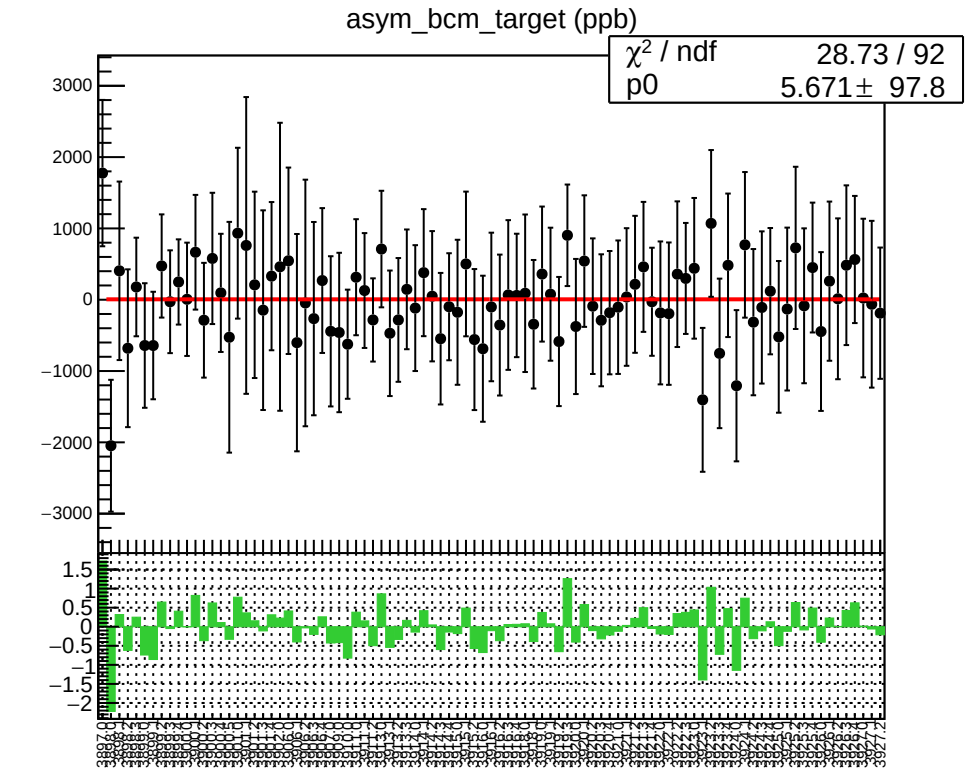
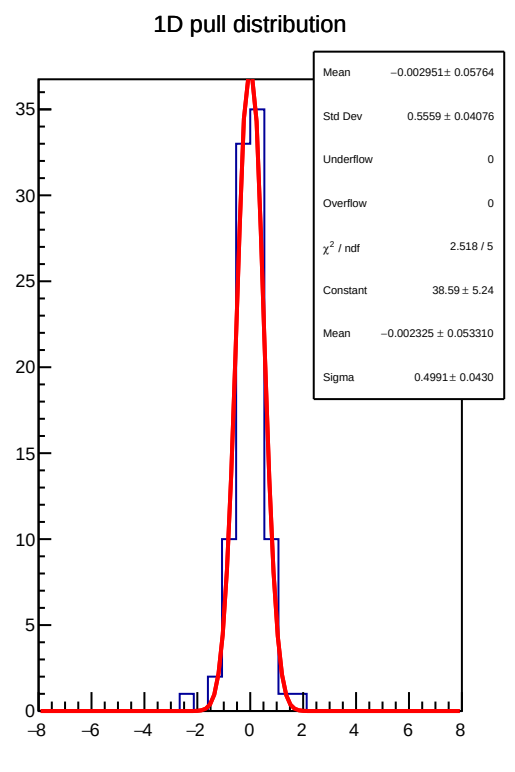
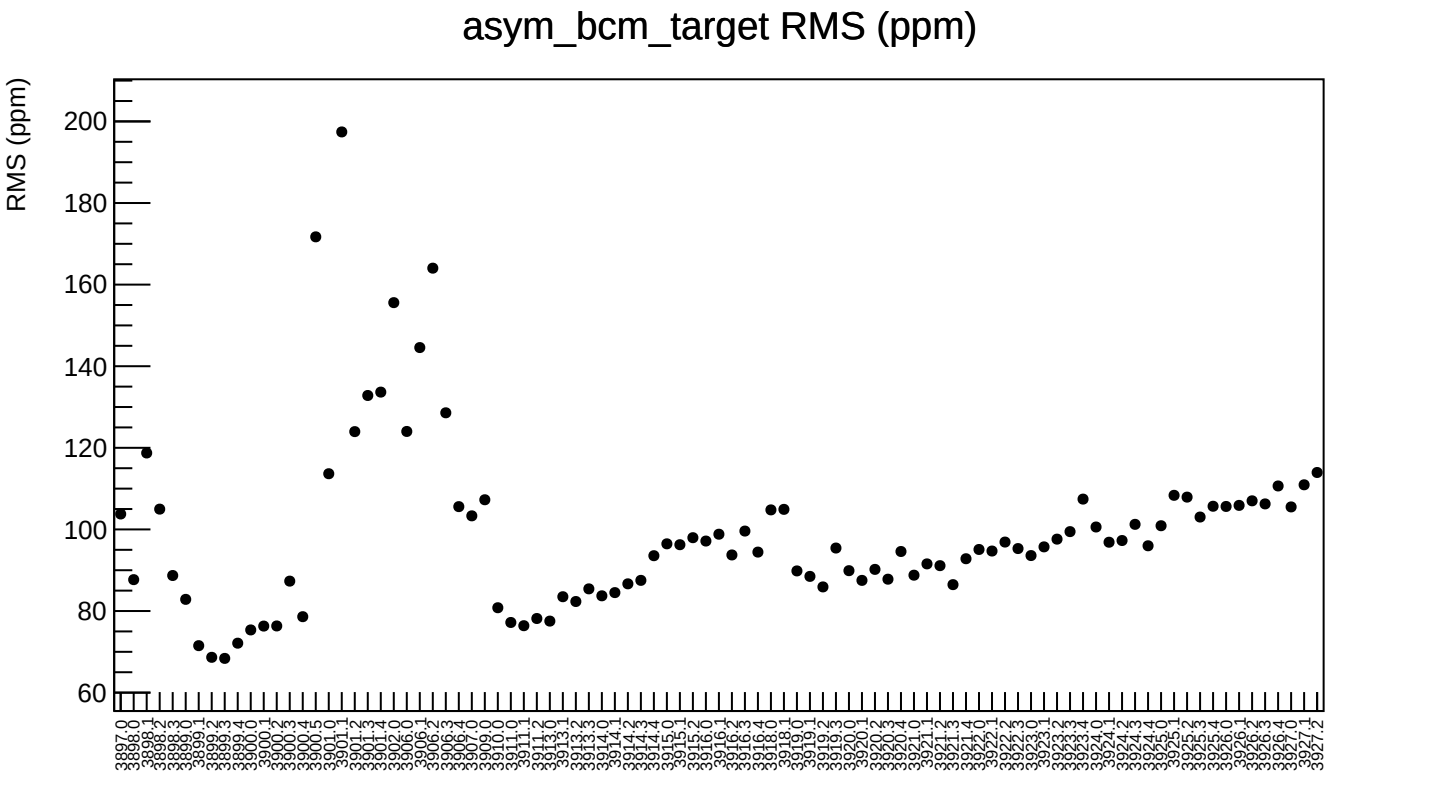
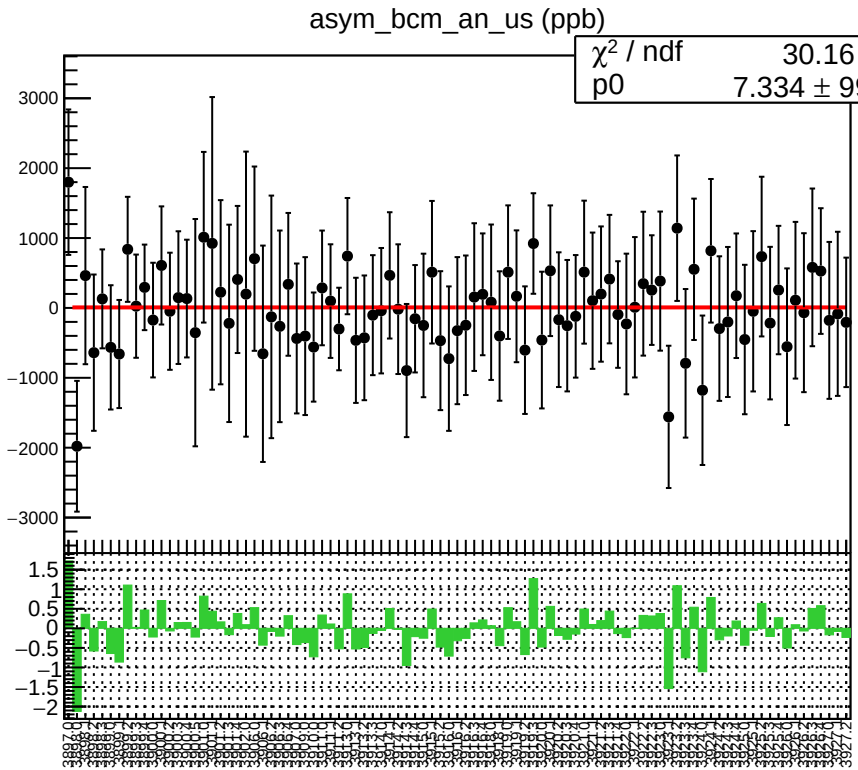
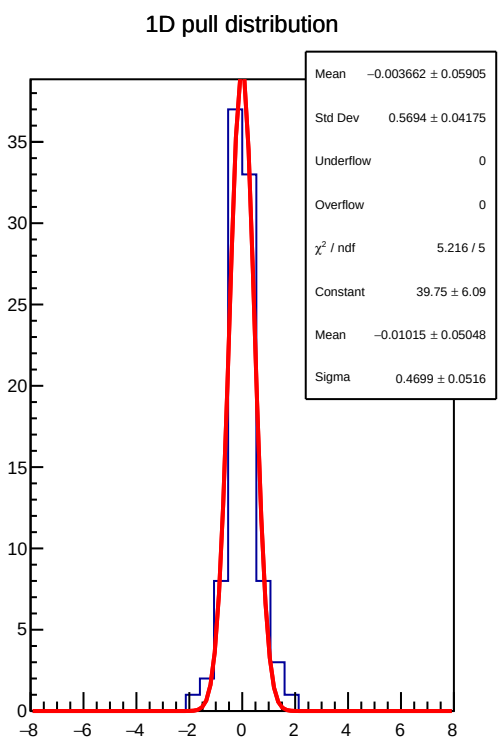
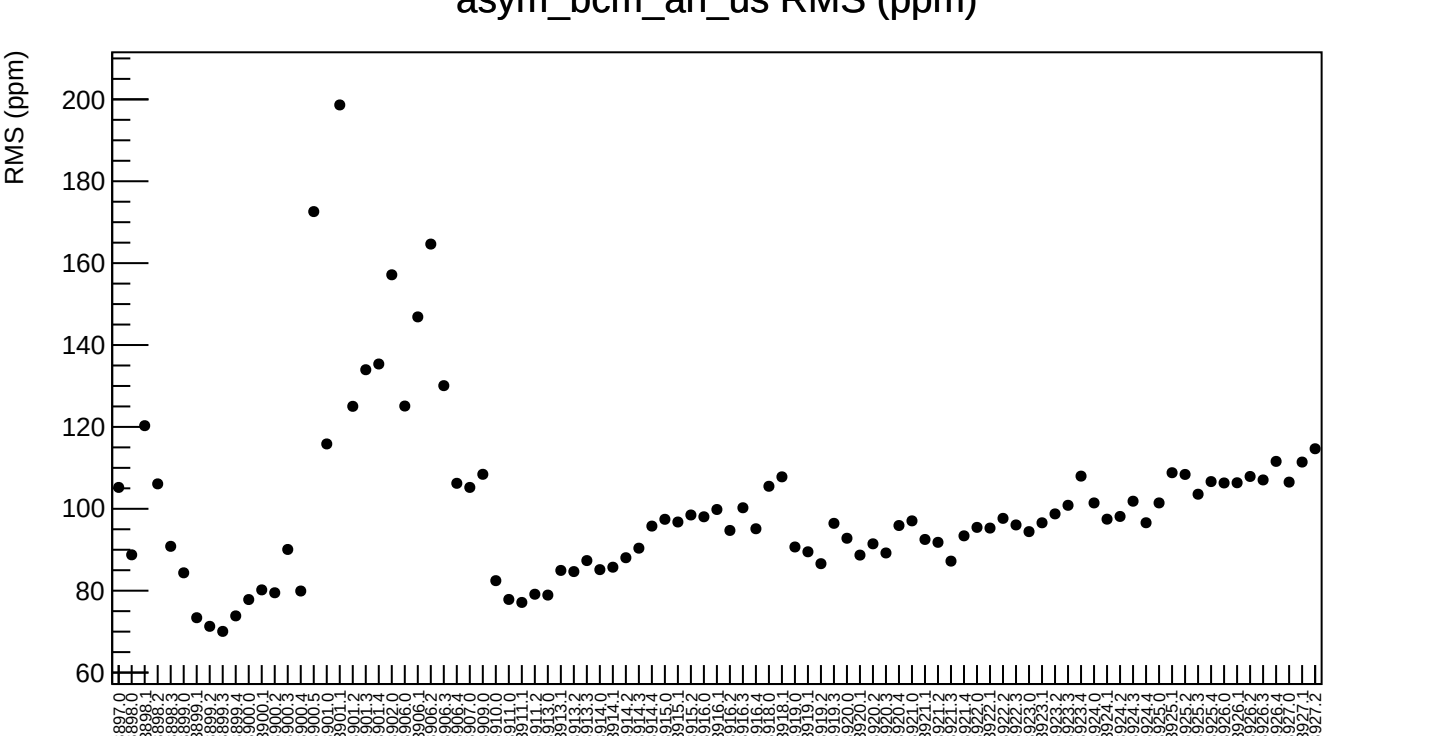

asym_bcm_target (ppb)
χ² / ndf 28.73 / 92
p0 5.671± 97.8
3000
2000
1000
0
−1000
−2000
−3000
1.5
1
0.5
0
−0.5
−1
−1.5
−2


1D pull distribution
Mean −0.002951± 0.05764
Std Dev 0.5559 ± 0.04076
Underflow 0
Overflow 0
χ² / ndf 2.518 / 5
Constant 38.59 ± 5.24
Mean −0.002325 ± 0.053310
Sigma 0.4991± 0.0430
35
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8


asym_bcm_target RMS (ppm)
RMS (ppm)
200
180
160
140
120
100
80
60
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.0
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2


asym_bcm_an_us (ppb)
χ² / ndf 30.16 / 92
p0 7.334 ± 99.32
3000
2000
1000
0
−1000
−2000
−3000
1.5
1
0.5
0
−0.5
−1
−1.5
−2


1D pull distribution
Mean −0.003662 ± 0.05905
Std Dev 0.5694 ± 0.04175
Underflow 0
Overflow 0
χ² / ndf 5.216 / 5
Constant 39.75 ± 6.09
Mean −0.01015 ± 0.05048
Sigma 0.4699 ± 0.0516
35
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8


asym_bcm_an_us RMS (ppm)
RMS (ppm)
200
180
160
140
120
100
80
60
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.0
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
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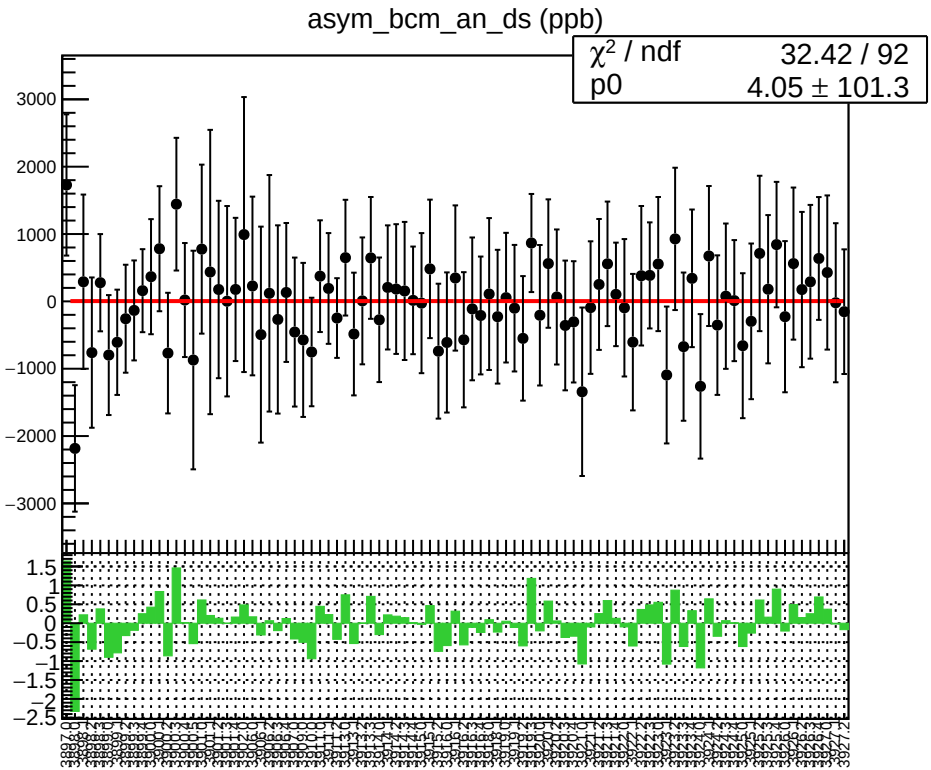
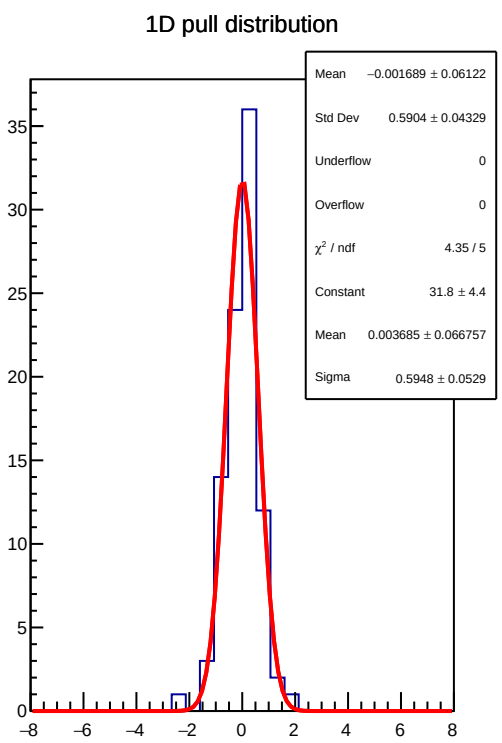
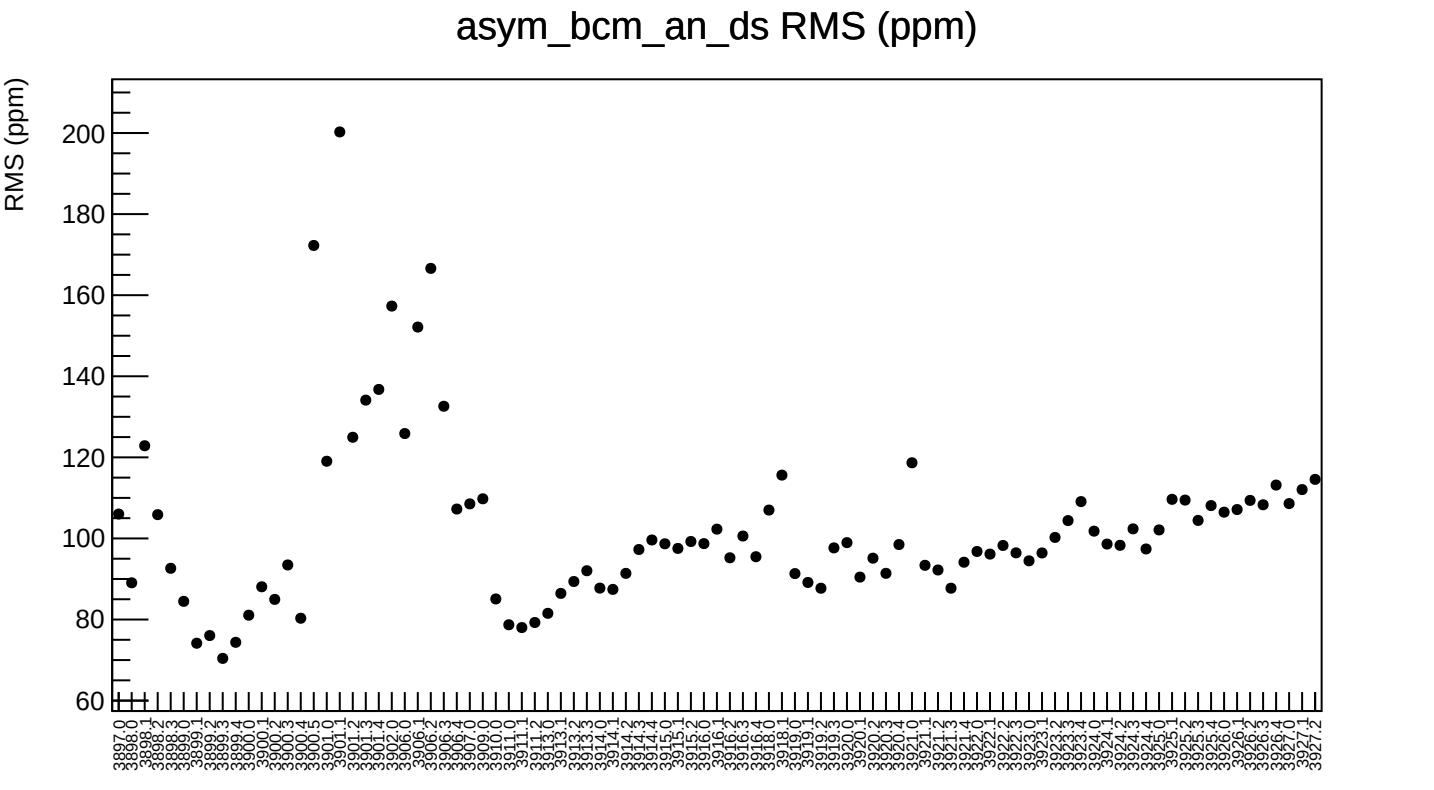
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2


asym_bcm_an_ds (ppb)
χ² / ndf 32.42 / 92
p0 4.05 ± 101.3


1D pull distribution
Mean −0.001689 ± 0.06122
Std Dev 0.5904 ± 0.04329
Underflow 0
Overflow 0
χ² / ndf 4.35 / 5
Constant 31.8 ± 4.4
Mean 0.003685 ± 0.066757
Sigma 0.5948 ± 0.0529


