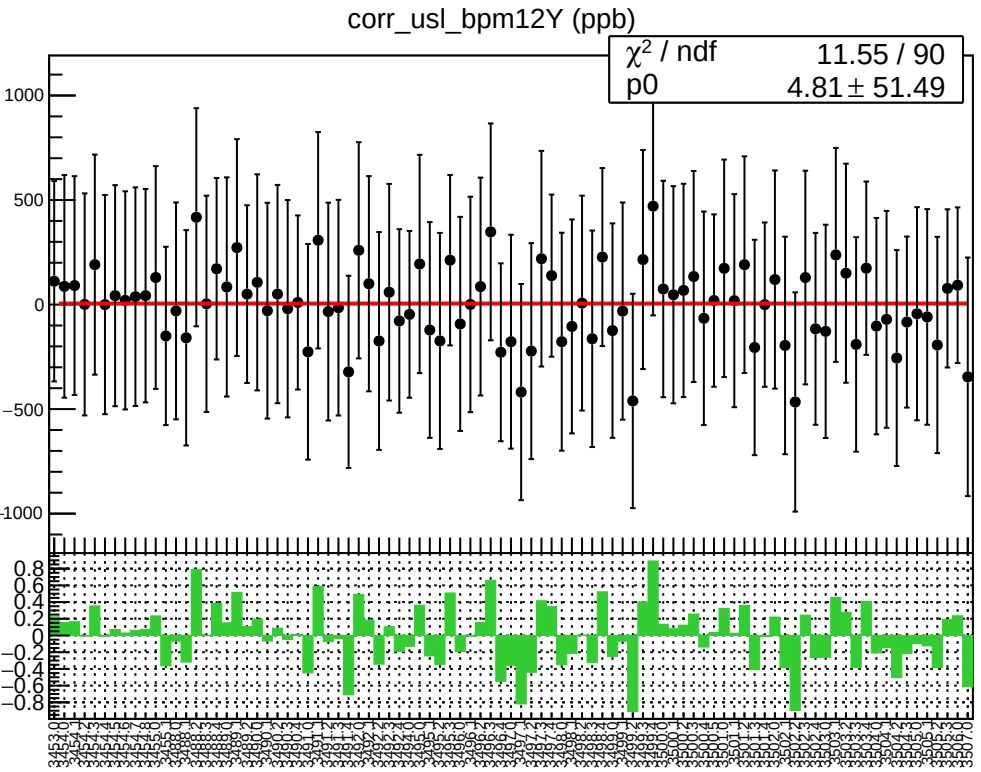

corr_usl_bpm16Y (ppb)
χ² / ndf 38.78 / 90
p0 −13.26 ± 37.67
1000
500
0
−500
−1000
1.5
1
0.5
0
−0.5
−1
1D pull distribution
Mean 0.000662 ± 0.06843
Std Dev 0.6528 ± 0.04839
Underflow 0
Overflow 0
χ² / ndf 2.675 / 3
Constant 27.45 ± 3.86
Mean 0.008792 ± 0.086744
Sigma 0.6976 ± 0.0735
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

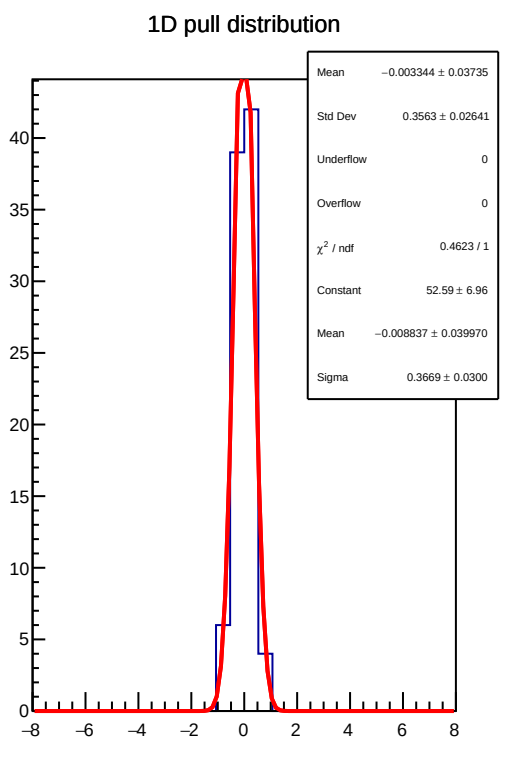

corr_usl_bpm16Y RMS (ppm)
RMS (ppm)
32
30
28
26
24
22
20
18
16
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3506.0
3506.3
3507.0

