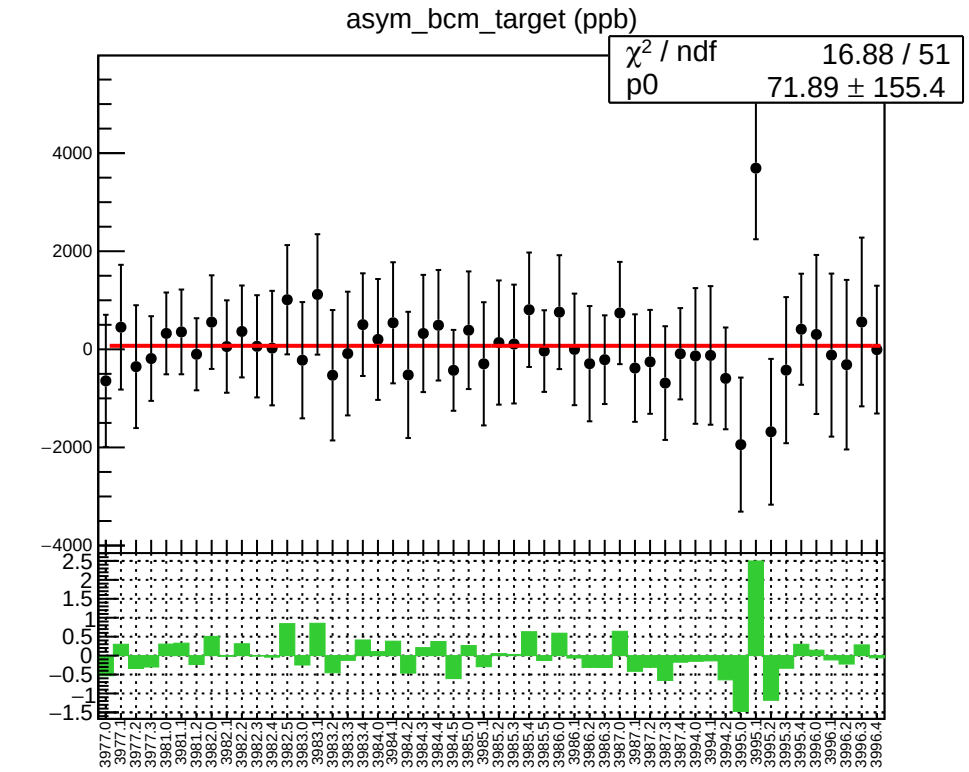
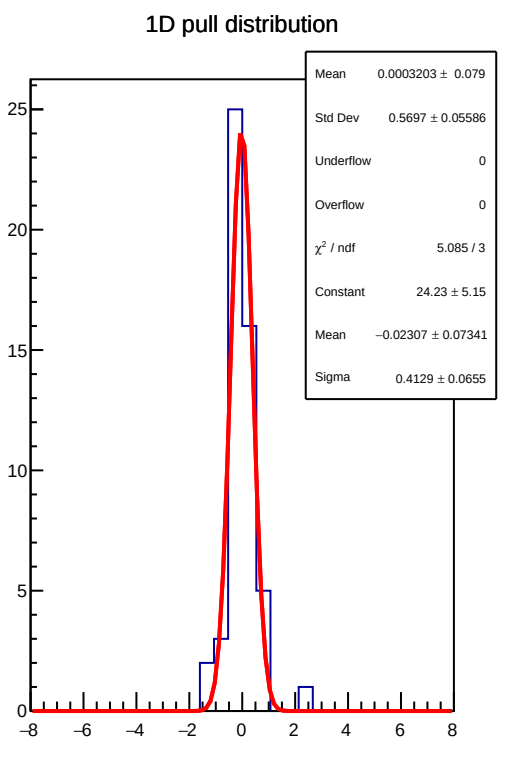
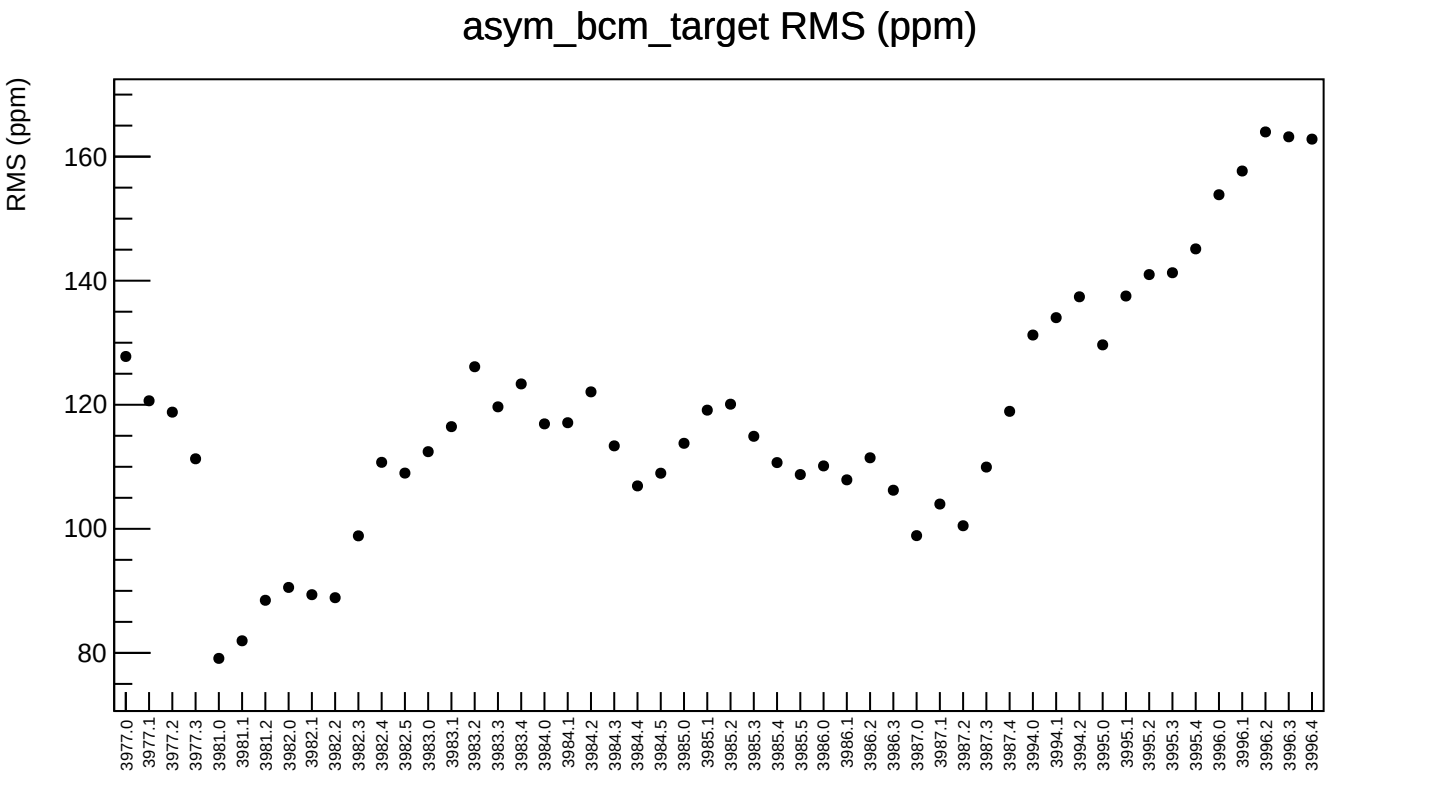
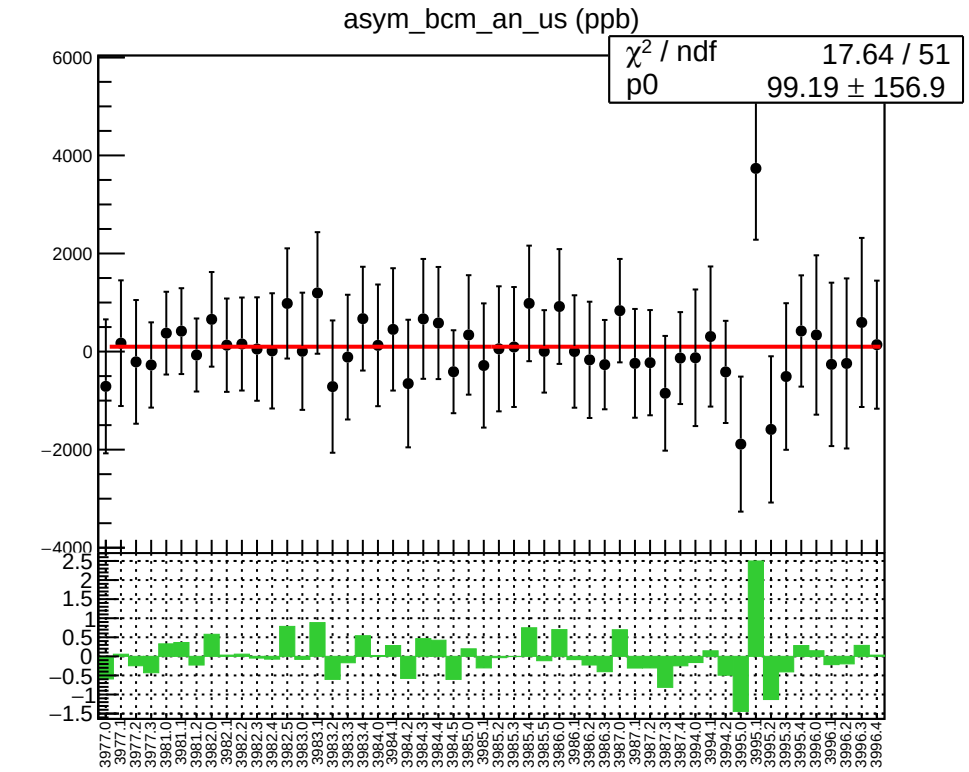
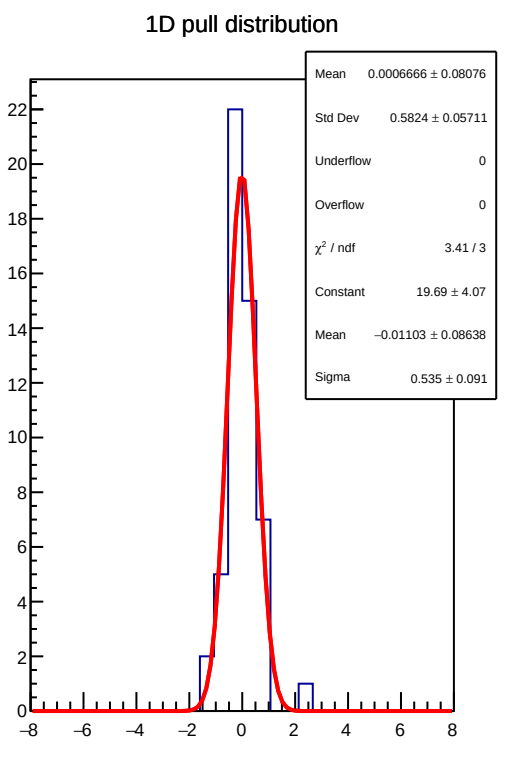
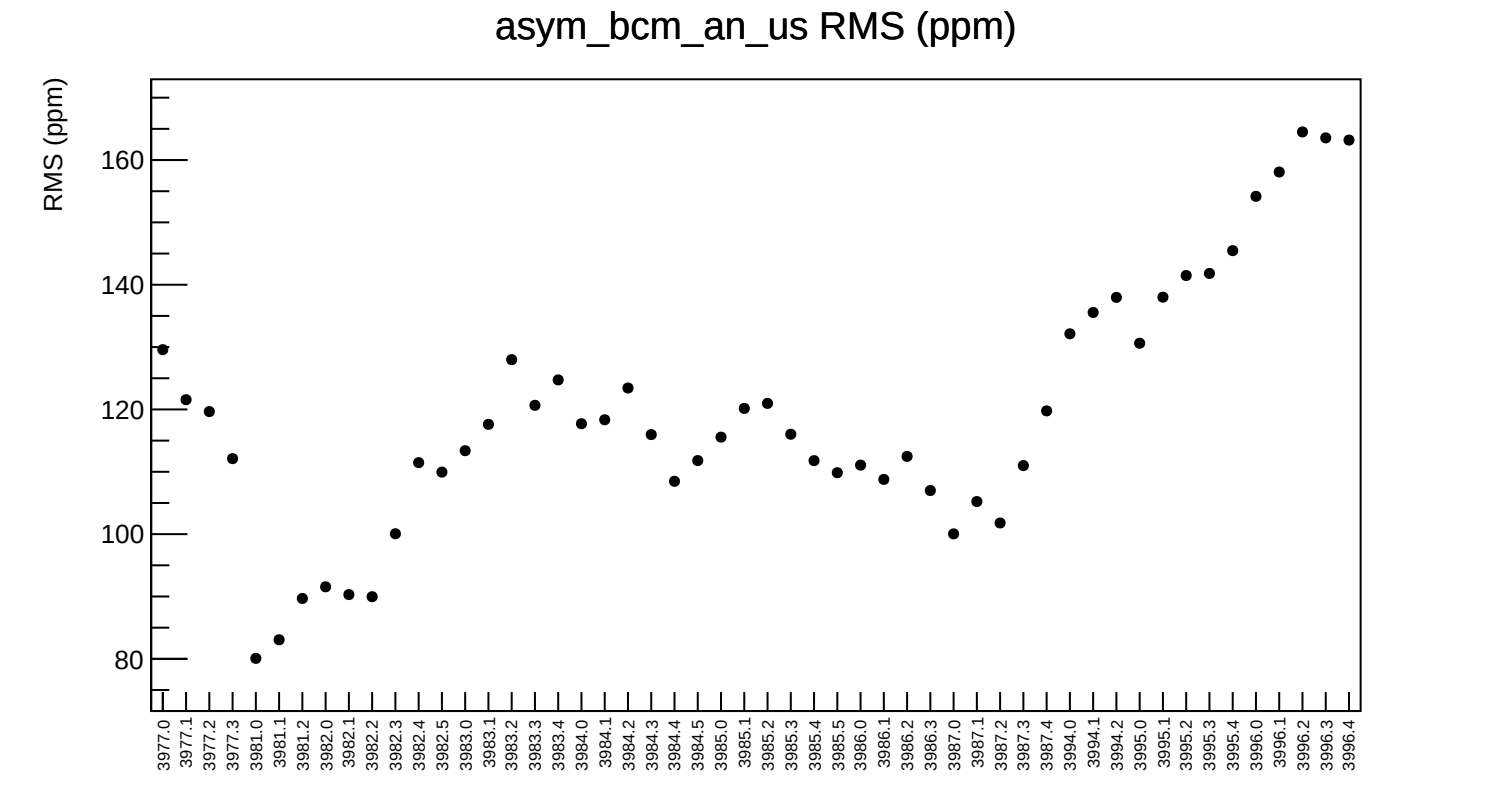

asym_bcm_target (ppb)
χ² / ndf 16.88 / 51
p0 71.89 ± 155.4
4000
2000
0
−2000
−4000
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

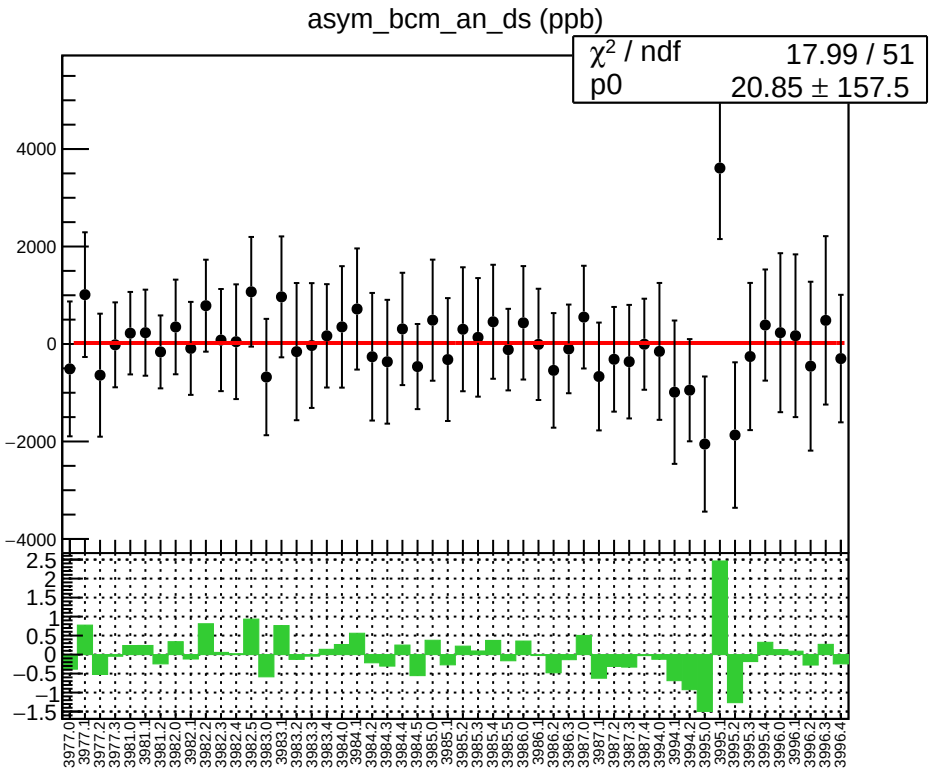

1D pull distribution
Mean 0.0003203 ± 0.079
Std Dev 0.5697 ± 0.05586
Underflow 0
Overflow 0
χ² / ndf 5.085 / 3
Constant 24.23 ± 5.15
Mean −0.02307 ± 0.07341
Sigma 0.4129 ± 0.0655
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

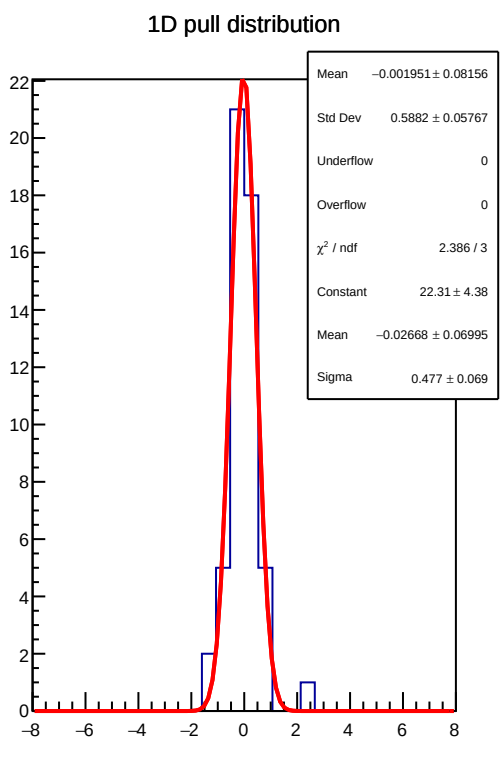

asym_bcm_target RMS (ppm)
RMS (ppm)
160
140
120
100
80
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

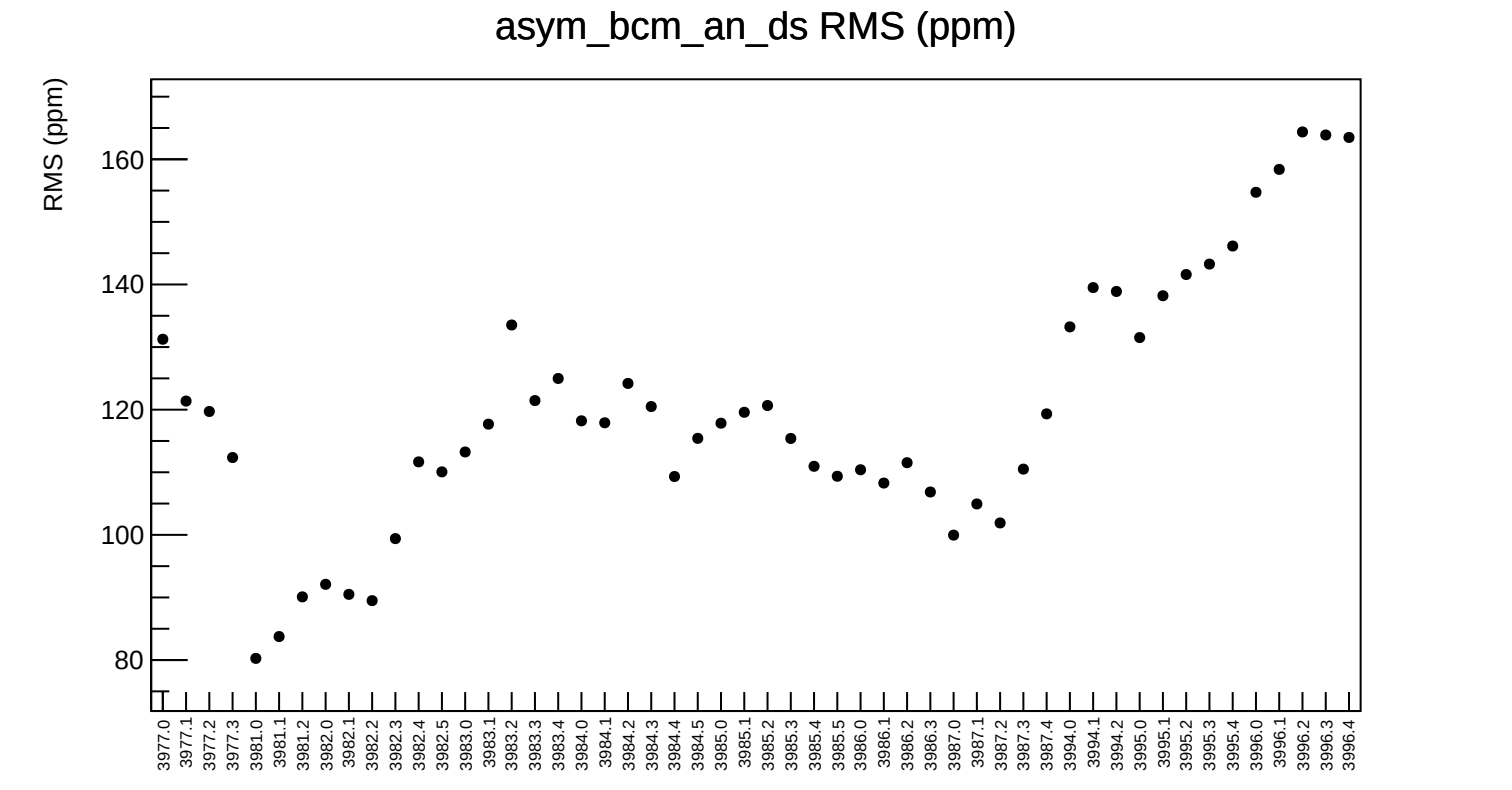

asym_bcm_an_us (ppb)
χ² / ndf 17.64 / 51
p0 99.19 ± 156.9
6000
4000
2000
0
−2000
−4000
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

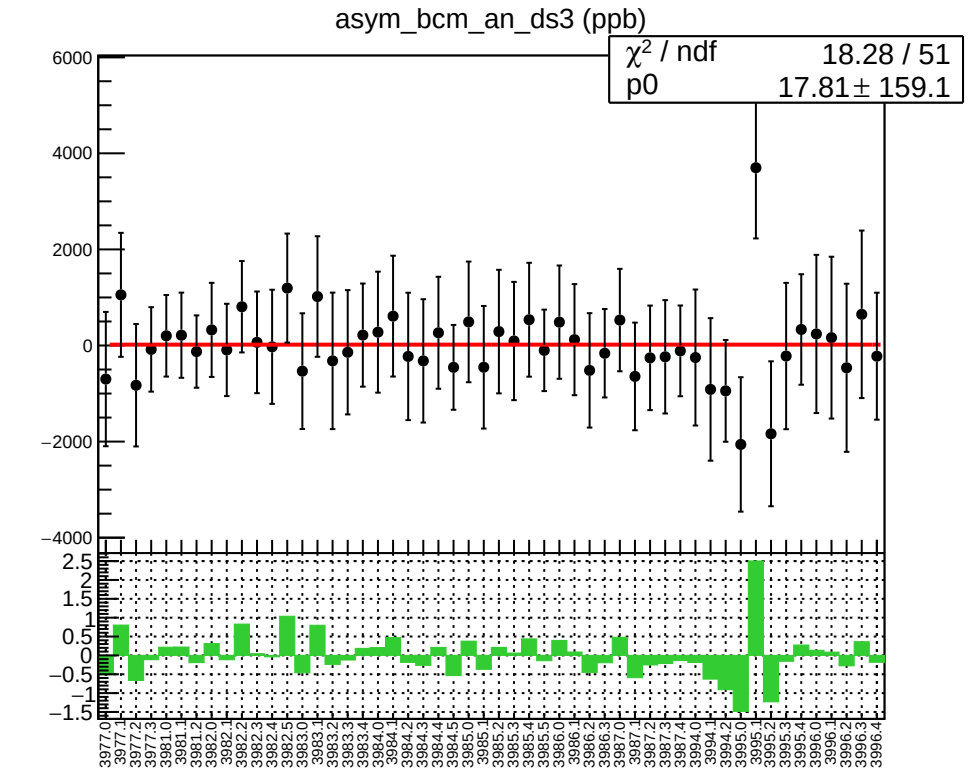

1D pull distribution
Mean 0.0006666 ± 0.08076
Std Dev 0.5824 ± 0.05711
Underflow 0
Overflow 0
χ² / ndf 3.41 / 3
Constant 19.69 ± 4.07
Mean −0.01103 ± 0.08638
Sigma 0.535 ± 0.091
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