asym_bcm_an_ds RMS (ppm)
RMS (ppm)
200
180
160
140
120
100
80
60
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
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3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
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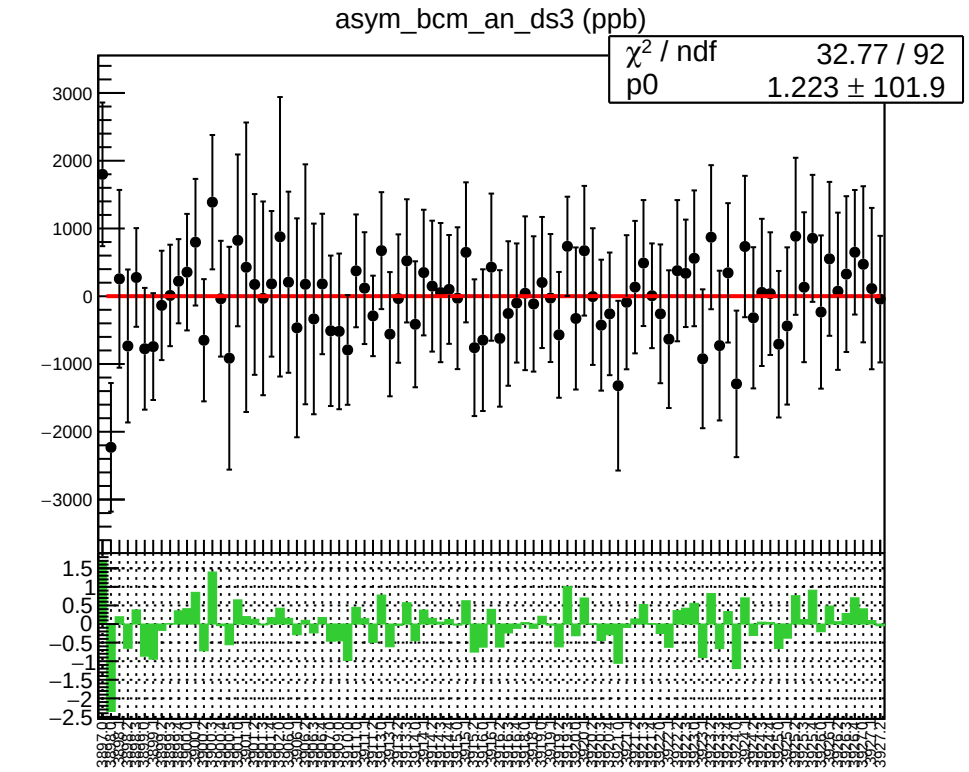
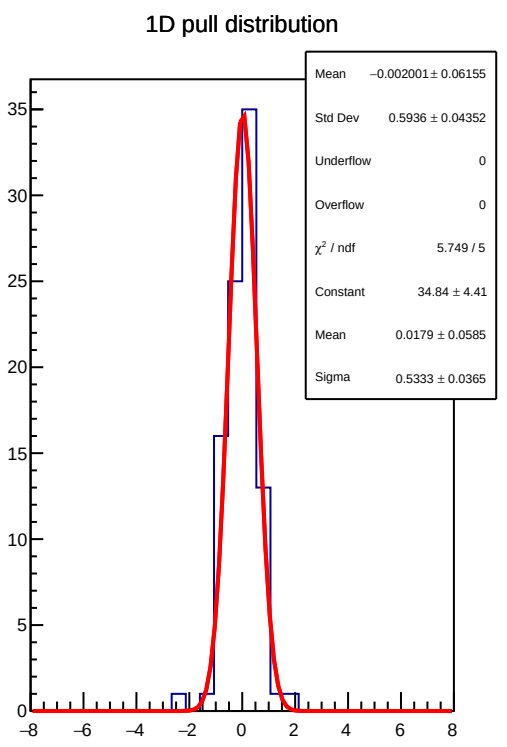
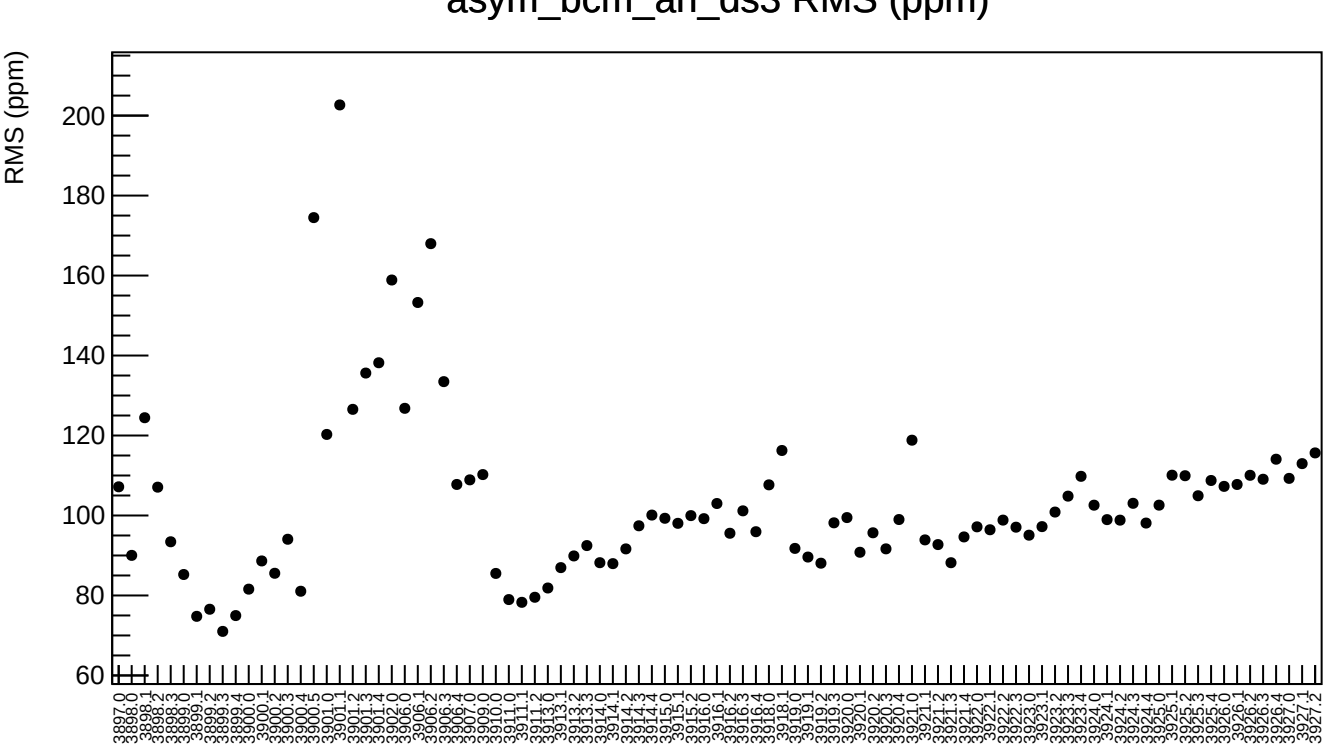
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2


asym_bcm_an_ds3 (ppb)
χ² / ndf 32.77 / 92
p0 1.223 ± 101.9
3000
2000
1000
0
−1000
−2000
−3000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5


1D pull distribution
Mean −0.002001 ± 0.06155
Std Dev 0.5936 ± 0.04352
Underflow 0
Overflow 0
χ² / ndf 5.749 / 5
Constant 34.84 ± 4.41
Mean 0.0179 ± 0.0585
Sigma 0.5333 ± 0.0365
35
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8


asym_bcm_an_ds3 RMS (ppm)
RMS (ppm)
200
180
160
140
120
100
80
60
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
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3906.4
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3915.2
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3916.1
3916.2
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3916.4
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3918.1
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3920.2
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3922.2
3922.3
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3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
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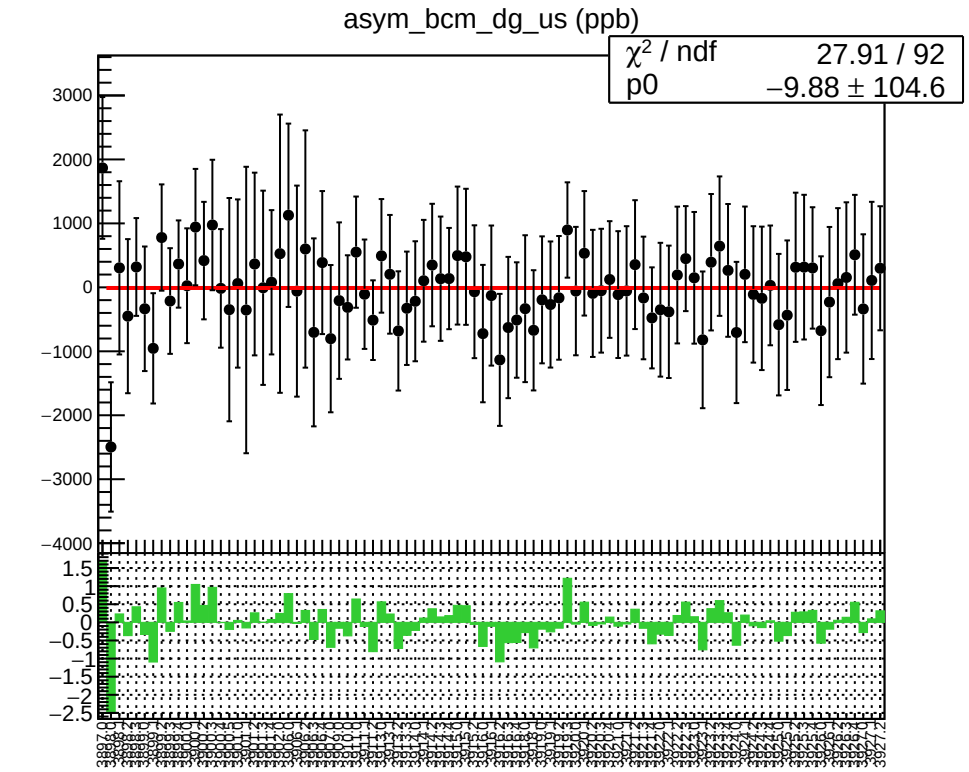
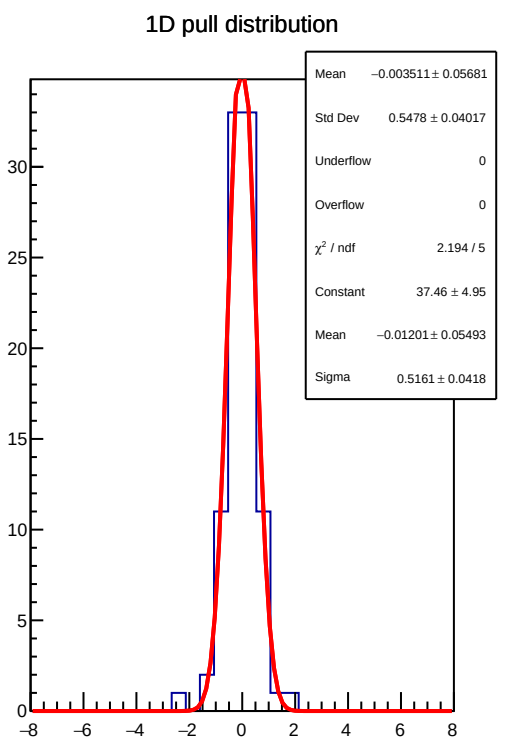
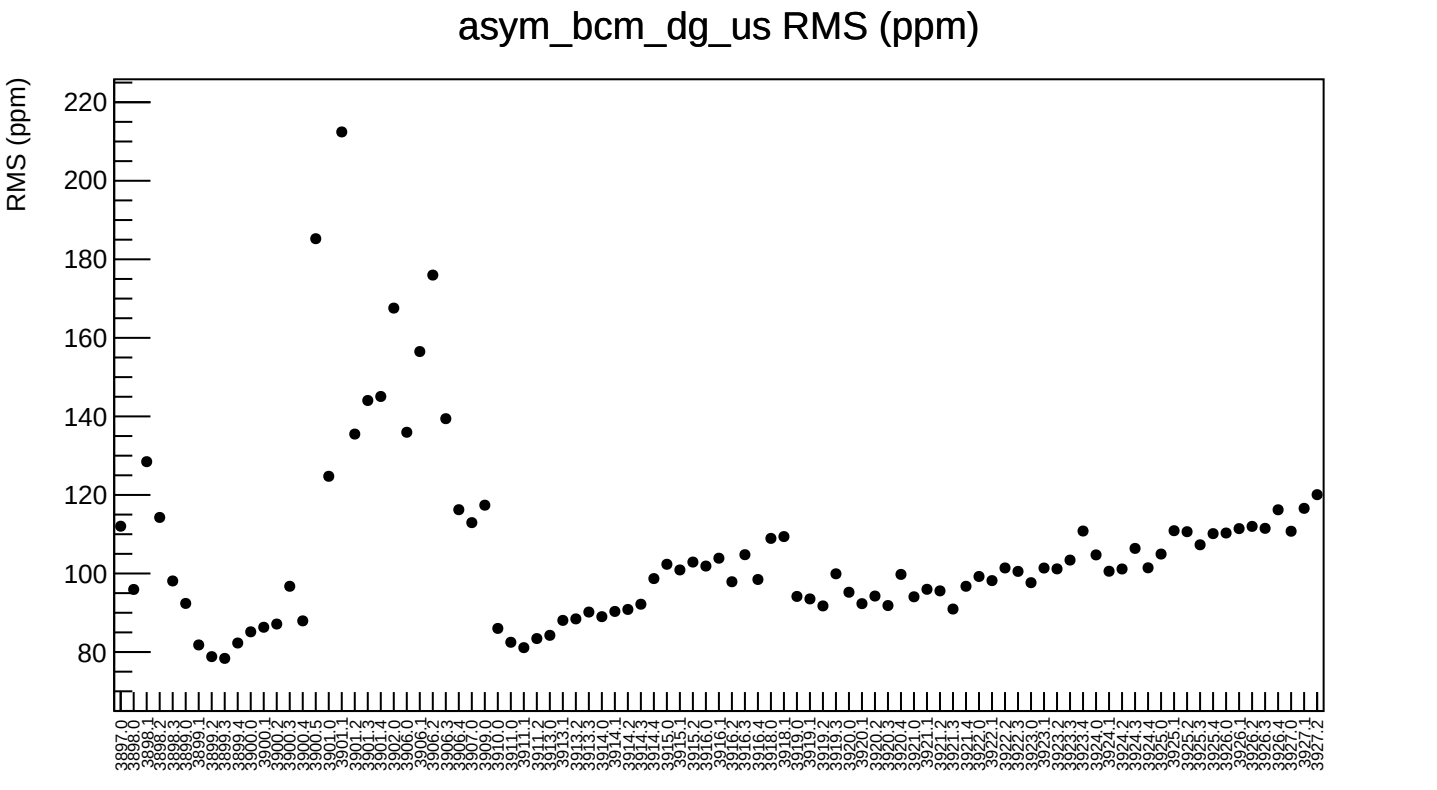
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2


asym_bcm_dg_us (ppb)
χ² / ndf 27.91 / 92
p0 −9.88 ± 104.6


1D pull distribution
Mean −0.003511 ± 0.05681
Std Dev 0.5478 ± 0.04017
Underflow 0
Overflow 0
χ² / ndf 2.194 / 5
Constant 37.46 ± 4.95
Mean −0.01201 ± 0.05493
Sigma 0.5161 ± 0.0418


asym_bcm_dg_us RMS (ppm)
RMS (ppm)
220
200
180
160
140
120
100
80
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
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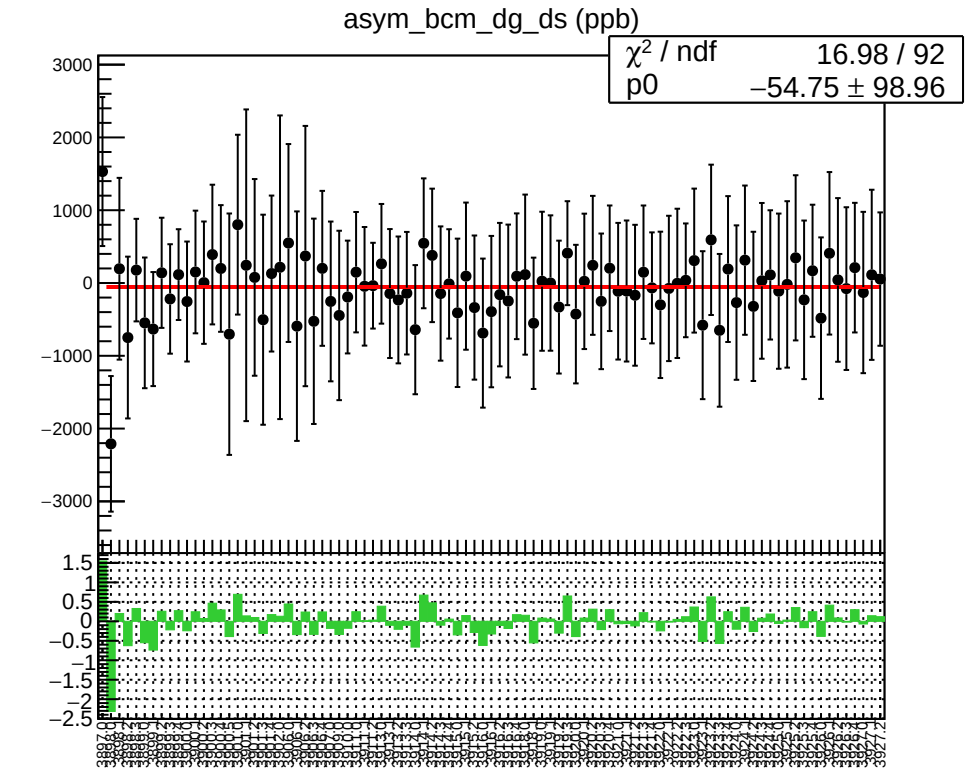
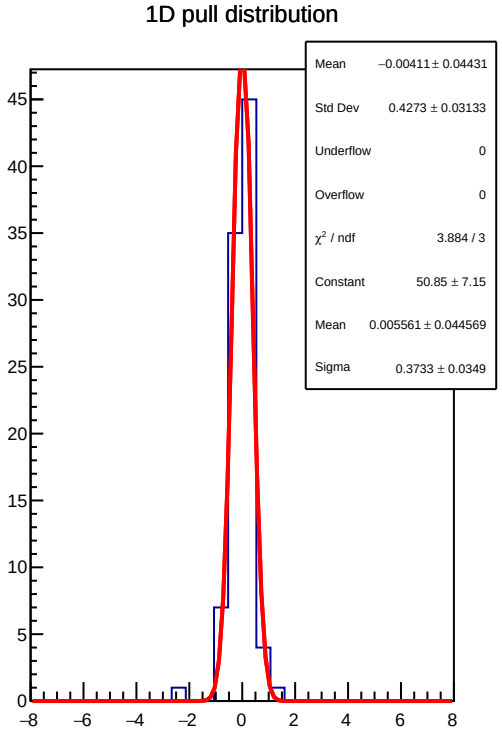
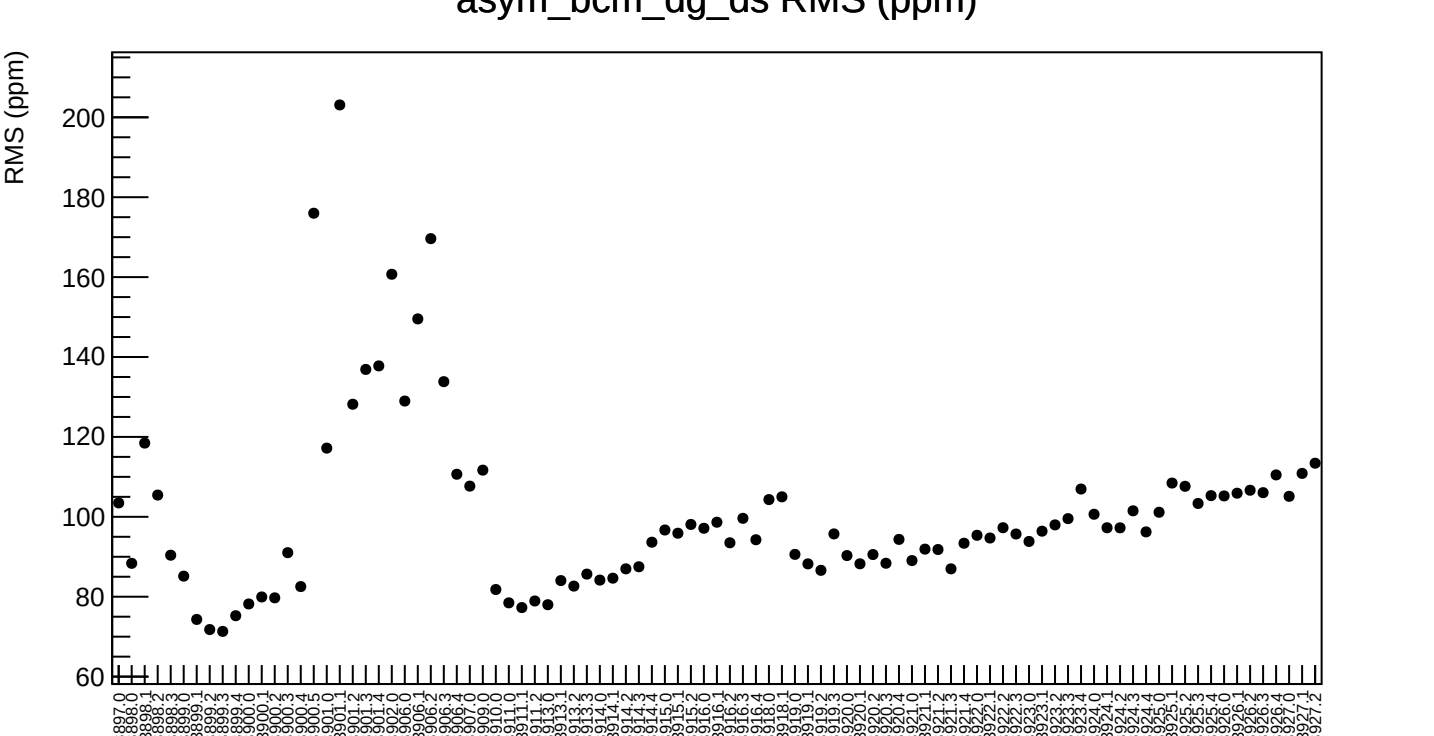
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2


asym_bcm_dg_ds (ppb)
χ² / ndf 16.98 / 92
p0 −54.75 ± 98.96
3000
2000
1000
0
−1000
−2000
−3000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5