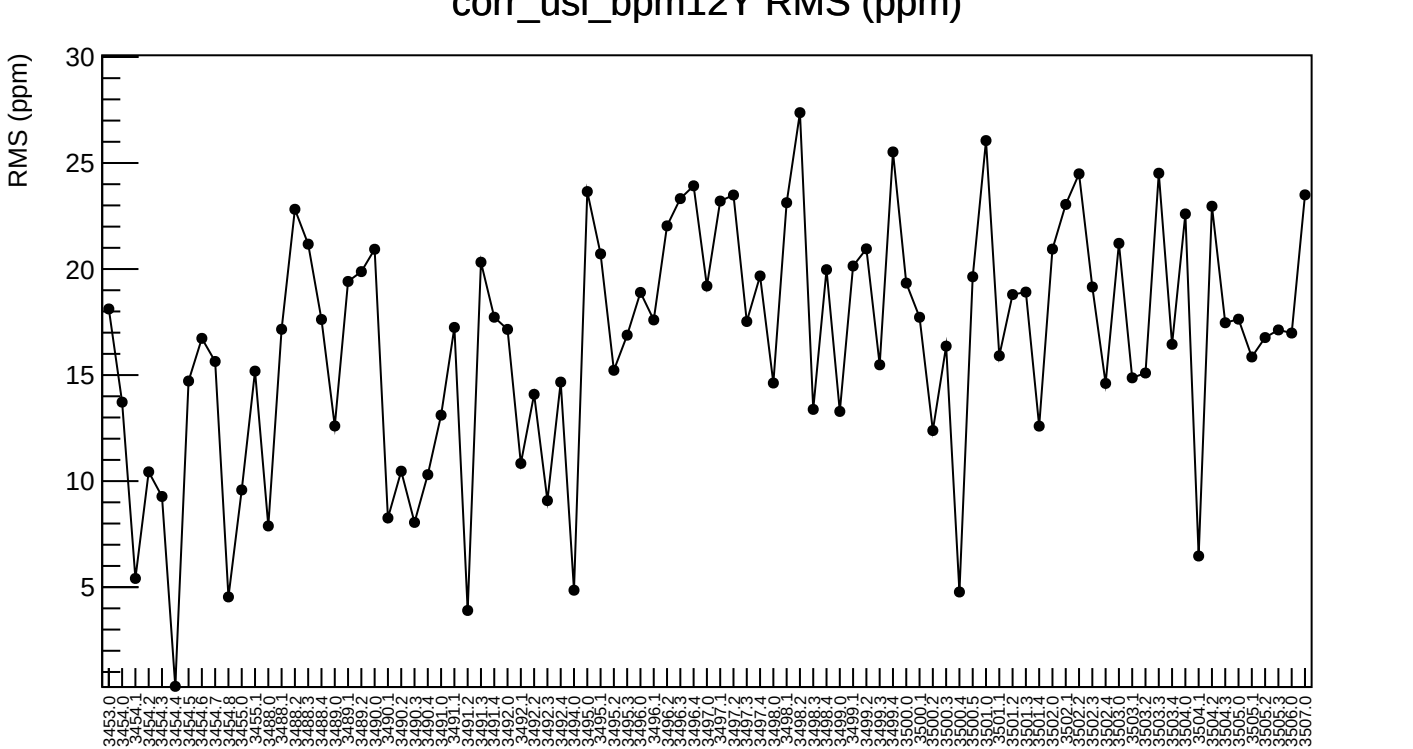

corr_usl_bpm12X (ppb)
χ² / ndf 12.53 / 90
p0 −53.5 ± 190.8

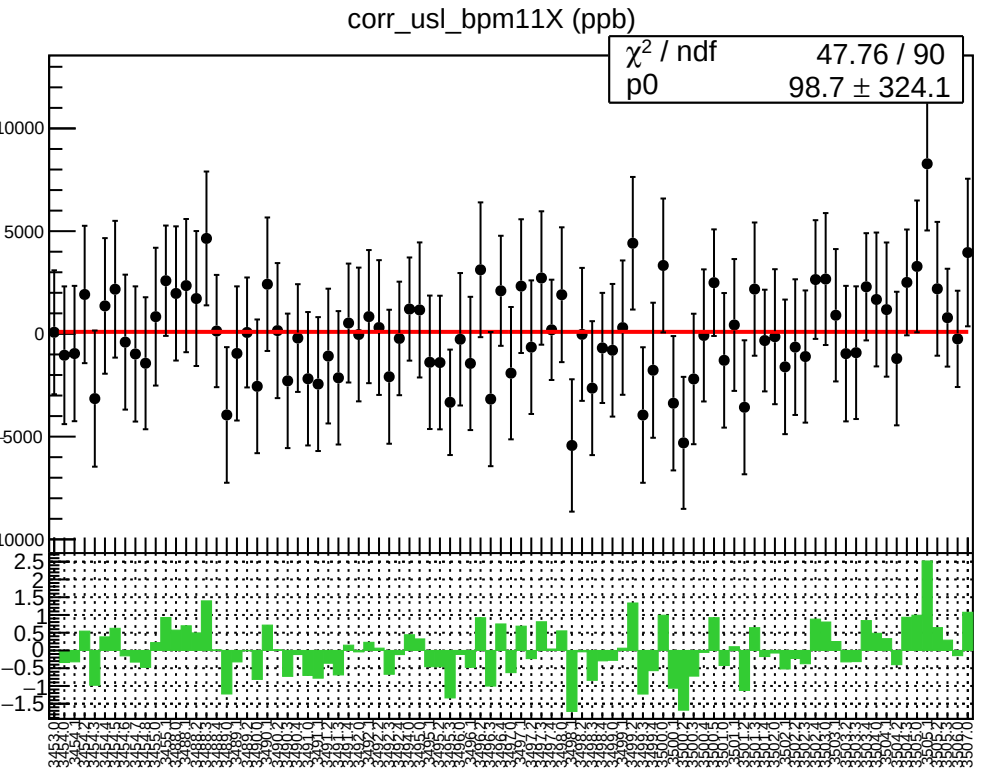

1D pull distribution
Mean −0.005516 ± 0.03889
Std Dev 0.371± 0.0275
Underflow 0
Overflow 0
χ² / ndf 0.5528 / 2
Constant 46.44 ± 6.28
Mean −0.002997 ± 0.044338
Sigma 0.4157 ± 0.0364