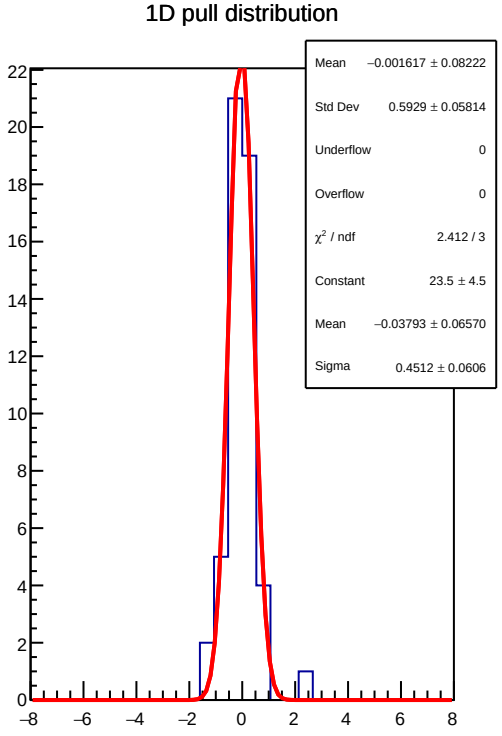

asym_bcm_an_us RMS (ppm)
RMS (ppm)
160
140
120
100
80
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

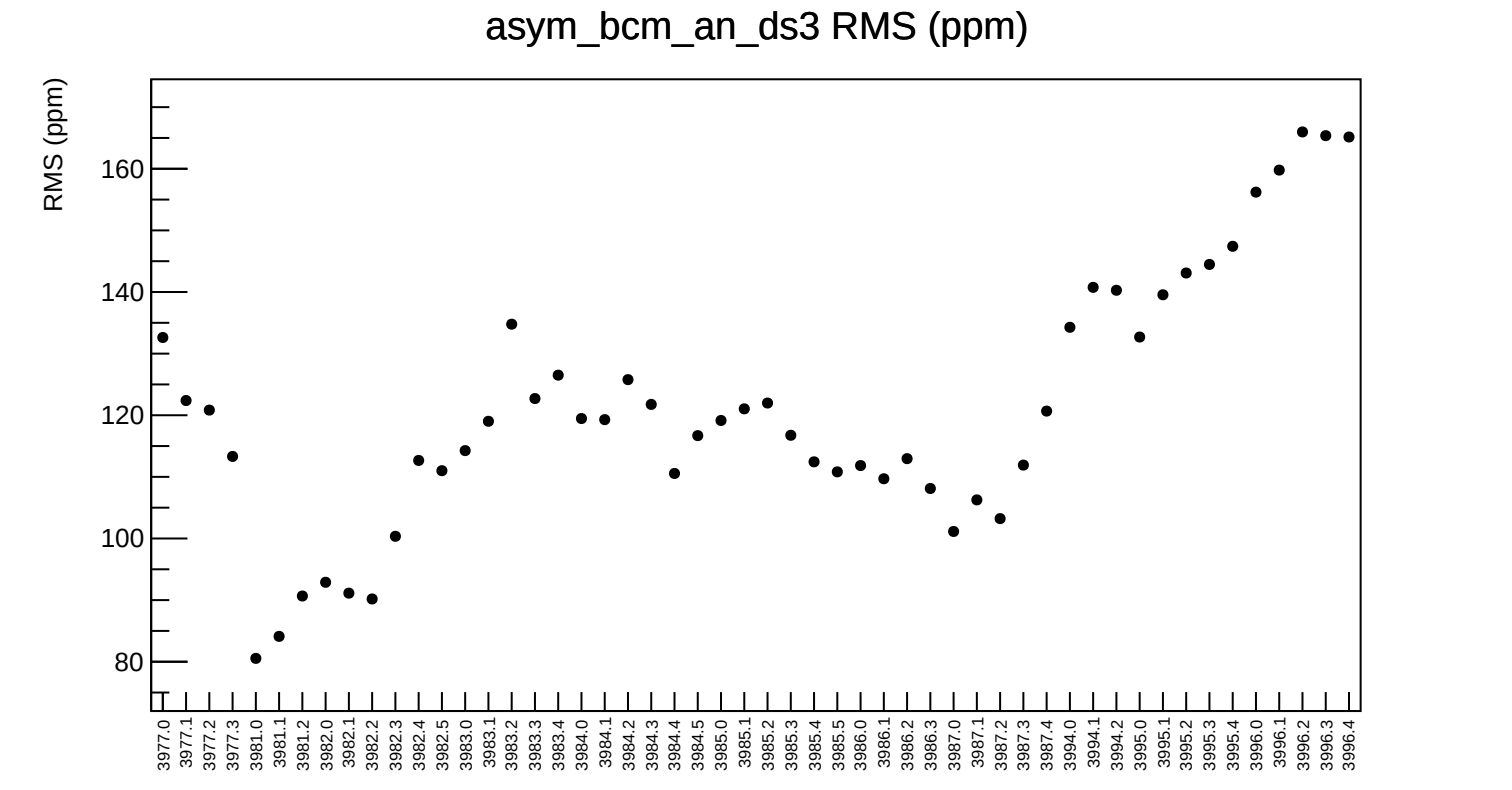

asym_bcm_an_ds (ppb)
χ² / ndf 17.99 / 51
p0 20.85 ± 157.5
4000
2000
0
−2000
−4000
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

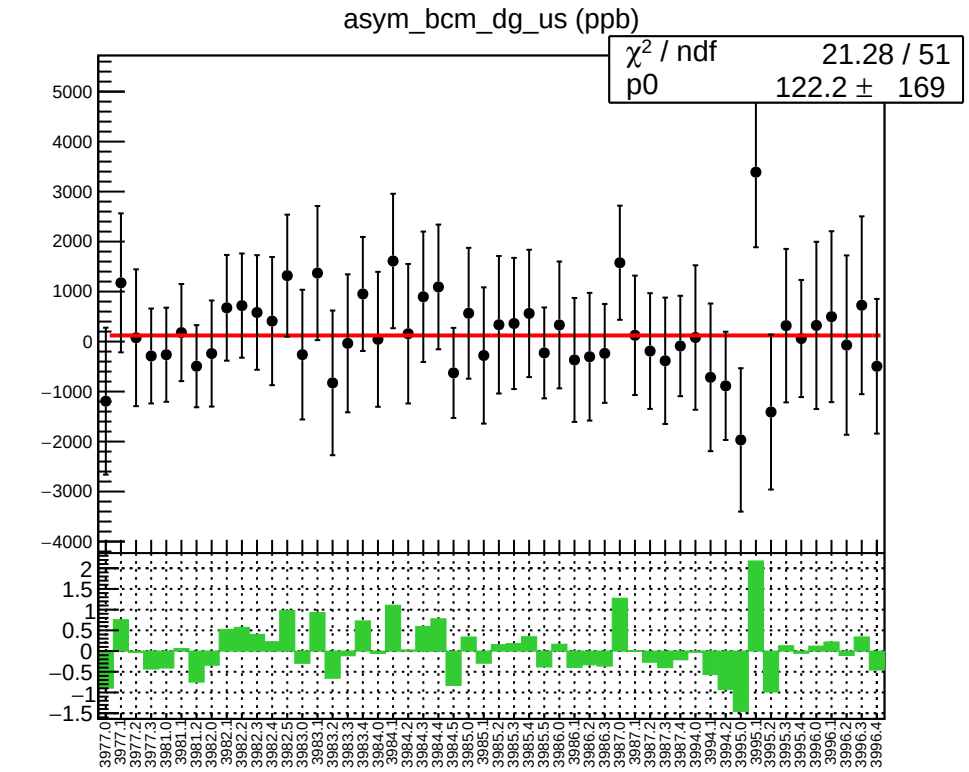

1D pull distribution
Mean −0.001951 ± 0.08156
Std Dev 0.5882 ± 0.05767
Underflow 0
Overflow 0
χ² / ndf 2.386 / 3
Constant 22.31 ± 4.38
Mean −0.02668 ± 0.06995
Sigma 0.477 ± 0.069
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

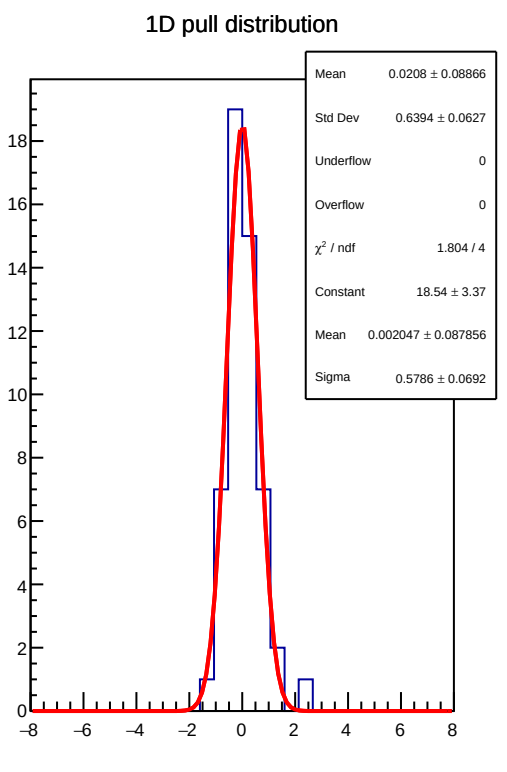

asym_bcm_an_ds RMS (ppm)
RMS (ppm)
160
140
120
100
80
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

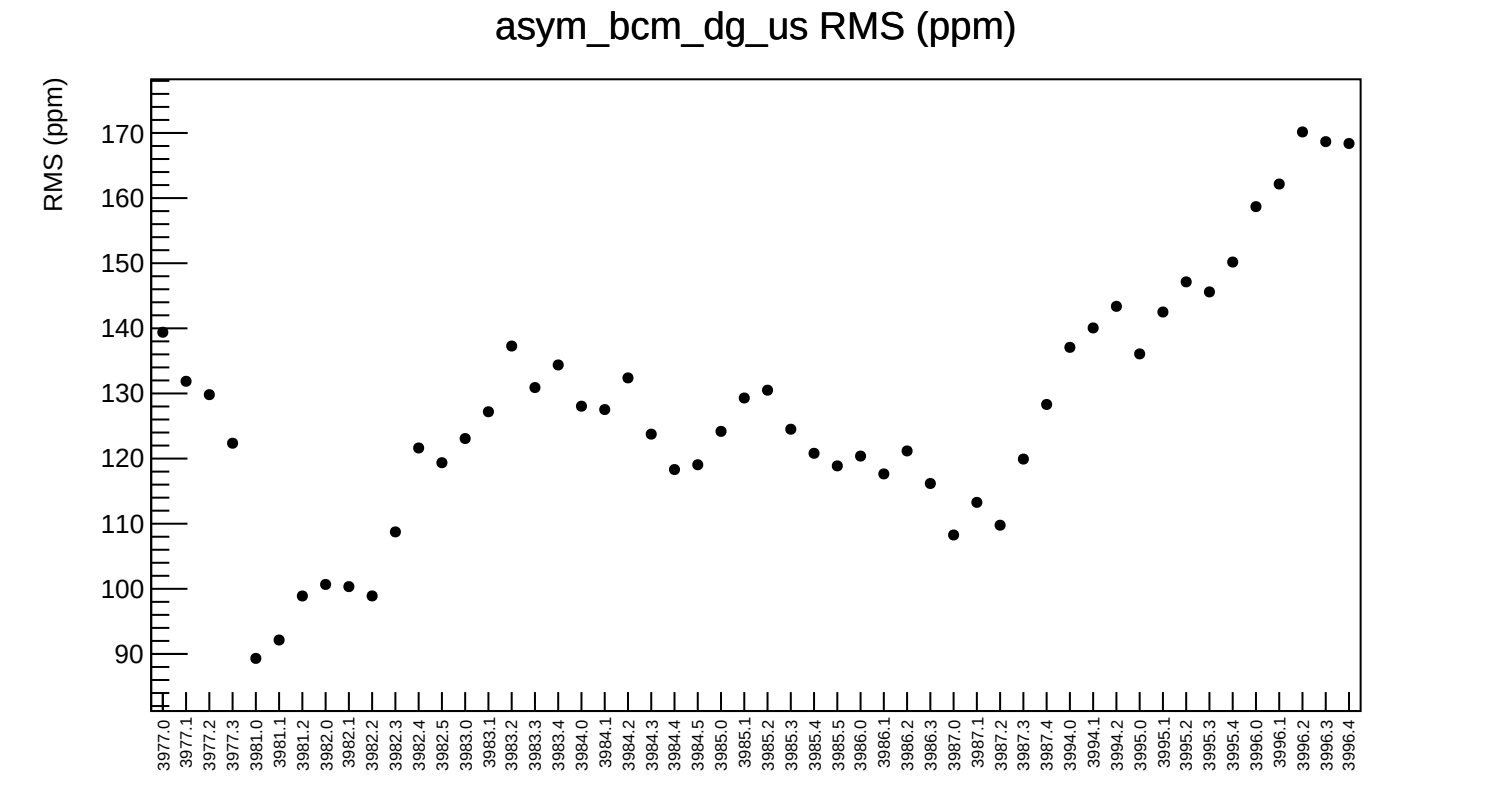

asym_bcm_an_ds3 (ppb)
χ² / ndf 18.28 / 51
p0 17.81 ± 159.1
6000
4000
2000
0
−2000
−4000
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

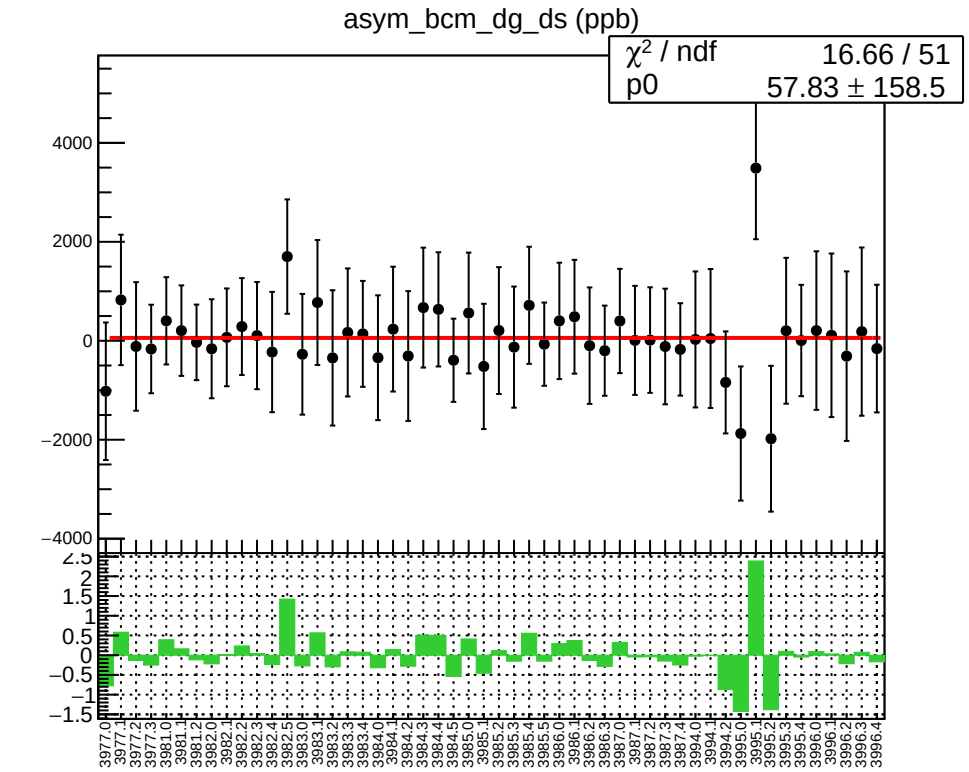

1D pull distribution
Mean −0.001617 ± 0.08222
Std Dev 0.5929 ± 0.05814
Underflow 0
Overflow 0
χ² / ndf 2.412 / 3
Constant 23.5 ± 4.5
Mean −0.03793 ± 0.06570
Sigma 0.4512 ± 0.0606
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

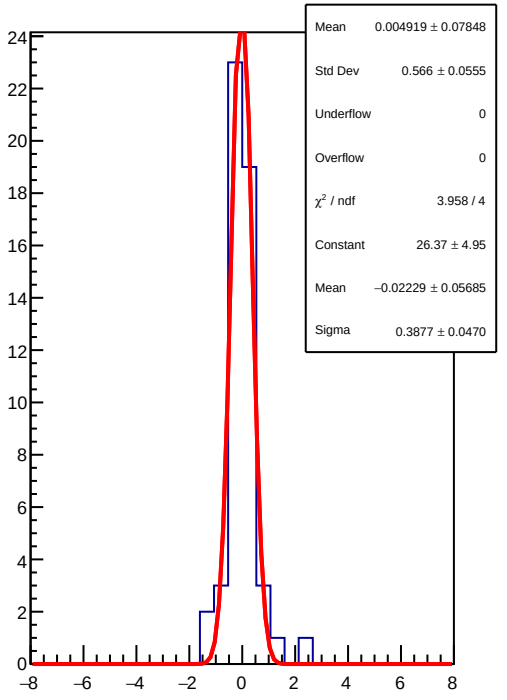

asym_bcm_an_ds3 RMS (ppm)
RMS (ppm)
160
140
120
100
80
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

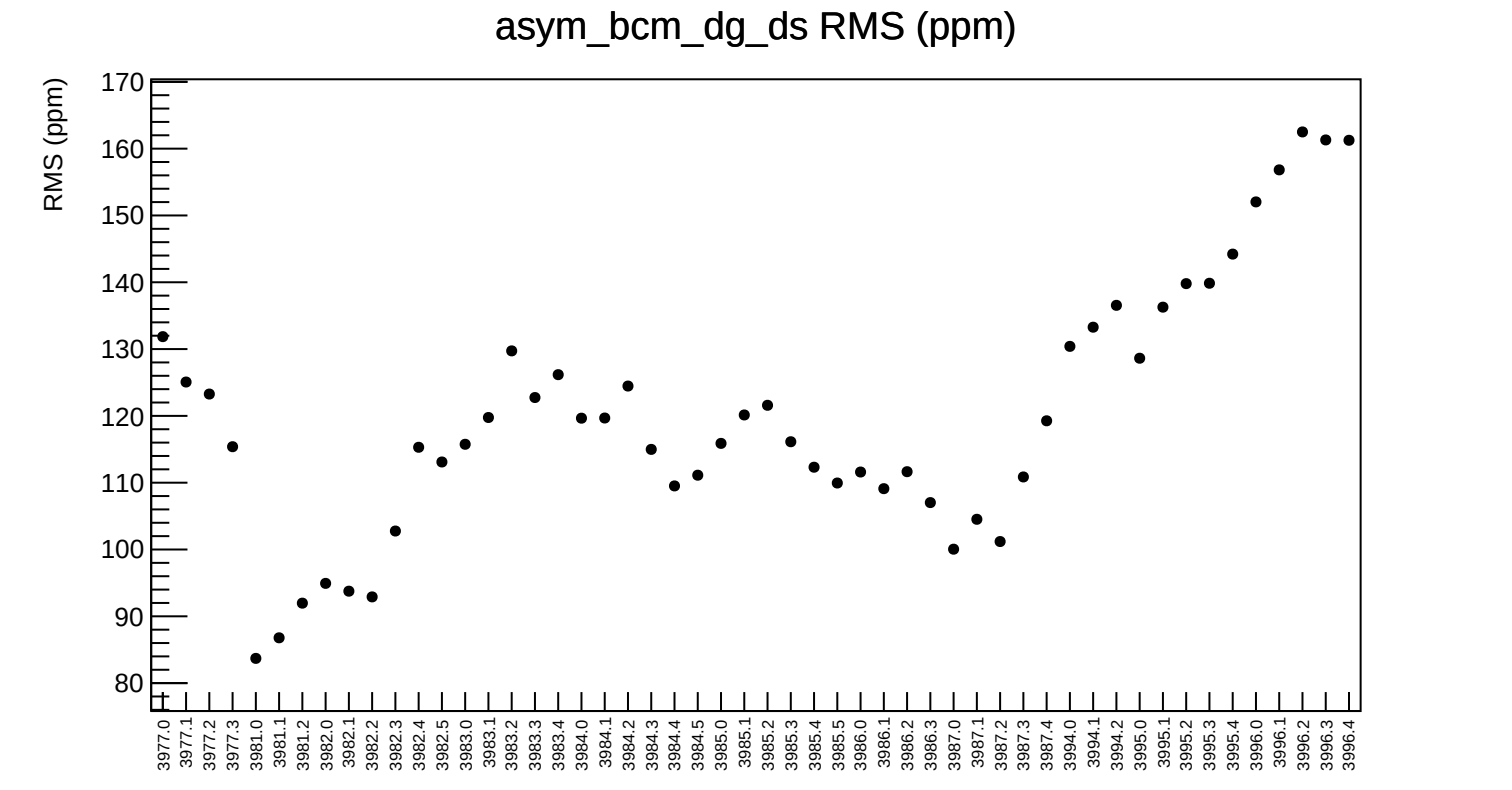

asym_bcm_dg_us (ppb)
χ² / ndf 21.28 / 51
p0 122.2 ± 169

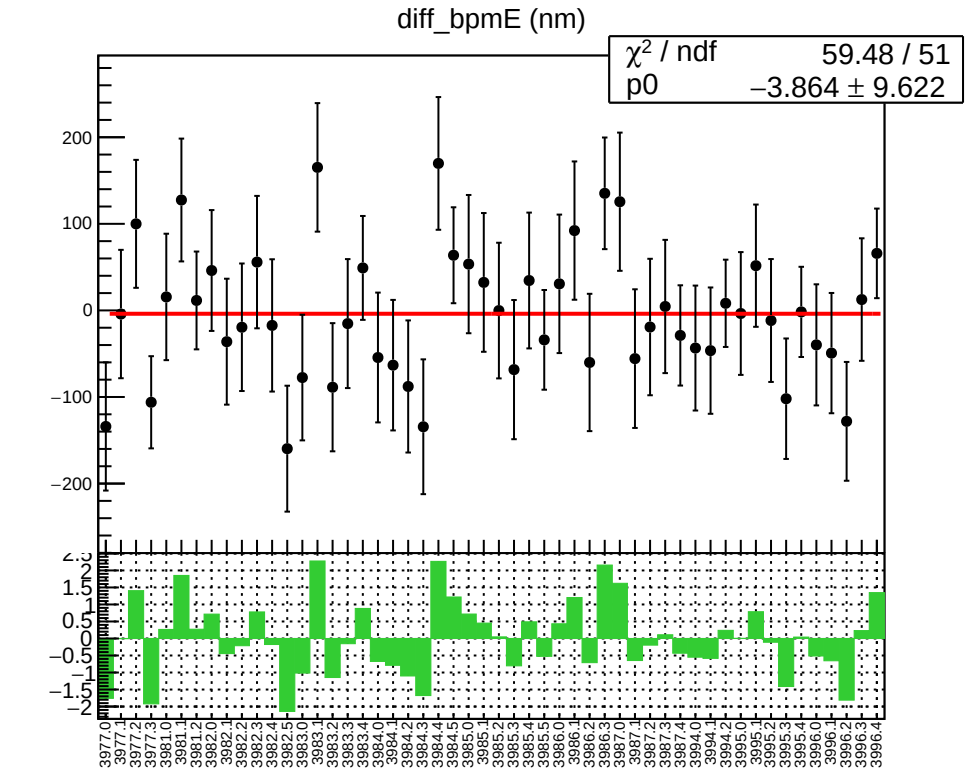

1D pull distribution
Mean 0.0208 ± 0.08866
Std Dev 0.6394 ± 0.0627
Underflow 0
Overflow 0
χ² / ndf 1.804 / 4
Constant 18.54 ± 3.37
Mean 0.002047 ± 0.087856
Sigma 0.5786 ± 0.0692

