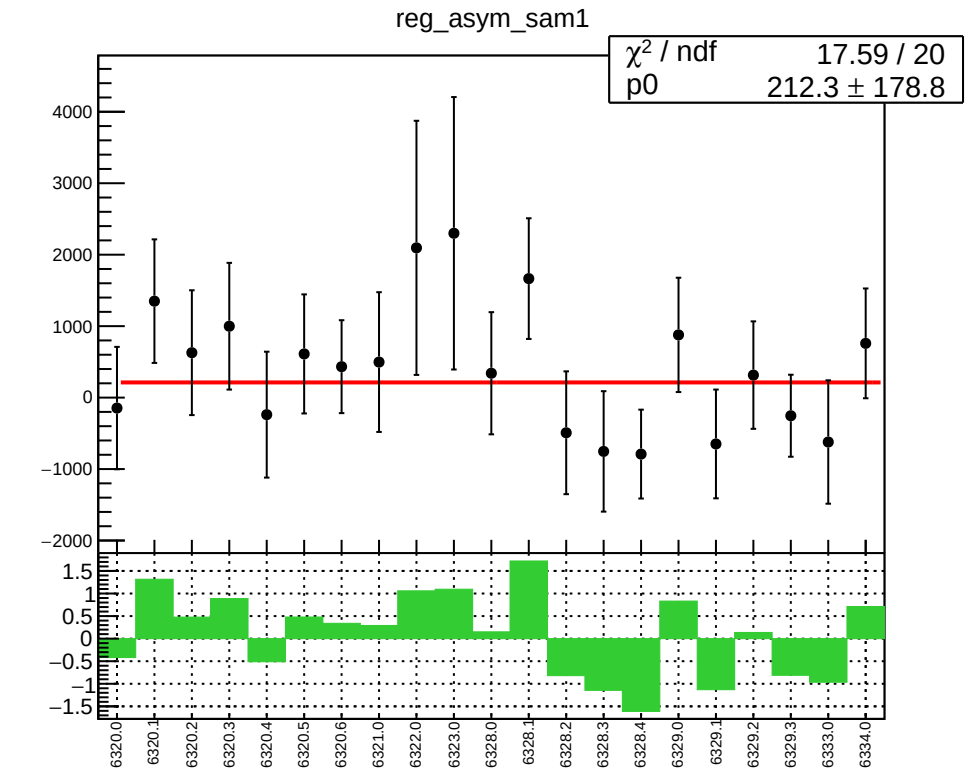
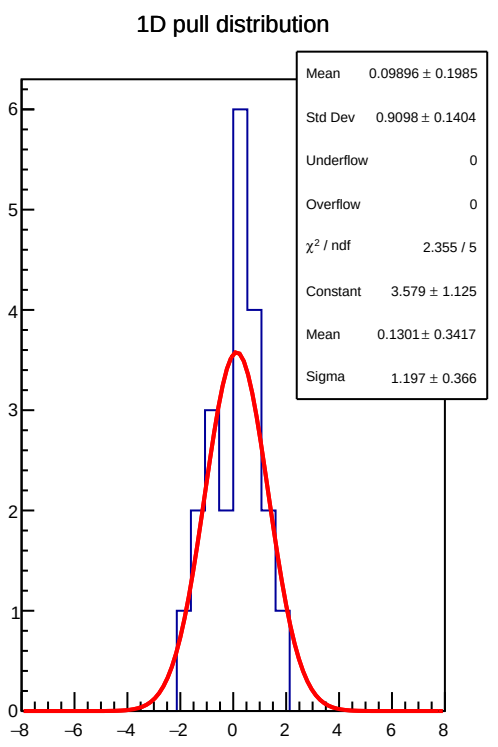