1D pull distribution
Mean −0.00411 ± 0.04431
Std Dev 0.4273 ± 0.03133
Underflow 0
Overflow 0
χ² / ndf 3.884 / 3
Constant 50.85 ± 7.15
Mean 0.005561 ± 0.044569
Sigma 0.3733 ± 0.0349
45
40
35
30
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8


asym_bcm_dg_ds RMS (ppm)
RMS (ppm)
200
180
160
140
120
100
80
60
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
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3911.2
3913.0
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
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3916.1
3916.2
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3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
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3920.3
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3921.3
3921.4
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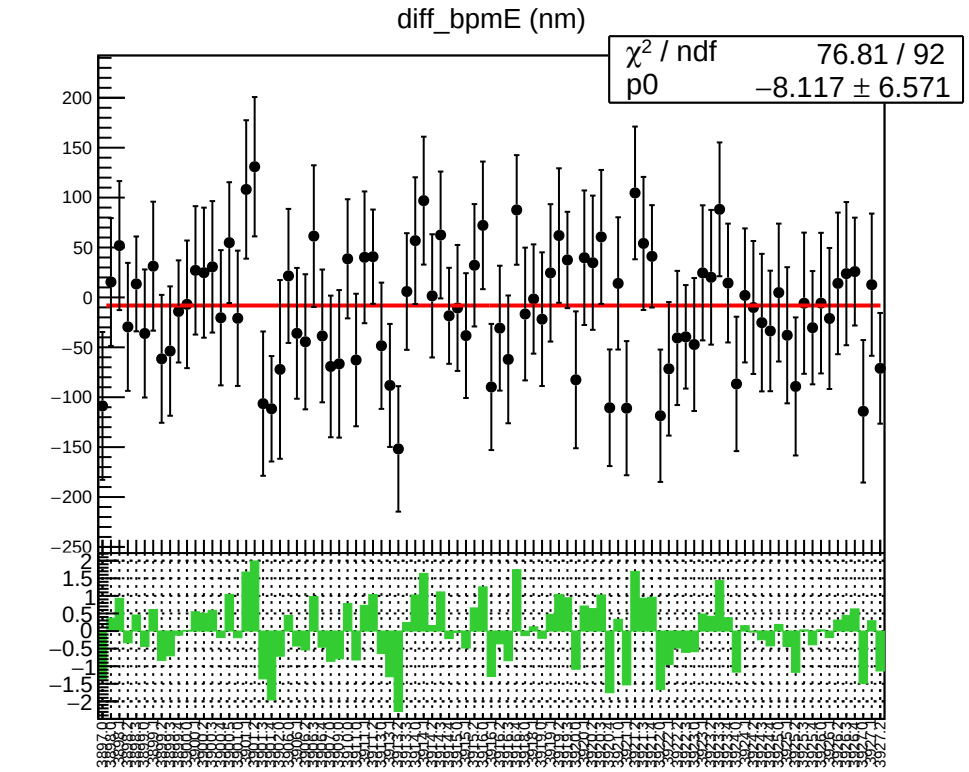
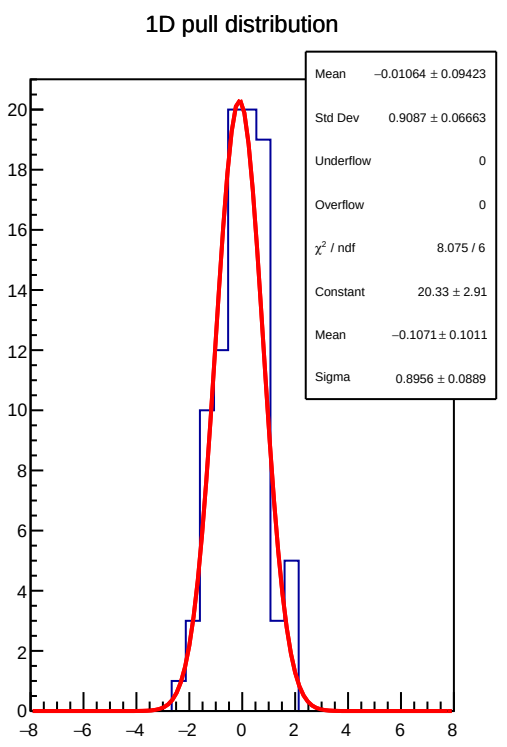
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2


diff_bpmE (nm)
χ² / ndf 76.81 / 92
p0 −8.117 ± 6.571


1D pull distribution
Mean −0.01064 ± 0.09423
Std Dev 0.9087 ± 0.06663
Underflow 0
Overflow 0
χ² / ndf 8.075 / 6
Constant 20.33 ± 2.91
Mean −0.1071 ± 0.1011
Sigma 0.8956 ± 0.0889

diff_bpmE RMS (um)

RMS (um)

7.6
7.4
7.2
7
6.8
6.6
6.4
6.2
6
5.8

3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
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3924.0
3924.2
3924.3
3924.4
3925.0
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3926.4
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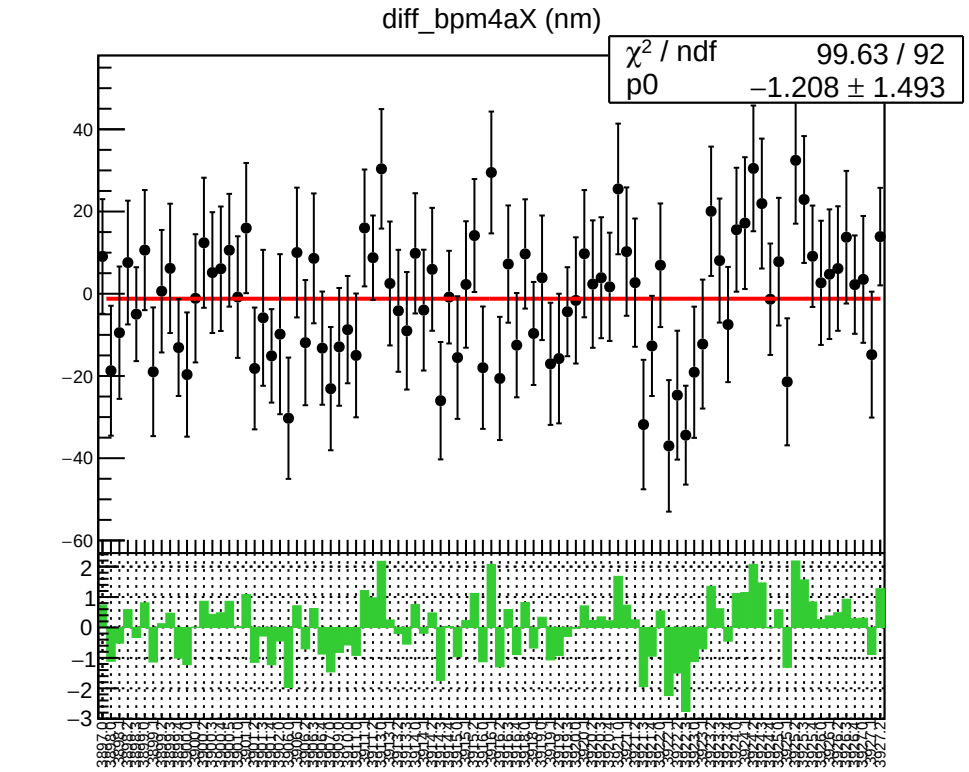
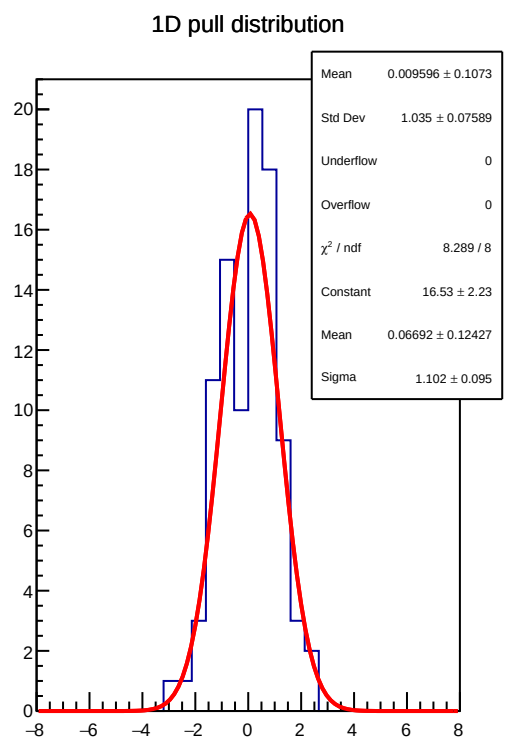
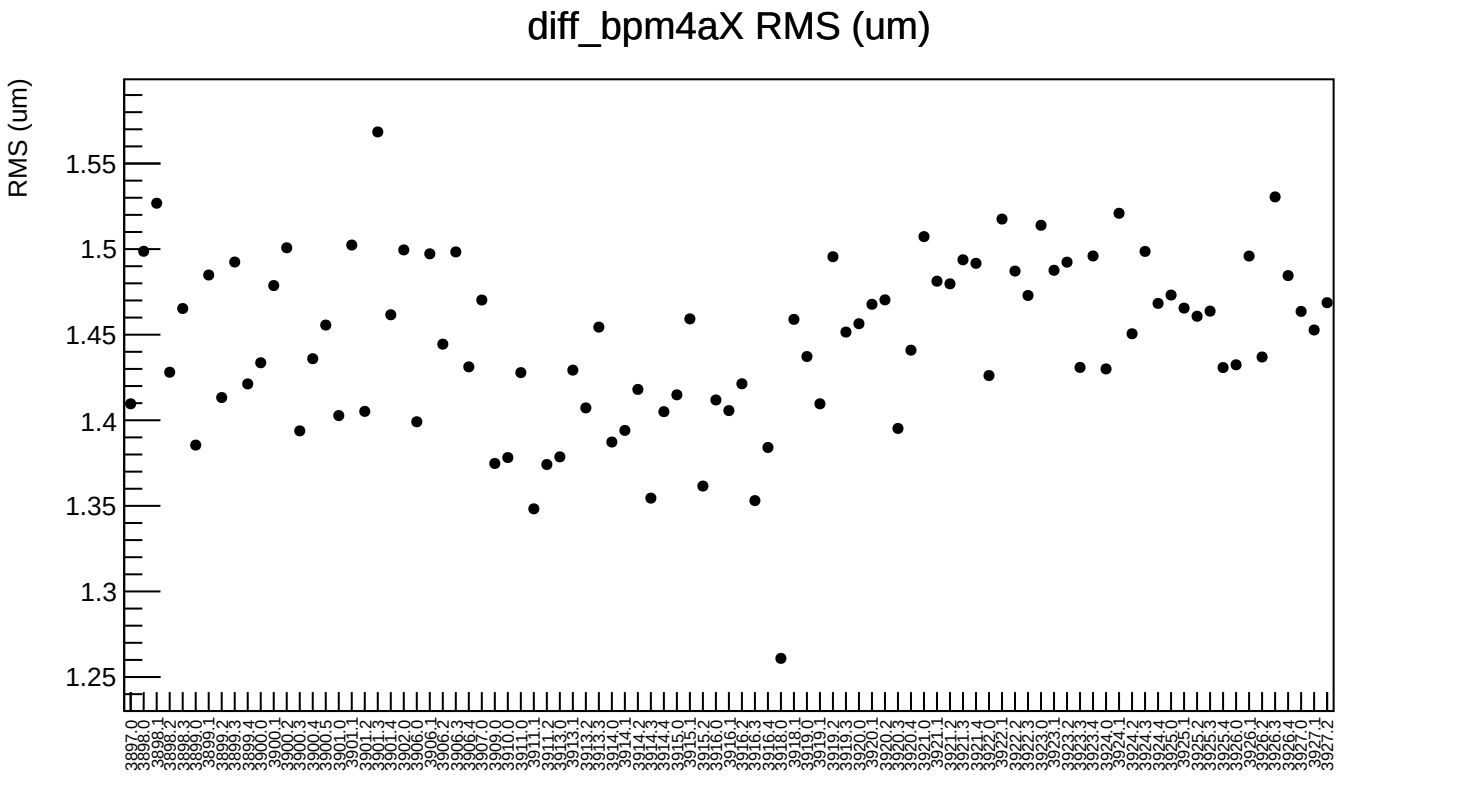
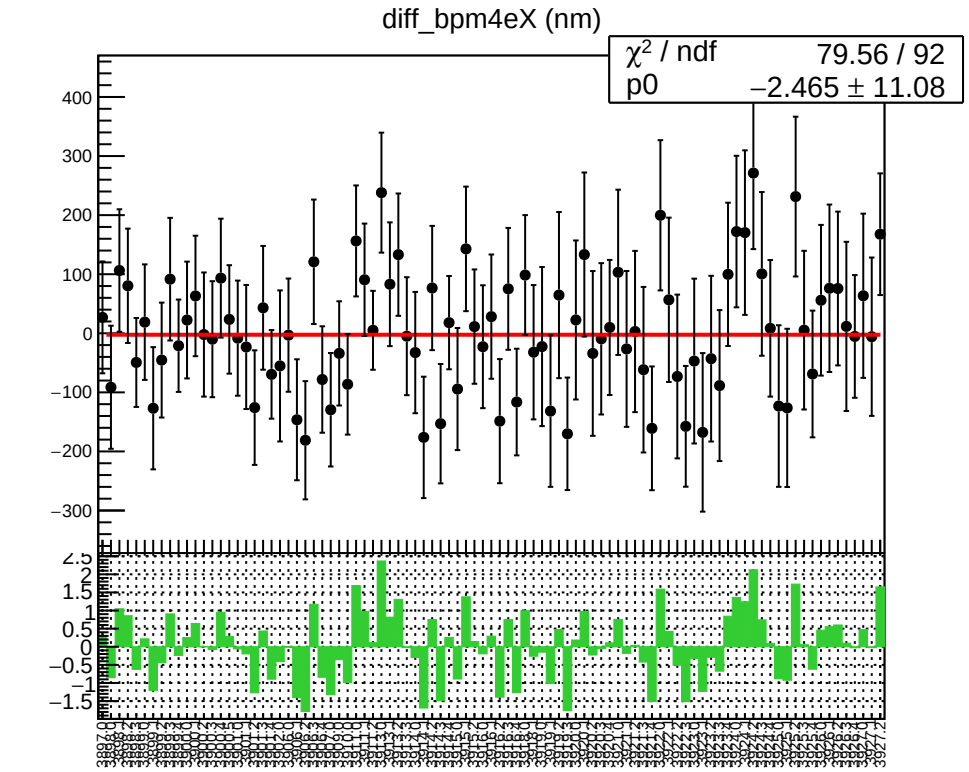
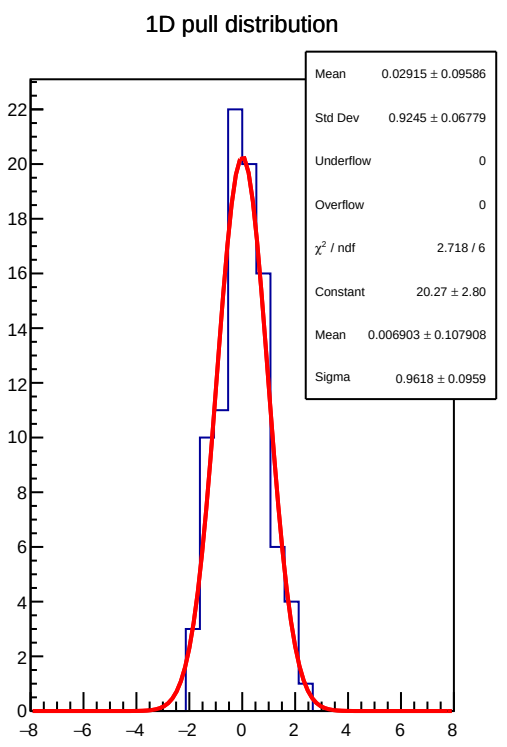
3927.2

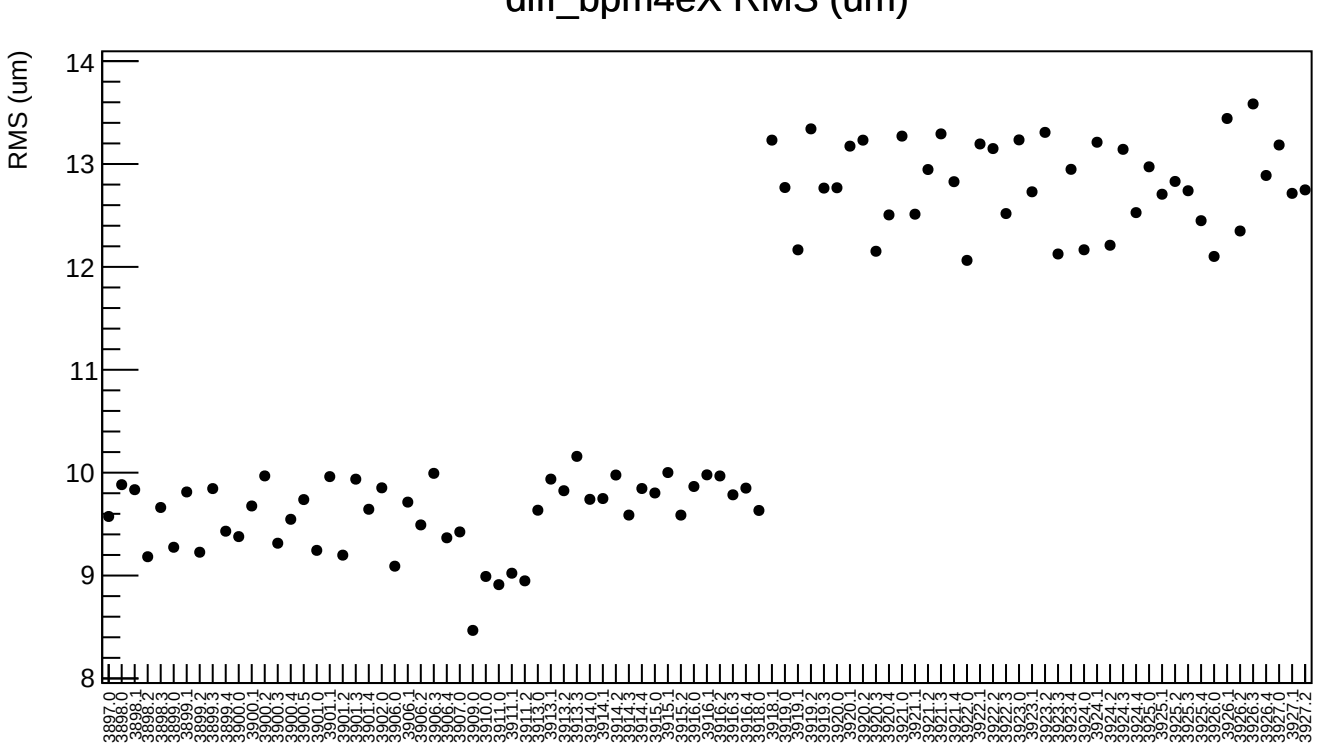

diff_bpm4aX (nm)
χ² / ndf 99.63 / 92
p0 −1.208 ± 1.493

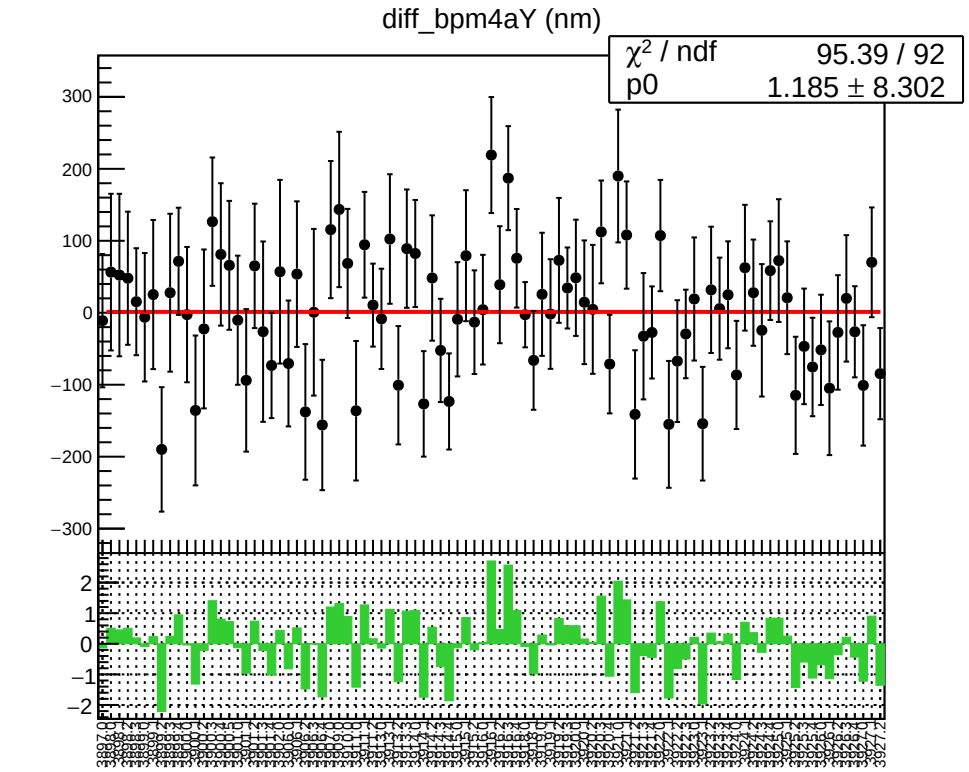

1D pull distribution
Mean 0.009596 ± 0.1073
Std Dev 1.035 ± 0.07589
Underflow 0
Overflow 0
χ² / ndf 8.289 / 8
Constant 16.53 ± 2.23
Mean 0.06692 ± 0.12427
Sigma 1.102 ± 0.095

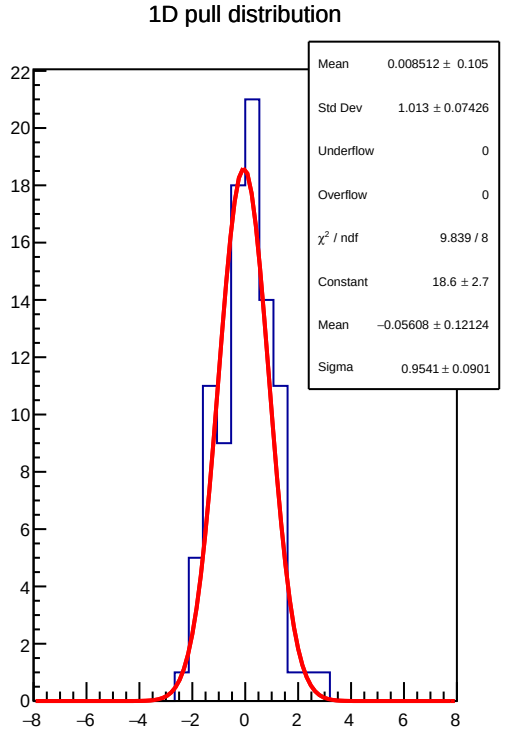

diff_bpm4aX RMS (um)
RMS (um)
1.55
1.5
1.45
1.4
1.35
1.3
1.25
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.0
3927.1
3927.2