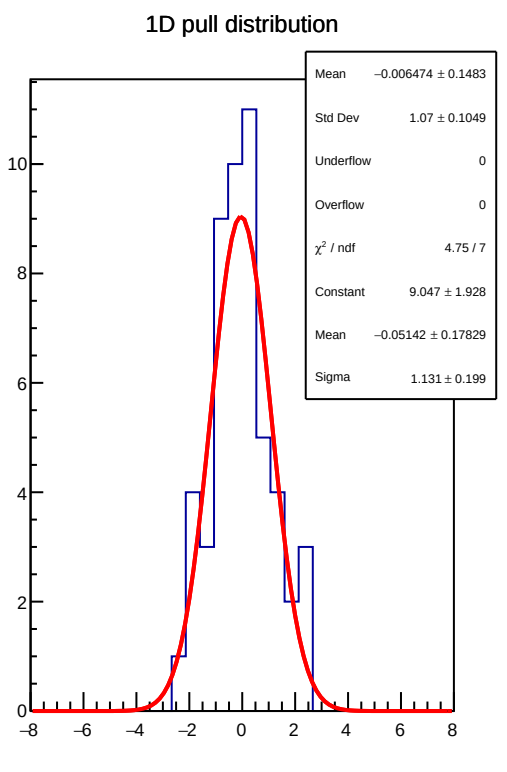

asym_bcm_dg_us RMS (ppm)
RMS (ppm)
90
100
110
120
130
140
150
160
170
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

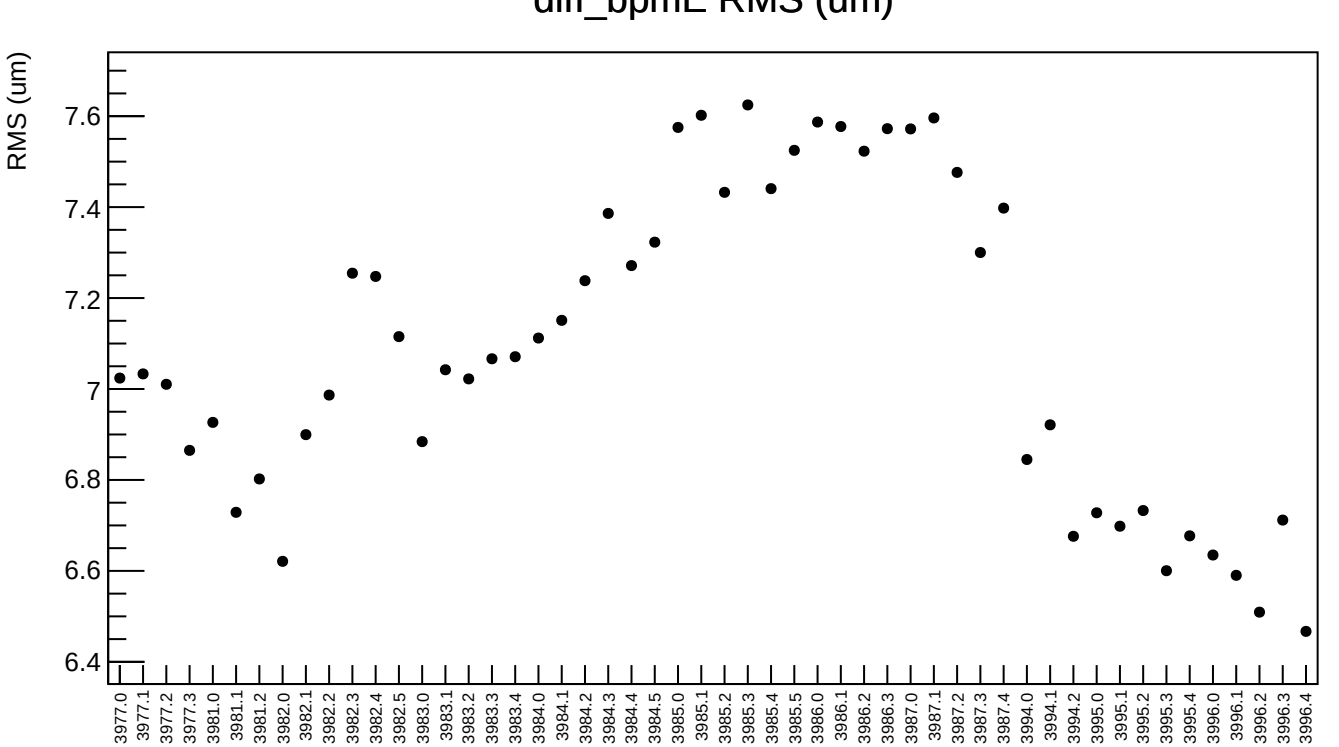

asym_bcm_dg_ds (ppb)
χ² / ndf 16.66 / 51
p0 57.83 ± 158.5
4000
2000
0
−2000
−4000
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

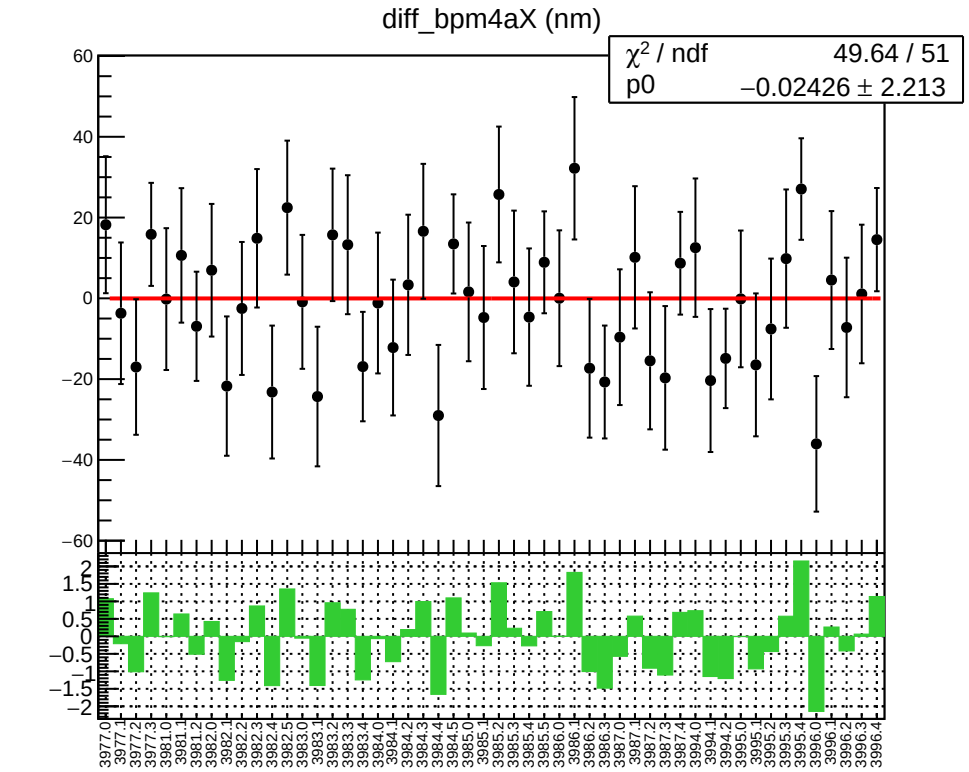

1D pull distribution
Mean 0.004919 ± 0.07848
Std Dev 0.566 ± 0.0555
Underflow 0
Overflow 0
χ² / ndf 3.958 / 4
Constant 26.37 ± 4.95
Mean −0.02229 ± 0.05685
Sigma 0.3877 ± 0.0470
24
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

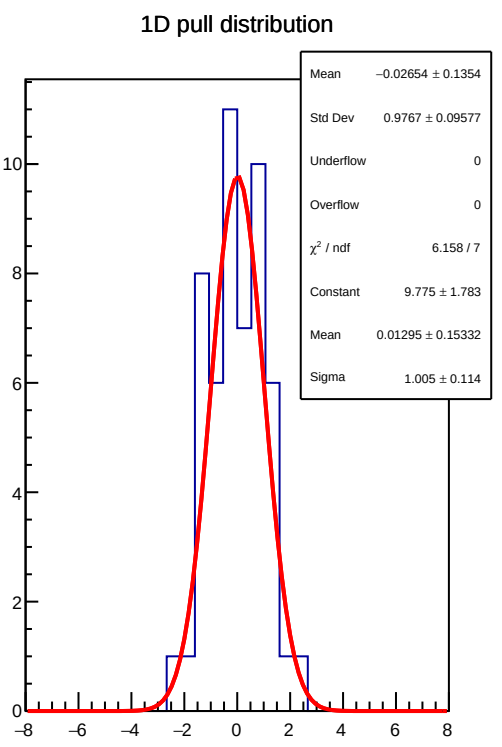

asym_bcm_dg_ds RMS (ppm)
RMS (ppm)
170
160
150
140
130
120
110
100
90
80
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

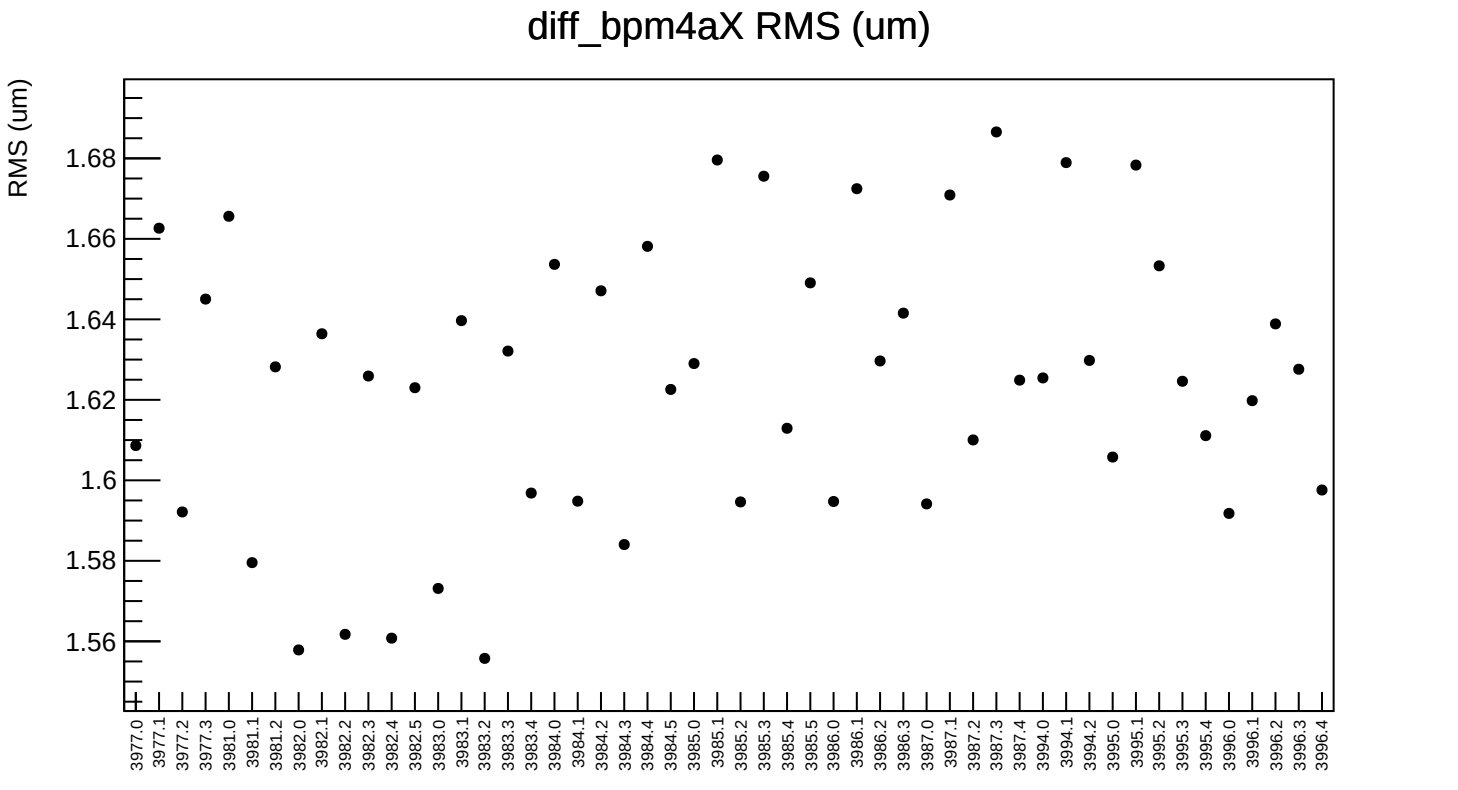

diff_bpmE (nm)
χ² / ndf 59.48 / 51
p0 −3.864 ± 9.622
200
100
0
−100
−200
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

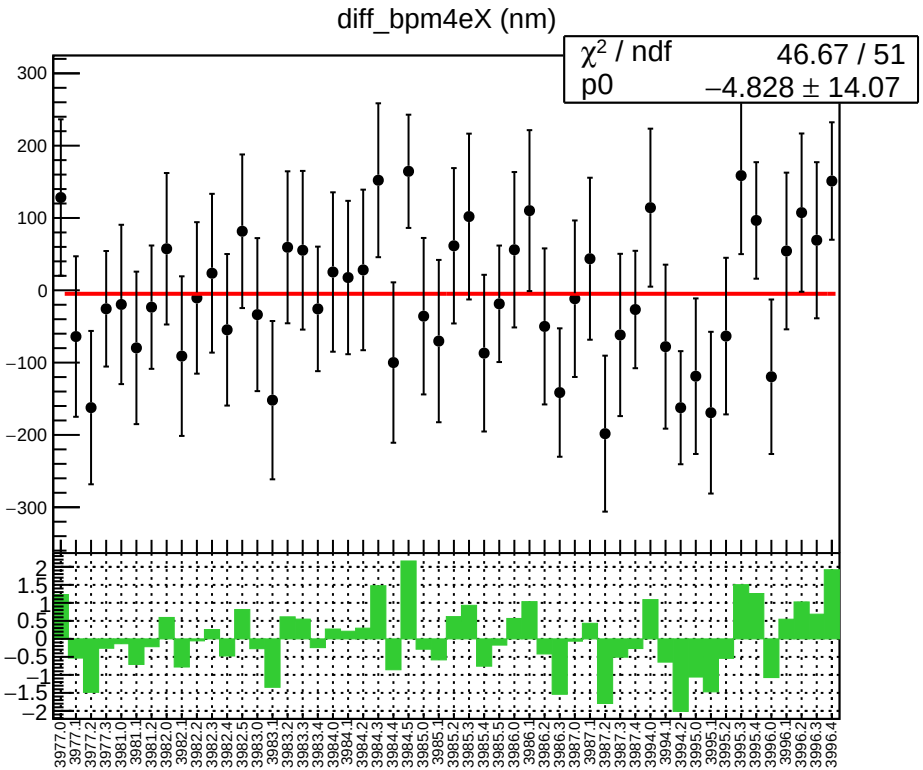

1D pull distribution
Mean −0.006474 ± 0.1483
Std Dev 1.07 ± 0.1049
Underflow 0
Overflow 0
χ² / ndf 4.75 / 7
Constant 9.047 ± 1.928
Mean −0.05142 ± 0.17829
Sigma 1.131 ± 0.199
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

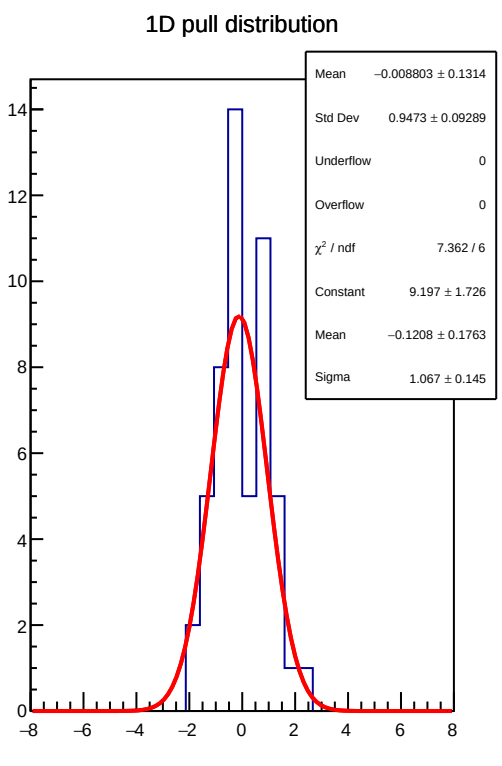

diff_bpmE RMS (um)
RMS (um)
7.6
7.4
7.2
7
6.8
6.6
6.4
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

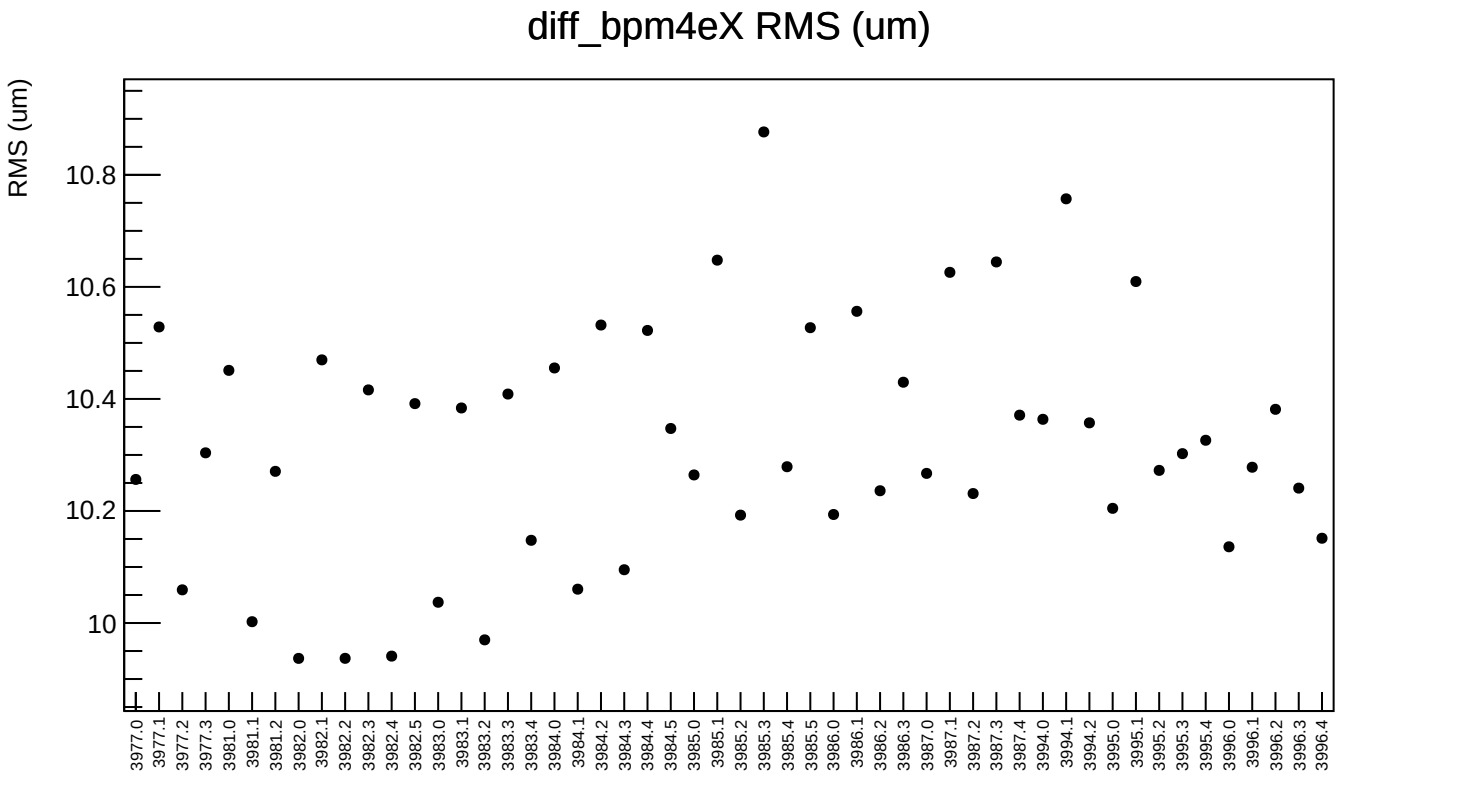

diff_bpm4aX (nm)
χ² / ndf 49.64 / 51
p0 −0.02426 ± 2.213

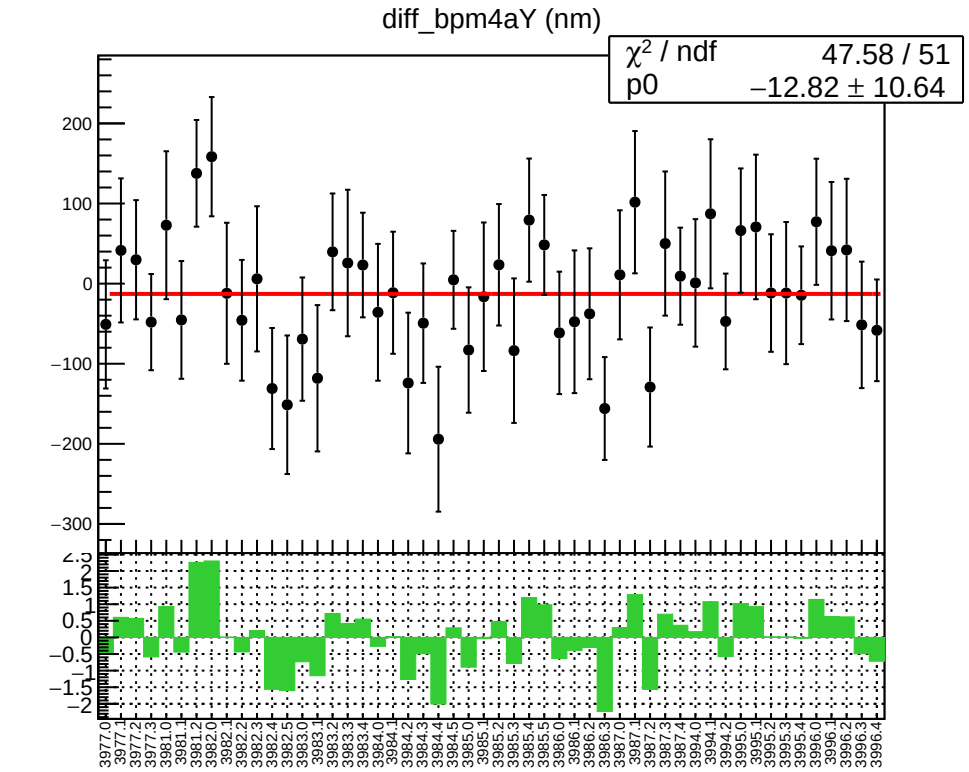

1D pull distribution
Mean −0.02654 ± 0.1354
Std Dev 0.9767 ± 0.09577
Underflow 0
Overflow 0
χ² / ndf 6.158 / 7
Constant 9.775 ± 1.783
Mean 0.01295 ± 0.15332
Sigma 1.005 ± 0.114