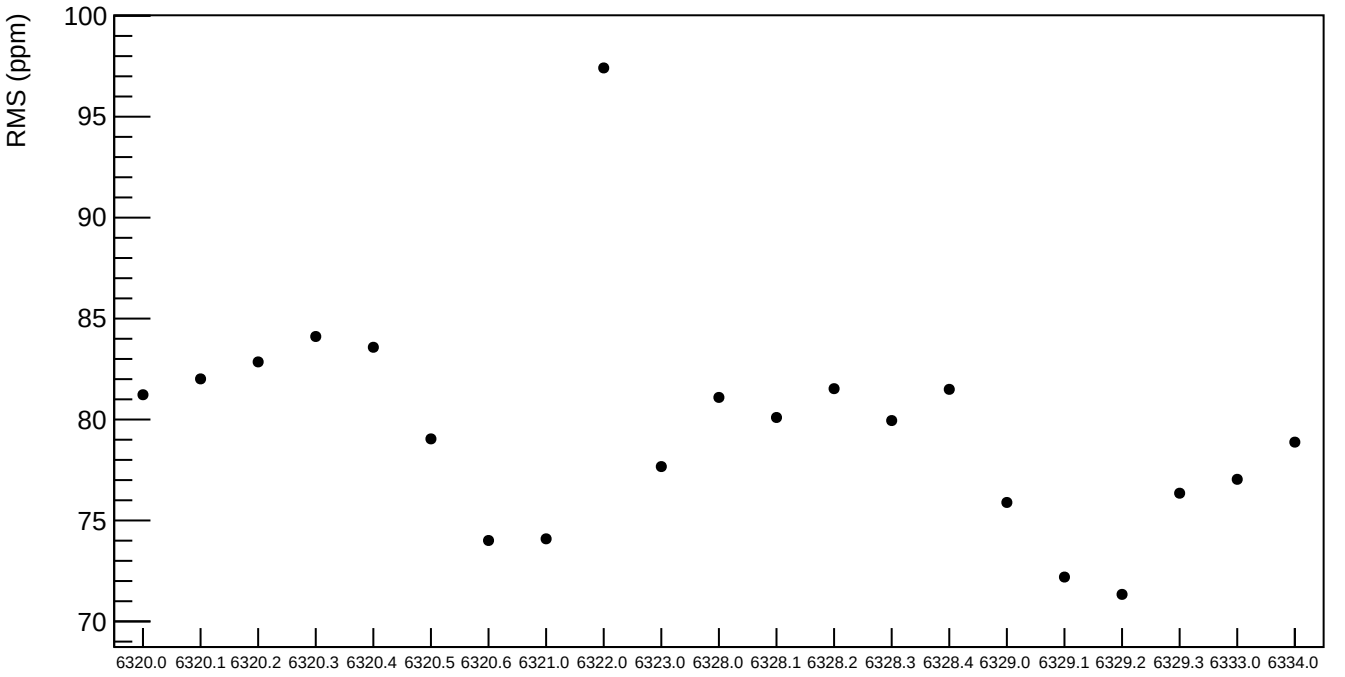
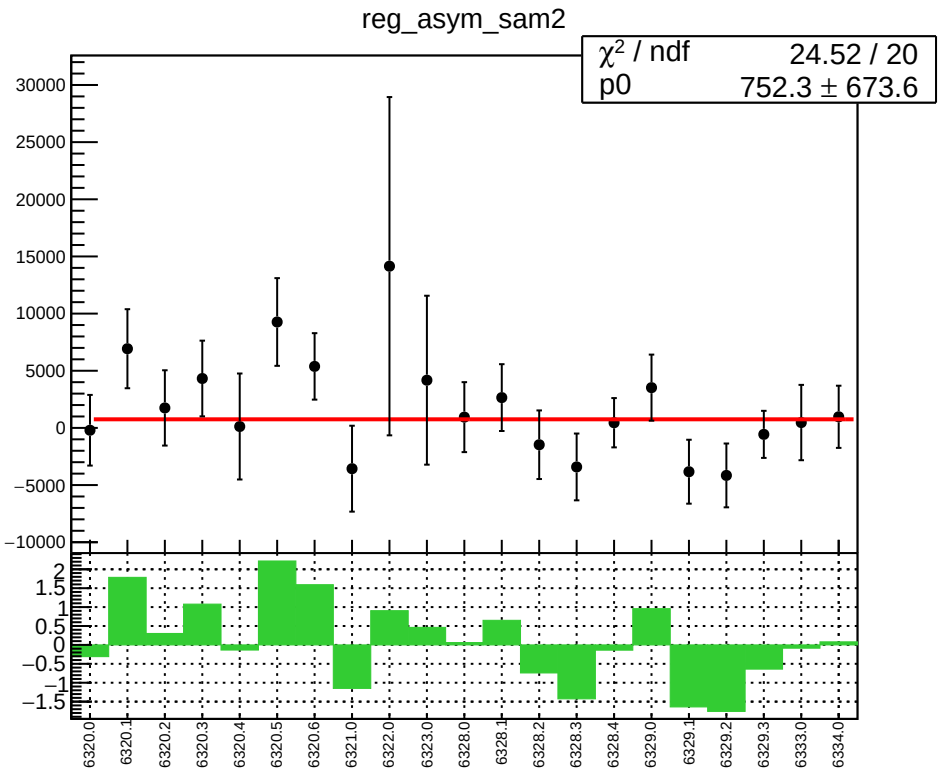