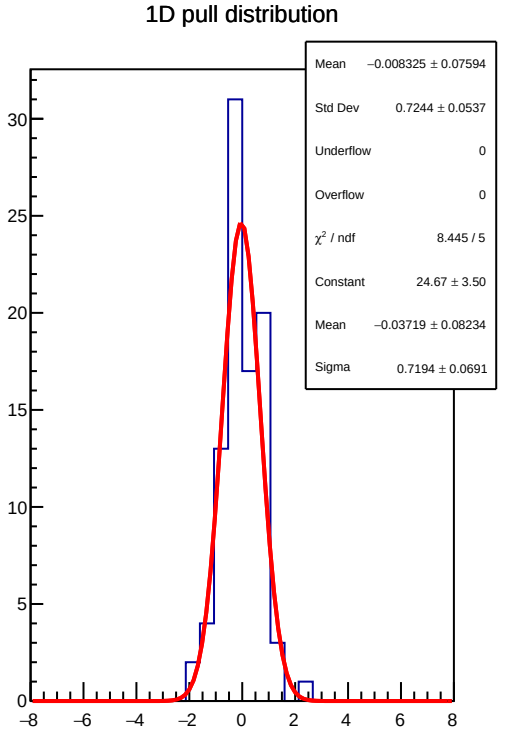

corr_usl_bpm12X RMS (ppm)
RMS (ppm)
120
100
80
60
40
20
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

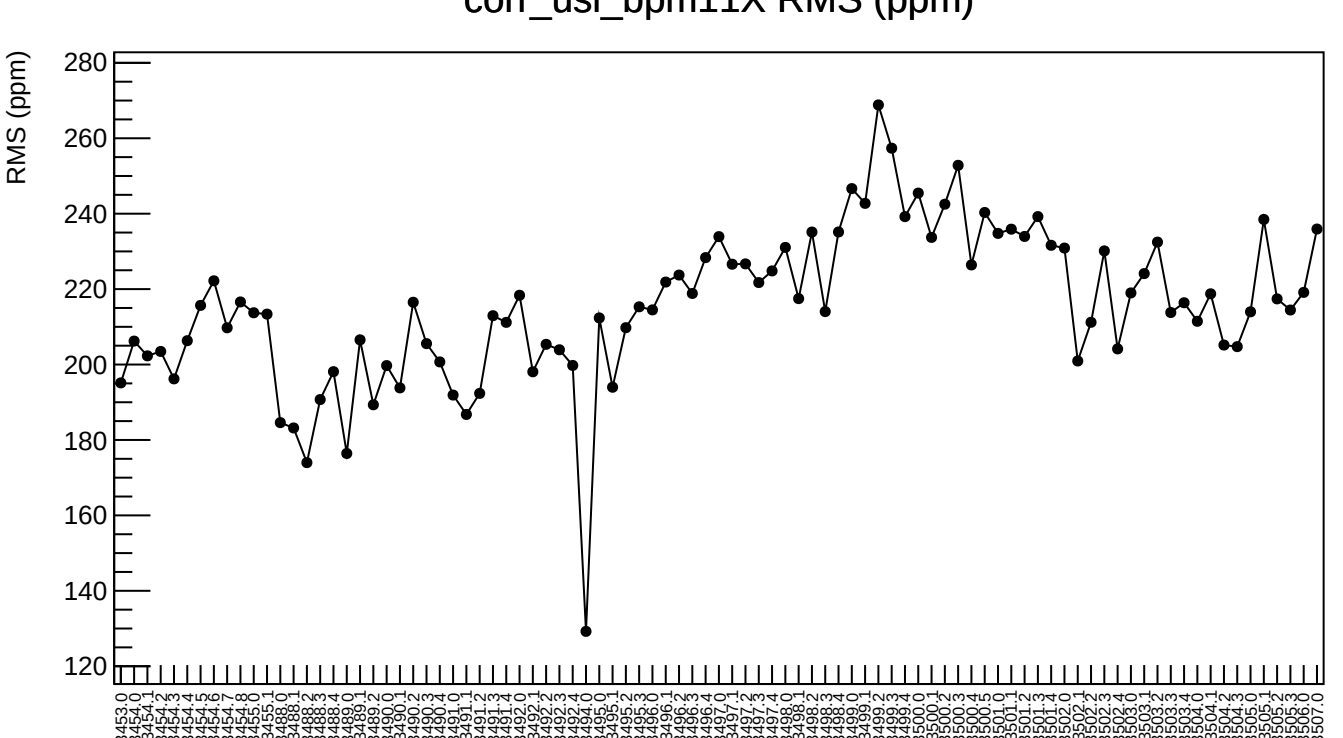

corr_usl_bpm12Y (ppb)
χ² / ndf 11.55 / 90
p0 4.81 ± 51.49
1000
500
0
−500
−1000
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8