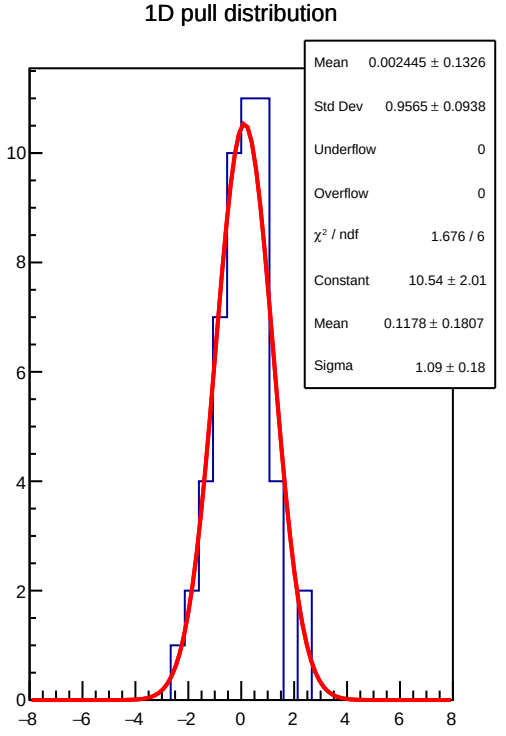

diff_bpm4aX RMS (um)
RMS (um)
1.68
1.66
1.64
1.62
1.6
1.58
1.56
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4


diff_bpm4eX (nm)
χ² / ndf 46.67 / 51
p0 −4.828 ± 14.07
300
200
100
0
−100
−200
−300
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4


1D pull distribution
Mean −0.008803 ± 0.1314
Std Dev 0.9473 ± 0.09289
Underflow 0
Overflow 0
χ² / ndf 7.362 / 6
Constant 9.197 ± 1.726
Mean −0.1208 ± 0.1763
Sigma 1.067 ± 0.145
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8


diff_bpm4eX RMS (um)
RMS (um)
10.8
10.6
10.4
10.2
10
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4


diff_bpm4aY (nm)
χ² / ndf 47.58 / 51
p0 −12.82 ± 10.64
200
100
0
−100
−200
−300
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

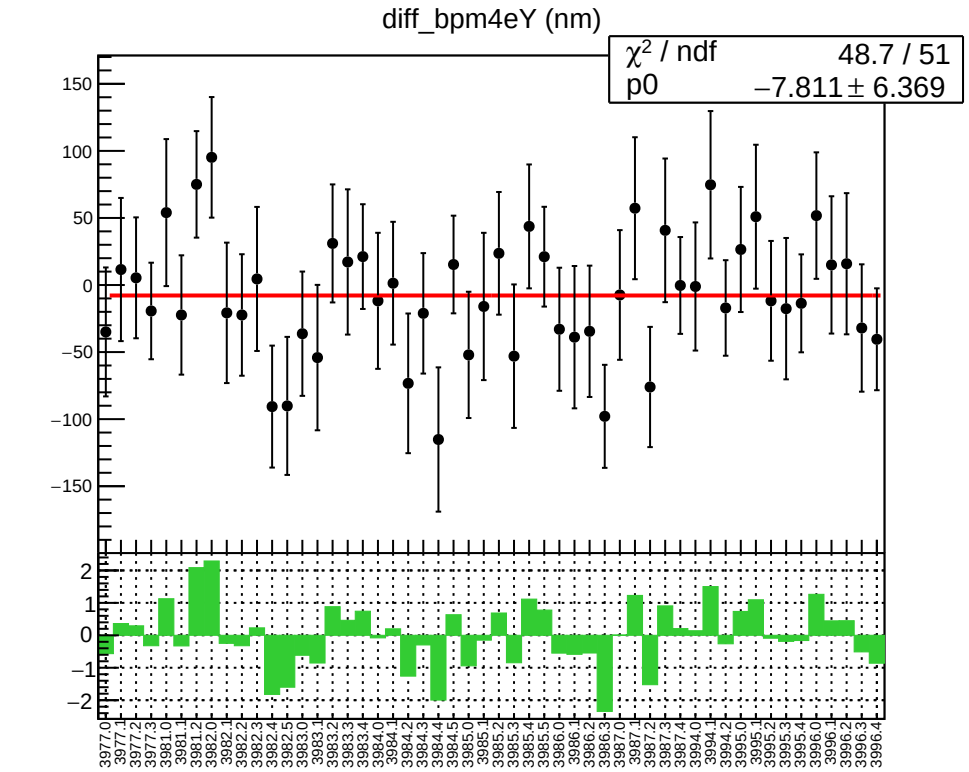

1D pull distribution
Mean 0.002445 ± 0.1326
Std Dev 0.9565 ± 0.0938
Underflow 0
Overflow 0
χ² / ndf 1.676 / 6
Constant 10.54 ± 2.01
Mean 0.1178 ± 0.1807
Sigma 1.09 ± 0.18
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

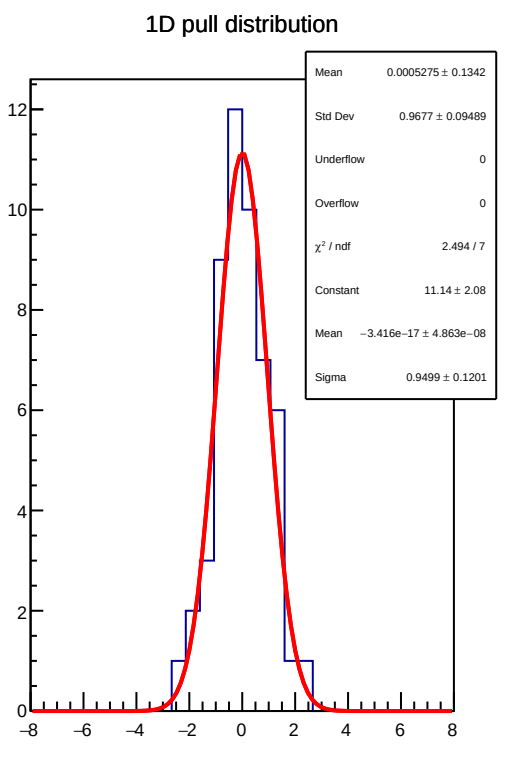
diff_bpm4aY RMS (um)

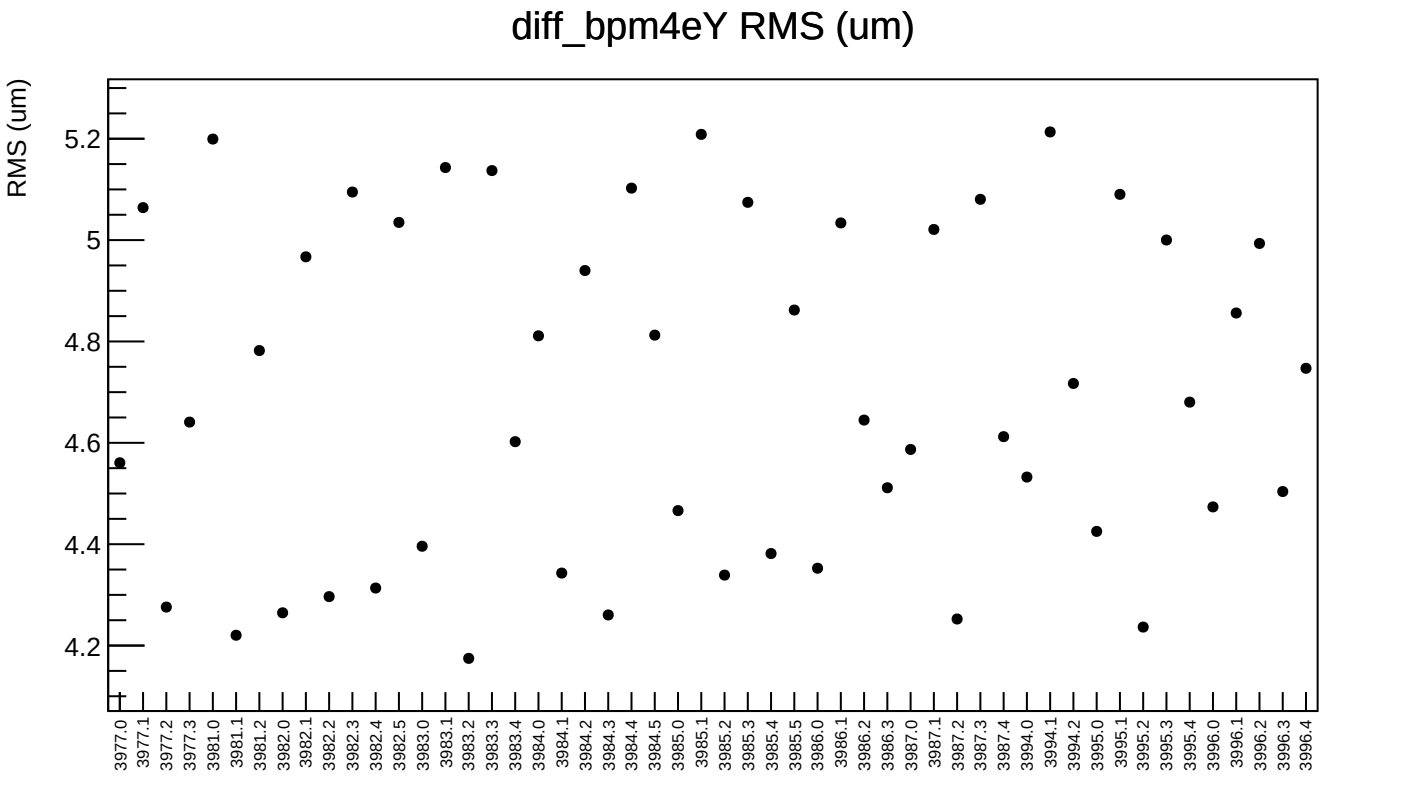
RMS (um)

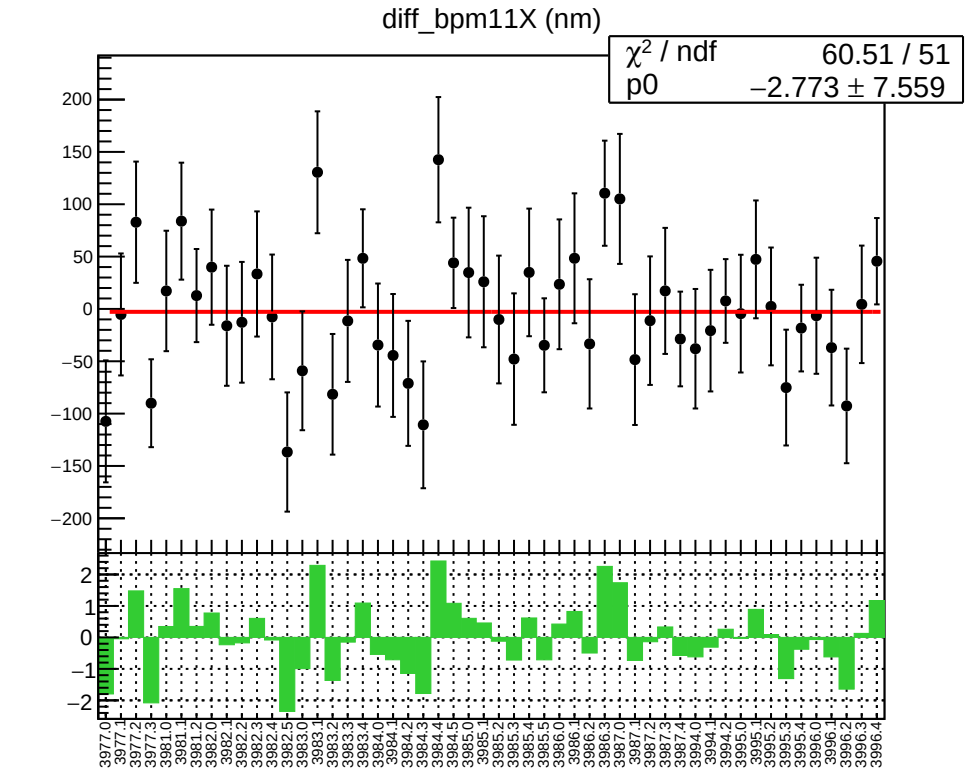
9
8.5
8
7.5
7

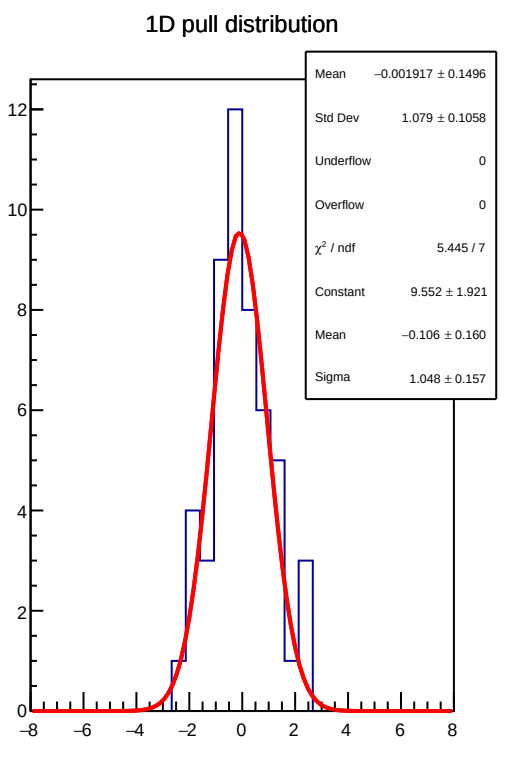
3977.0 3977.1 3977.2 3977.3 3981.0 3981.1 3981.2 3982.0 3982.1 3982.2 3982.3 3982.4 3982.5 3983.0 3983.1 3983.2 3983.3 3983.4 3984.0 3984.1 3984.2 3984.3 3984.4 3984.5 3985.0 3985.1 3985.2 3985.3 3985.4 3985.5 3986.0 3986.1 3986.2 3986.3 3987.0 3987.1 3987.2 3987.3 3987.4 3994.0 3994.1 3994.2 3995.0 3995.1 3995.2 3995.3 3995.4 3996.0 3996.1 3996.2 3996.3 3996.4

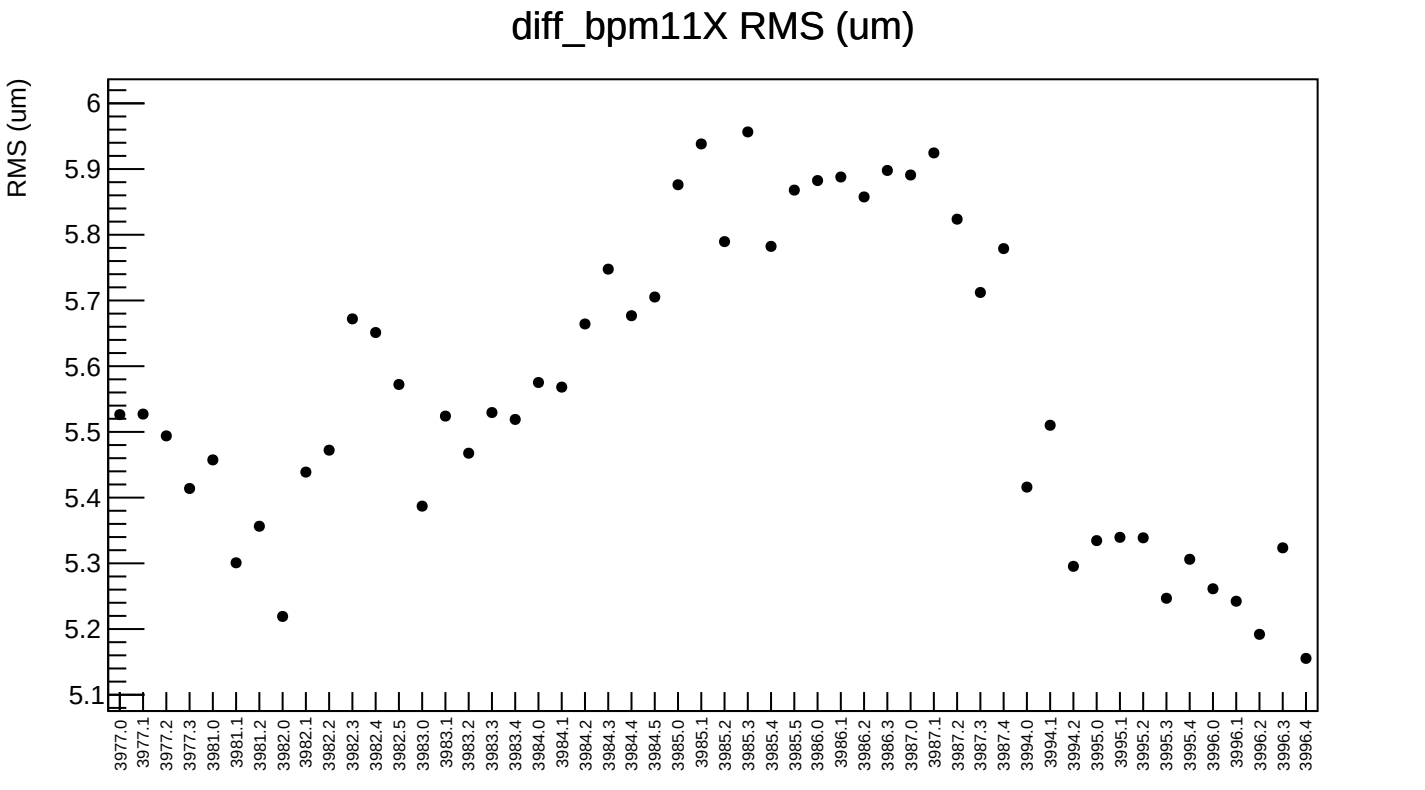

diff_bpm4eY (nm)
χ² / ndf 48.7 / 51
p0 −7.811 ± 6.369
150
100
50
0
−50
−100
−150
2
1
0
−1
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

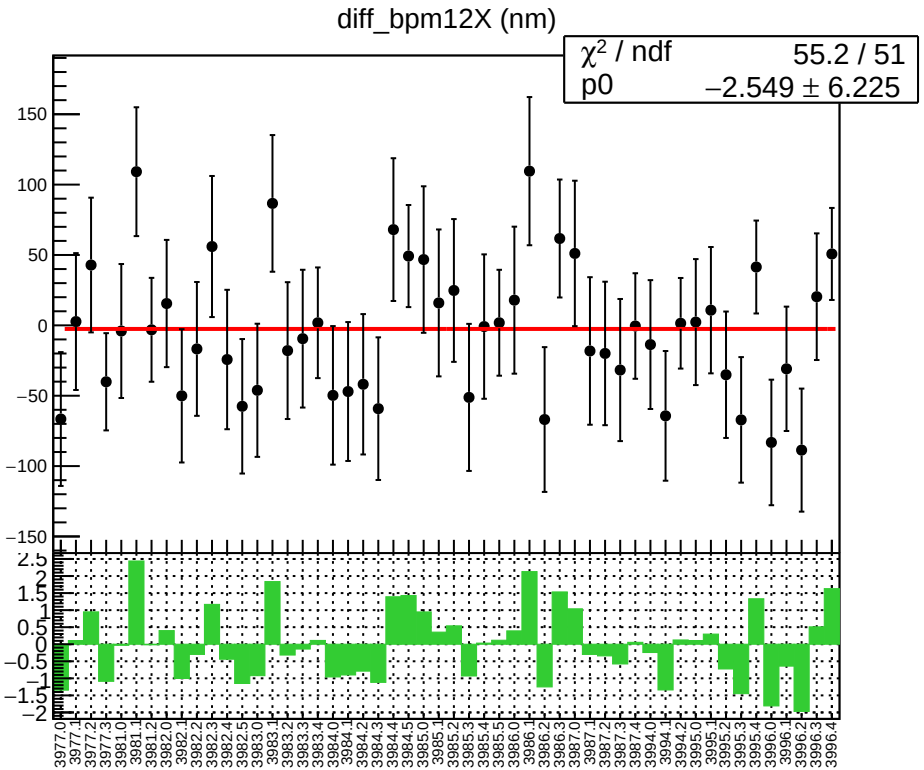

1D pull distribution
Mean 0.0005275 ± 0.1342
Std Dev 0.9677 ± 0.09489
Underflow 0
Overflow 0
χ² / ndf 2.494 / 7
Constant 11.14 ± 2.08
Mean −3.416e−17 ± 4.863e−08
Sigma 0.9499 ± 0.1201
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

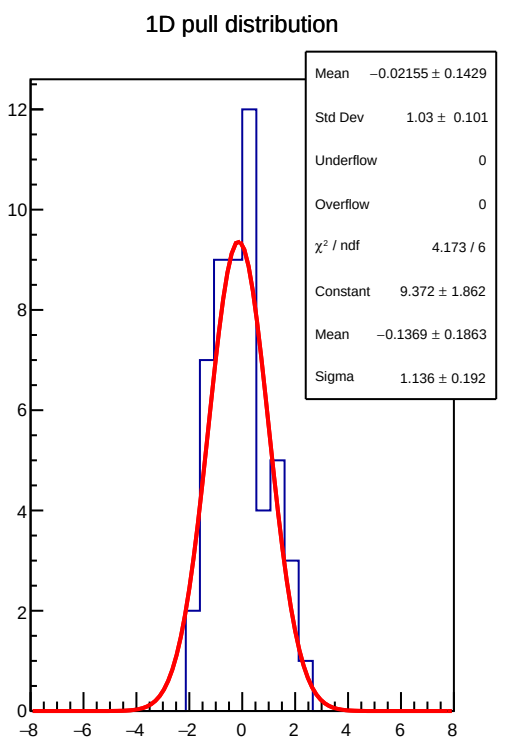

diff_bpm4eY RMS (um)
RMS (um)
5.2
5
4.8
4.6
4.4
4.2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

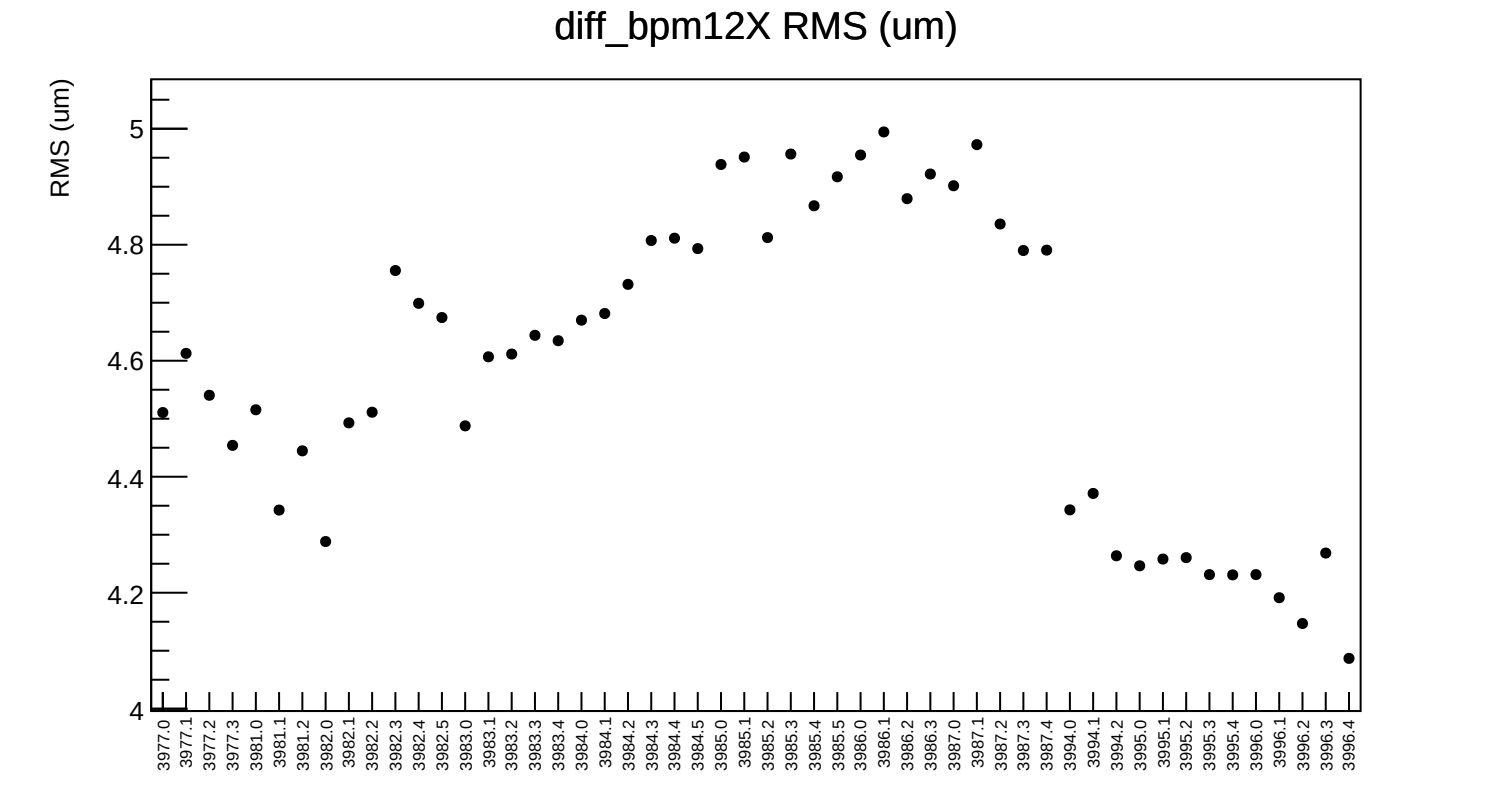

diff_bpm11X (nm)
χ² / ndf 60.51 / 51
p0 −2.773 ± 7.559
200
150
100
50
0
−50
−100
−150
−200
2
1
0
−1
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