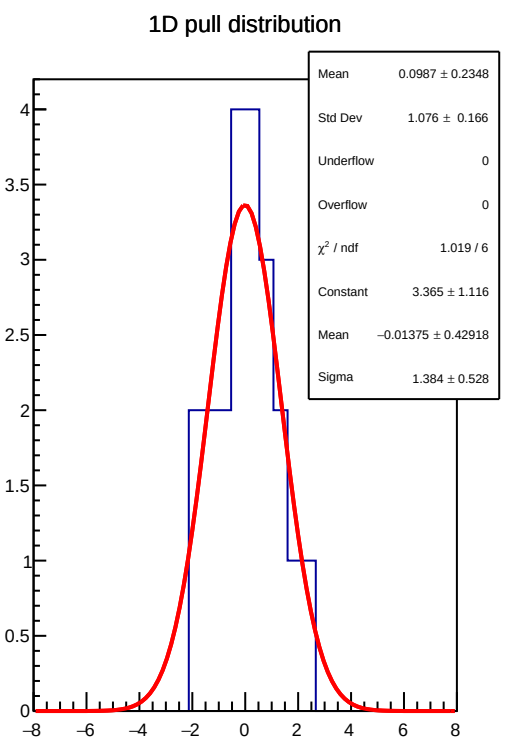
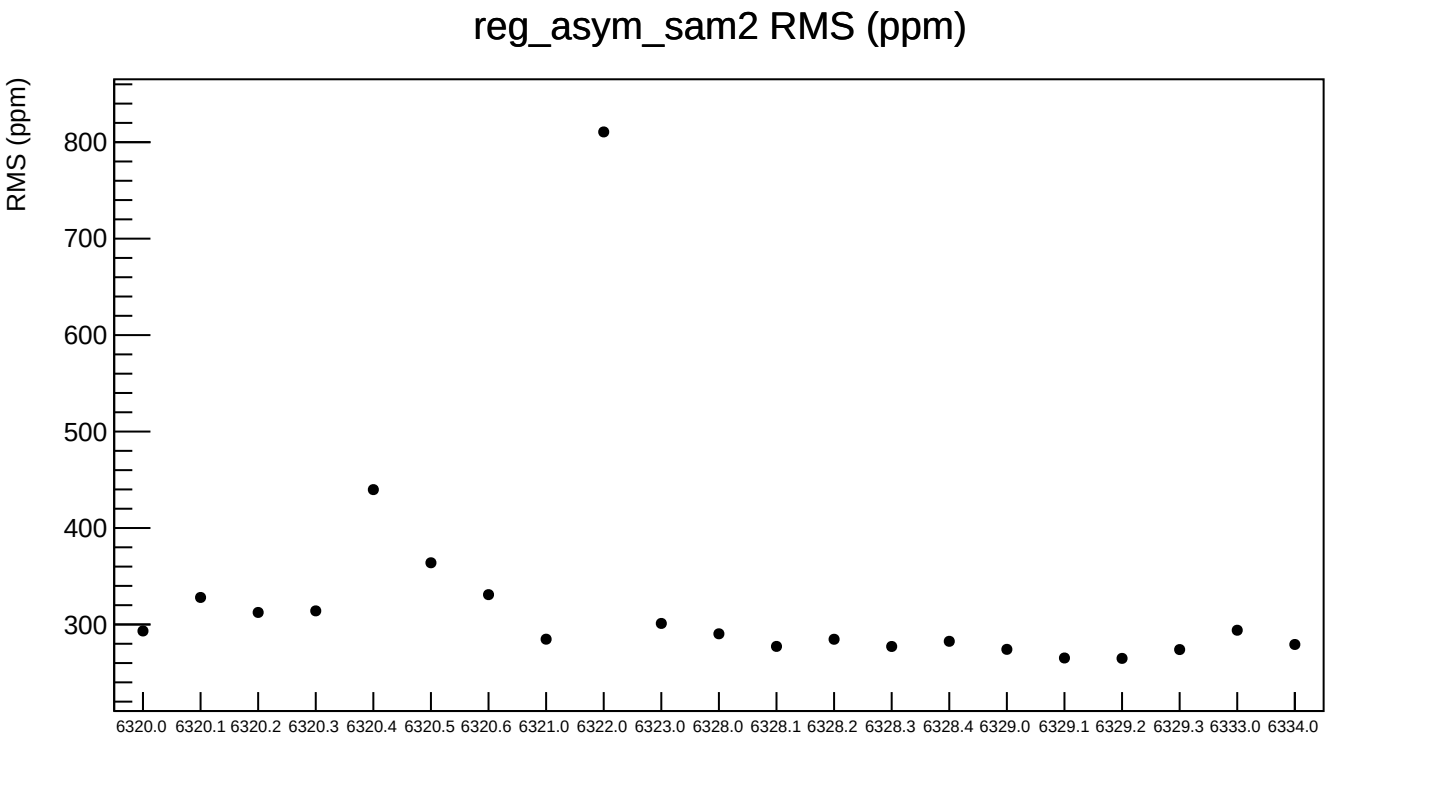