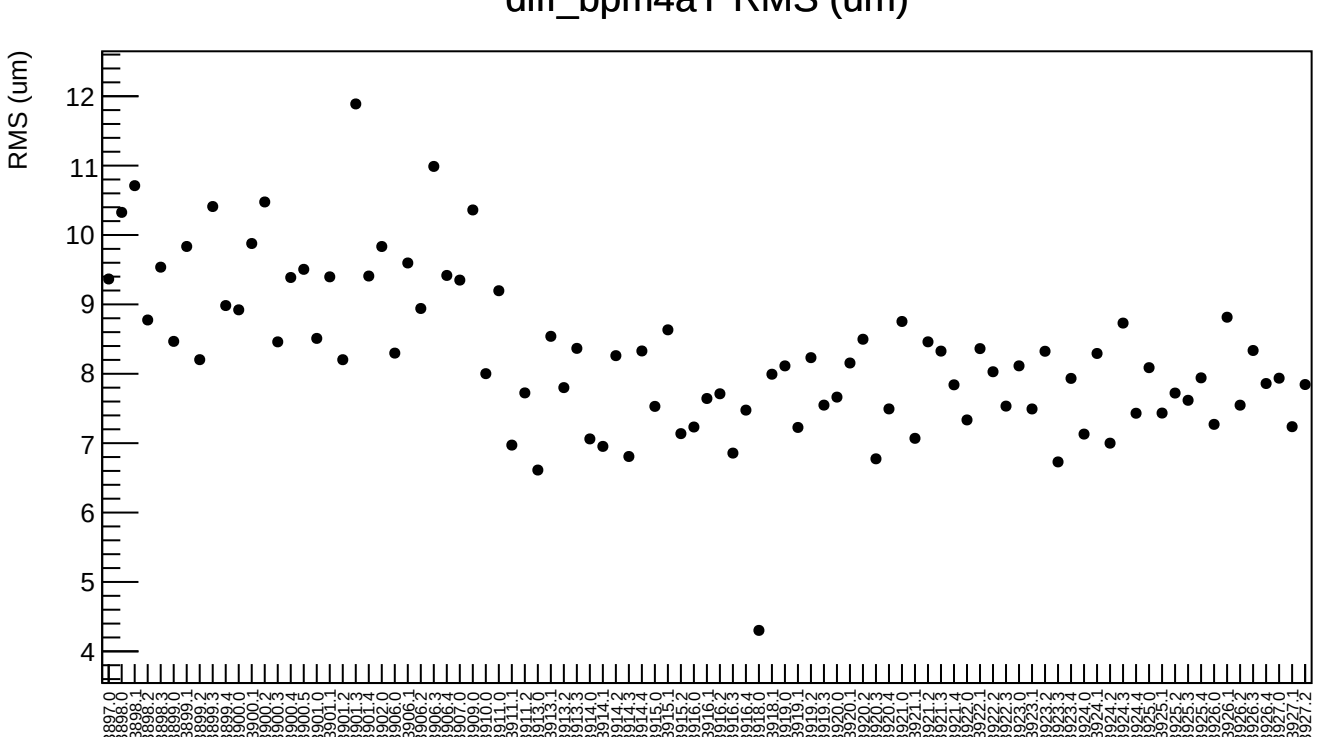

diff_bpm4eX (nm)
χ² / ndf 79.56 / 92
p0 −2.465 ± 11.08

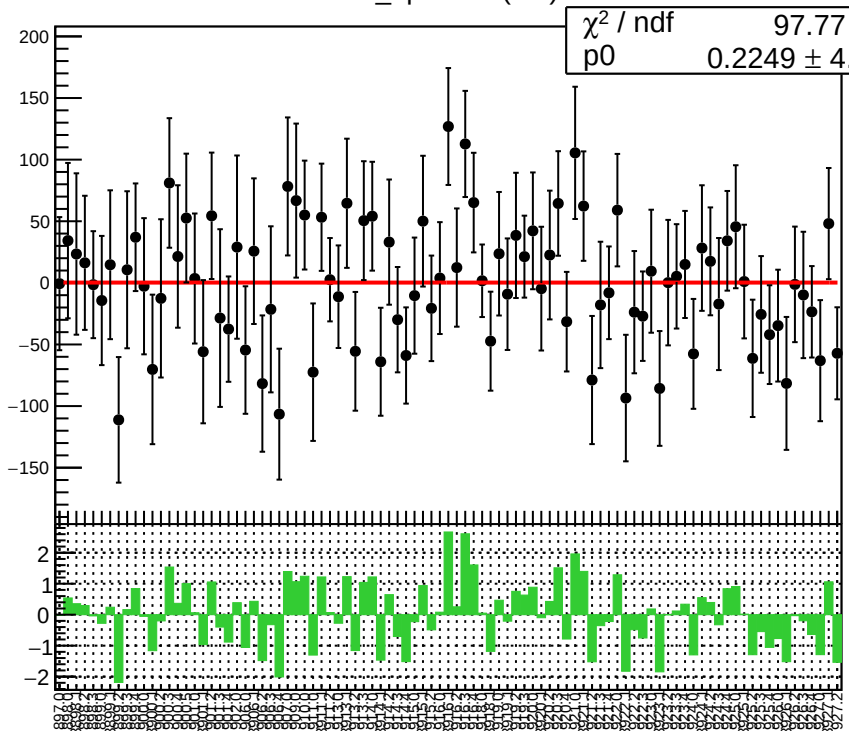

1D pull distribution
Mean 0.02915 ± 0.09586
Std Dev 0.9245 ± 0.06779
Underflow 0
Overflow 0
χ² / ndf 2.718 / 6
Constant 20.27 ± 2.80
Mean 0.006903 ± 0.107908
Sigma 0.9618 ± 0.0959

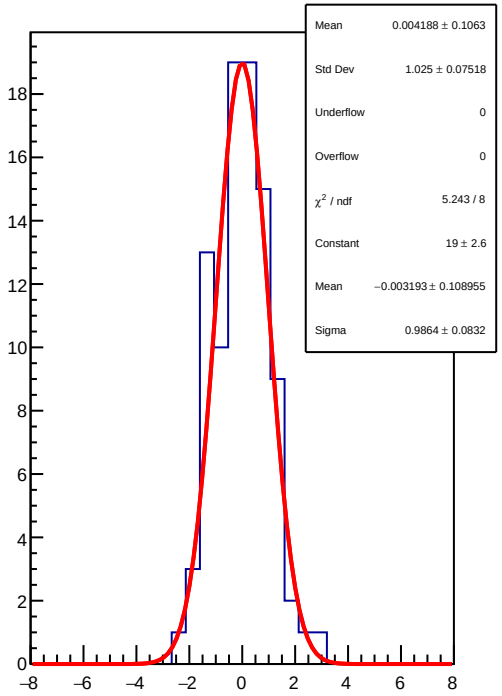

diff_bpm4eX RMS (um)
RMS (um)
14
13
12
11
10
9
8
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.0
3927.1
3927.2

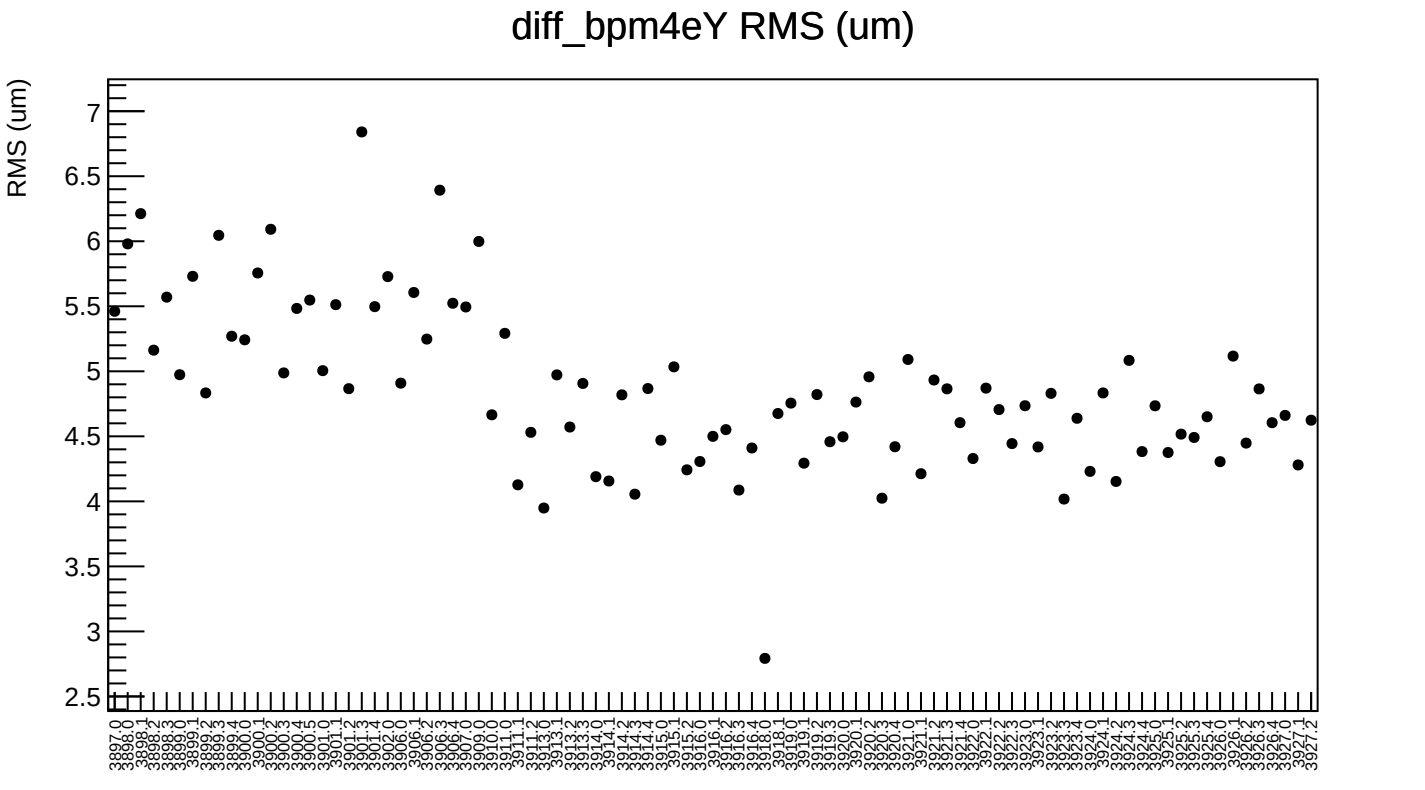

diff_bpm4aY (nm)
χ² / ndf 95.39 / 92
p0 1.185 ± 8.302
300
200
100
0
−100
−200
−300
2
1
0
−1
−2

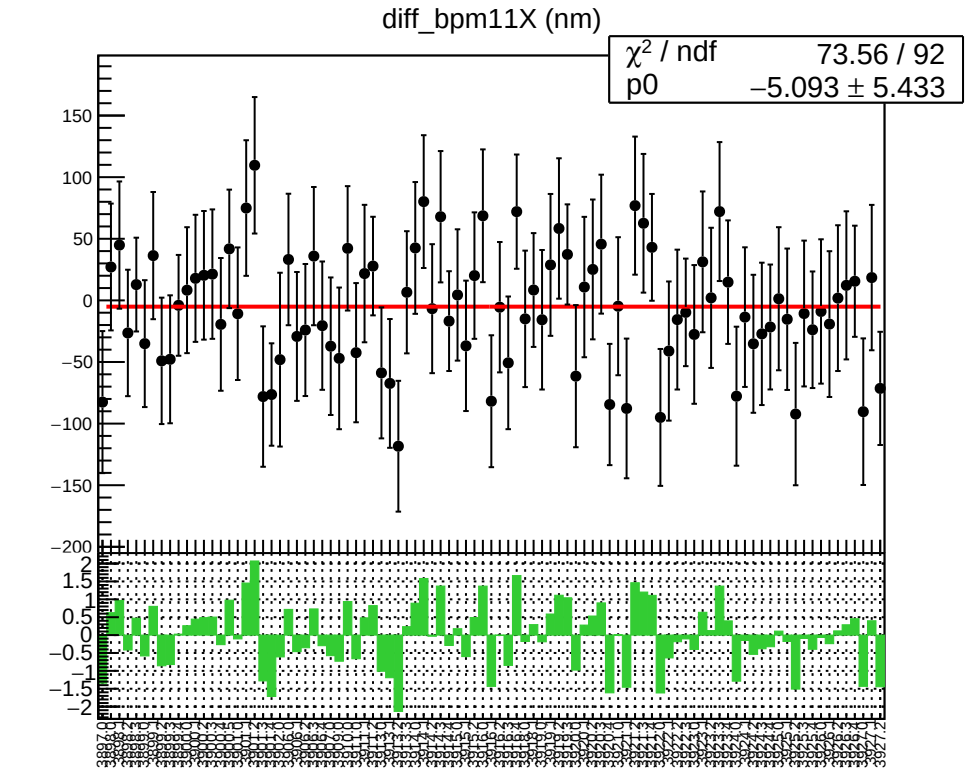

1D pull distribution
Mean 0.008512 ± 0.105
Std Dev 1.013 ± 0.07426
Underflow 0
Overflow 0
χ² / ndf 9.839 / 8
Constant 18.6 ± 2.7
Mean −0.05608 ± 0.12124
Sigma 0.9541 ± 0.0901
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

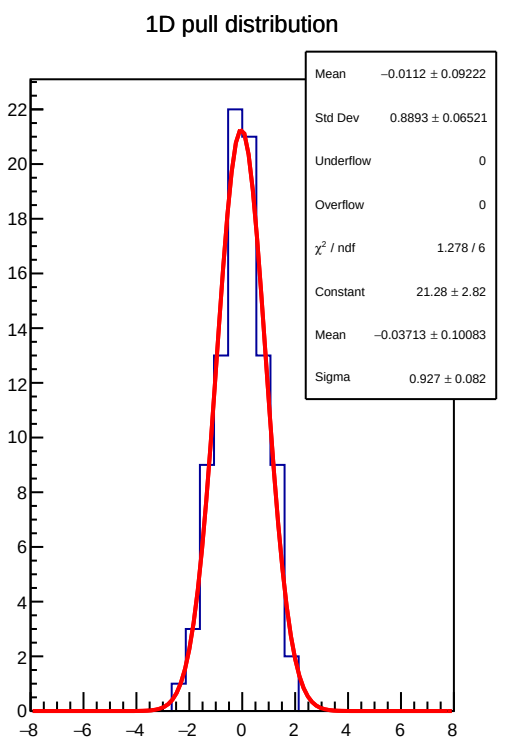

diff_bpm4aY RMS (um)
RMS (um)
12
11
10
9
8
7
6
5
4
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2

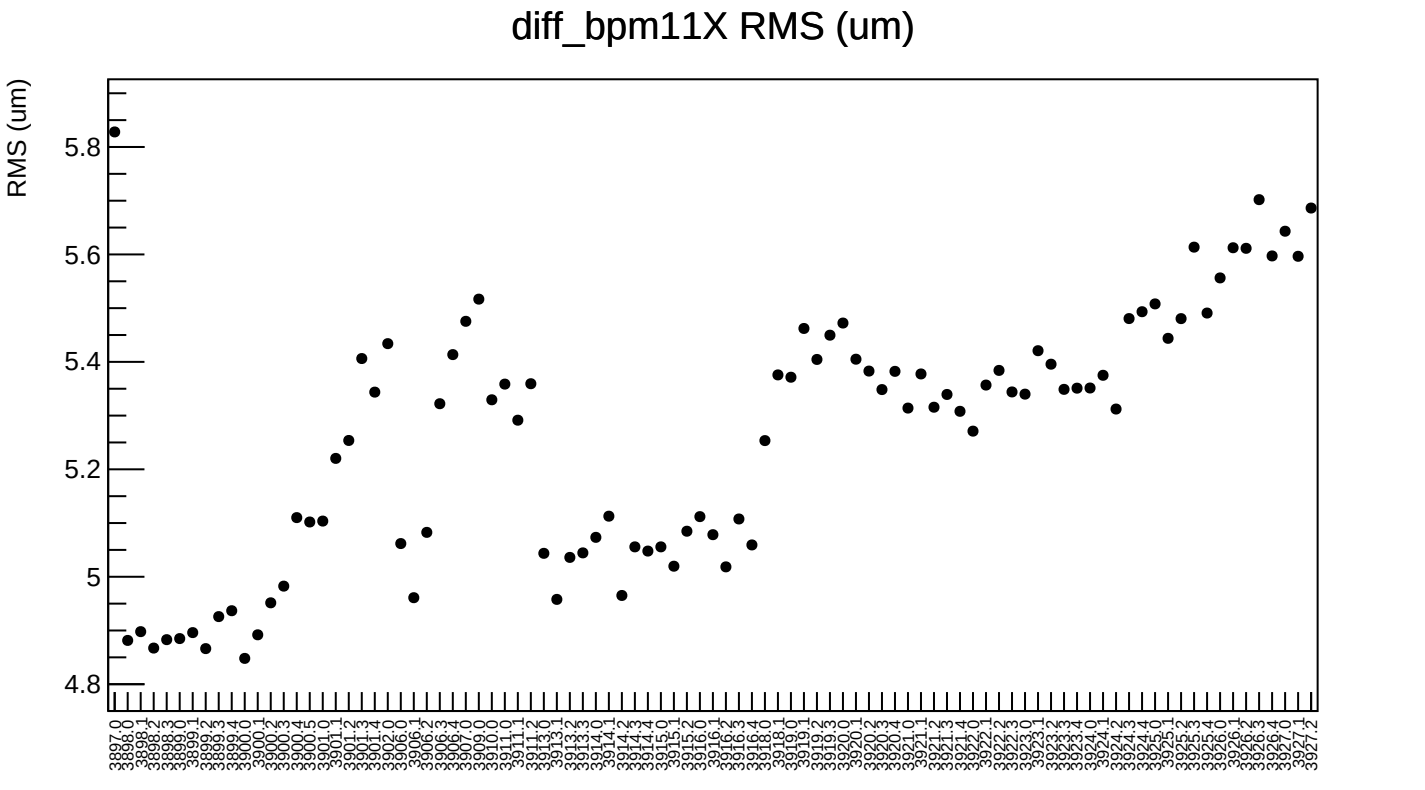

diff_bpm4eY (nm)
χ² / ndf 97.77 / 92
p0 0.2249 ± 4.895

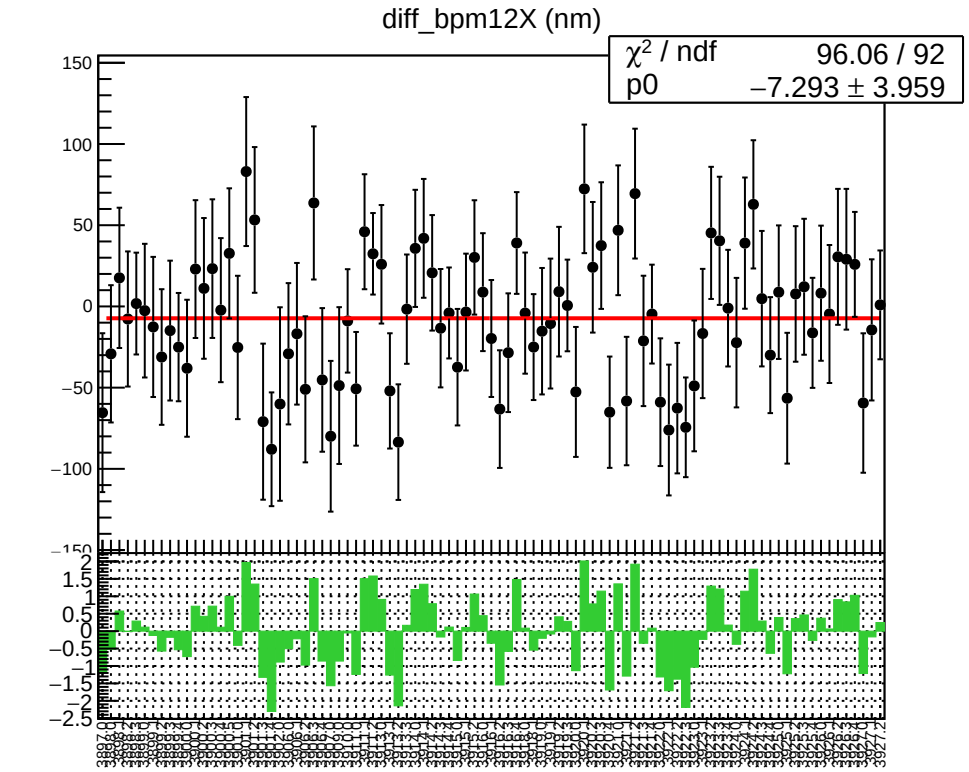

1D pull distribution
Mean 0.004188 ± 0.1063
Std Dev 1.025 ± 0.07518
Underflow 0
Overflow 0
χ² / ndf 5.243 / 8
Constant 19 ± 2.6
Mean −0.003193 ± 0.108955
Sigma 0.9864 ± 0.0832

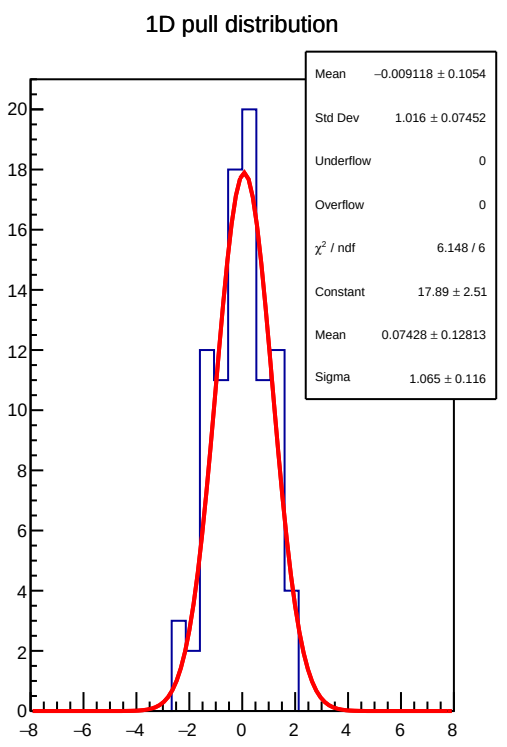

diff_bpm4eY RMS (um)
RMS (um)
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.0
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2

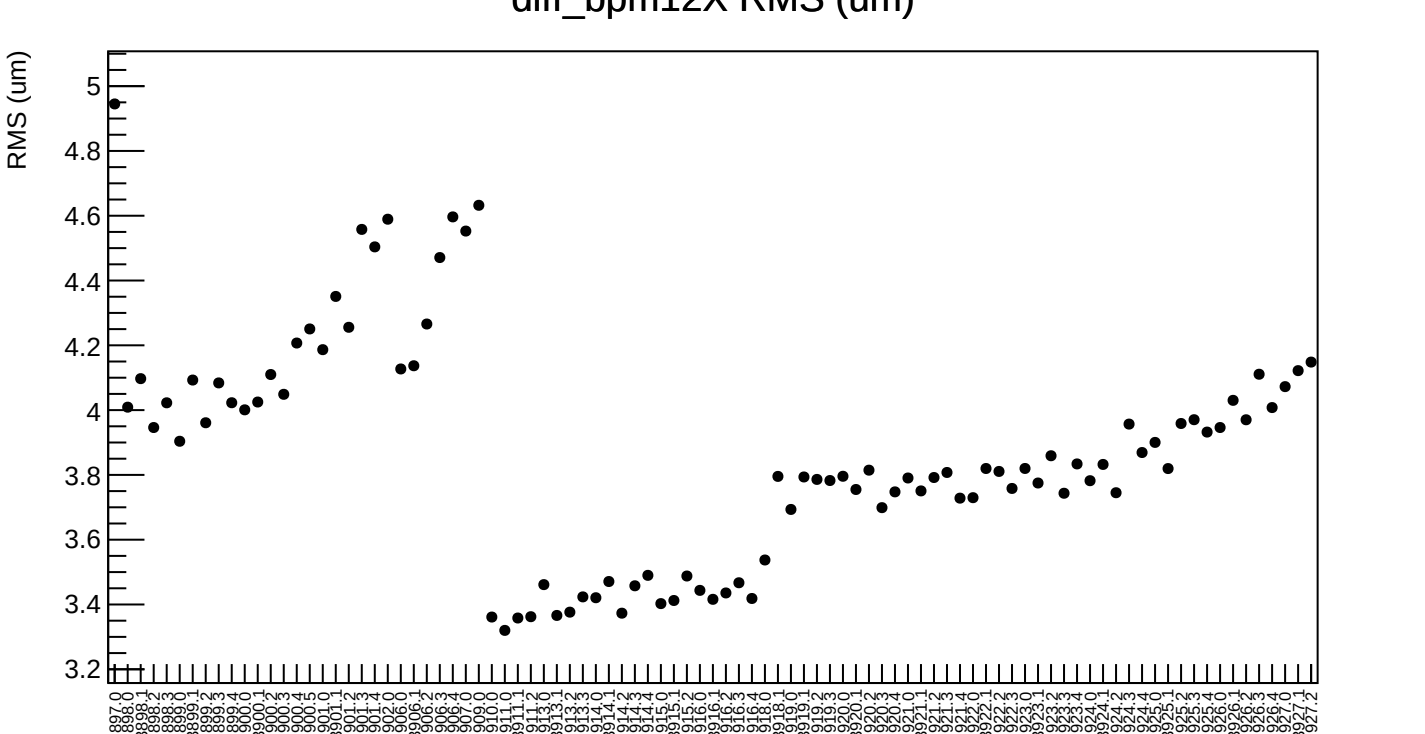

diff_bpm11X (nm)
χ² / ndf 73.56 / 92
p0 −5.093 ± 5.433


1D pull distribution
Mean −0.0112 ± 0.09222
Std Dev 0.8893 ± 0.06521
Underflow 0
Overflow 0
χ² / ndf 1.278 / 6
Constant 21.28 ± 2.82
Mean −0.03713 ± 0.10083
Sigma 0.927 ± 0.082