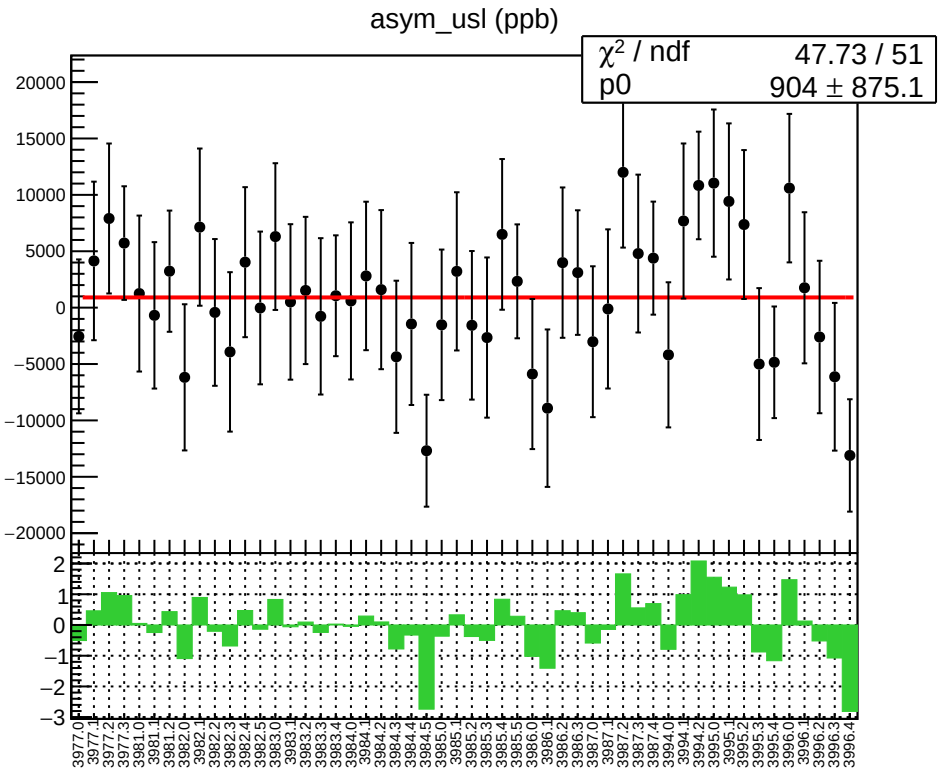

1D pull distribution
Mean −0.001917 ± 0.1496
Std Dev 1.079 ± 0.1058
Underflow 0
Overflow 0
χ² / ndf 5.445 / 7
Constant 9.552 ± 1.921
Mean −0.106 ± 0.160
Sigma 1.048 ± 0.157
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

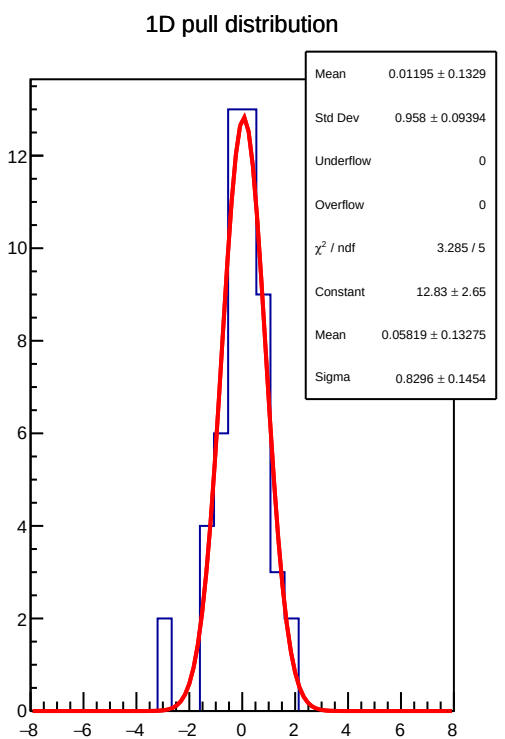

diff_bpm11X RMS (um)
RMS (um)
6
5.9
5.8
5.7
5.6
5.5
5.4
5.3
5.2
5.1
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

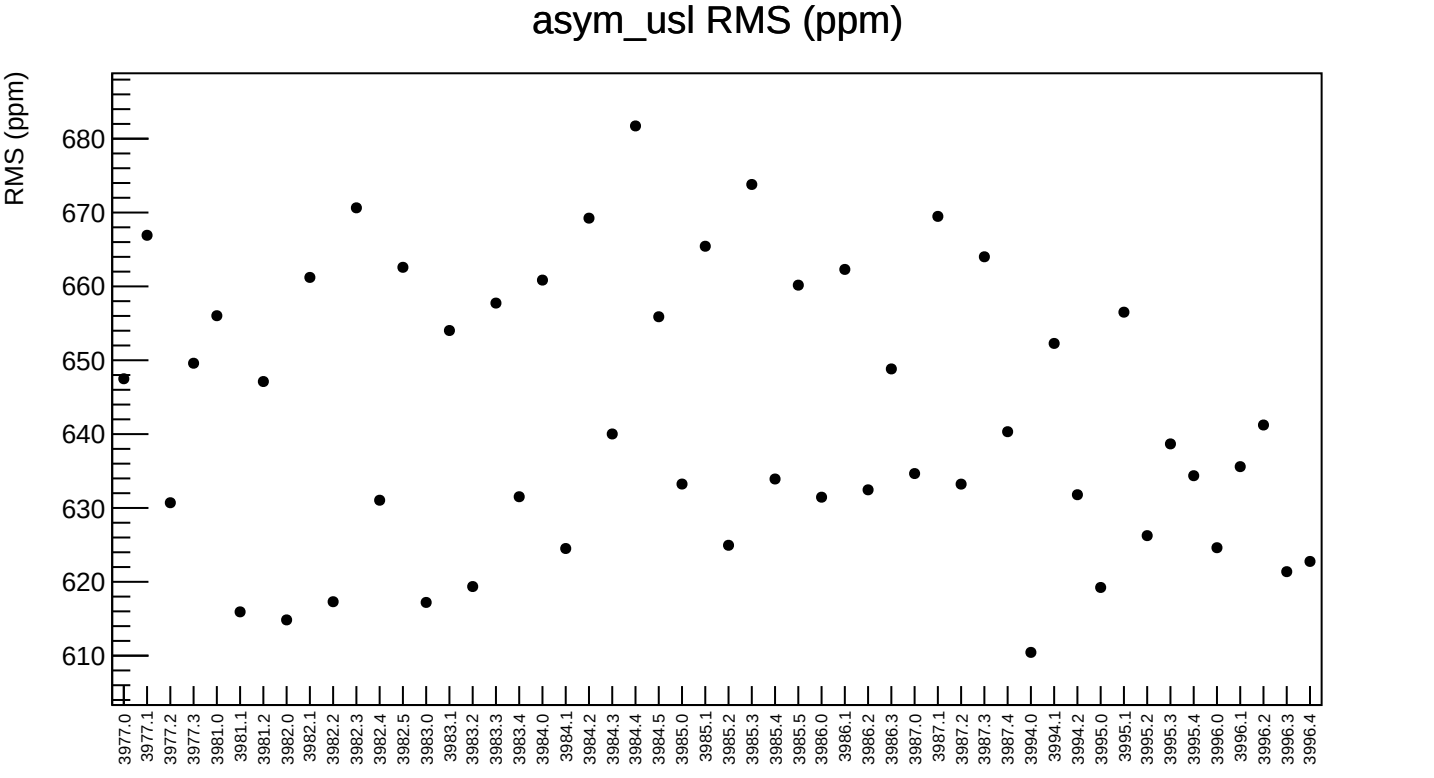

diff_bpm12X (nm)
χ² / ndf 55.2 / 51
p0 −2.549 ± 6.225

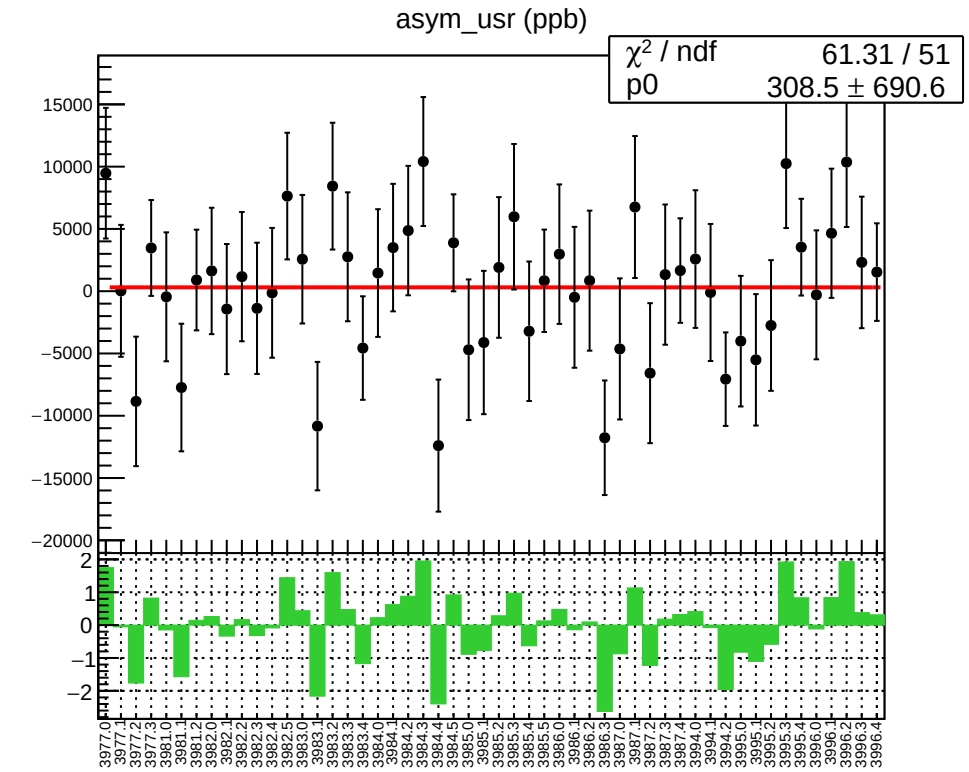

1D pull distribution
Mean −0.02155 ± 0.1429
Std Dev 1.03 ± 0.101
Underflow 0
Overflow 0
χ² / ndf 4.173 / 6
Constant 9.372 ± 1.862
Mean −0.1369 ± 0.1863
Sigma 1.136 ± 0.192

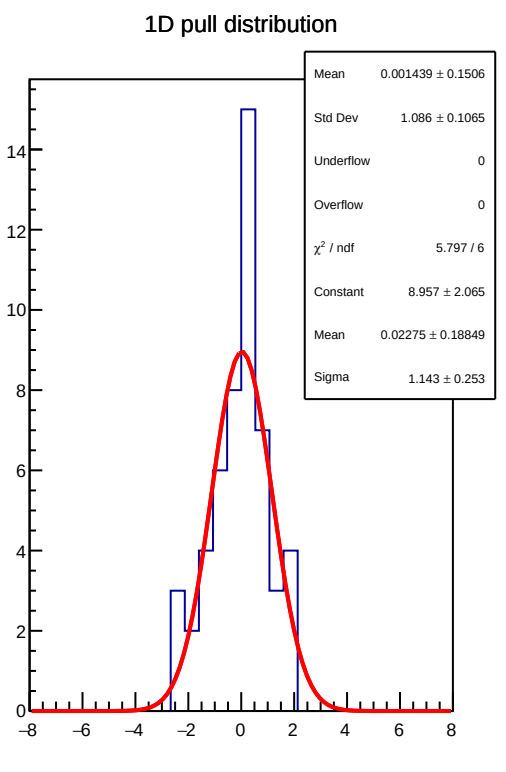

diff_bpm12X RMS (um)
RMS (um)
5
4.8
4.6
4.4
4.2
4
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

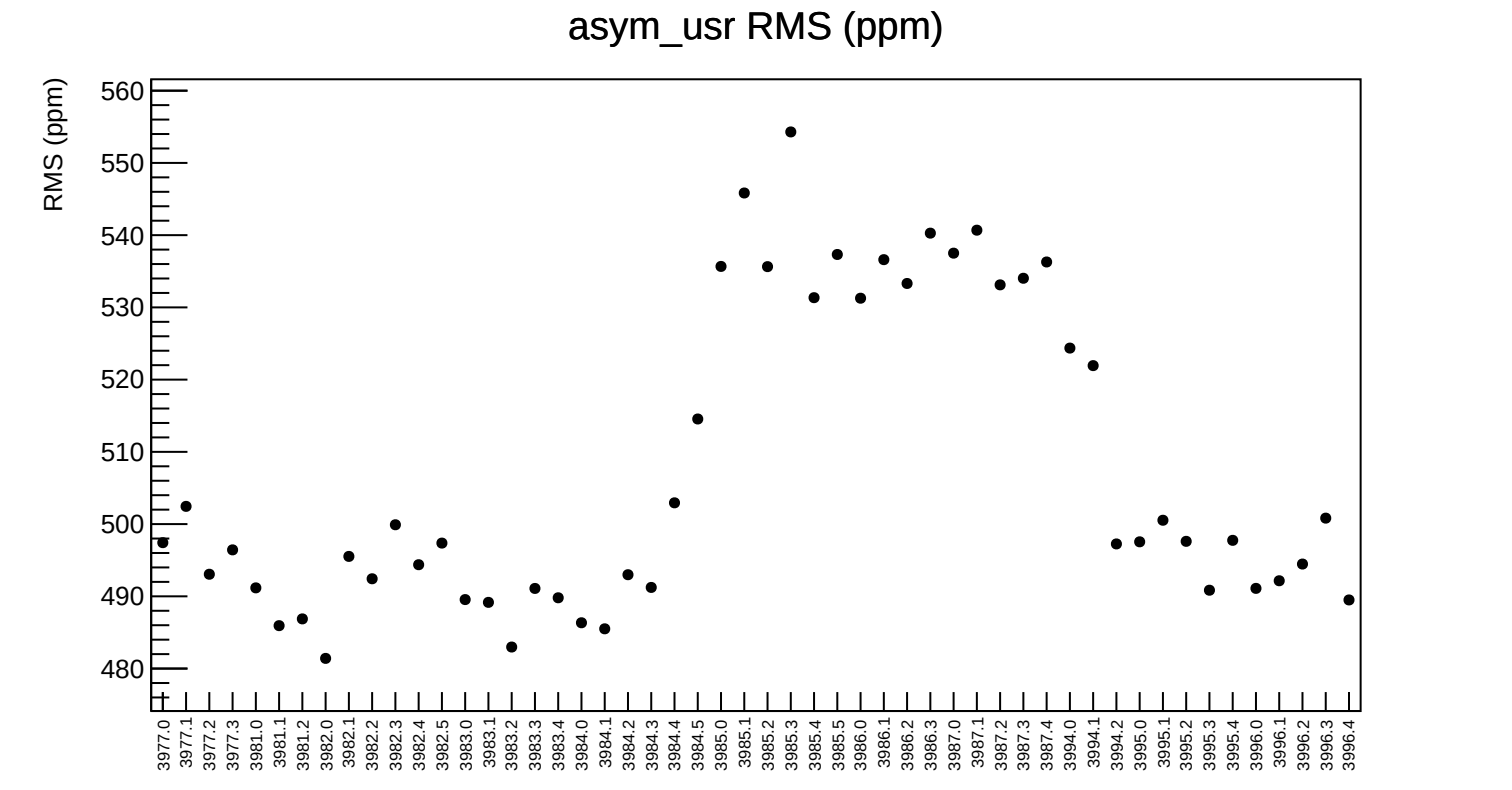

asym_usl (ppb)
χ² / ndf 47.73 / 51
p0 904 ± 875.1

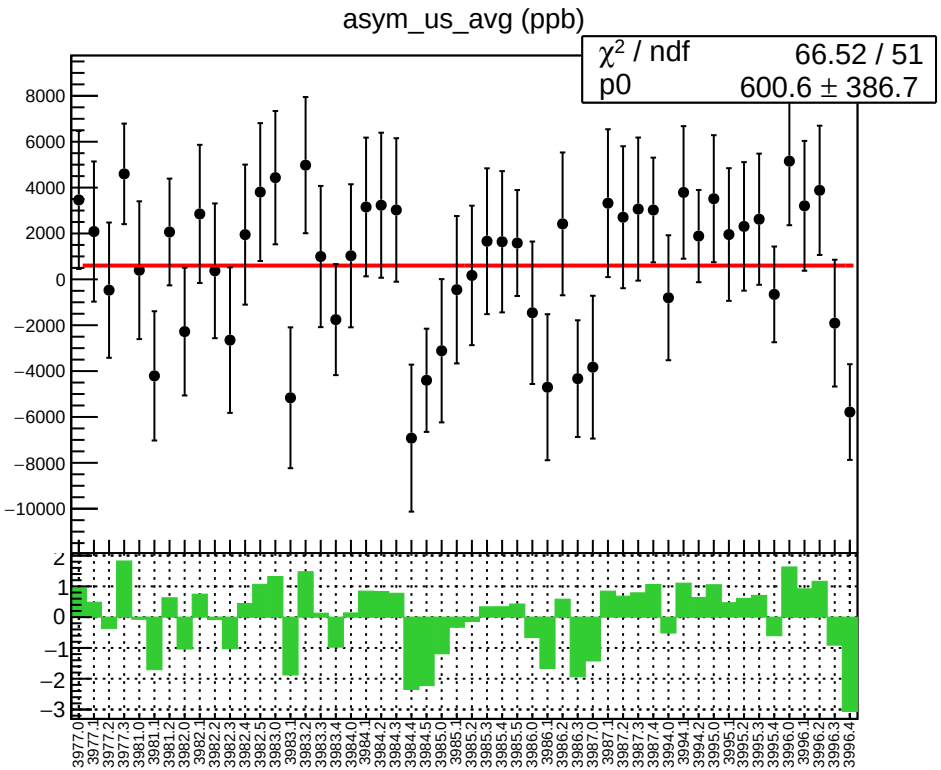

1D pull distribution
Mean 0.01195 ± 0.1329
Std Dev 0.958 ± 0.09394
Underflow 0
Overflow 0
χ² / ndf 3.285 / 5
Constant 12.83 ± 2.65
Mean 0.05819 ± 0.13275
Sigma 0.8296 ± 0.1454

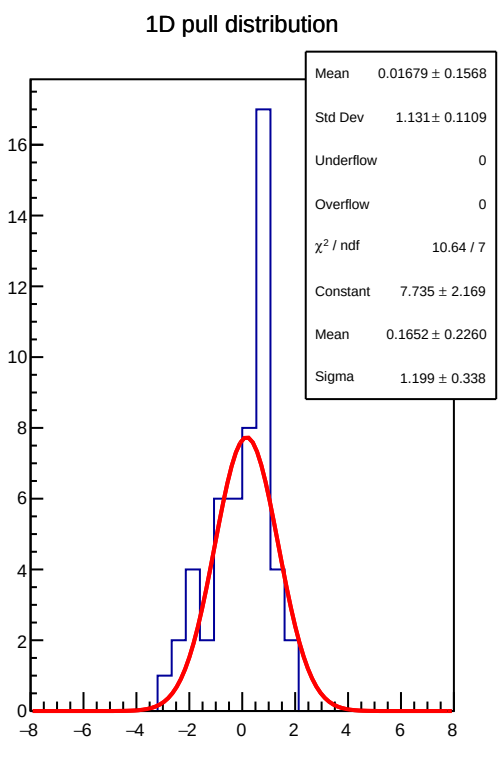

asym_usl RMS (ppm)
RMS (ppm)
680
670
660
650
640
630
620
610
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

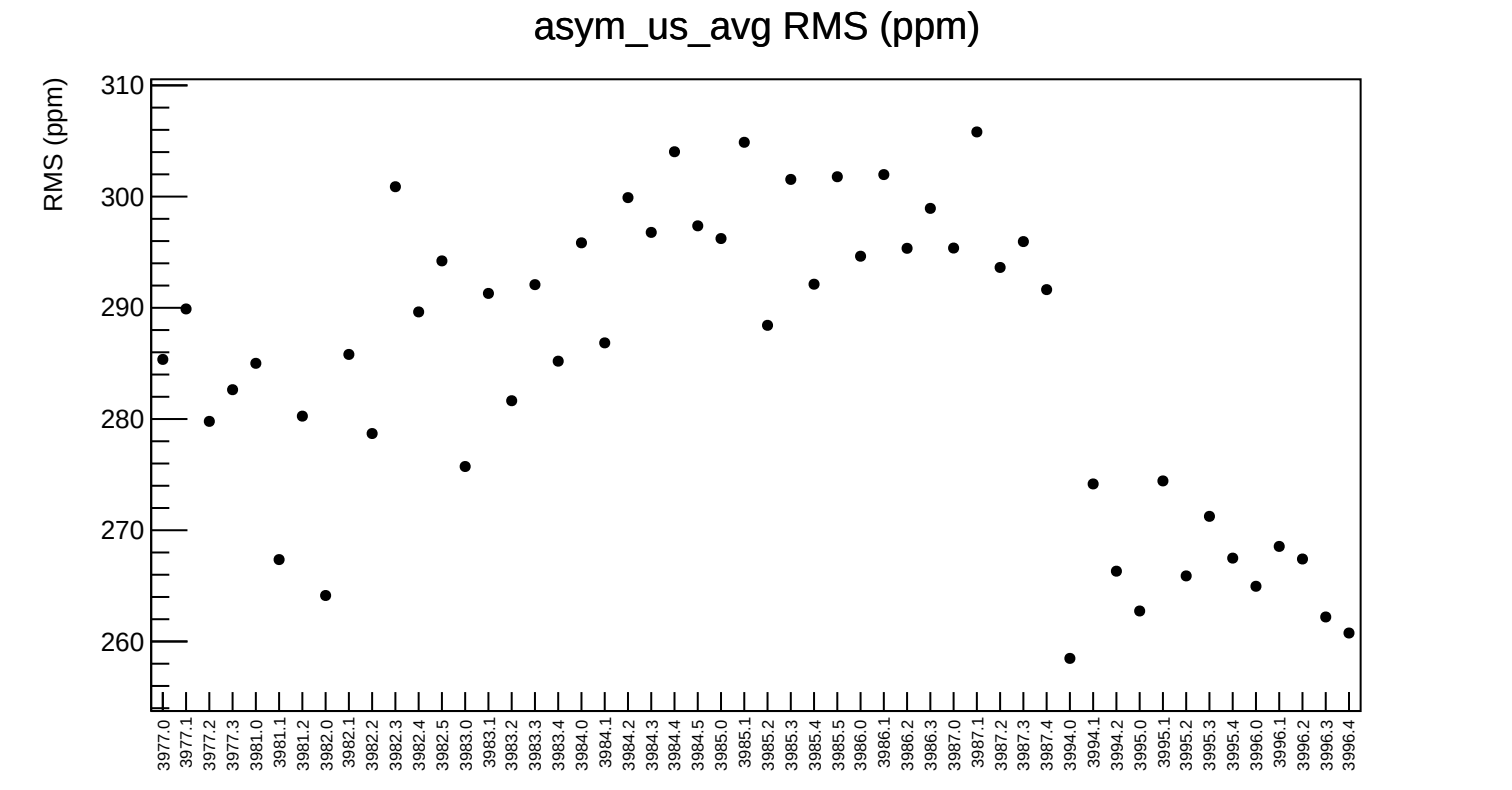

asym_usr (ppb)
χ² / ndf 61.31 / 51
p0 308.5 ± 690.6
15000
10000
5000
0
−5000
−10000
−15000
−20000
2
1
0
−1
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