reg_asym_sam1
χ² / ndf 17.59 / 20
p0 212.3 ± 178.8
4000
3000
2000
1000
0
−1000
−2000
1.5
1
0.5
0
−0.5
−1
−1.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

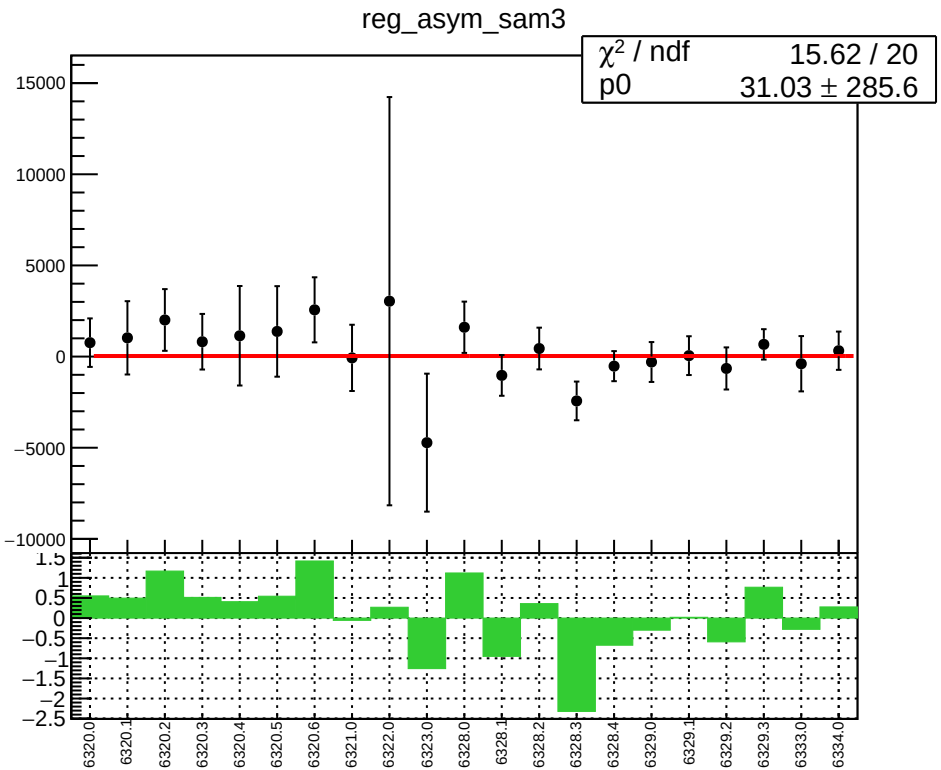

1D pull distribution
Mean 0.09896 ± 0.1985
Std Dev 0.9098 ± 0.1404
Underflow 0
Overflow 0
χ² / ndf 2.355 / 5
Constant 3.579 ± 1.125
Mean 0.1301 ± 0.3417
Sigma 1.197 ± 0.366
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

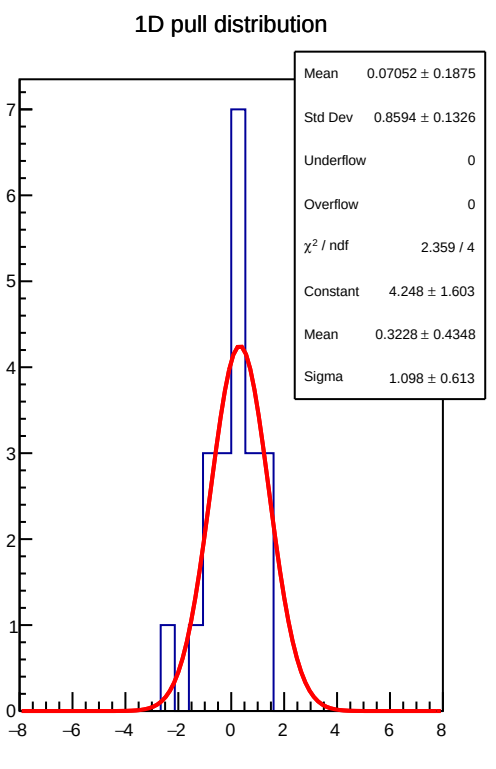

reg_asym_sam1 RMS (ppm)
RMS (ppm)
100
95
90
85
80
75
70
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