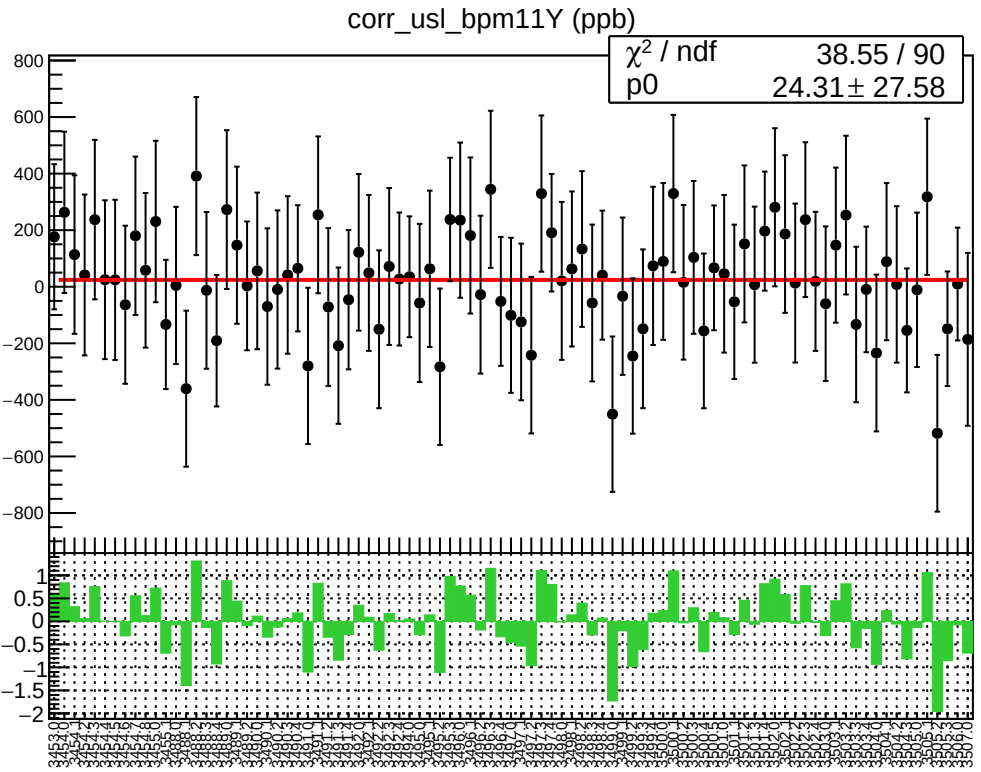

1D pull distribution
Mean −0.003344 ± 0.03735
Std Dev 0.3563 ± 0.02641
Underflow 0
Overflow 0
χ² / ndf 0.4623 / 1
Constant 52.59 ± 6.96
Mean −0.008837 ± 0.039970
Sigma 0.3669 ± 0.0300
40
35
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

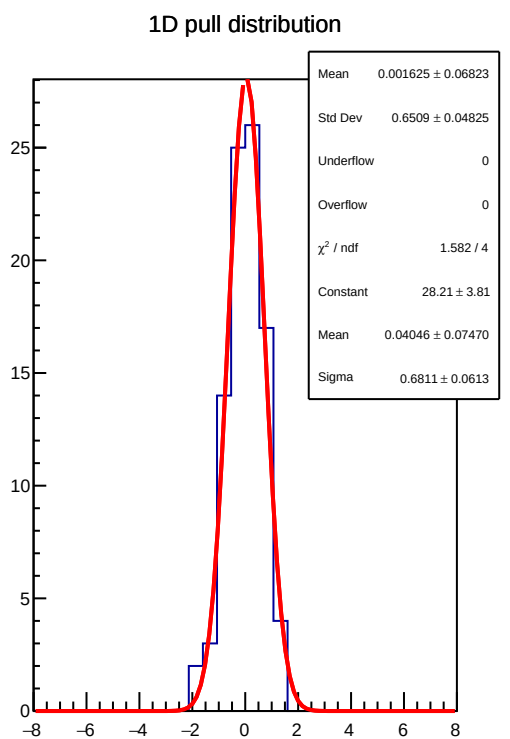

corr_usl_bpm12Y RMS (ppm)
RMS (ppm)
30
25
20
15
10
5
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3506.2
3506.3
3507.0