diff_bpm11X RMS (um)
RMS (um)
5.8
5.6
5.4
5.2
5
4.8
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2


diff_bpm12X (nm)
χ² / ndf 96.06 / 92
p0 −7.293 ± 3.959


1D pull distribution
Mean −0.009118 ± 0.1054
Std Dev 1.016 ± 0.07452
Underflow 0
Overflow 0
χ² / ndf 6.148 / 6
Constant 17.89 ± 2.51
Mean 0.07428 ± 0.12813
Sigma 1.065 ± 0.116


diff_bpm12X RMS (um)
RMS (um)
5
4.8
4.6
4.4
4.2
4
3.8
3.6
3.4
3.2
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
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3922.3
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3923.1
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3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
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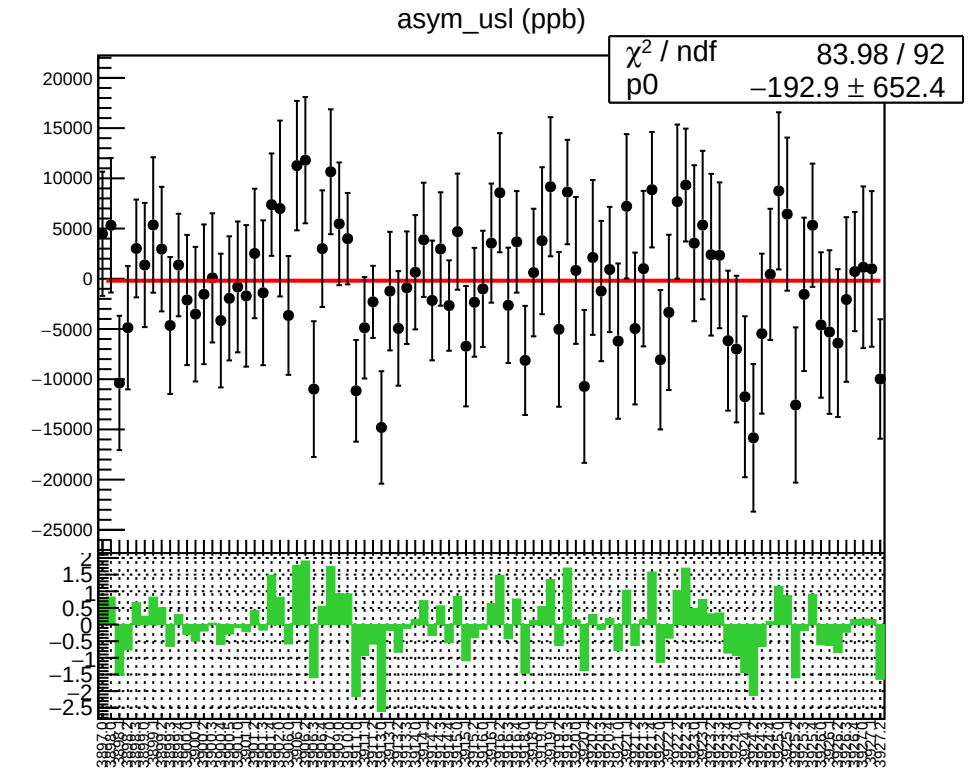
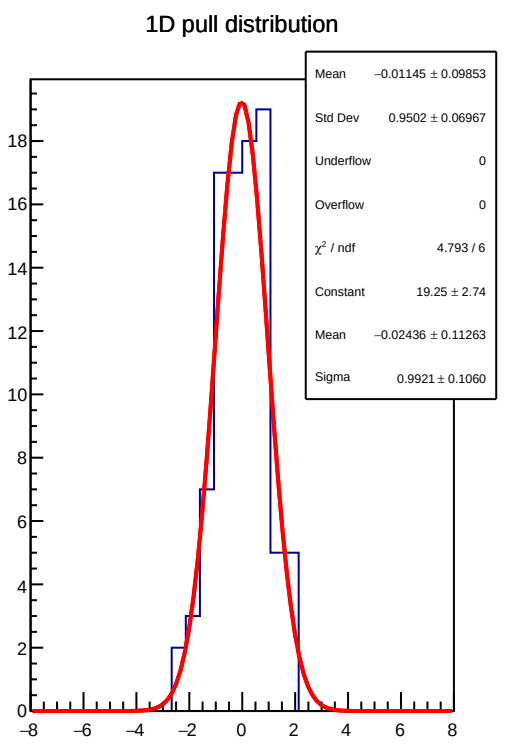
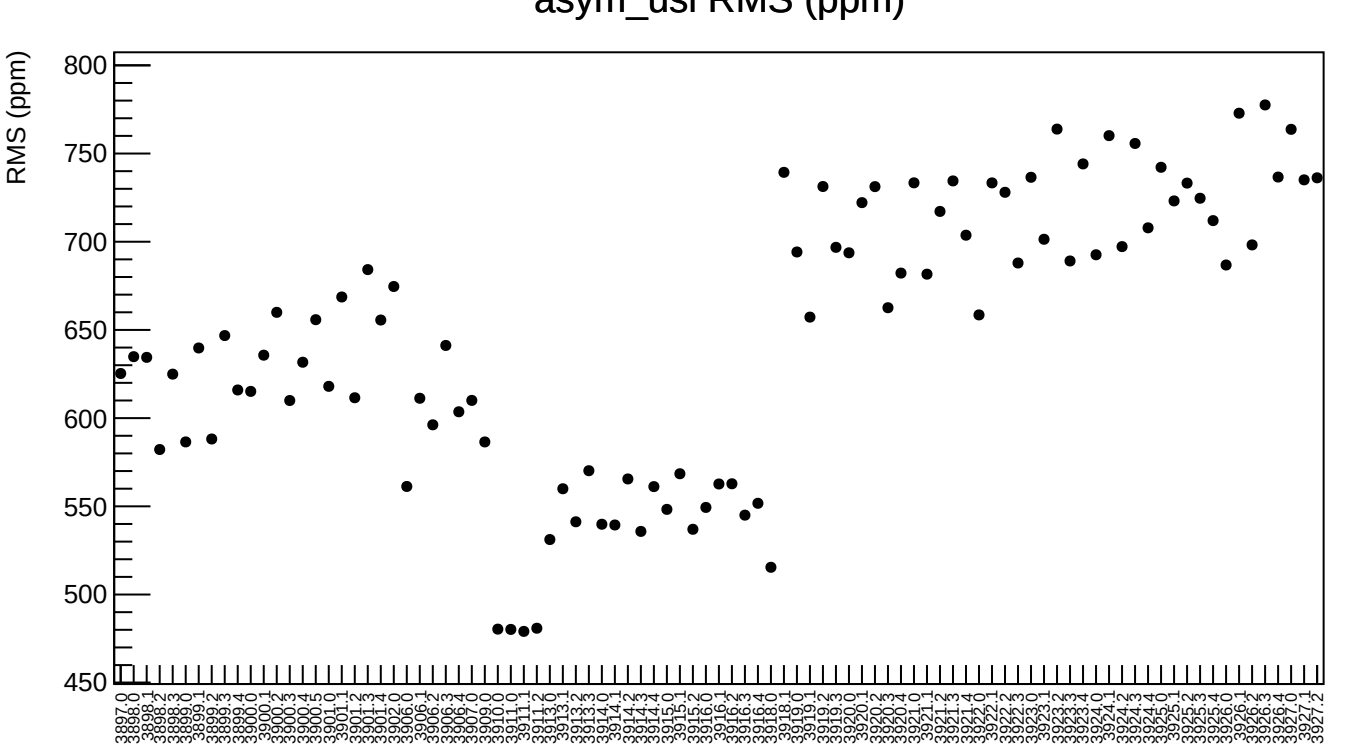
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2


asym_usl (ppb)
χ² / ndf 83.98 / 92
p0 −192.9 ± 652.4


1D pull distribution
Mean −0.01145 ± 0.09853
Std Dev 0.9502 ± 0.06967
Underflow 0
Overflow 0
χ² / ndf 4.793 / 6
Constant 19.25 ± 2.74
Mean −0.02436 ± 0.11263
Sigma 0.9921 ± 0.1060


asym_usl RMS (ppm)
RMS (ppm)
800
750
700
650
600
550
500
450
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.0
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
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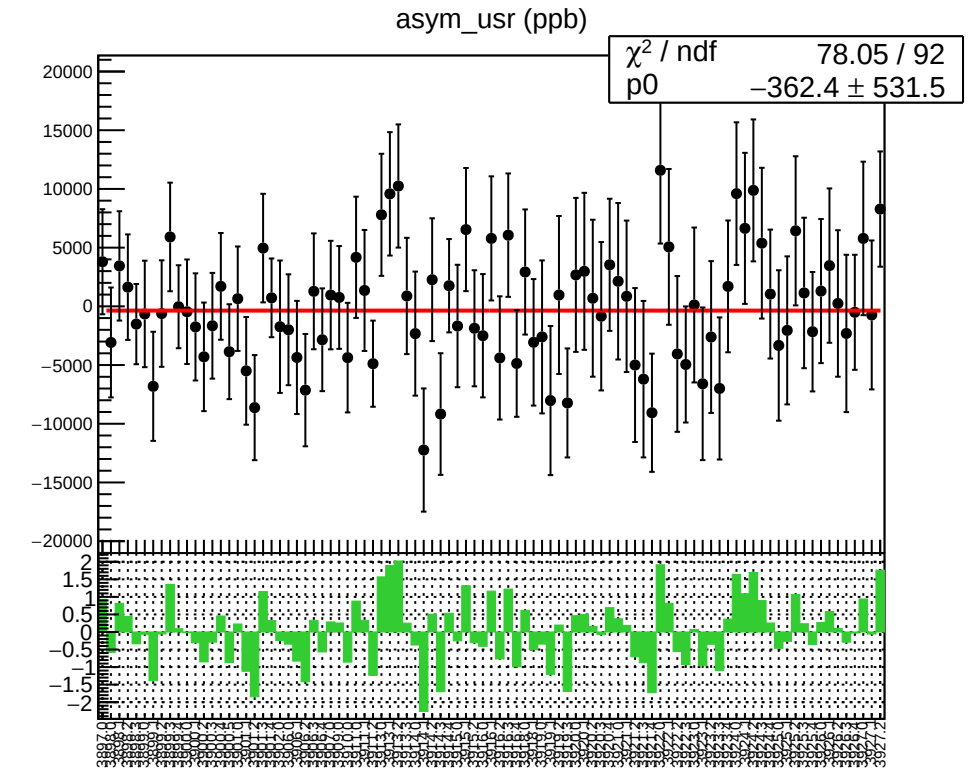
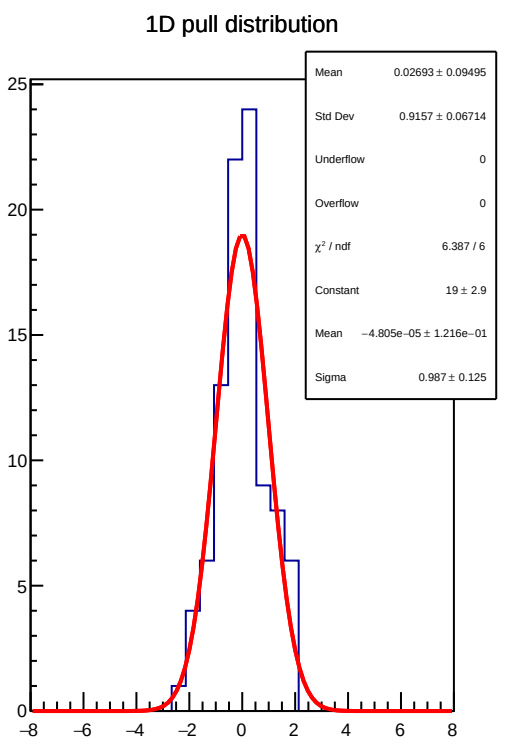
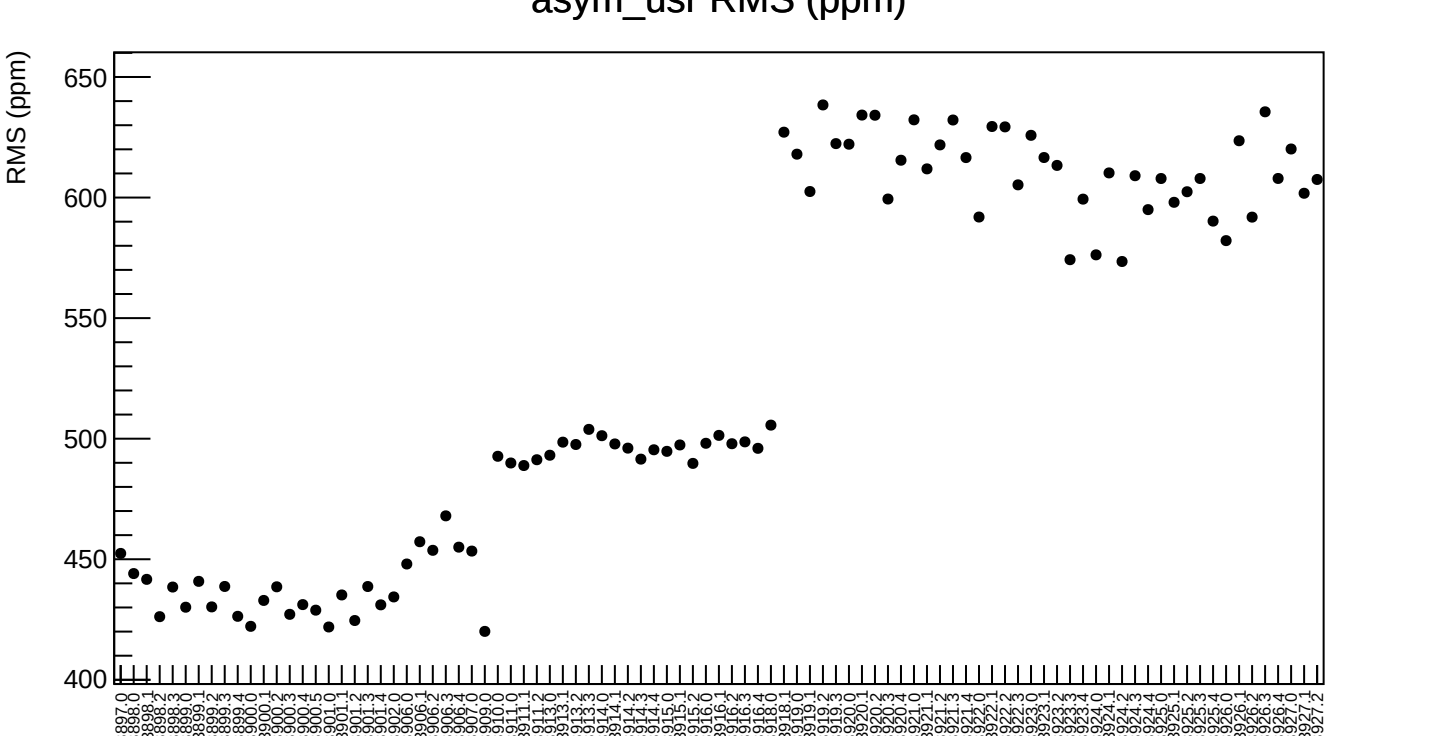
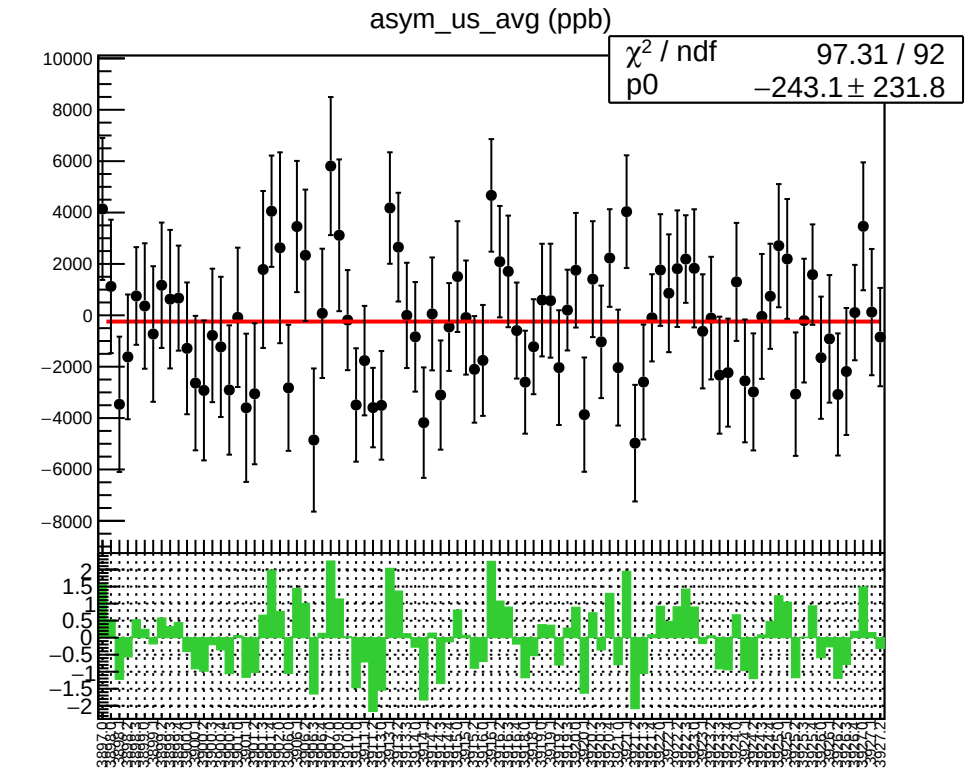
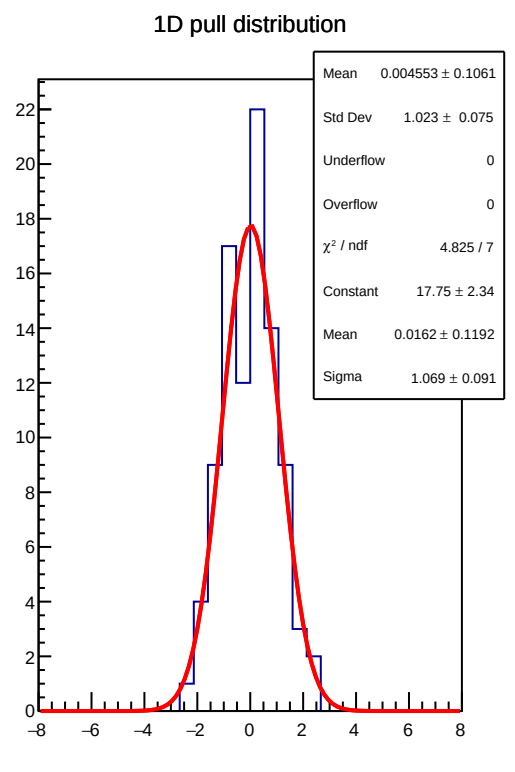
3926.0
3926.1
3926.2
3926.3
3926.4
3927.0
3927.1
3927.2

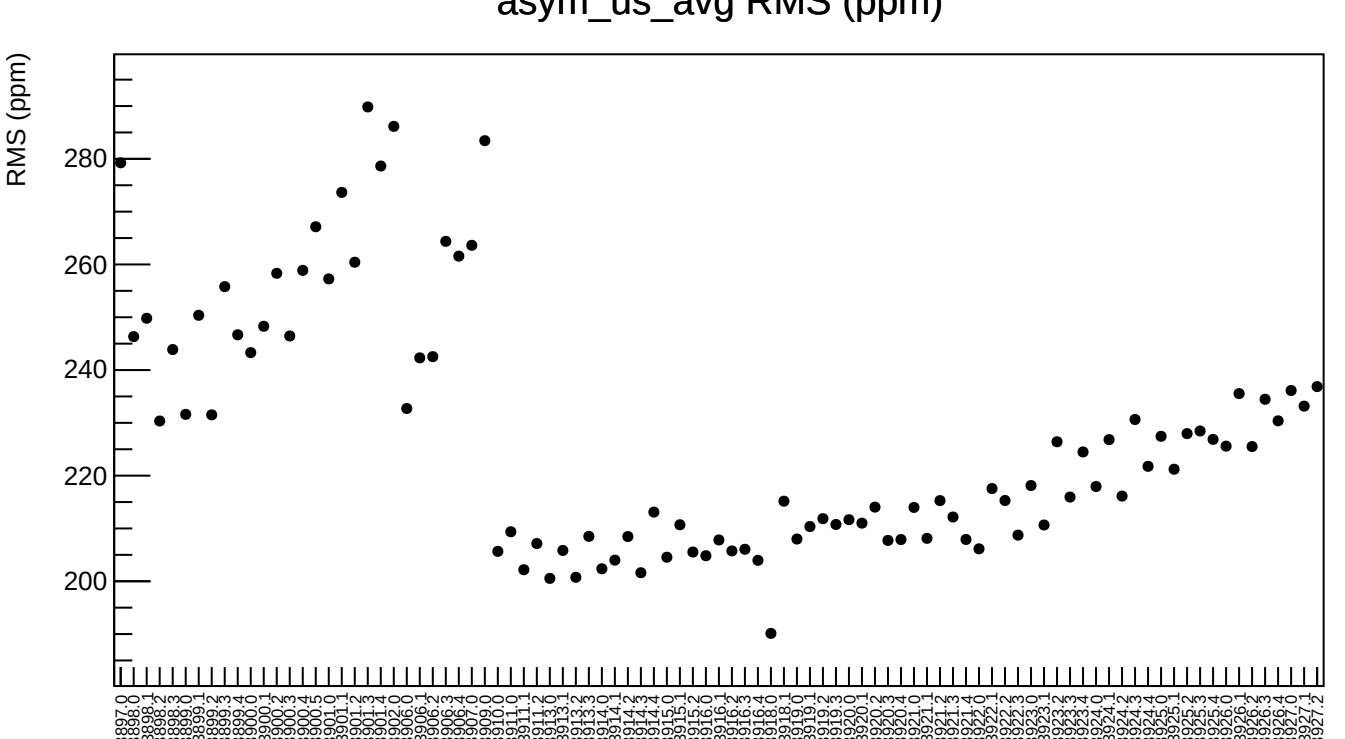

asym_usr (ppb)
χ² / ndf 78.05 / 92
p0 −362.4 ± 531.5

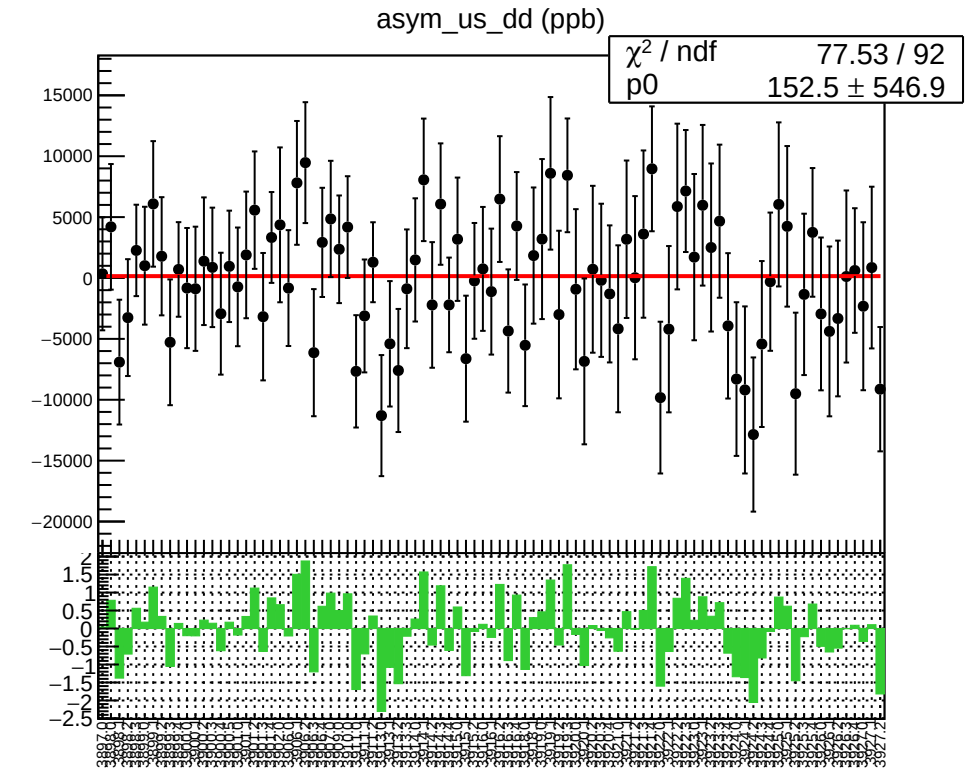

1D pull distribution
Mean 0.02693 ± 0.09495
Std Dev 0.9157 ± 0.06714
Underflow 0
Overflow 0
χ² / ndf 6.387 / 6
Constant 19 ± 2.9
Mean −4.805e−05 ± 1.216e−01
Sigma 0.987 ± 0.125