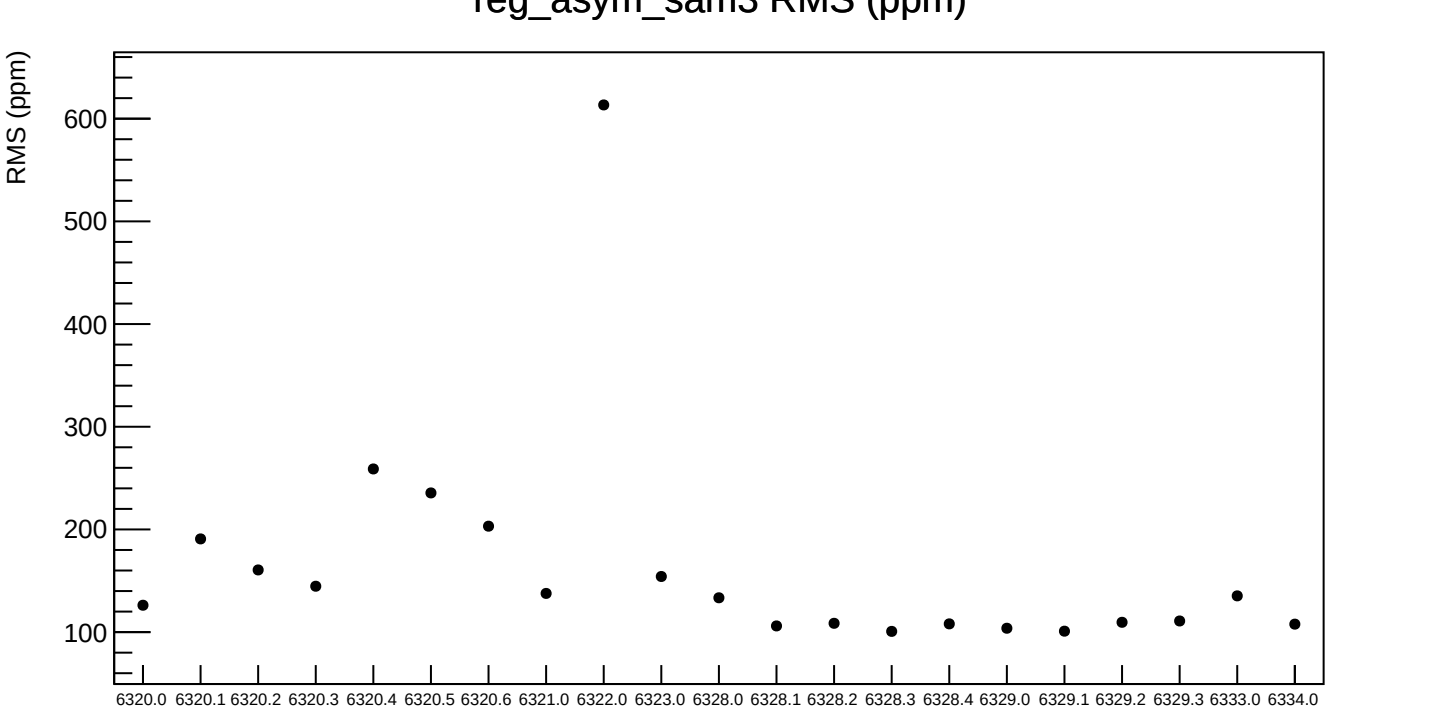

reg_asym_sam2
χ² / ndf 24.52 / 20
p0 752.3 ± 673.6
30000
25000
20000
15000
10000
5000
0
−5000
−10000
2
1.5
1
0.5
0
−0.5
−1
−1.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

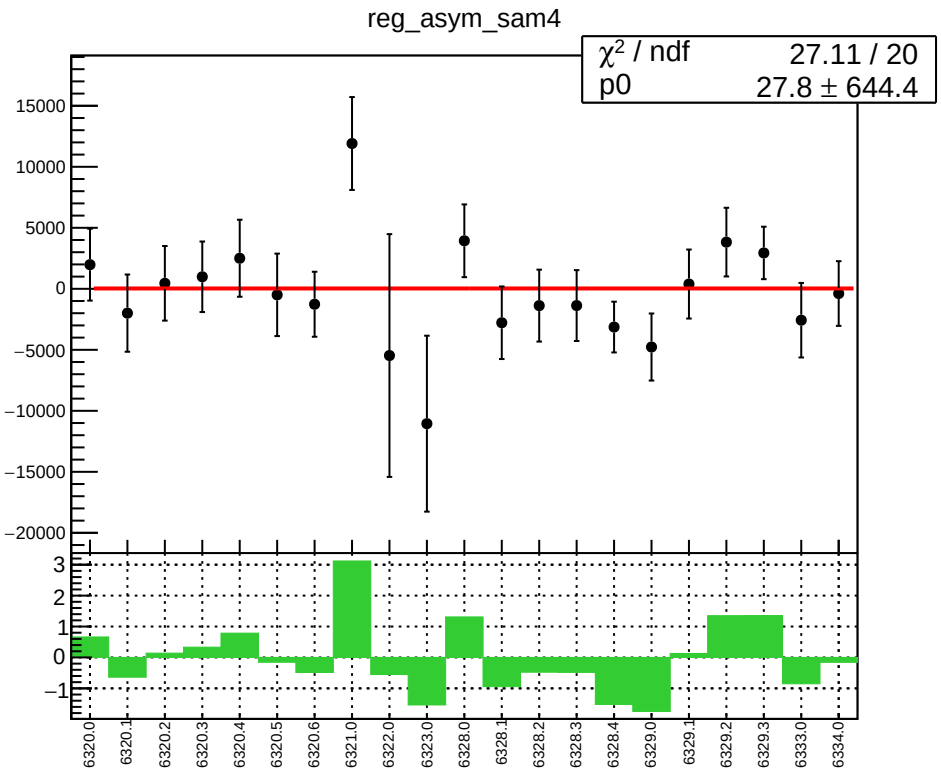

1D pull distribution
Mean 0.0987 ± 0.2348
Std Dev 1.076 ± 0.166
Underflow 0
Overflow 0
χ² / ndf 1.019 / 6
Constant 3.365 ± 1.116
Mean −0.01375 ± 0.42918
Sigma 1.384 ± 0.528
4
3.5
3
2.5
2
1.5
1
0.5
0
−8
−6
−4
−2
0
2
4
6
8