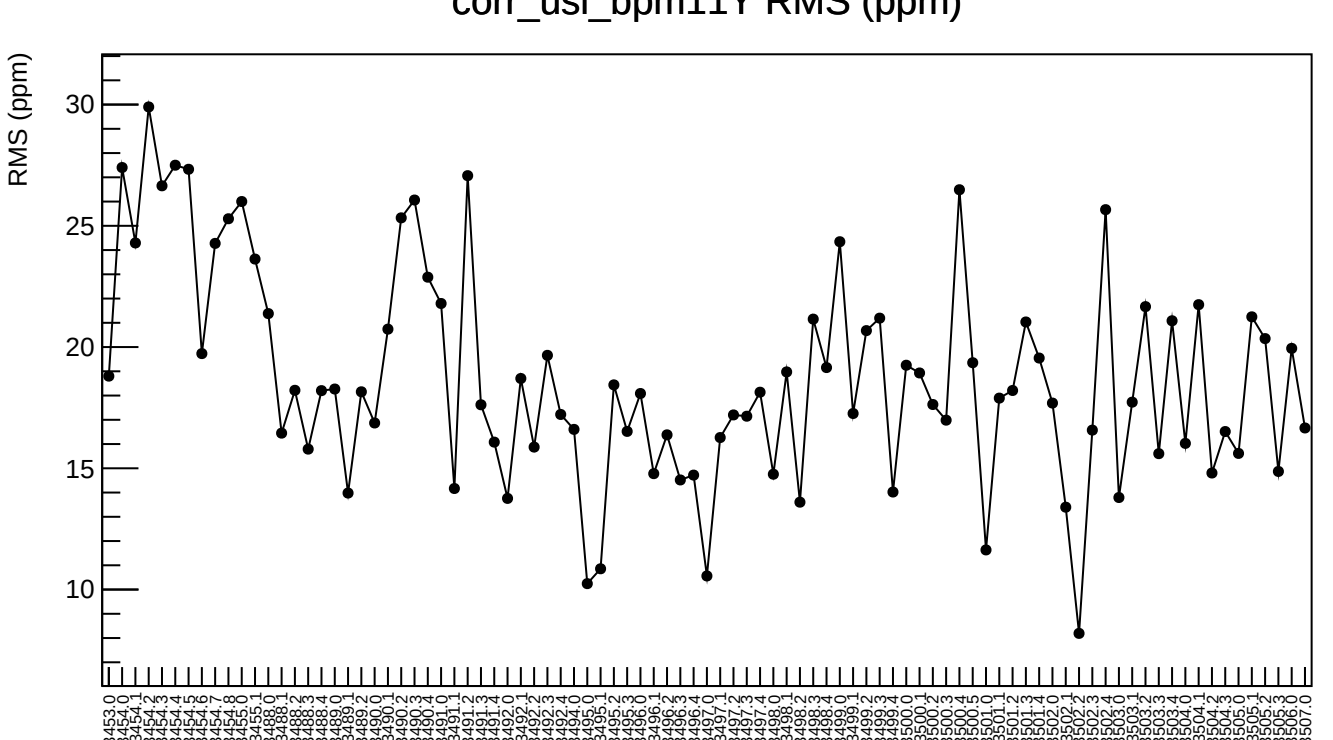

corr_usl_bpm11X (ppb)
χ² / ndf 47.76 / 90
p0 98.7 ± 324.1
10000
5000
0
-5000
-10000
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5