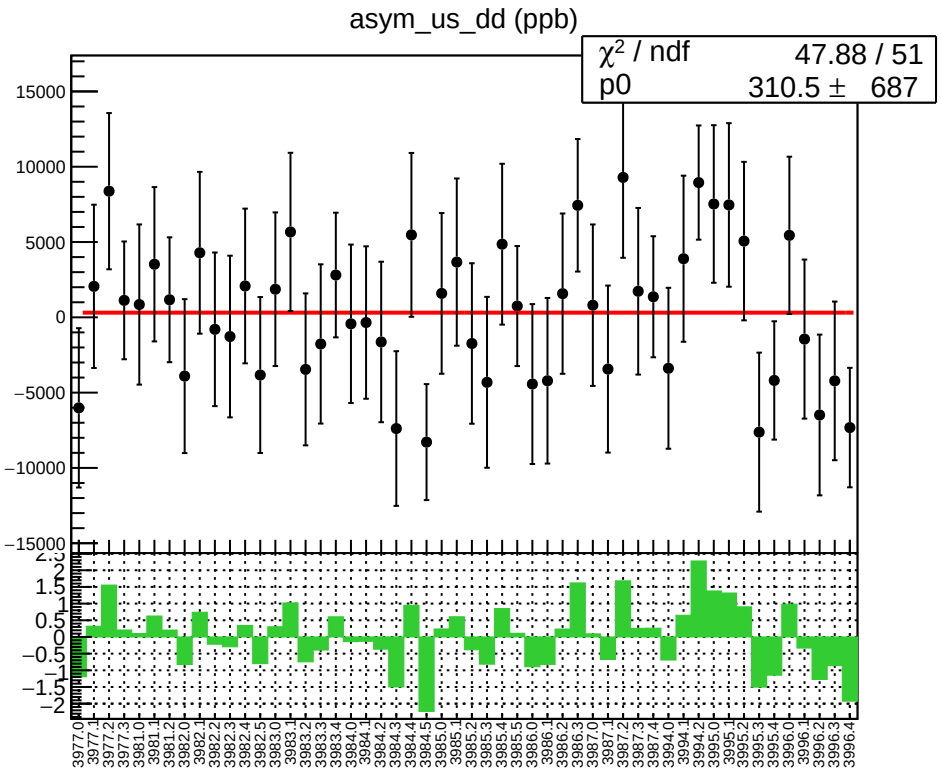

1D pull distribution
Mean 0.001439 ± 0.1506
Std Dev 1.086 ± 0.1065
Underflow 0
Overflow 0
χ² / ndf 5.797 / 6
Constant 8.957 ± 2.065
Mean 0.02275 ± 0.18849
Sigma 1.143 ± 0.253
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

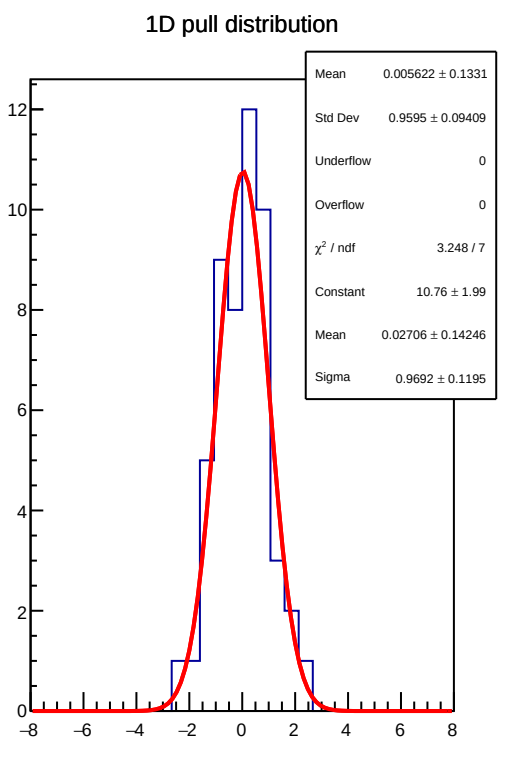

asym_usr RMS (ppm)
RMS (ppm)
560
550
540
530
520
510
500
490
480
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

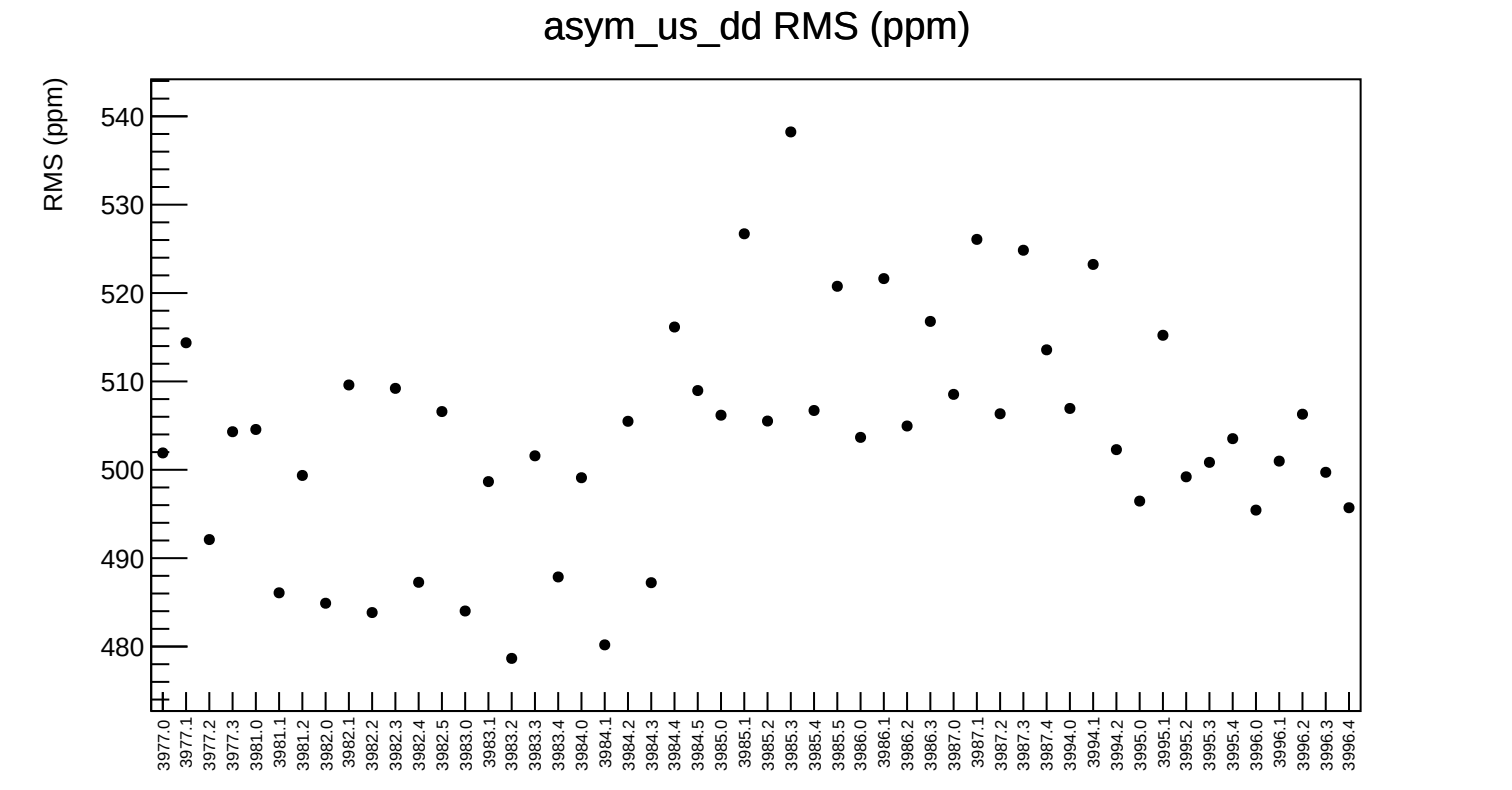

asym_us_avg (ppb)
χ² / ndf 66.52 / 51
p0 600.6 ± 386.7
8000
6000
4000
2000
0
−2000
−4000
−6000
−8000
−10000
2
1
0
−1
−2
−3
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

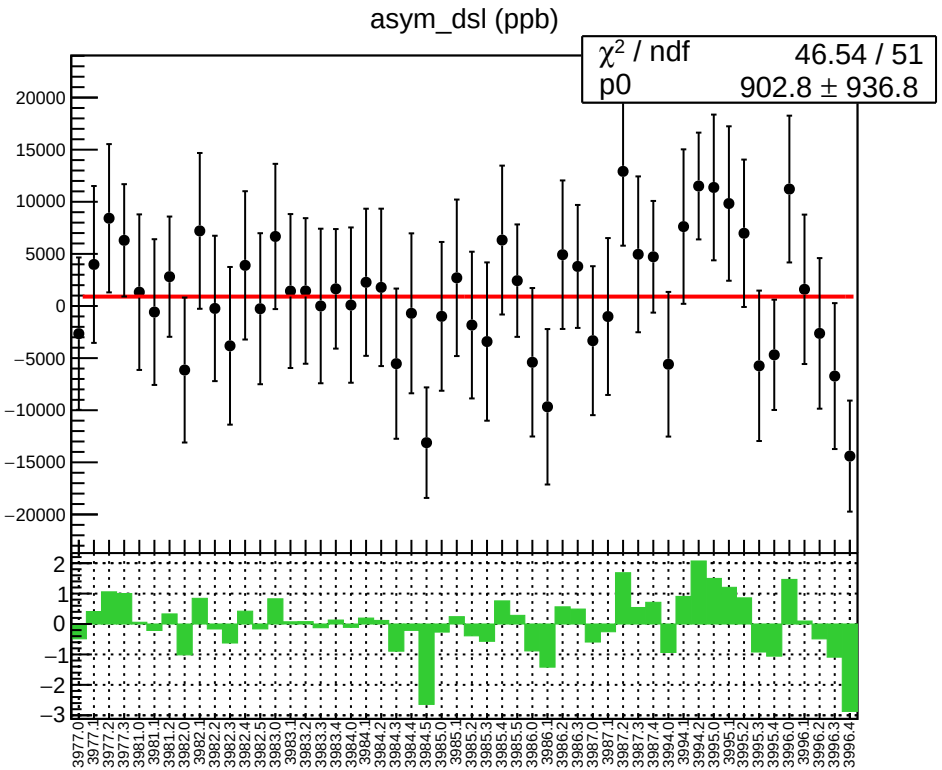

1D pull distribution
Mean 0.01679 ± 0.1568
Std Dev 1.131± 0.1109
Underflow 0
Overflow 0
χ² / ndf 10.64 / 7
Constant 7.735 ± 2.169
Mean 0.1652 ± 0.2260
Sigma 1.199 ± 0.338
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

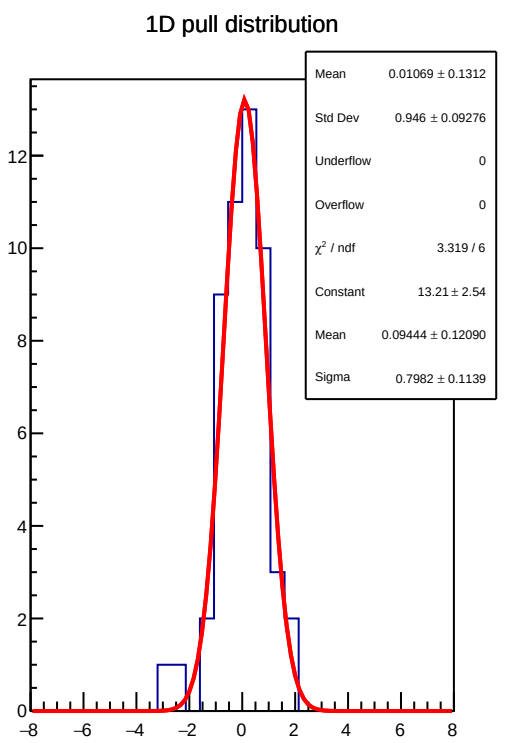

asym_us_avg RMS (ppm)
RMS (ppm)
310
300
290
280
270
260
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

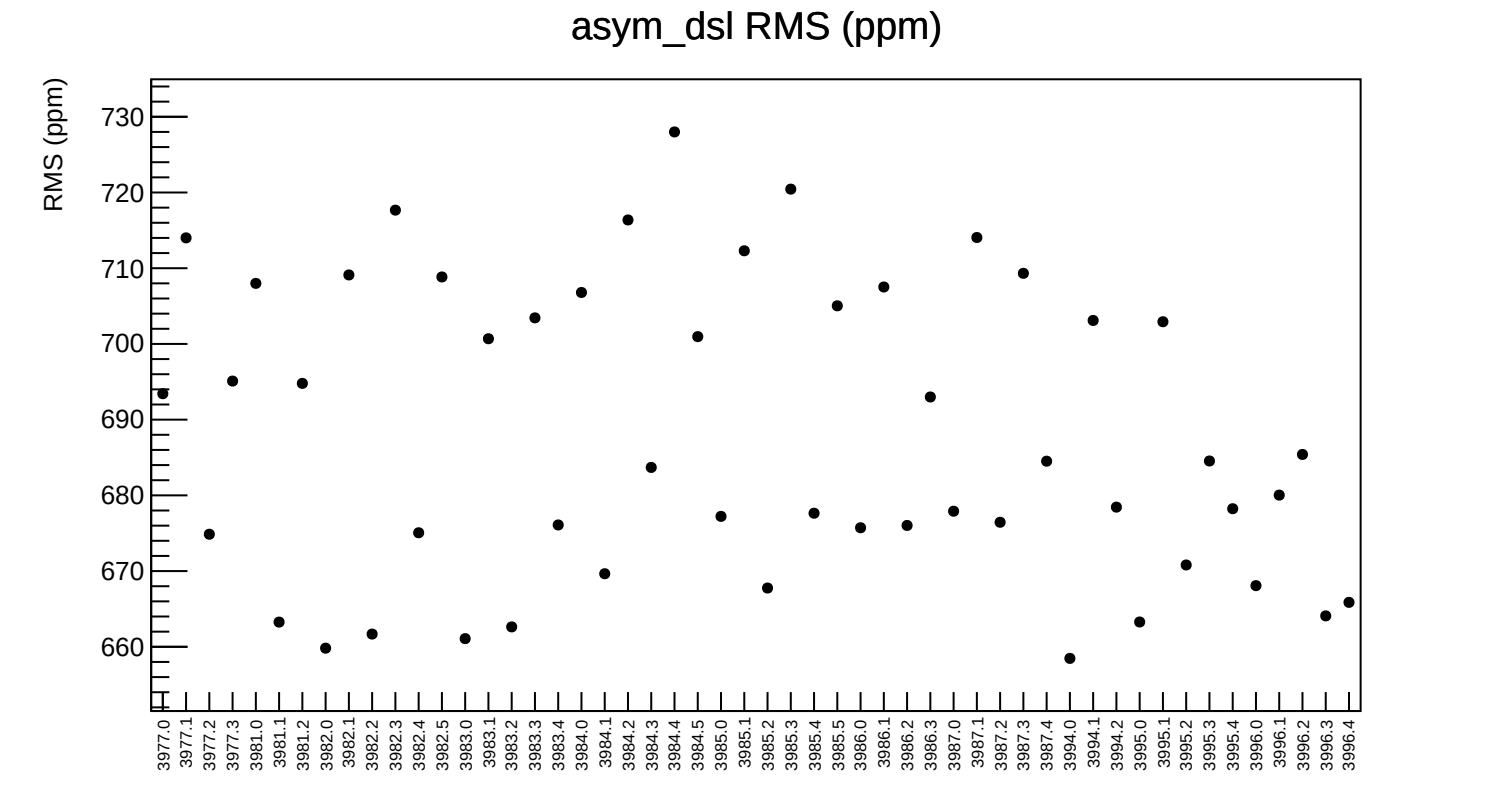

asym_us_dd (ppb)
χ² / ndf 47.88 / 51
p0 310.5 ± 687
15000
10000
5000
0
−5000
−10000
−15000
2
1.5
0.5
0
−0.5
−1.5
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

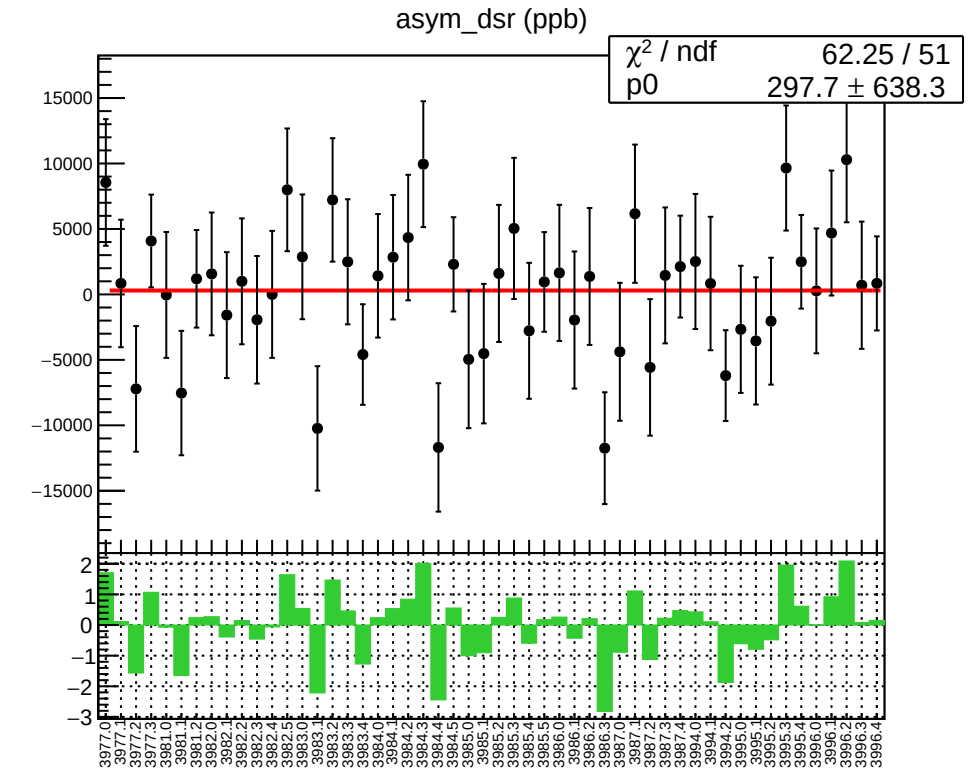

1D pull distribution
Mean 0.005622 ± 0.1331
Std Dev 0.9595 ± 0.09409
Underflow 0
Overflow 0
χ² / ndf 3.248 / 7
Constant 10.76 ± 1.99
Mean 0.02706 ± 0.14246
Sigma 0.9692 ± 0.1195
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

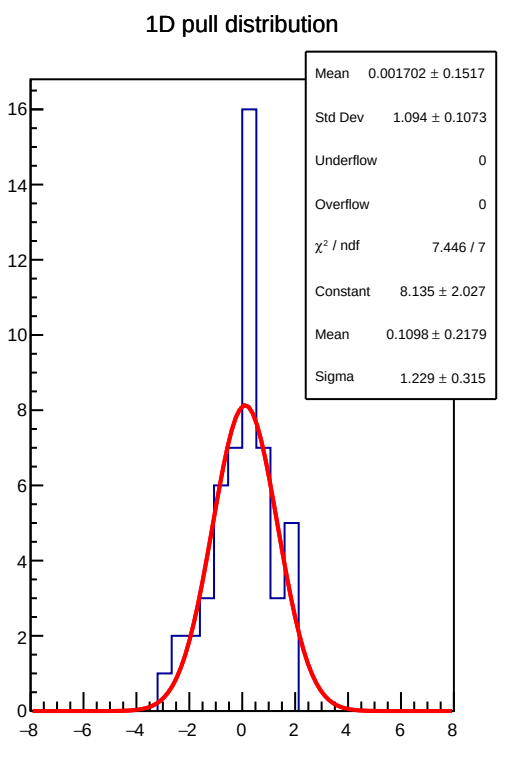

asym_us_dd RMS (ppm)
RMS (ppm)
540
530
520
510
500
490
480
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

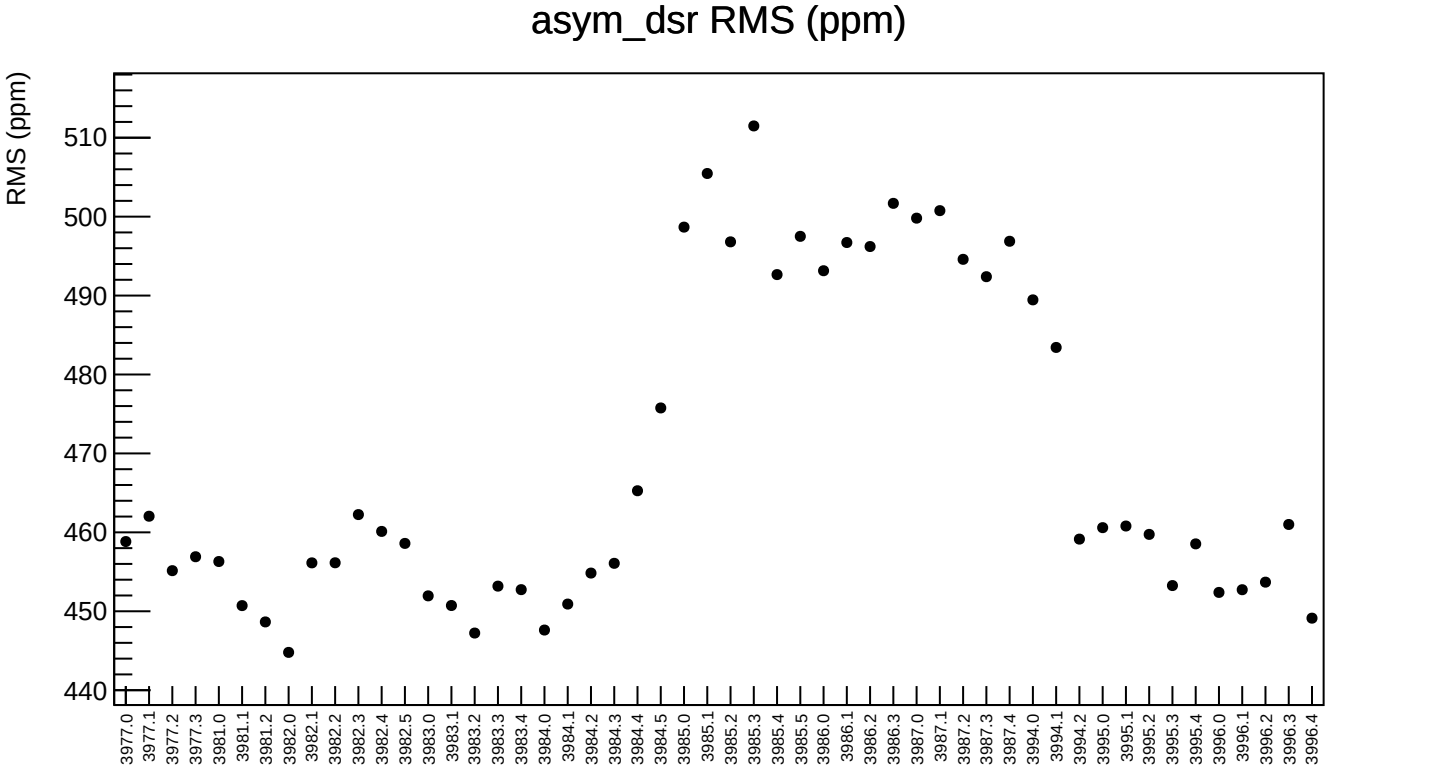

asym_dsl (ppb)
χ² / ndf 46.54 / 51
p0 902.8 ± 936.8

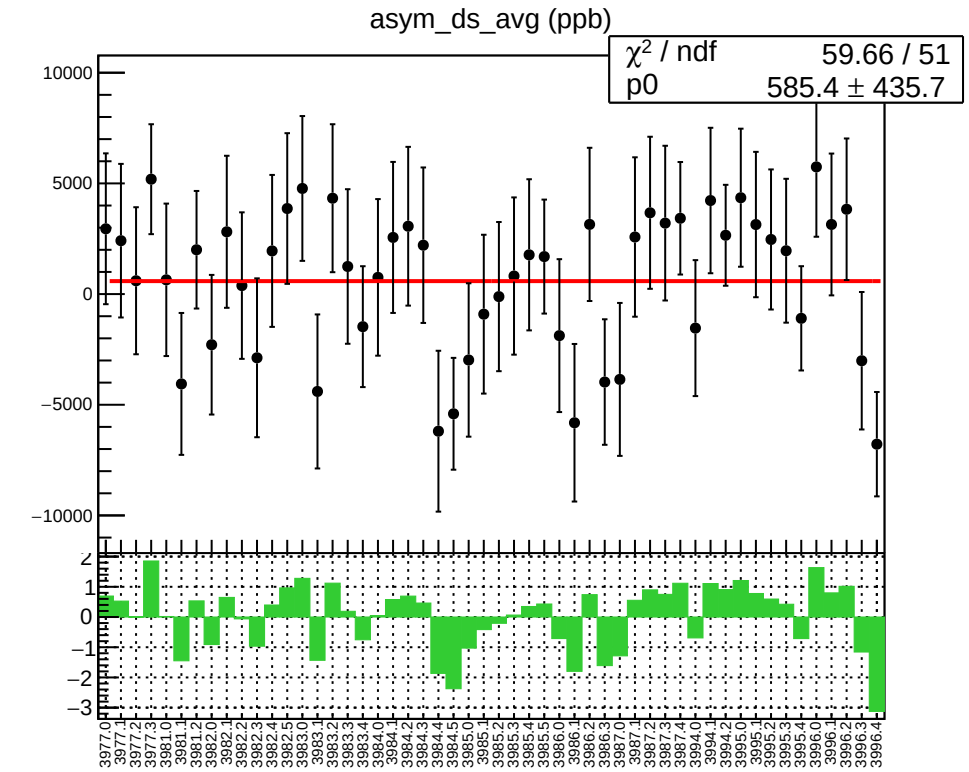

1D pull distribution
Mean 0.01069 ± 0.1312
Std Dev 0.946 ± 0.09276
Underflow 0
Overflow 0
χ² / ndf 3.319 / 6
Constant 13.21 ± 2.54
Mean 0.09444 ± 0.12090
Sigma 0.7982 ± 0.1139