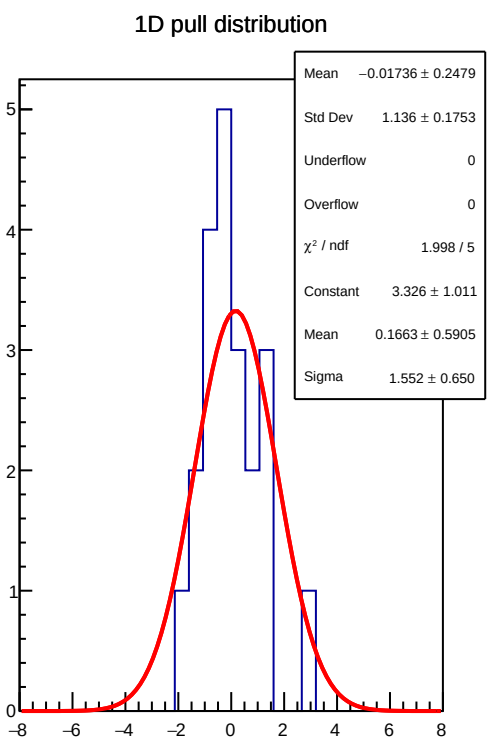

reg_asym_sam2 RMS (ppm)
RMS (ppm)
800
700
600
500
400
300
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

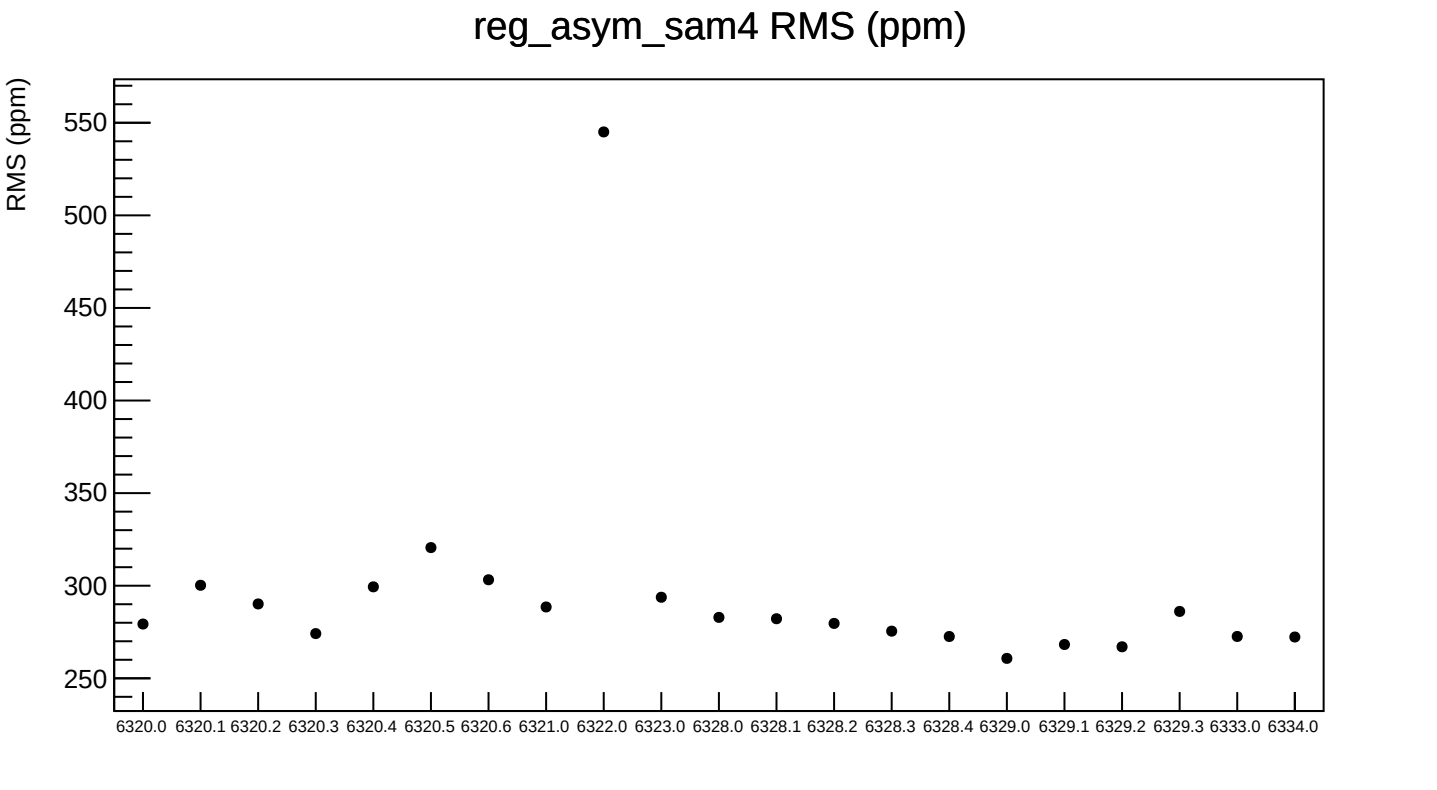

reg_asym_sam3
χ² / ndf 15.62 / 20
p0 31.03 ± 285.6
15000
10000
5000
0
−5000
−10000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