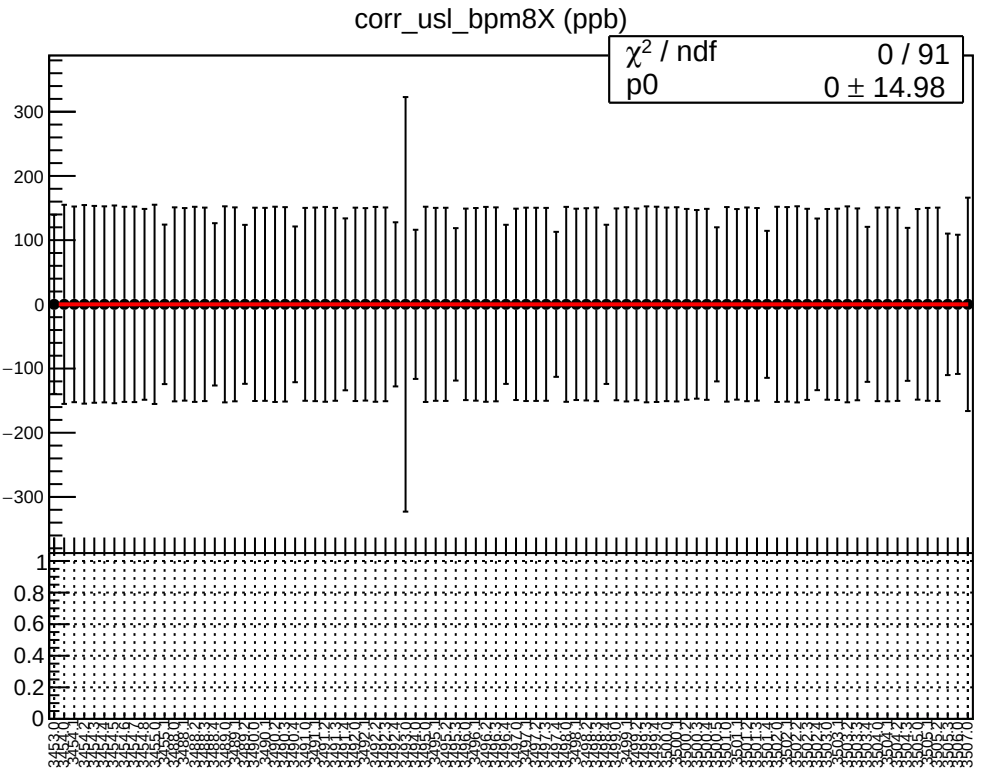

1D pull distribution
Mean −0.008325 ± 0.07594
Std Dev 0.7244 ± 0.0537
Underflow 0
Overflow 0
χ² / ndf 8.445 / 5
Constant 24.67 ± 3.50
Mean −0.03719 ± 0.08234
Sigma 0.7194 ± 0.0691
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

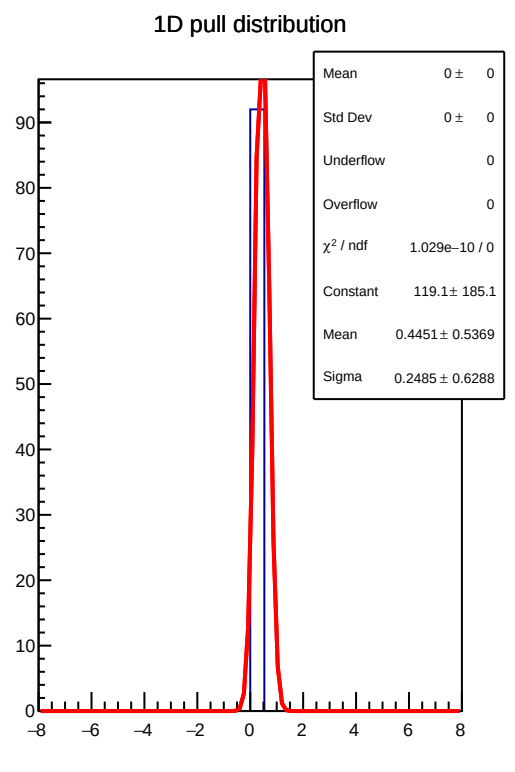

corr_usl_bpm11X RMS (ppm)
RMS (ppm)
280
260
240
220
200
180
160
140
120
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