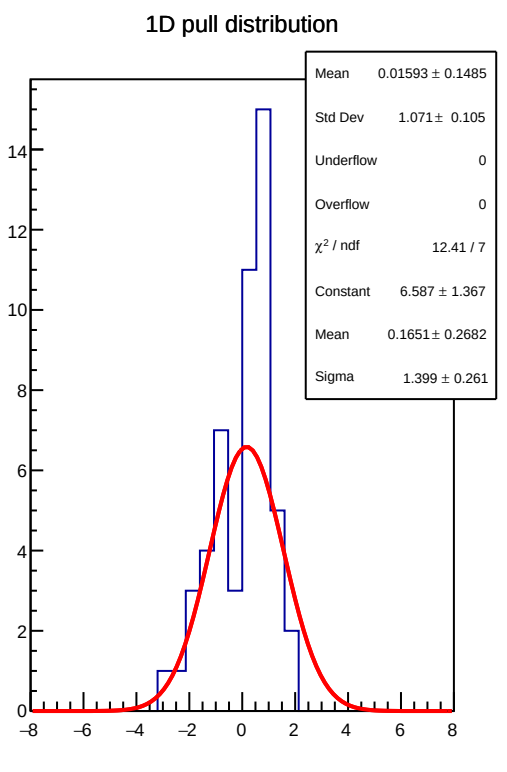

asym_dsl RMS (ppm)
RMS (ppm)
730
720
710
700
690
680
670
660
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

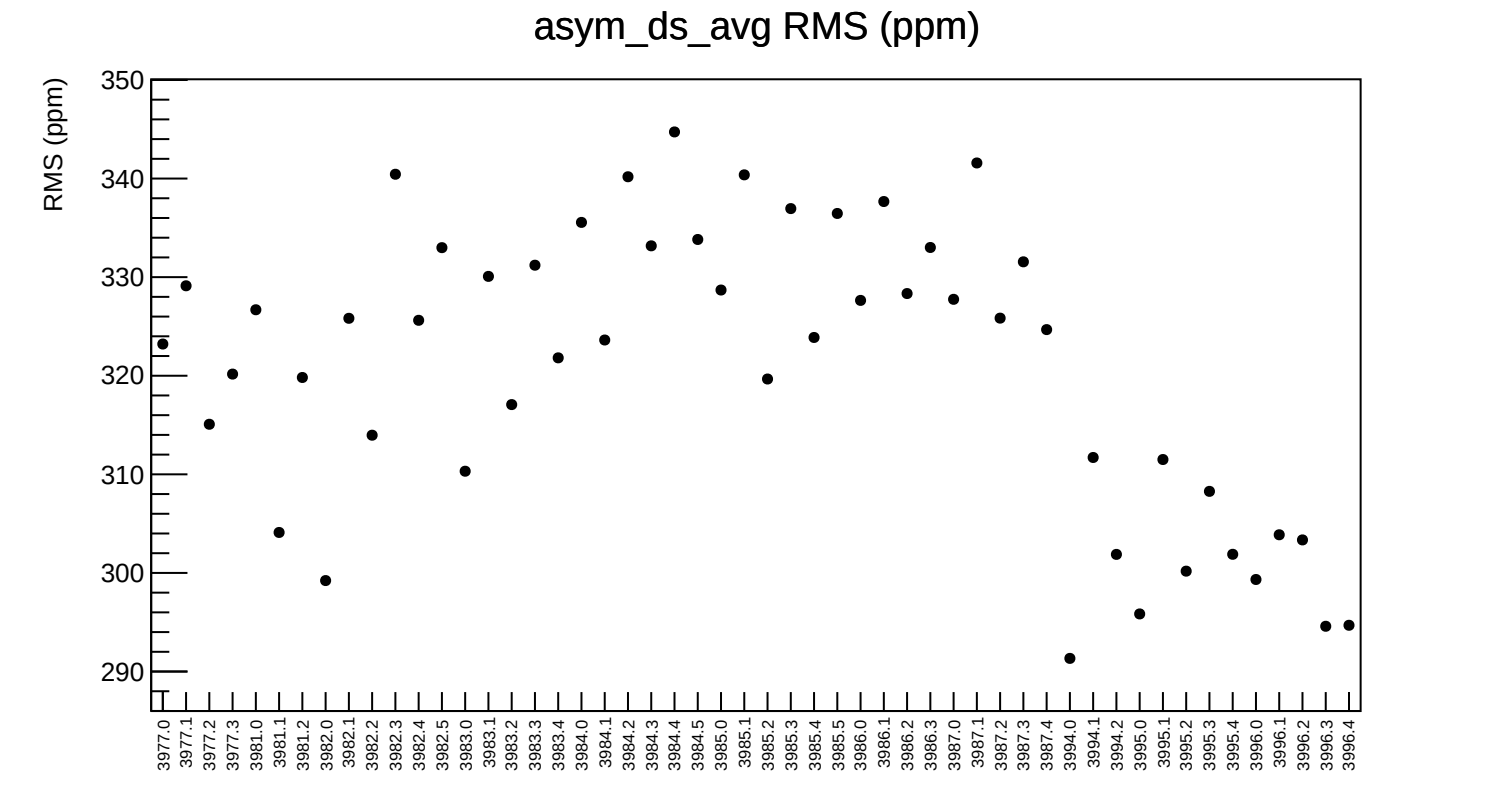

asym_dsr (ppb)
χ² / ndf 62.25 / 51
p0 297.7 ± 638.3
15000
10000
5000
0
−5000
−10000
−15000
2
1
0
−1
−2
−3
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3994.3
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

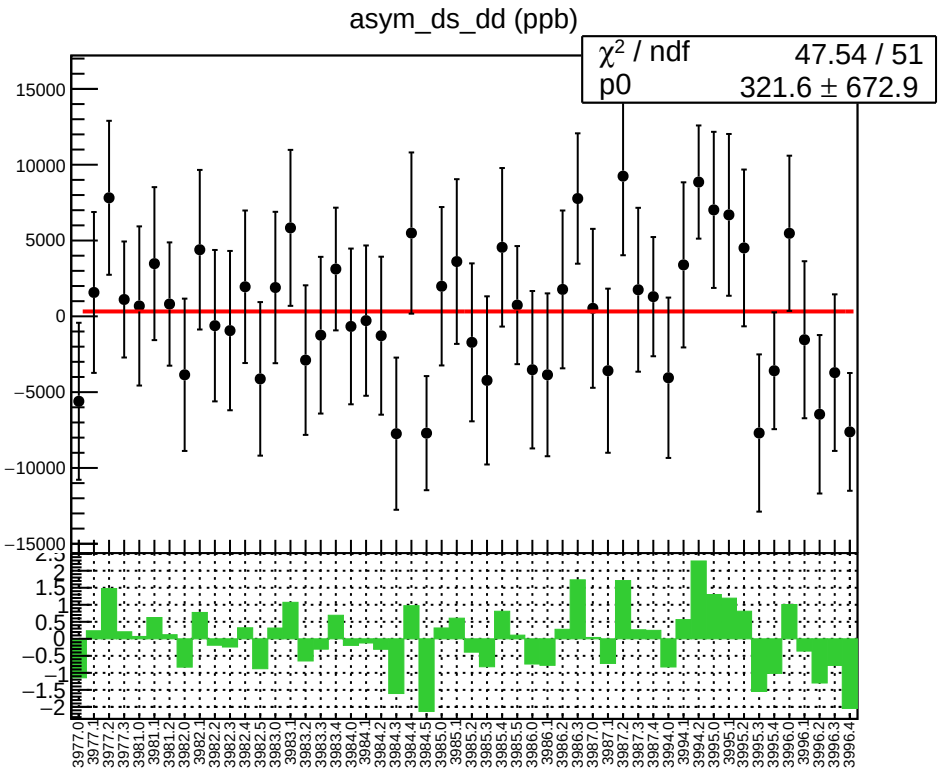

1D pull distribution
Mean 0.001702 ± 0.1517
Std Dev 1.094 ± 0.1073
Underflow 0
Overflow 0
χ² / ndf 7.446 / 7
Constant 8.135 ± 2.027
Mean 0.1098 ± 0.2179
Sigma 1.229 ± 0.315
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

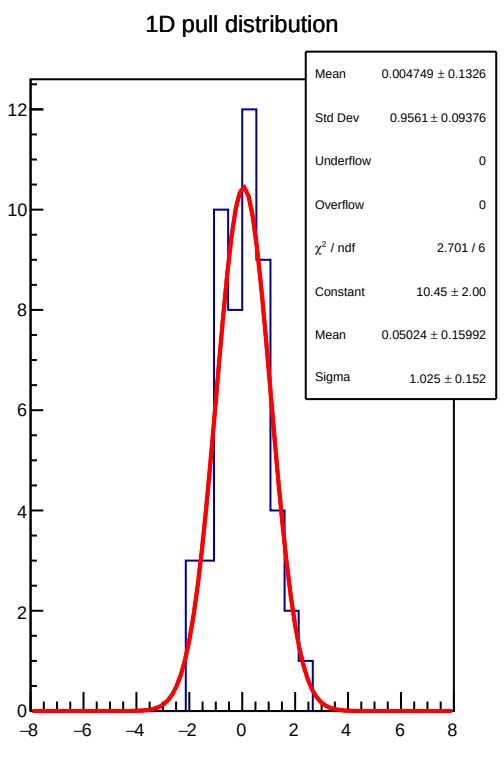

asym_dsr RMS (ppm)
RMS (ppm)
510
500
490
480
470
460
450
440
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

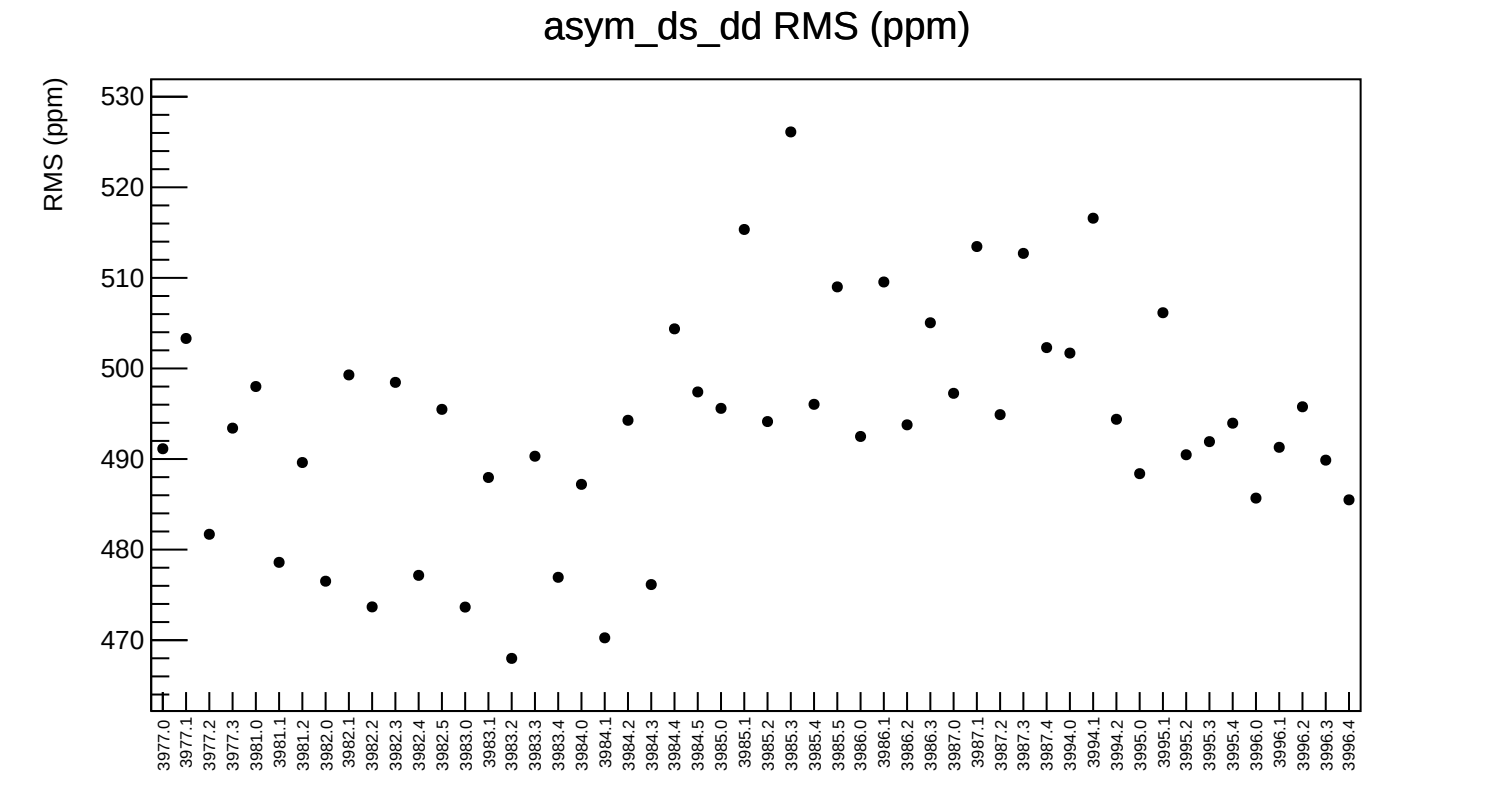

asym_ds_avg (ppb)
χ² / ndf 59.66 / 51
p0 585.4 ± 435.7
10000
5000
0
−5000
−10000
2
1
0
−1
−2
−3
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

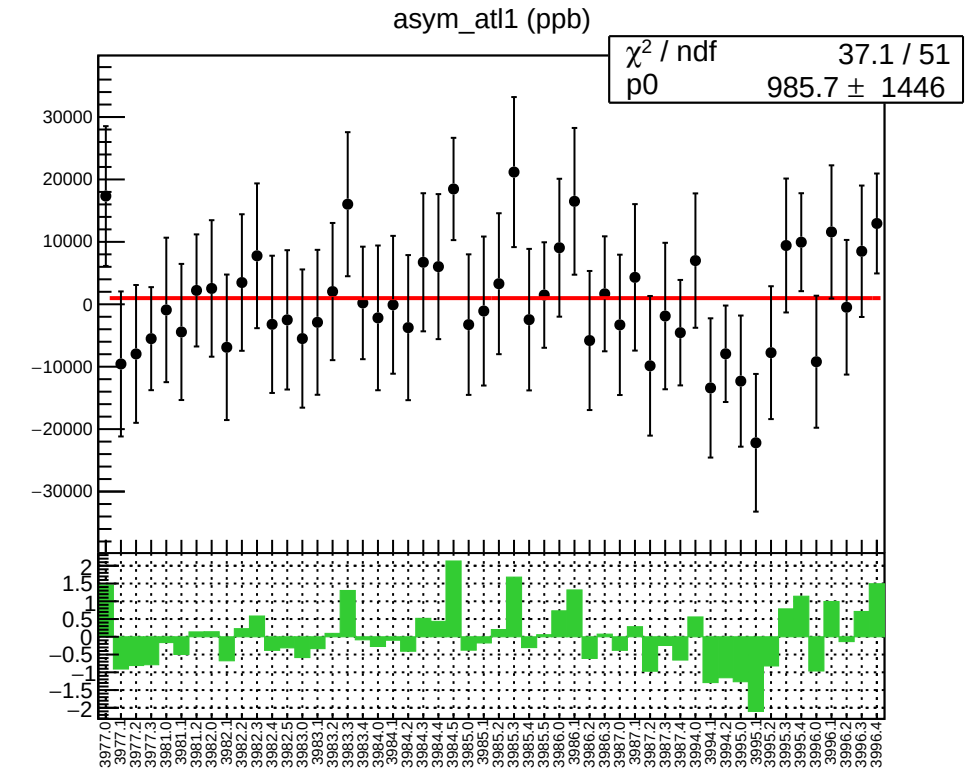

1D pull distribution
Mean 0.01593 ± 0.1485
Std Dev 1.071± 0.105
Underflow 0
Overflow 0
χ² / ndf 12.41 / 7
Constant 6.587 ± 1.367
Mean 0.1651± 0.2682
Sigma 1.399 ± 0.261
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

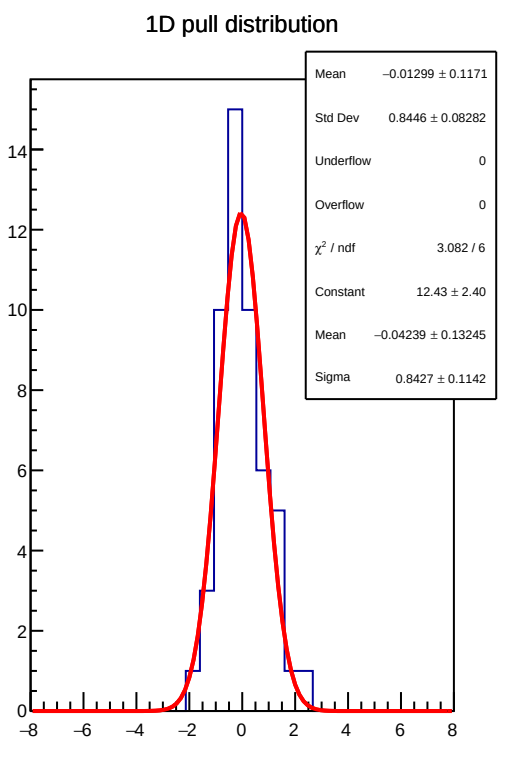

asym_ds_avg RMS (ppm)
RMS (ppm)
350
340
330
320
310
300
290
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

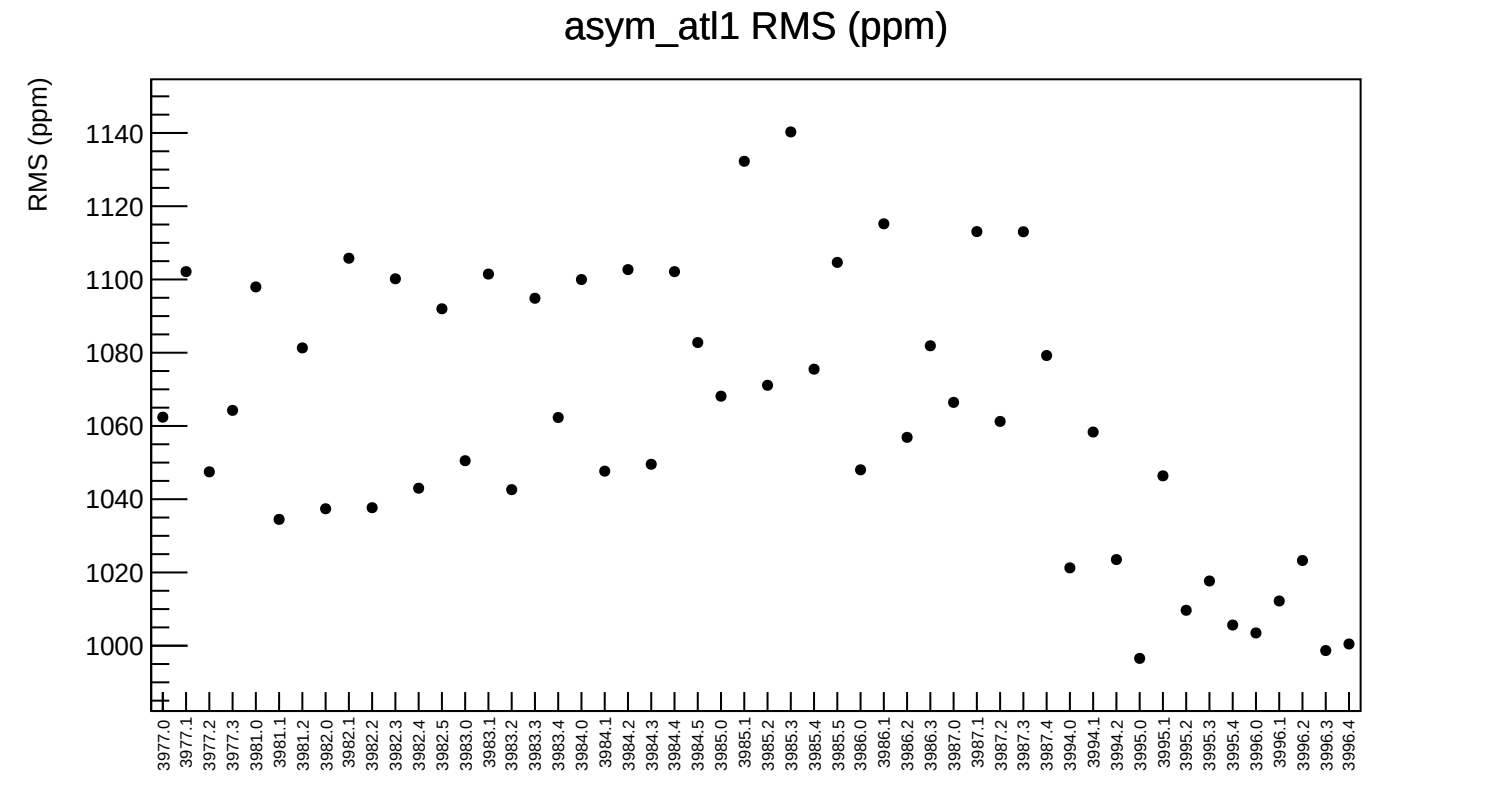

asym_ds_dd (ppb)
χ² / ndf 47.54 / 51
p0 321.6 ± 672.9
15000
10000
5000
0
−5000
−10000
−15000
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