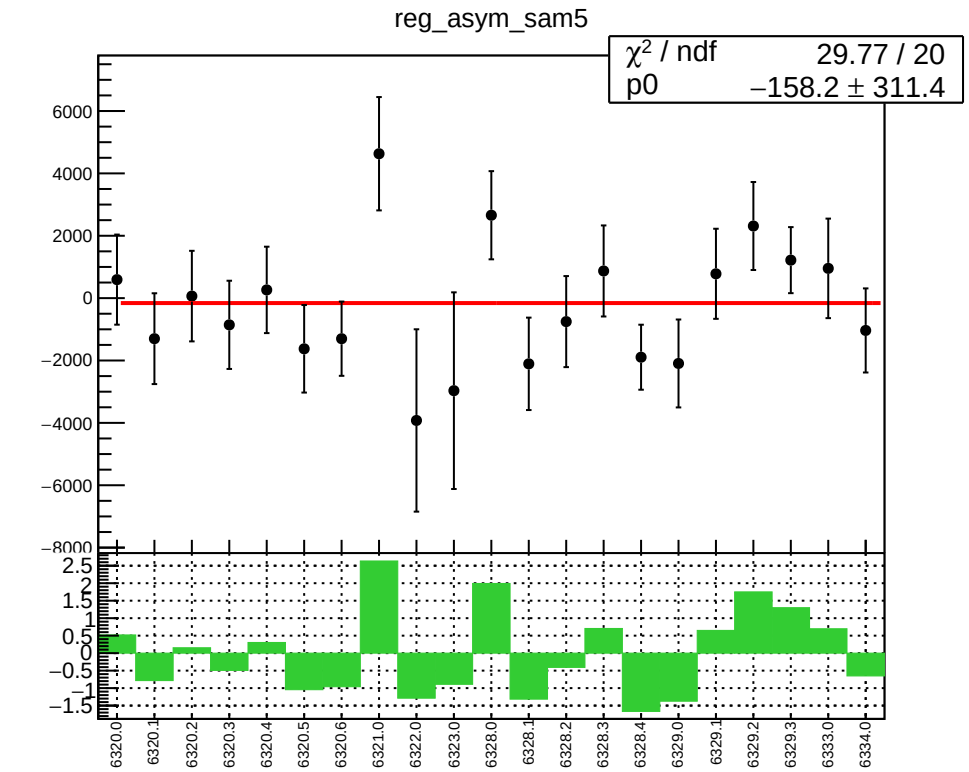

1D pull distribution
Mean 0.07052 ± 0.1875
Std Dev 0.8594 ± 0.1326
Underflow 0
Overflow 0
χ² / ndf 2.359 / 4
Constant 4.248 ± 1.603
Mean 0.3228 ± 0.4348
Sigma 1.098 ± 0.613
7
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

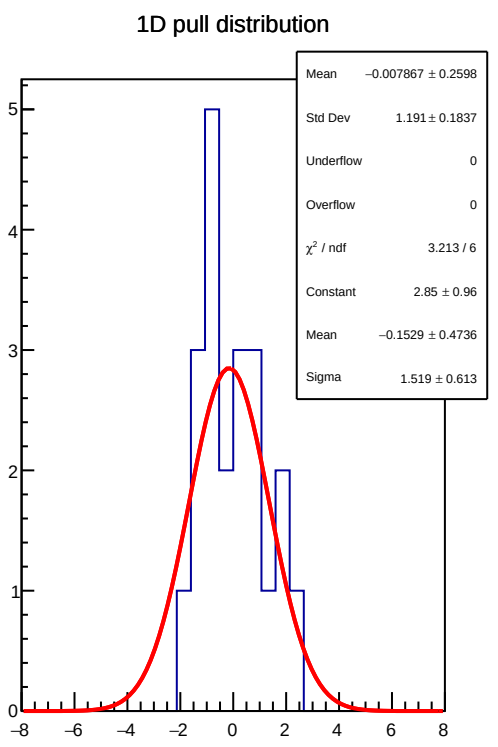

reg_asym_sam3 RMS (ppm)
RMS (ppm)
600
500
400
300
200
100
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