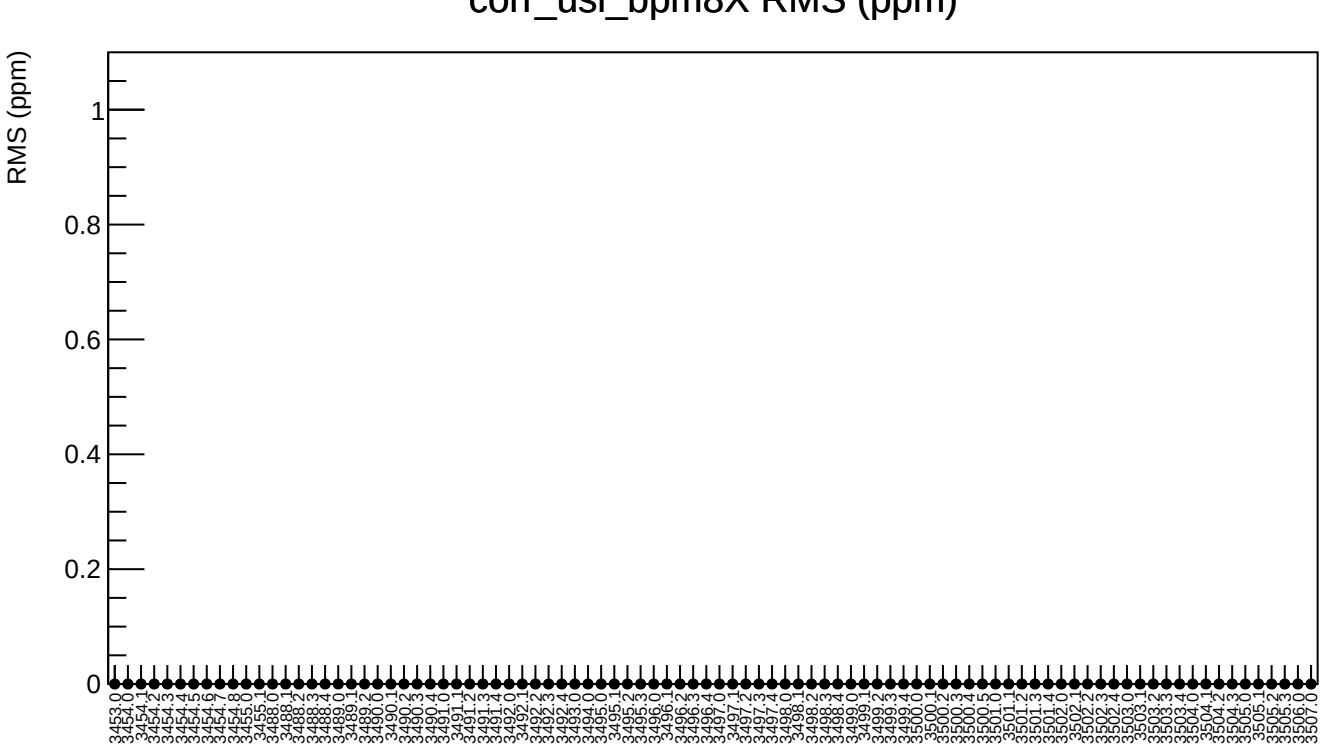

corr_usl_bpm11Y (ppb)
χ² / ndf 38.55 / 90
p0 24.31 ± 27.58

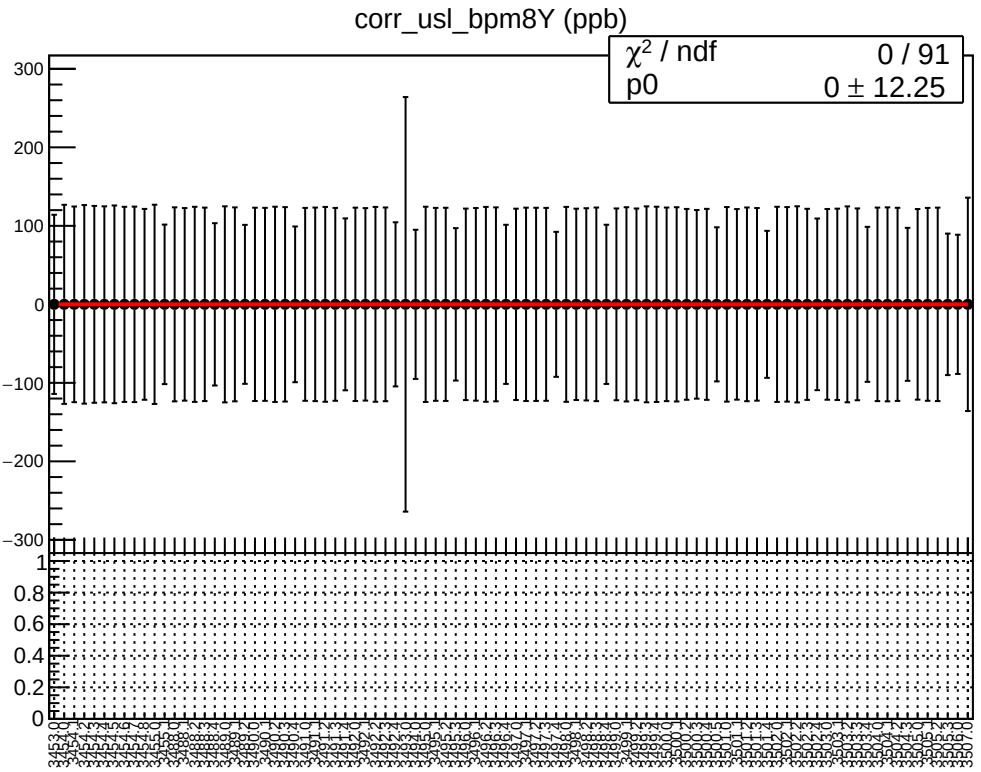

1D pull distribution
Mean 0.001625 ± 0.06823
Std Dev 0.6509 ± 0.04825
Underflow 0
Overflow 0
χ² / ndf 1.582 / 4
Constant 28.21 ± 3.81
Mean 0.04046 ± 0.07470
Sigma 0.6811 ± 0.0613

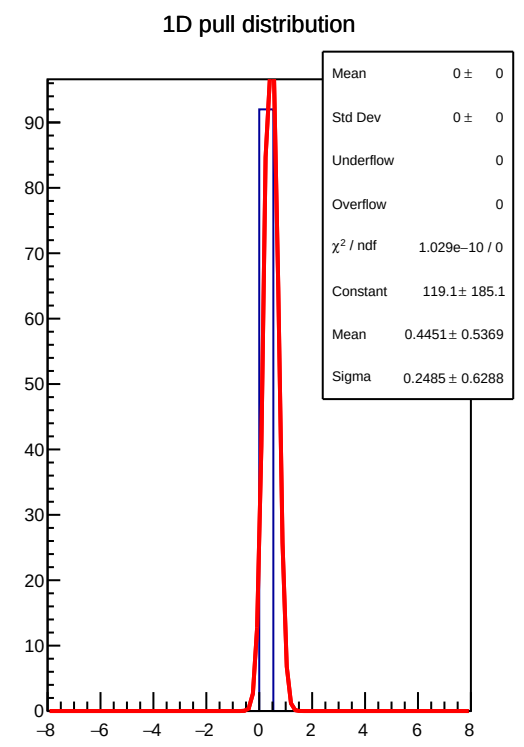

corr_usl_bpm11Y RMS (ppm)
RMS (ppm)
30
25
20
15
10
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3490.4
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.2
3505.3
3506.0
3507.0