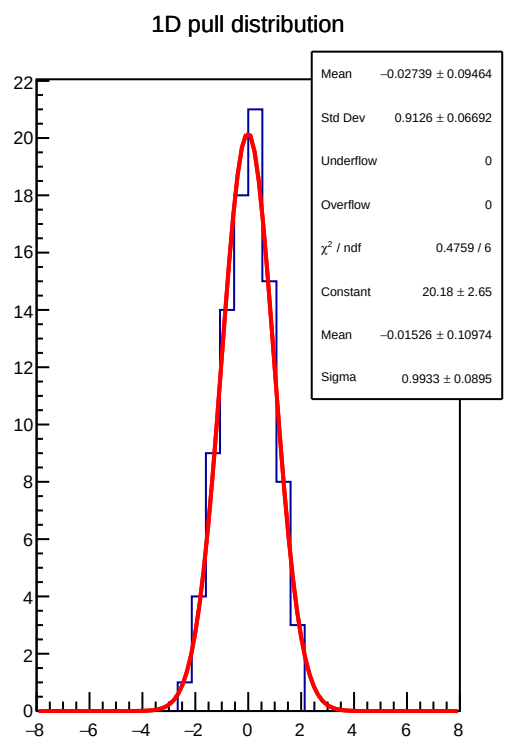

asym_usr RMS (ppm)
RMS (ppm)
650
600
550
500
450
400
3897.0
3898.0
3898.1
3898.2
3898.3
3899.0
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.0
3927.1
3927.2

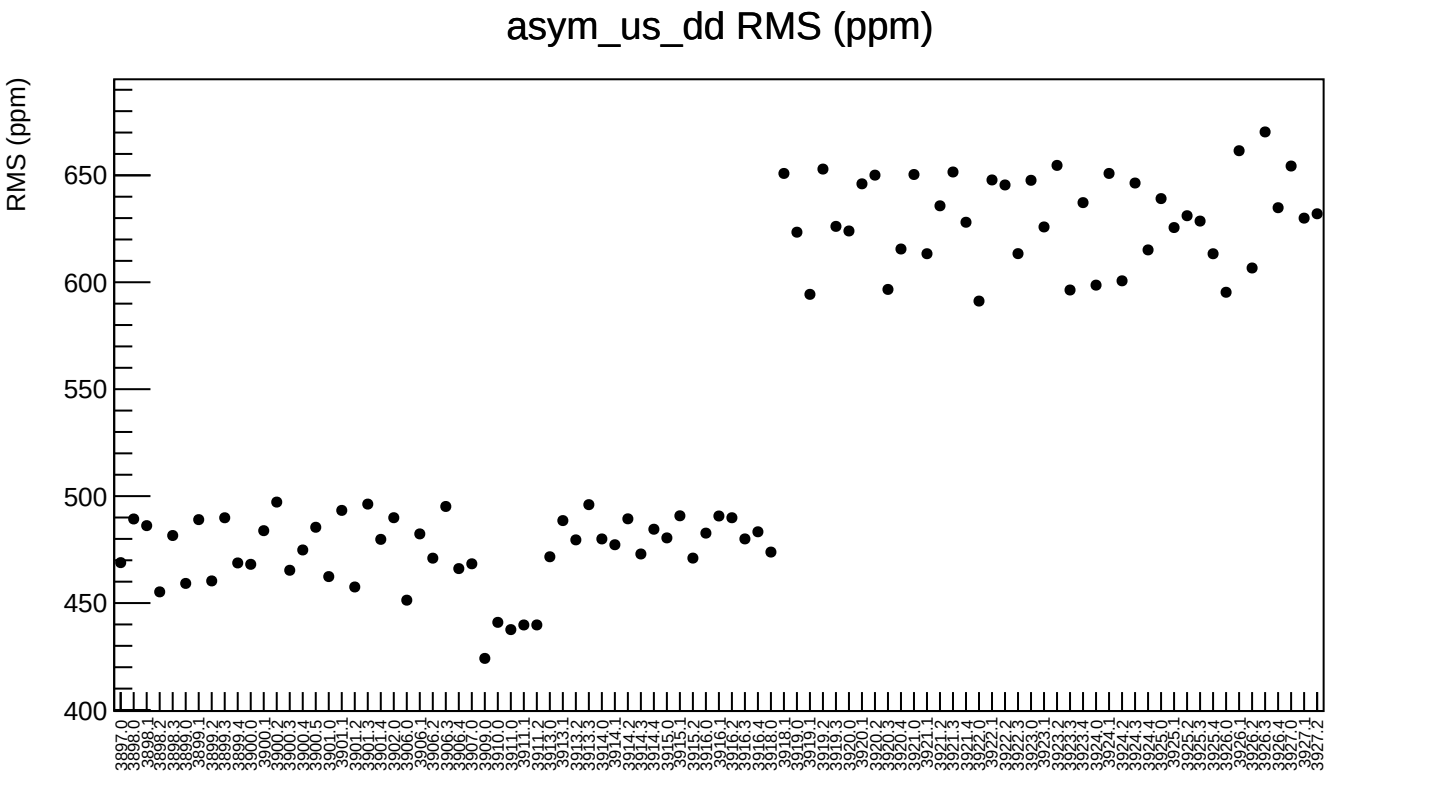

asym_us_avg (ppb)
χ² / ndf 97.31 / 92
p0 −243.1 ± 231.8
10000
8000
6000
4000
2000
0
−2000
−4000
−6000
−8000
2
1.5
0.5
0
−0.5
−1
−1.5
−2

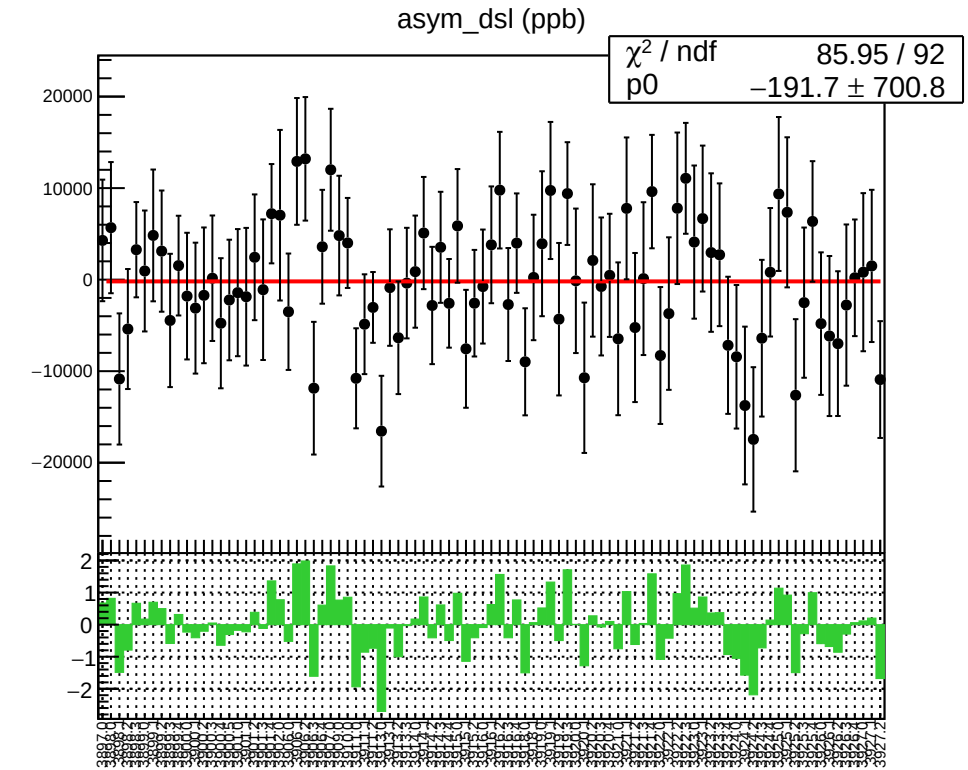

1D pull distribution
Mean 0.004553 ± 0.1061
Std Dev 1.023 ± 0.075
Underflow 0
Overflow 0
χ² / ndf 4.825 / 7
Constant 17.75 ± 2.34
Mean 0.0162 ± 0.1192
Sigma 1.069 ± 0.091
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

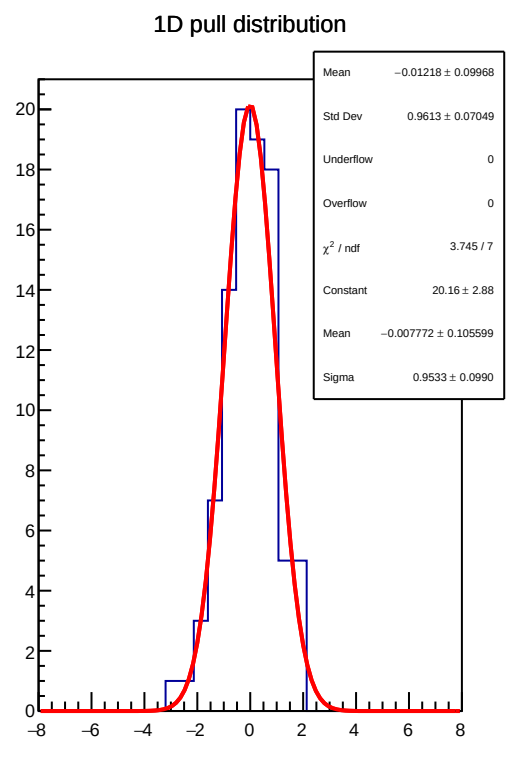

asym_us_avg RMS (ppm)
RMS (ppm)
280
260
240
220
200
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2

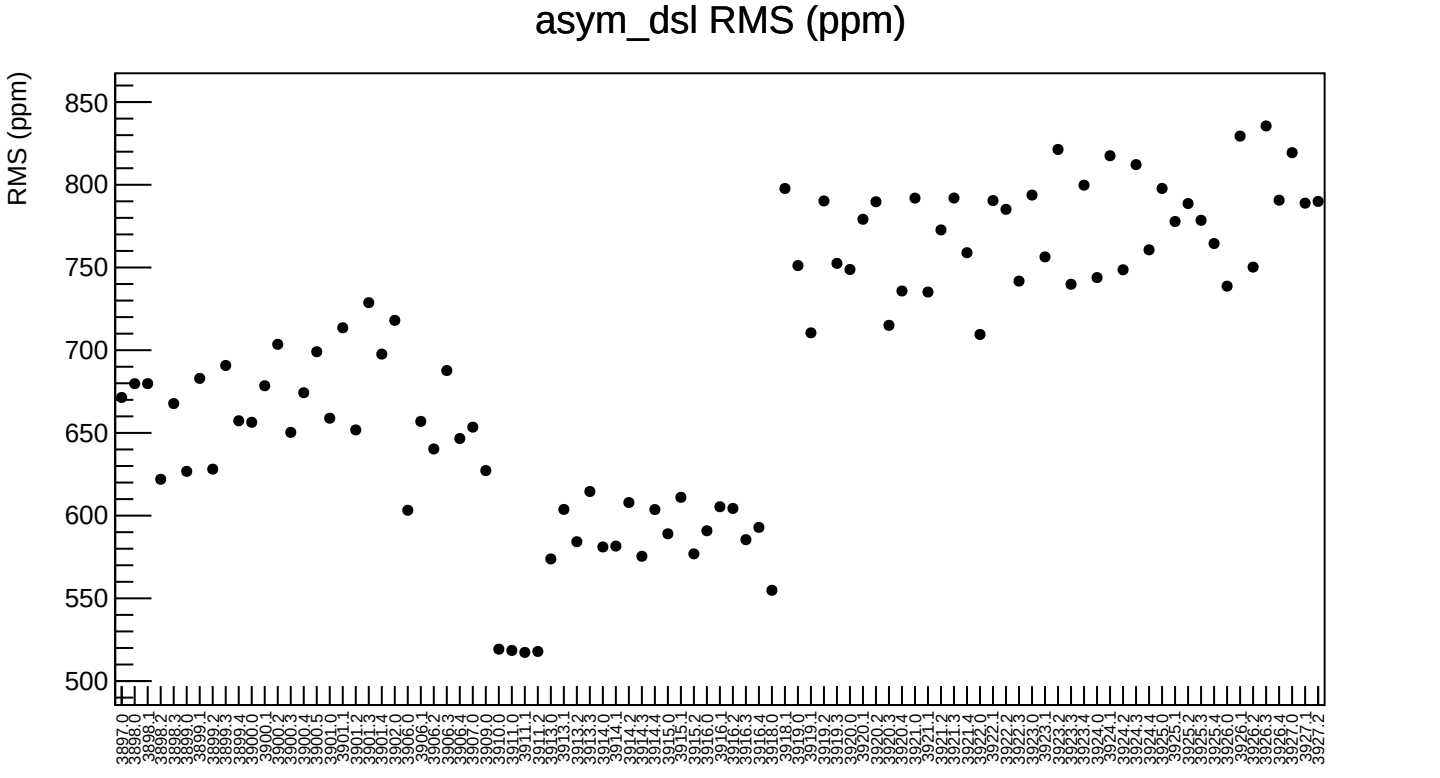

asym_us_dd (ppb)
χ² / ndf 77.53 / 92
p0 152.5 ± 546.9

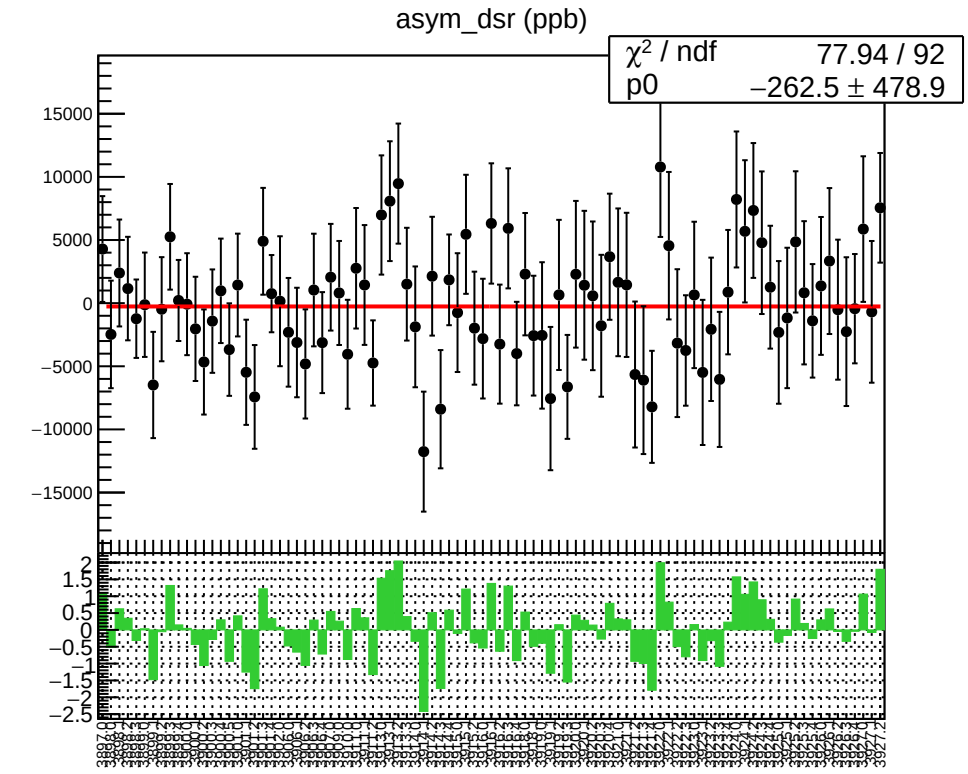

1D pull distribution
Mean −0.02739 ± 0.09464
Std Dev 0.9126 ± 0.06692
Underflow 0
Overflow 0
χ² / ndf 0.4759 / 6
Constant 20.18 ± 2.65
Mean −0.01526 ± 0.10974
Sigma 0.9933 ± 0.0895

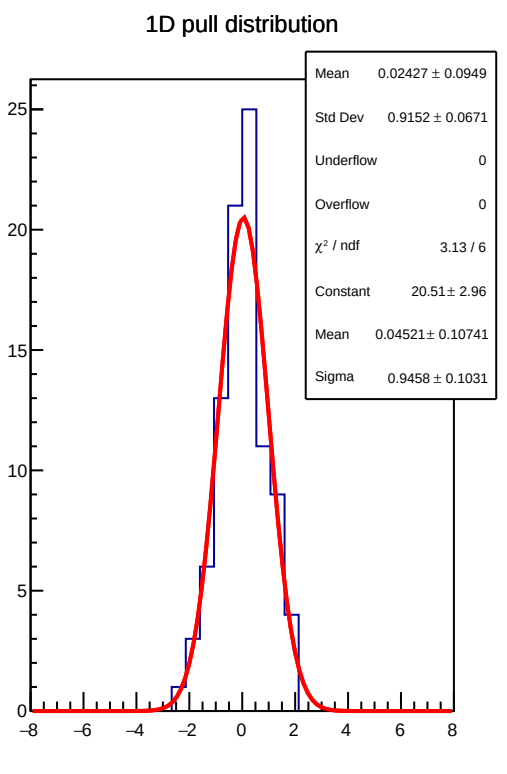

asym_us_dd RMS (ppm)
RMS (ppm)
400
450
500
550
600
650
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.0
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2

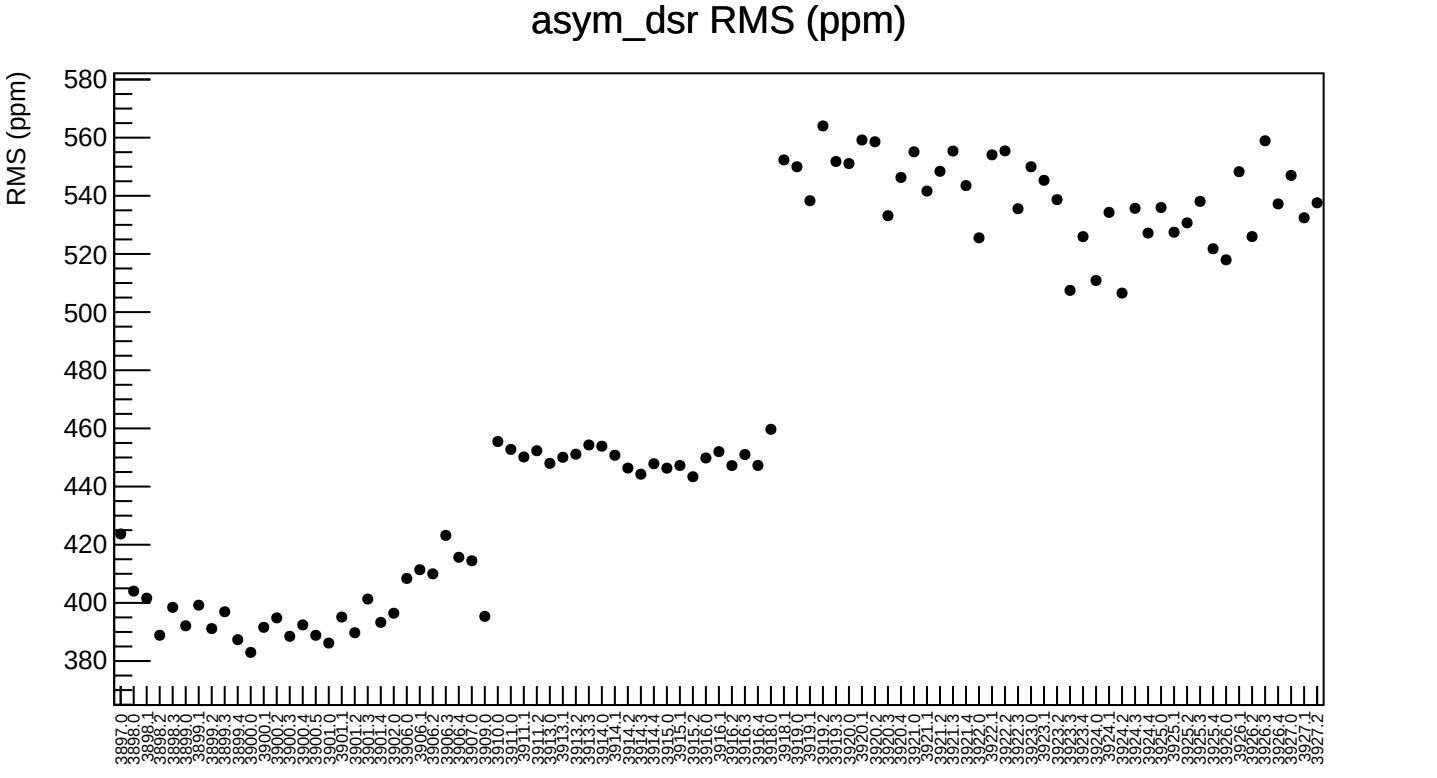

asym_dsl (ppb)
χ² / ndf 85.95 / 92
p0 −191.7 ± 700.8
20000
10000
0
−10000
−20000
2
1
0
−1
−2

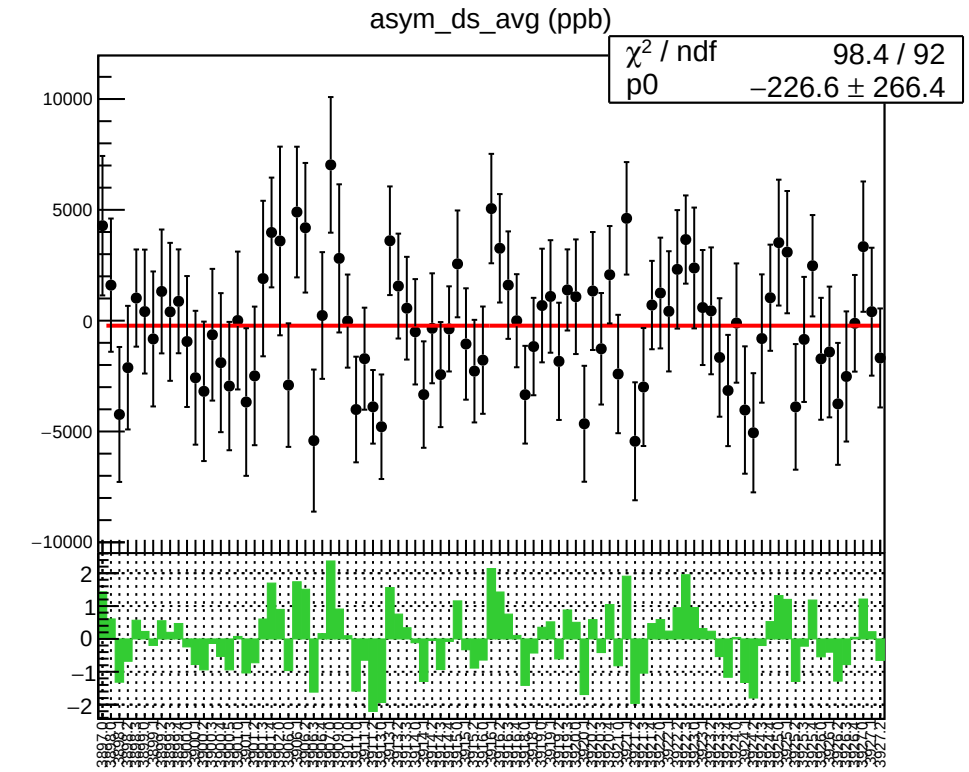

1D pull distribution
Mean −0.01218 ± 0.09968
Std Dev 0.9613 ± 0.07049
Underflow 0
Overflow 0
χ² / ndf 3.745 / 7
Constant 20.16 ± 2.88
Mean −0.007772 ± 0.105599
Sigma 0.9533 ± 0.0990
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