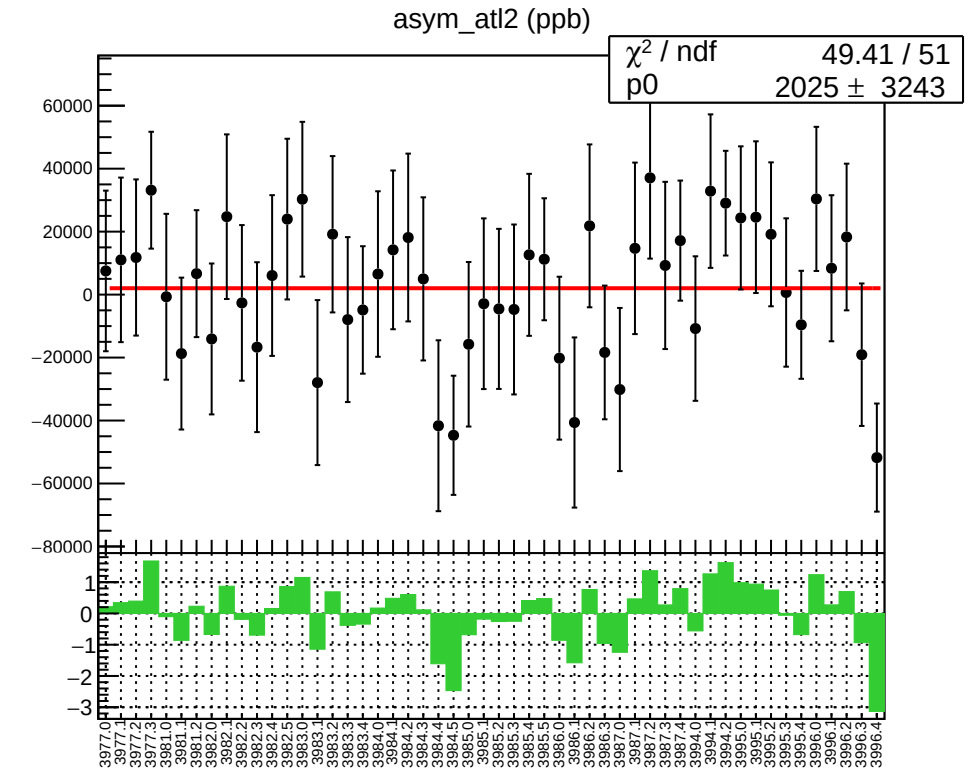

1D pull distribution
Mean 0.004749 ± 0.1326
Std Dev 0.9561 ± 0.09376
Underflow 0
Overflow 0
χ² / ndf 2.701 / 6
Constant 10.45 ± 2.00
Mean 0.05024 ± 0.15992
Sigma 1.025 ± 0.152
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

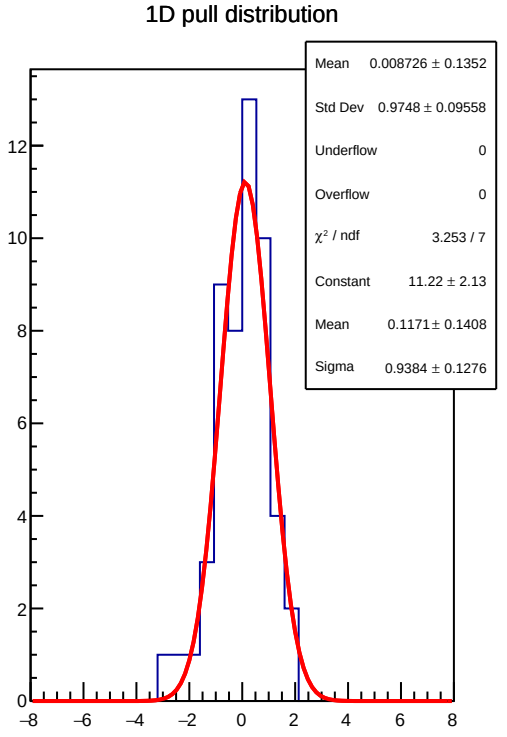

asym_ds_dd RMS (ppm)
RMS (ppm)
530
520
510
500
490
480
470
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

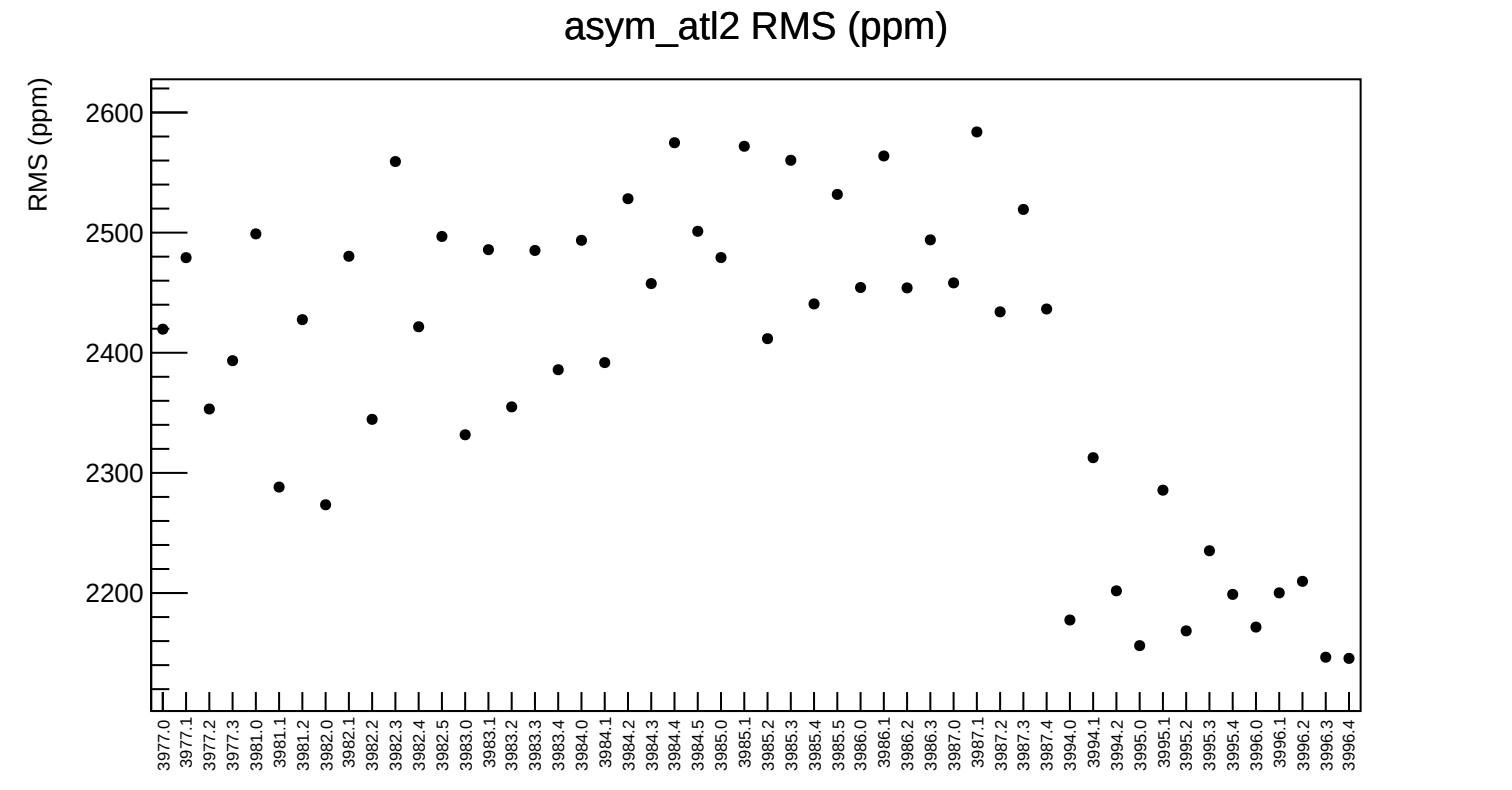

asym_atl1 (ppb)
χ² / ndf 37.1 / 51
p0 985.7 ± 1446
30000
20000
10000
0
−10000
−20000
−30000
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

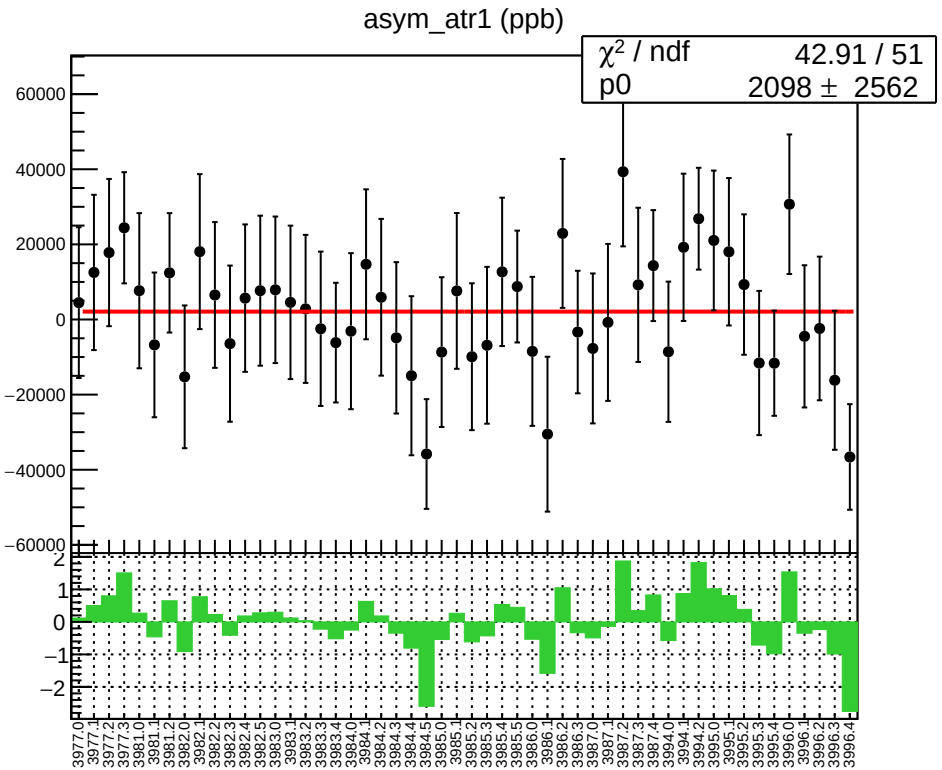

1D pull distribution
Mean −0.01299 ± 0.1171
Std Dev 0.8446 ± 0.08282
Underflow 0
Overflow 0
χ² / ndf 3.082 / 6
Constant 12.43 ± 2.40
Mean −0.04239 ± 0.13245
Sigma 0.8427 ± 0.1142
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

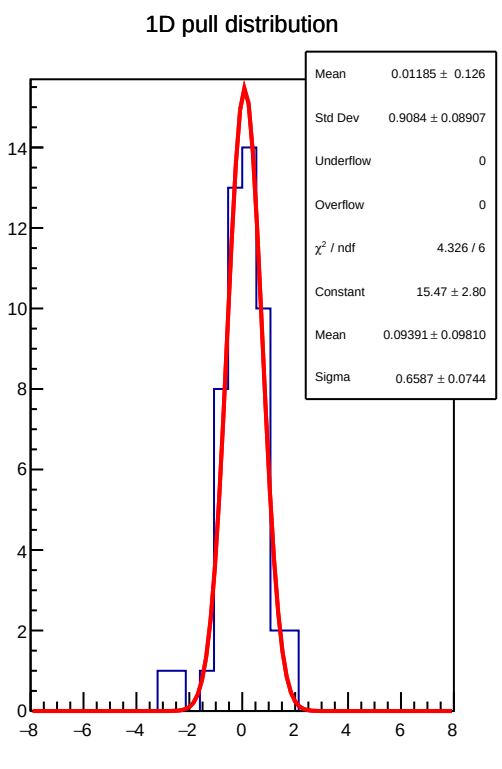

asym_atl1 RMS (ppm)
RMS (ppm)
1140
1120
1100
1080
1060
1040
1020
1000
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

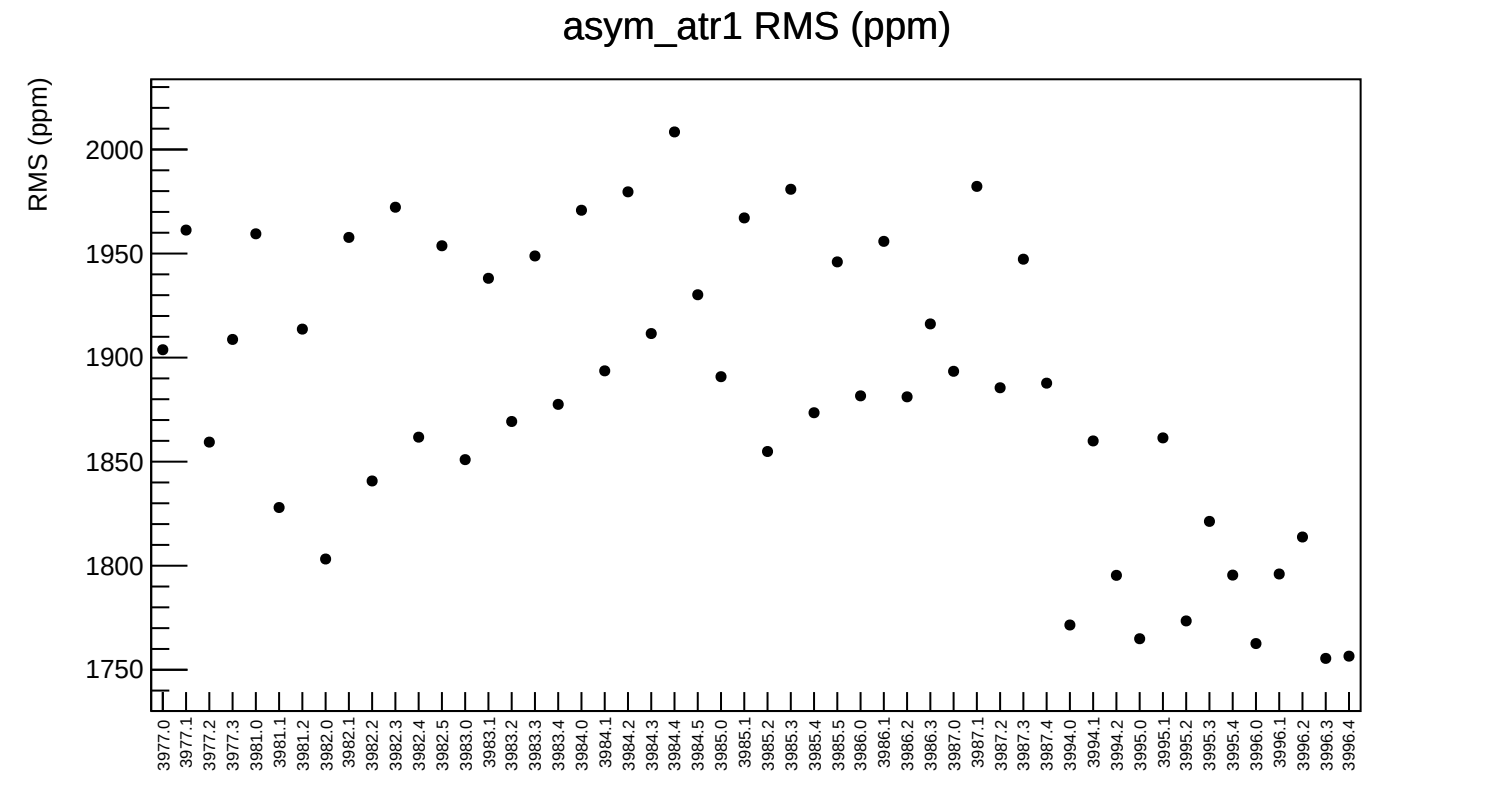

asym_atl2 (ppb)
χ² / ndf 49.41 / 51
p0 2025 ± 3243
60000
40000
20000
0
−20000
−40000
−60000
−80000
1
0
−1
−2
−3
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

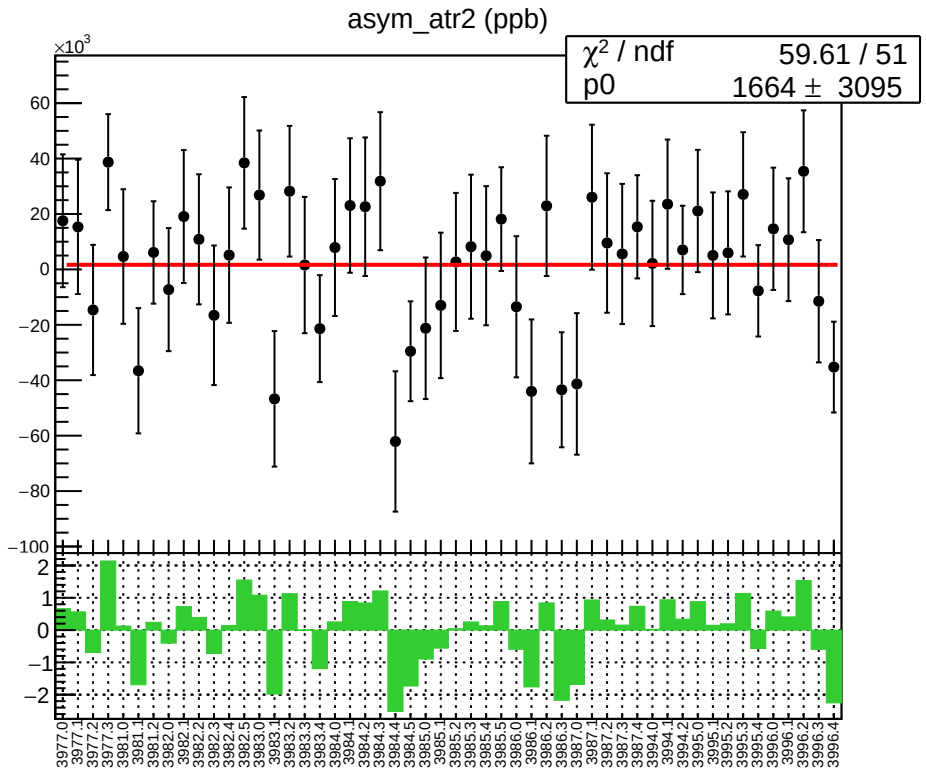

1D pull distribution
Mean 0.008726 ± 0.1352
Std Dev 0.9748 ± 0.09558
Underflow 0
Overflow 0
χ² / ndf 3.253 / 7
Constant 11.22 ± 2.13
Mean 0.1171 ± 0.1408
Sigma 0.9384 ± 0.1276
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

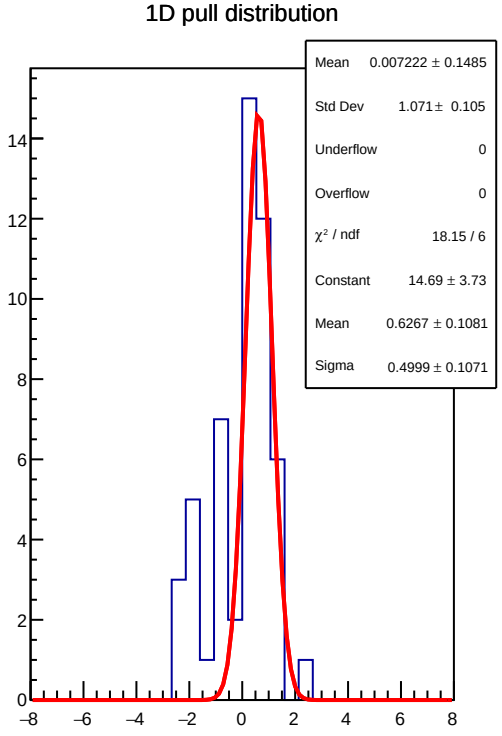

asym_atl2 RMS (ppm)
RMS (ppm)
2600
2500
2400
2300
2200
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4

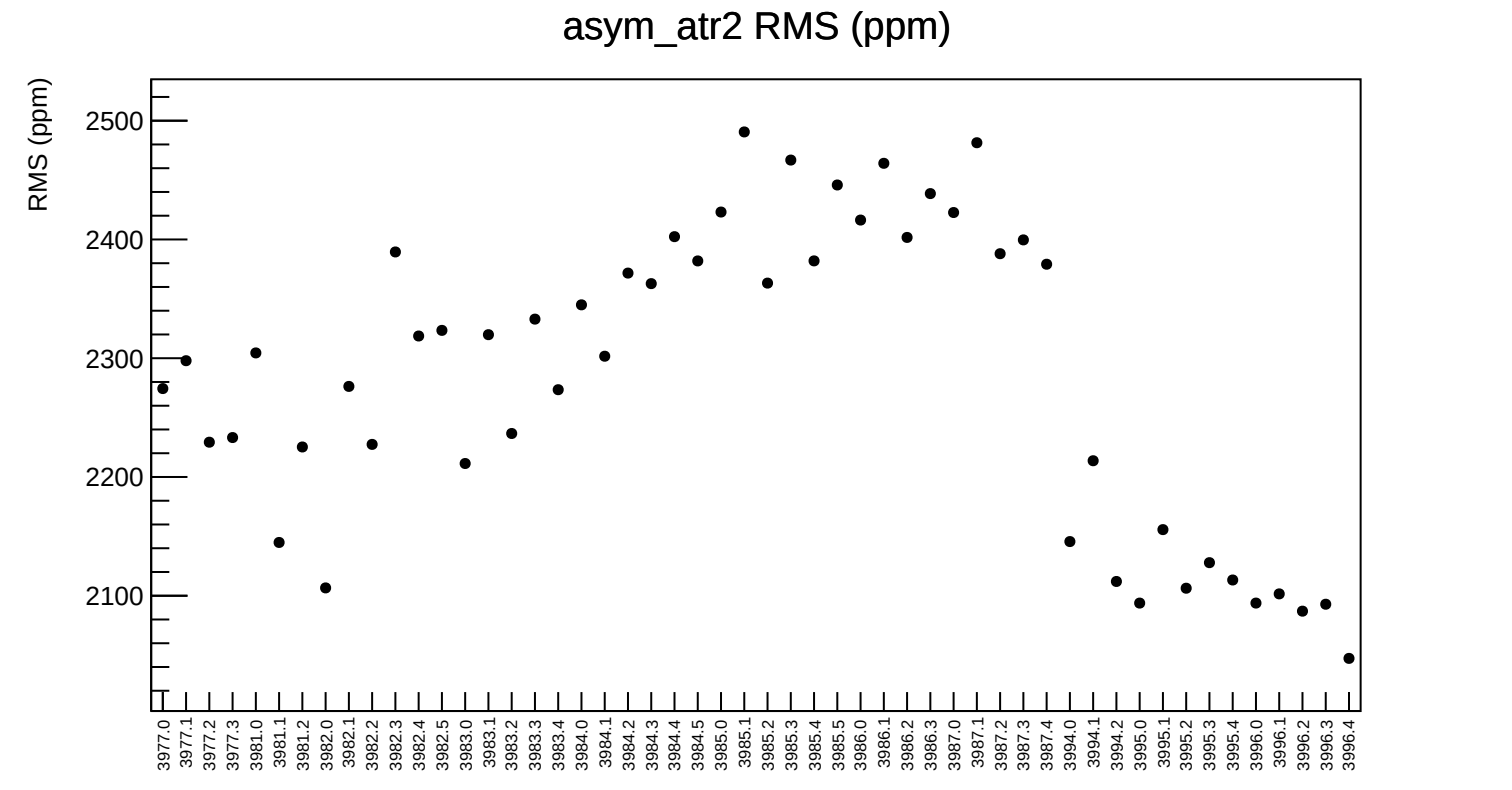

asym_atr1 (ppb)
χ² / ndf 42.91 / 51
p0 2098 ± 2562
60000
40000
20000
0
−20000
−40000
−60000
2
1
0
−1
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4


1D pull distribution
Mean 0.01185 ± 0.126
Std Dev 0.9084 ± 0.08907
Underflow 0
Overflow 0
χ² / ndf 4.326 / 6
Constant 15.47 ± 2.80
Mean 0.09391 ± 0.09810
Sigma 0.6587 ± 0.0744
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8


asym_atr1 RMS (ppm)
RMS (ppm)
2000
1950
1900
1850
1800
1750
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4


asym_atr2 (ppb)
χ² / ndf 59.61 / 51
p0 1664 ± 3095
×10³
60
40
20
0
−20
−40
−60
−80
−100
2
1
0
−1
−2
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4


1D pull distribution
Mean 0.007222 ± 0.1485
Std Dev 1.071± 0.105
Underflow 0
Overflow 0
χ² / ndf 18.15 / 6
Constant 14.69 ± 3.73
Mean 0.6267 ± 0.1081
Sigma 0.4999 ± 0.1071
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8


asym_atr2 RMS (ppm)
RMS (ppm)
2500
2400
2300
2200
2100
3977.0
3977.1
3977.2
3977.3
3981.0
3981.1
3981.2
3982.0
3982.1
3982.2
3982.3
3982.4
3982.5
3983.0
3983.1
3983.2
3983.3
3983.4
3984.0
3984.1
3984.2
3984.3
3984.4
3984.5
3985.0
3985.1
3985.2
3985.3
3985.4
3985.5
3986.0
3986.1
3986.2
3986.3
3987.0
3987.1
3987.2
3987.3
3987.4
3994.0
3994.1
3994.2
3995.0
3995.1
3995.2
3995.3
3995.4
3996.0
3996.1
3996.2
3996.3
3996.4