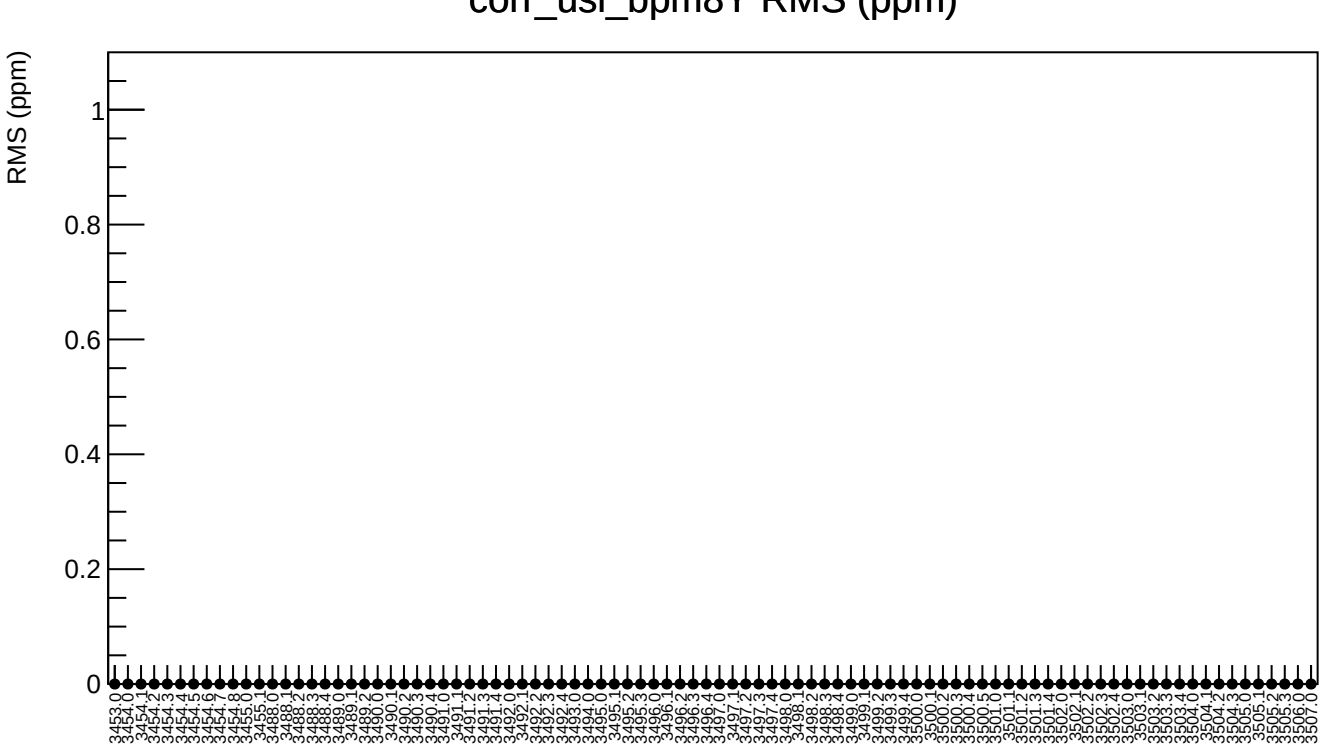

corr_usl_bpm8X (ppb)
χ² / ndf 0 / 91
p0 0 ± 14.98
300
200
100
0
−100
−200
−300
1
0.8
0.6
0.4
0.2
0


1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.029e−10 / 0
Constant 119.1 ± 185.1
Mean 0.4451 ± 0.5369
Sigma 0.2485 ± 0.6288
90
80
70
60
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
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3493.0
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.1
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0


corr_usl_bpm8Y (ppb)
χ² / ndf 0 / 91
p0 0 ± 12.25


1D pull distribution
Mean 0 ± 0
Std Dev 0 ± 0
Underflow 0
Overflow 0
χ² / ndf 1.029e−10 / 0
Constant 119.1 ± 185.1
Mean 0.4451 ± 0.5369
Sigma 0.2485 ± 0.6288


corr_usl_bpm8Y RMS (ppm)
RMS (ppm)
1
0.8
0.6
0.4
0.2
0
3453.0
3454.0
3454.1
3454.2
3454.3
3454.4
3454.5
3454.7
3454.8
3455.0
3455.1
3488.0
3488.1
3488.2
3488.3
3488.4
3489.0
3489.1
3489.2
3490.0
3490.1
3490.2
3490.3
3491.0
3491.1
3491.2
3491.3
3491.4
3492.0
3492.1
3492.2
3492.3
3492.4
3493.0
3494.0
3495.0
3495.1
3495.2
3495.3
3496.0
3496.1
3496.2
3496.3
3496.4
3497.0
3497.1
3497.2
3497.3
3497.4
3498.0
3498.1
3498.2
3498.3
3498.4
3499.0
3499.1
3499.2
3499.3
3499.4
3500.0
3500.1
3500.2
3500.3
3500.4
3500.5
3501.0
3501.1
3501.2
3501.3
3501.4
3502.0
3502.1
3502.2
3502.3
3502.4
3503.0
3503.1
3503.2
3503.3
3503.4
3504.0
3504.1
3504.2
3504.3
3505.0
3505.1
3505.2
3506.0
3507.0