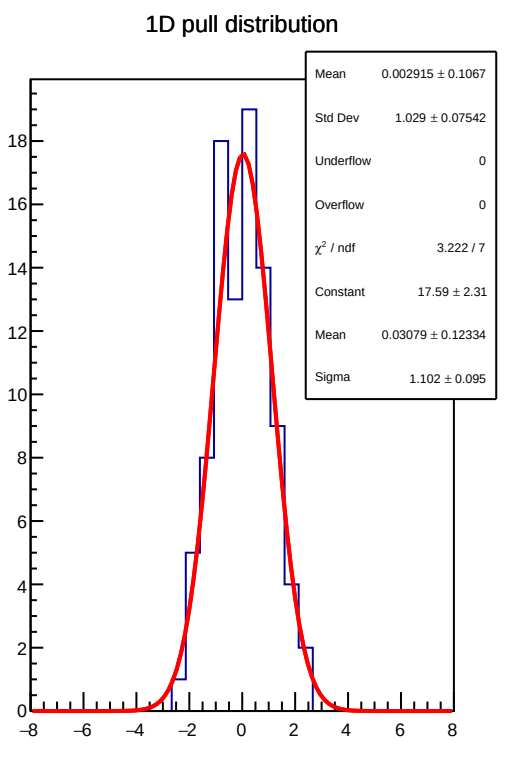

asym_dsl RMS (ppm)
RMS (ppm)
850
800
750
700
650
600
550
500
3897.0
3898.0
3898.1
3898.2
3898.3
3899.0
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.0
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.0
3927.1
3927.2

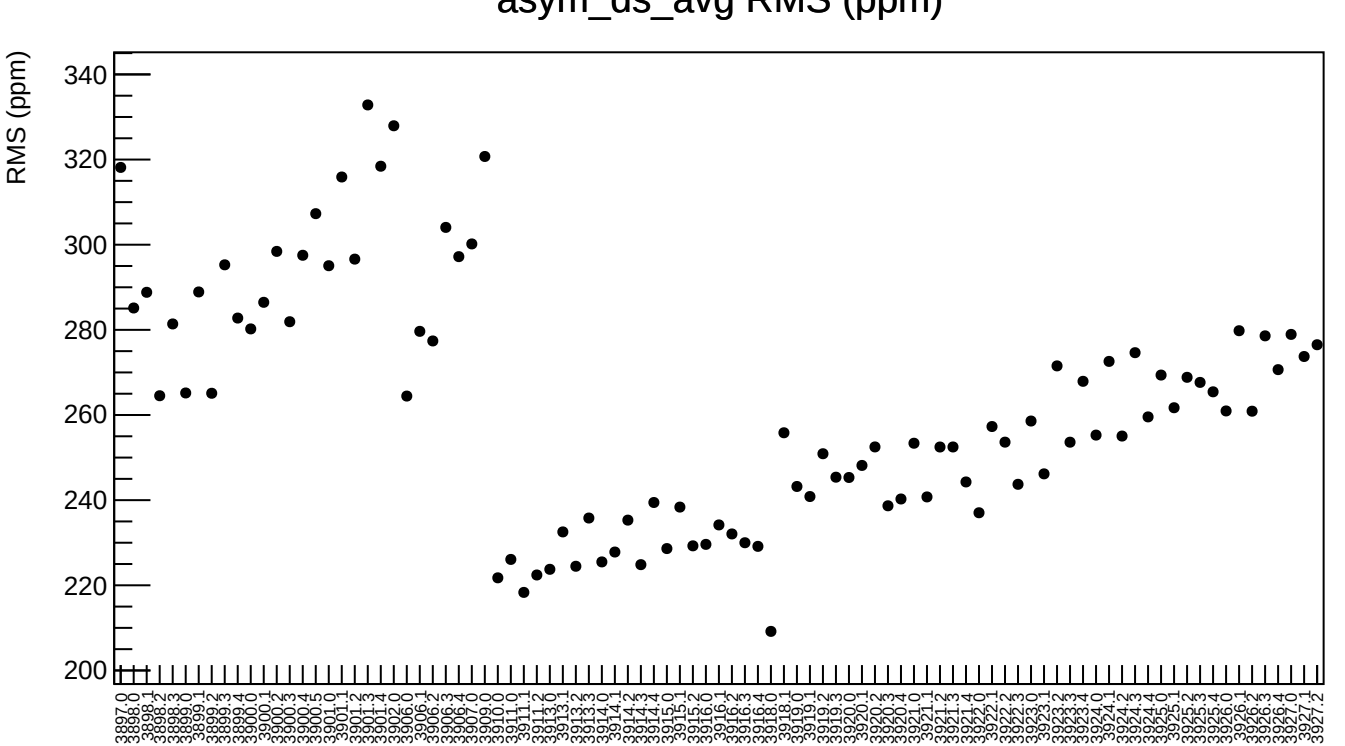

asym_dsr (ppb)
χ² / ndf 77.94 / 92
p0 −262.5 ± 478.9
15000
10000
5000
0
−5000
−10000
−15000
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5

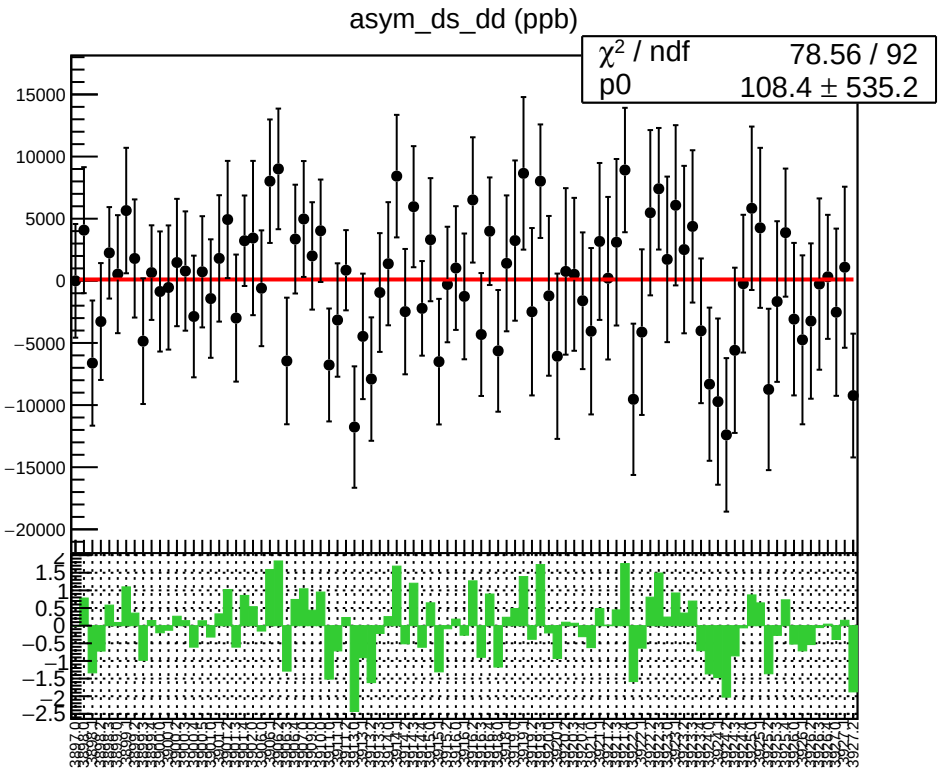

1D pull distribution
Mean 0.02427 ± 0.0949
Std Dev 0.9152 ± 0.0671
Underflow 0
Overflow 0
χ² / ndf 3.13 / 6
Constant 20.51 ± 2.96
Mean 0.04521 ± 0.10741
Sigma 0.9458 ± 0.1031
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

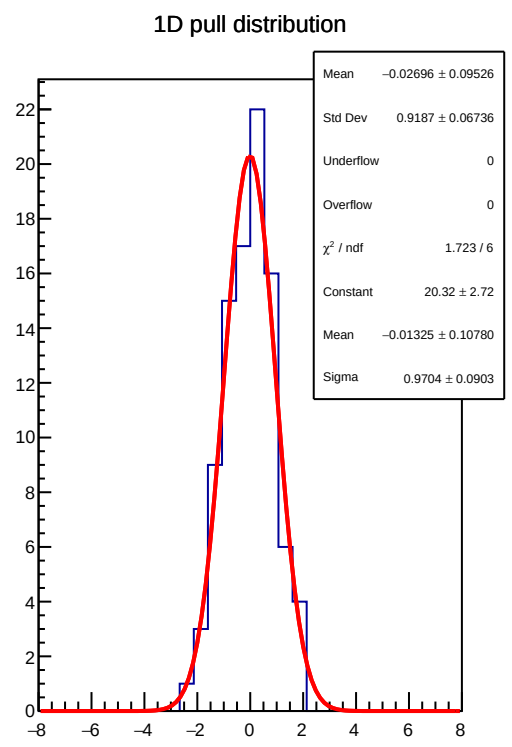

asym_dsr RMS (ppm)
RMS (ppm)
580
560
540
520
500
480
460
440
420
400
380
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3916.0
3916.1
3916.2
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.0
3927.1
3927.2

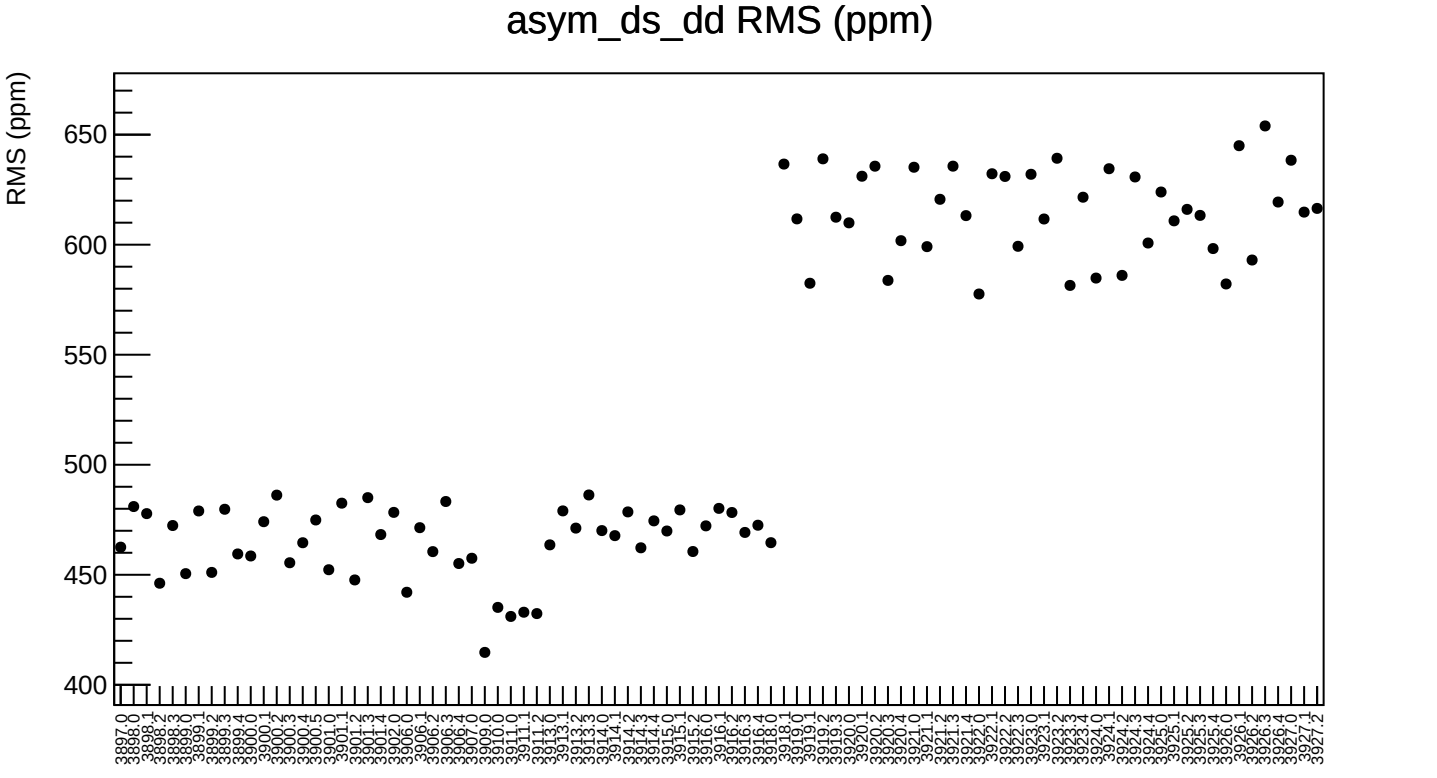

asym_ds_avg (ppb)
χ² / ndf 98.4 / 92
p0 −226.6 ± 266.4
10000
5000
0
−5000
−10000
2
1
0
−1
−2

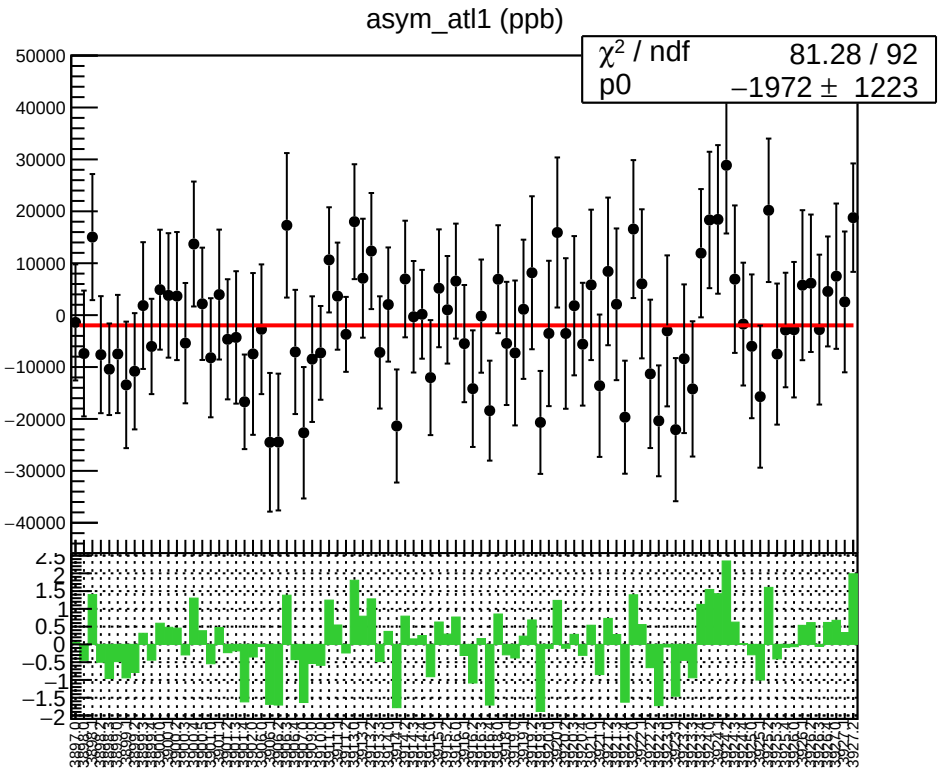

1D pull distribution
Mean 0.002915 ± 0.1067
Std Dev 1.029 ± 0.07542
Underflow 0
Overflow 0
χ² / ndf 3.222 / 7
Constant 17.59 ± 2.31
Mean 0.03079 ± 0.12334
Sigma 1.102 ± 0.095
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

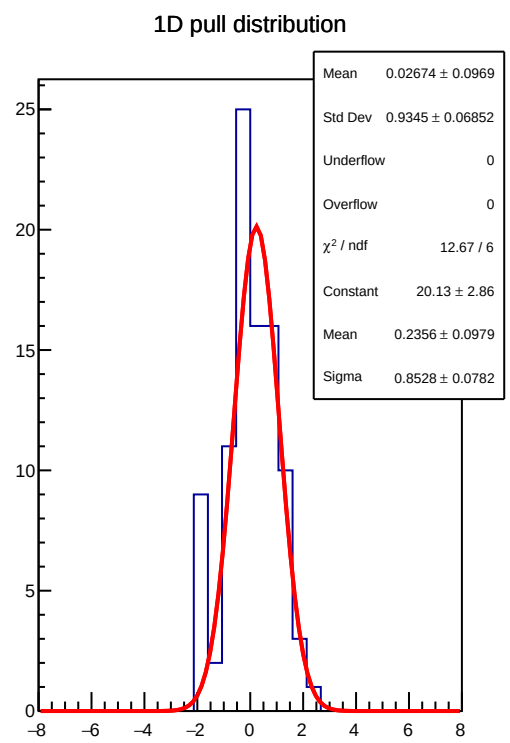

asym_ds_avg RMS (ppm)
RMS (ppm)
340
320
300
280
260
240
220
200
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2

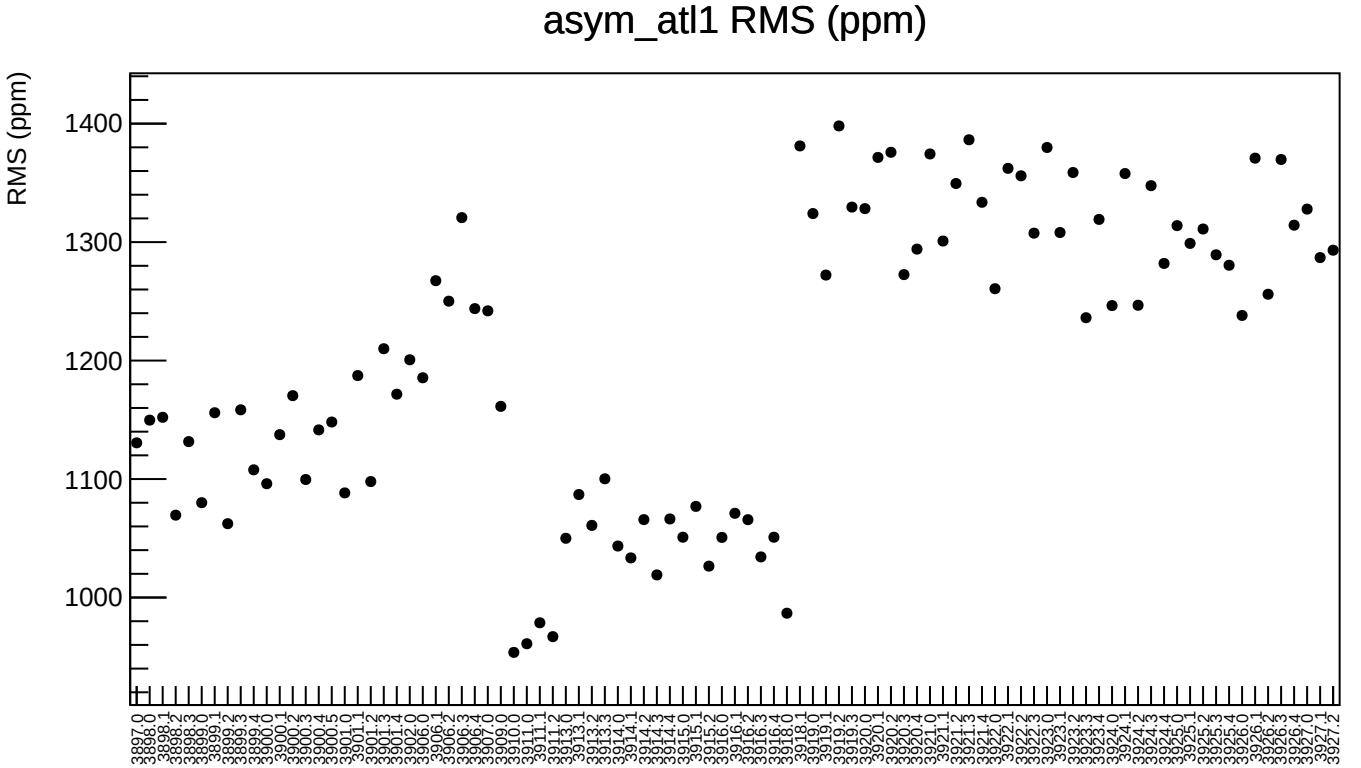

asym_ds_dd (ppb)
χ² / ndf 78.56 / 92
p0 108.4 ± 535.2
15000
10000
5000
0
−5000
−10000
−15000
−20000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5

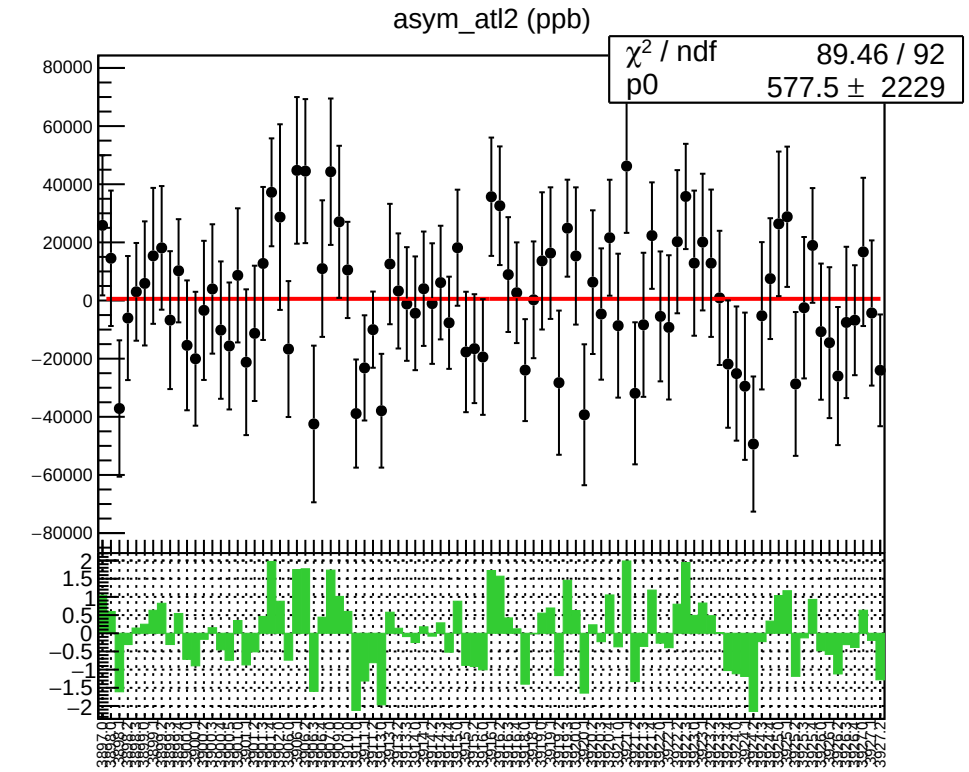

1D pull distribution
Mean −0.02696 ± 0.09526
Std Dev 0.9187 ± 0.06736
Underflow 0
Overflow 0
χ² / ndf 1.723 / 6
Constant 20.32 ± 2.72
Mean −0.01325 ± 0.10780
Sigma 0.9704 ± 0.0903
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

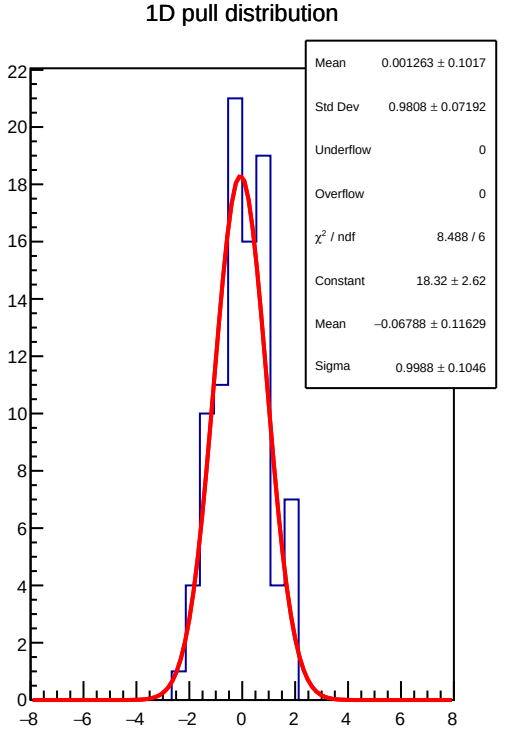

asym_ds_dd RMS (ppm)
RMS (ppm)
400
450
500
550
600
650
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2

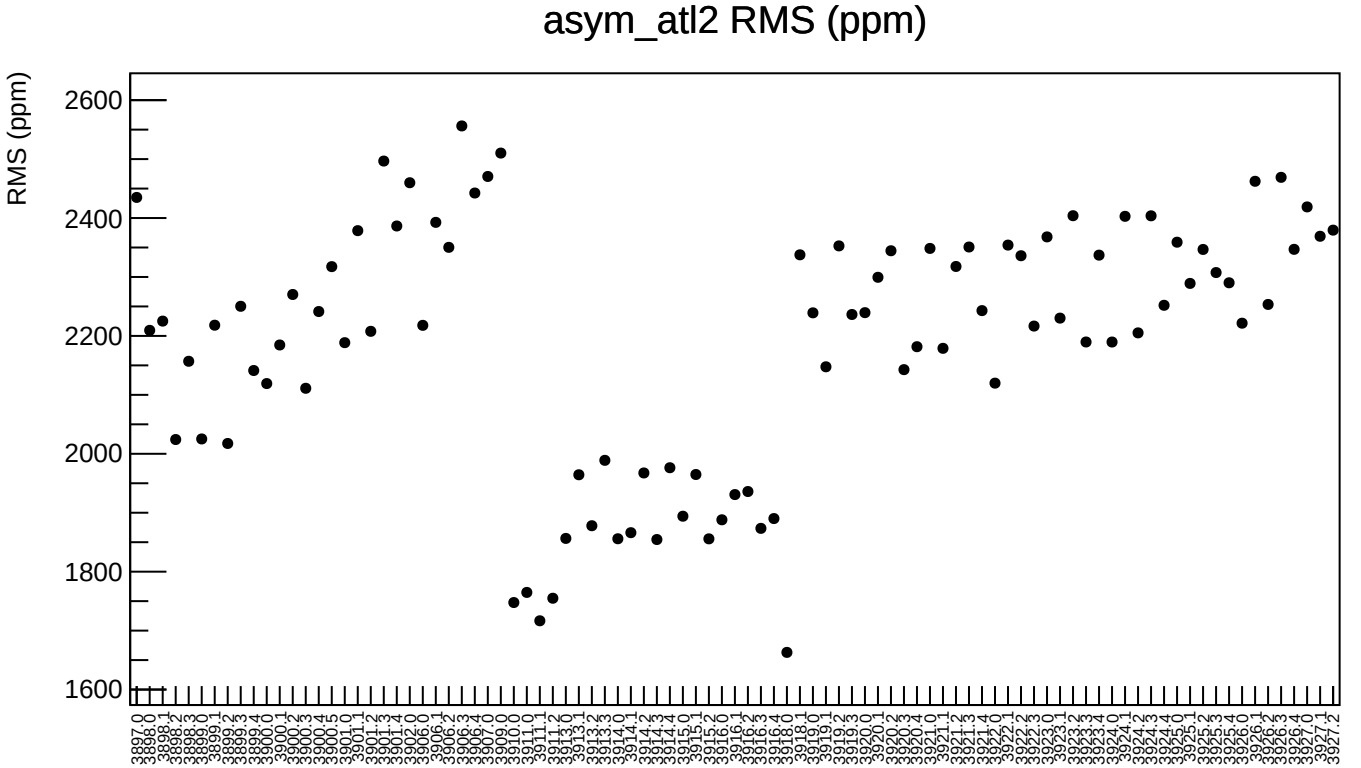

asym_atl1 (ppb)
χ² / ndf 81.28 / 92
p0 −1972 ± 1223

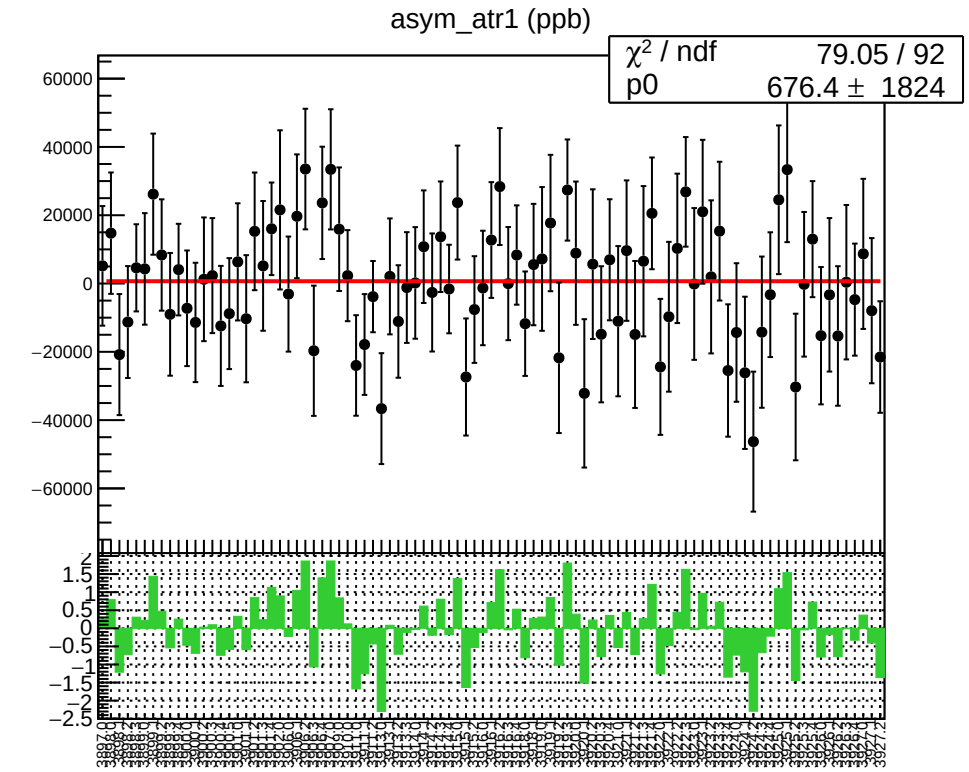

1D pull distribution
Mean 0.02674 ± 0.0969
Std Dev 0.9345 ± 0.06852
Underflow 0
Overflow 0
χ² / ndf 12.67 / 6
Constant 20.13 ± 2.86
Mean 0.2356 ± 0.0979
Sigma 0.8528 ± 0.0782

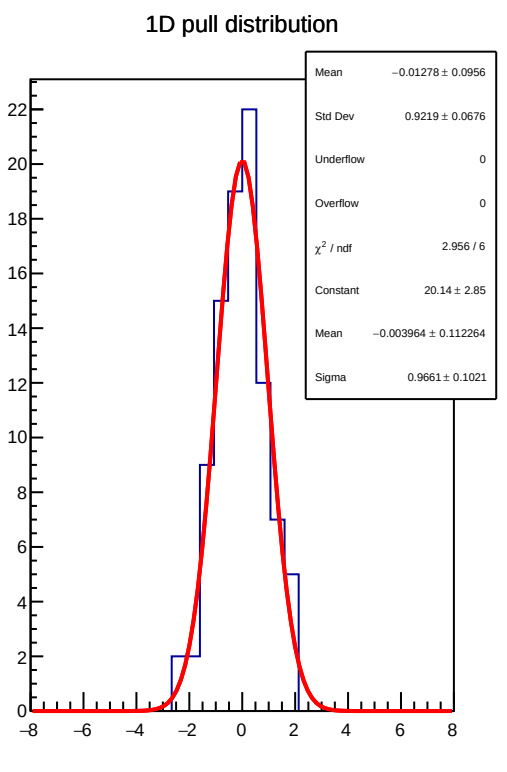

asym_atl1 RMS (ppm)
RMS (ppm)
1400
1300
1200
1100
1000
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3901.4
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.1
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2

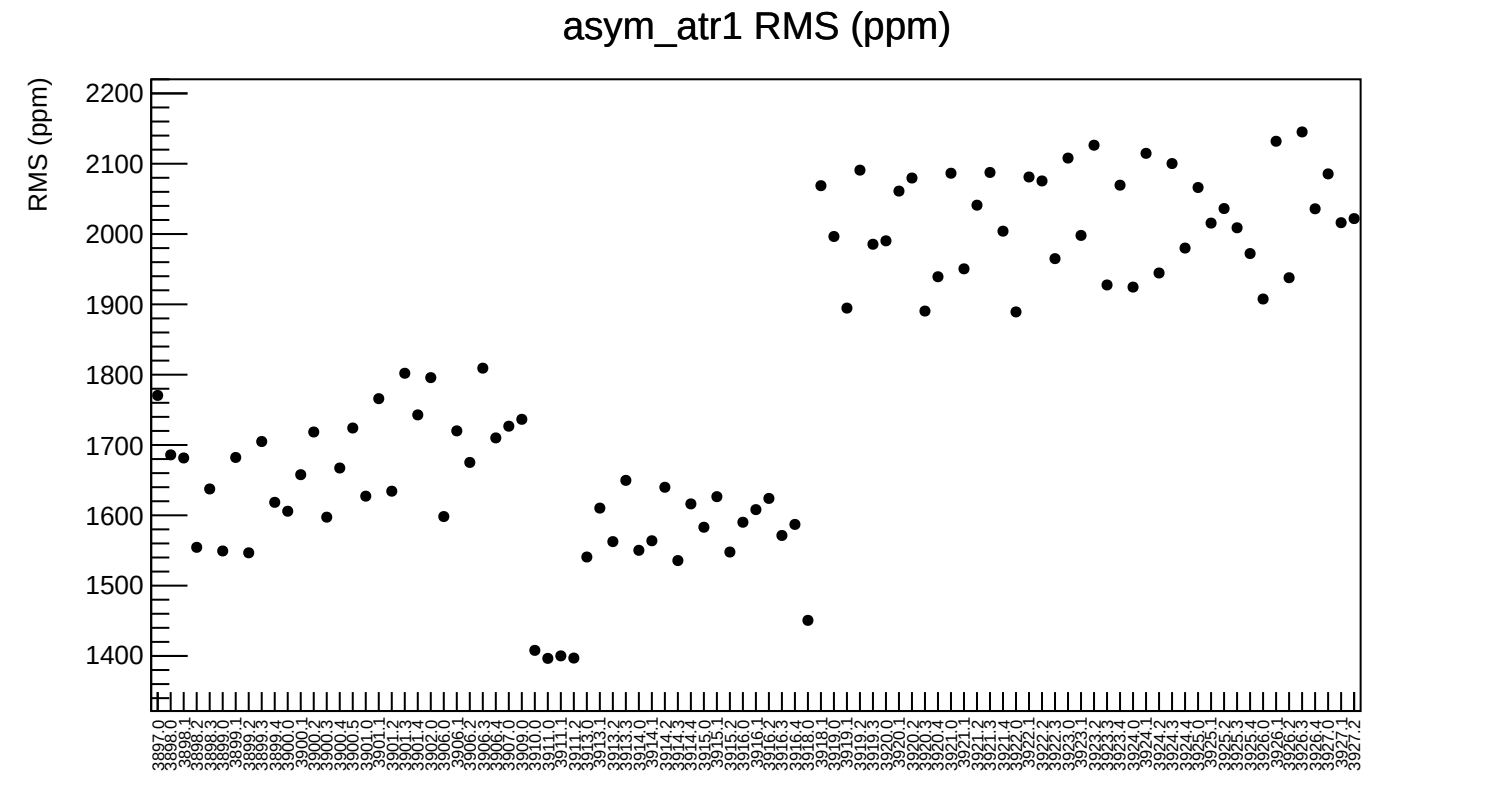

asym_atl2 (ppb)
χ² / ndf 89.46 / 92
p0 577.5 ± 2229
80000
60000
40000
20000
0
−20000
−40000
−60000
−80000
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2

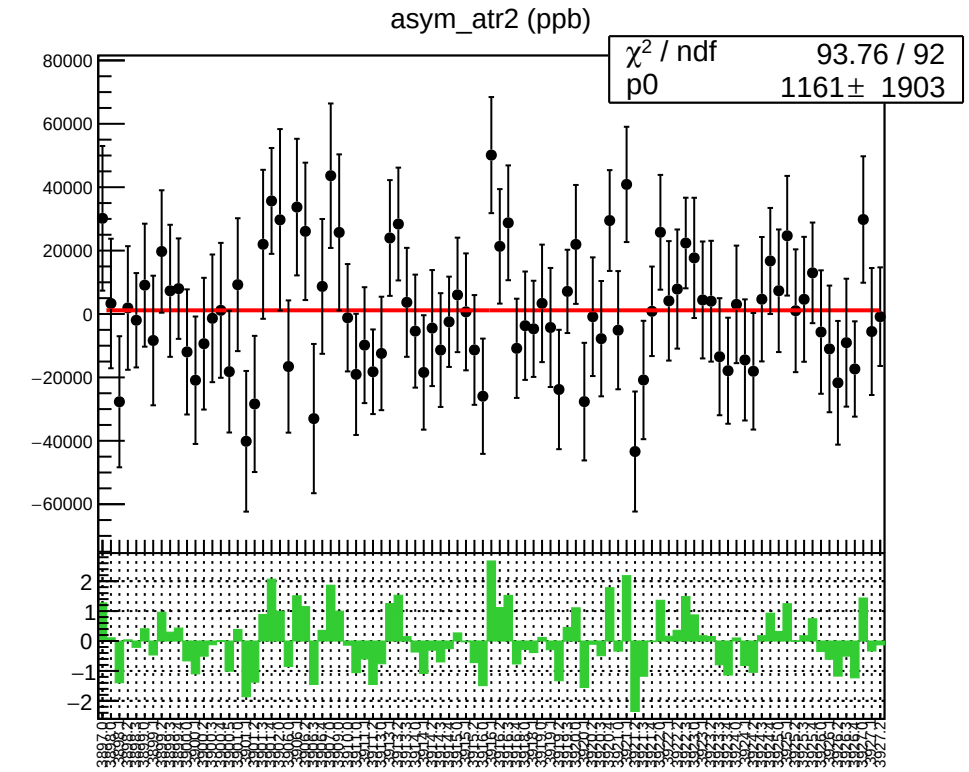

1D pull distribution
Mean 0.001263 ± 0.1017
Std Dev 0.9808 ± 0.07192
Underflow 0
Overflow 0
χ² / ndf 8.488 / 6
Constant 18.32 ± 2.62
Mean −0.06788 ± 0.11629
Sigma 0.9988 ± 0.1046
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

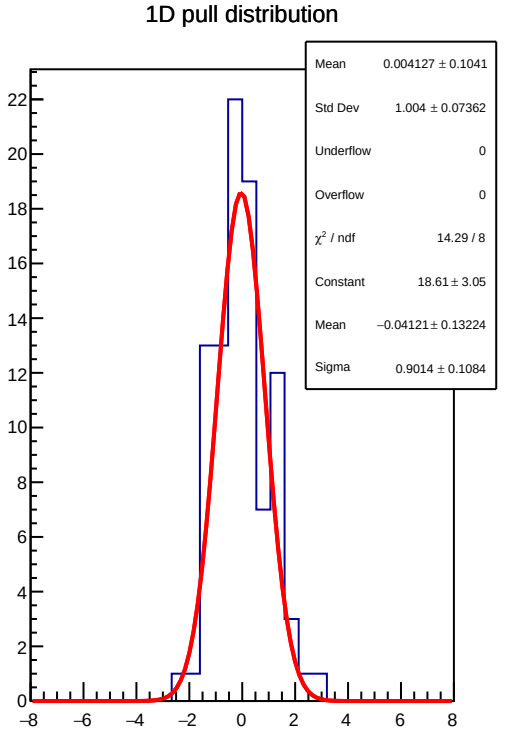

asym_atl2 RMS (ppm)
RMS (ppm)
2600
2400
2200
2000
1800
1600
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.0
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.0
3927.1
3927.2

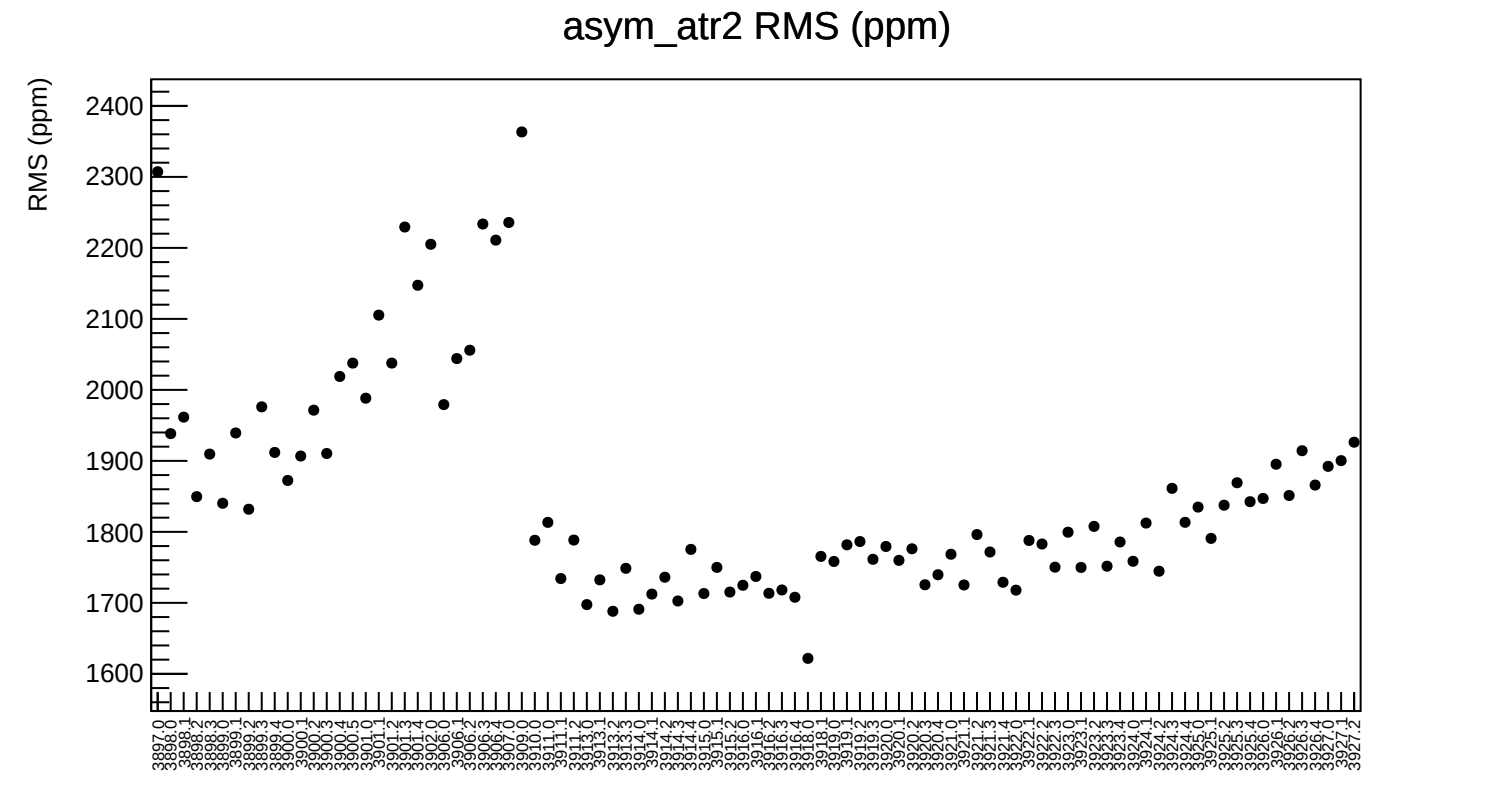

asym_atr1 (ppb)
χ² / ndf 79.05 / 92
p0 676.4 ± 1824
60000
40000
20000
0
−20000
−40000
−60000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5


1D pull distribution
Mean −0.01278 ± 0.0956
Std Dev 0.9219 ± 0.0676
Underflow 0
Overflow 0
χ² / ndf 2.956 / 6
Constant 20.14 ± 2.85
Mean −0.003964 ± 0.112264
Sigma 0.9661 ± 0.1021
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8


asym_atr1 RMS (ppm)
RMS (ppm)
2200
2100
2000
1900
1800
1700
1600
1500
1400
3897.0
3898.0
3898.1
3898.2
3898.3
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.0
3913.2
3913.3
3914.0
3914.1
3914.2
3914.3
3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
3919.1
3919.2
3919.3
3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2


asym_atr2 (ppb)
χ² / ndf 93.76 / 92
p0 1161± 1903
80000
60000
40000
20000
0
−20000
−40000
−60000
2
1
0
−1
−2


1D pull distribution
Mean 0.004127 ± 0.1041
Std Dev 1.004 ± 0.07362
Underflow 0
Overflow 0
χ² / ndf 14.29 / 8
Constant 18.61 ± 3.05
Mean −0.04121 ± 0.13224
Sigma 0.9014 ± 0.1084
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8


asym_atr2 RMS (ppm)
RMS (ppm)
2400
2300
2200
2100
2000
1900
1800
1700
1600
3897.0
3898.0
3898.1
3898.2
3898.3
3898.4
3899.1
3899.2
3899.3
3899.4
3900.0
3900.1
3900.2
3900.3
3900.4
3900.5
3901.0
3901.1
3901.2
3901.3
3901.4
3902.0
3906.0
3906.1
3906.2
3906.3
3906.4
3907.0
3909.0
3910.0
3911.0
3911.1
3911.2
3913.0
3913.2
3913.3
3914.0
3914.1
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3914.4
3915.0
3915.1
3915.2
3916.0
3916.1
3916.2
3916.3
3916.4
3918.0
3918.1
3919.0
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3920.0
3920.1
3920.2
3920.3
3920.4
3921.0
3921.2
3921.3
3921.4
3922.0
3922.1
3922.2
3922.3
3923.0
3923.1
3923.2
3923.3
3923.4
3924.0
3924.2
3924.3
3924.4
3925.0
3925.1
3925.2
3925.3
3925.4
3926.0
3926.1
3926.2
3926.3
3926.4
3927.1
3927.2