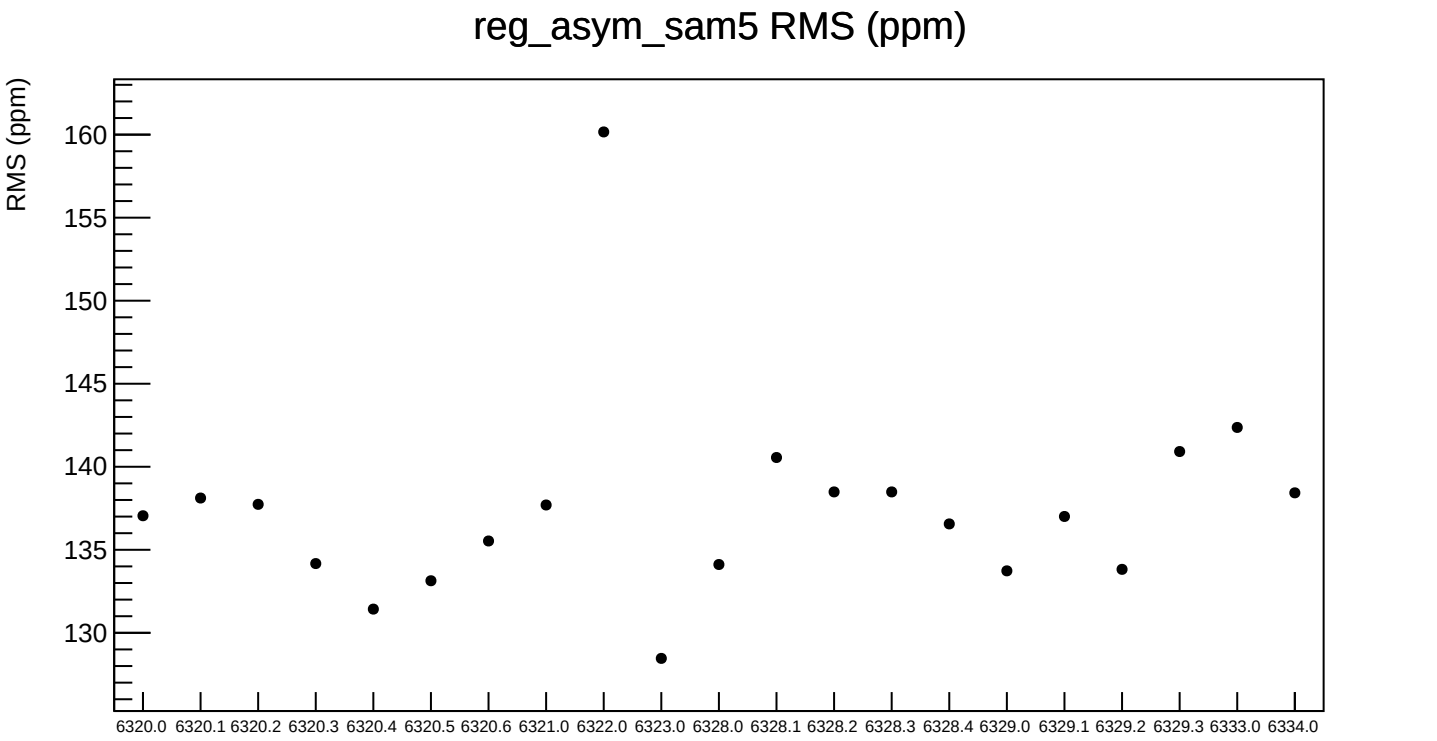

reg_asym_sam4
χ² / ndf 27.11 / 20
p0 27.8 ± 644.4
15000
10000
5000
0
−5000
−10000
−15000
−20000
3
2
1
0
−1
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

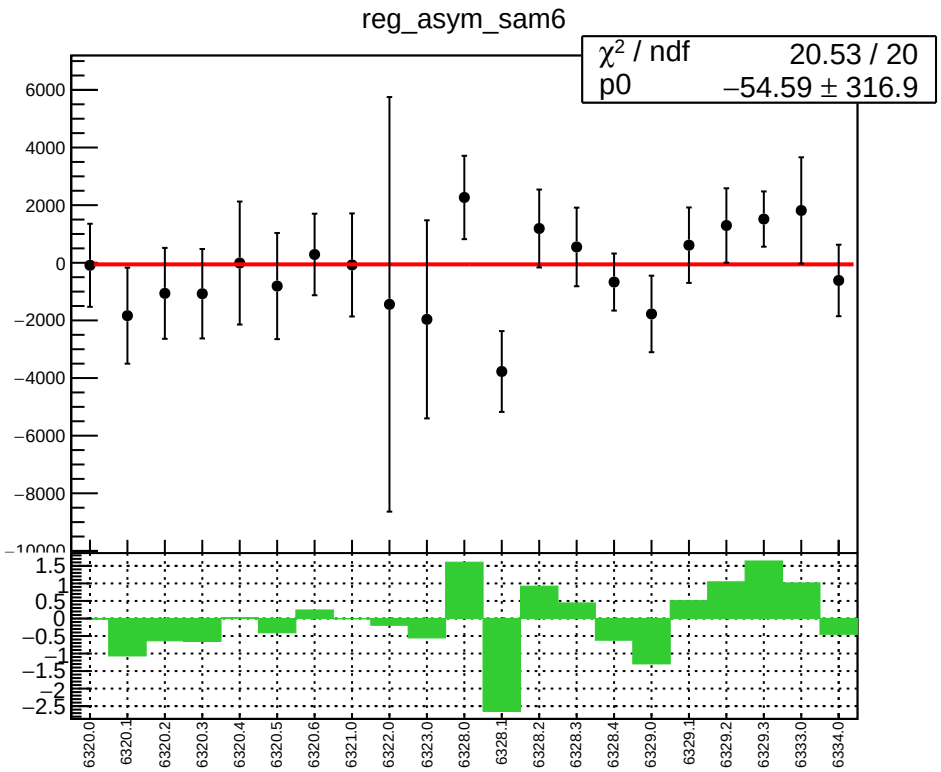

1D pull distribution
Mean −0.01736 ± 0.2479
Std Dev 1.136 ± 0.1753
Underflow 0
Overflow 0
χ² / ndf 1.998 / 5
Constant 3.326 ± 1.011
Mean 0.1663 ± 0.5905
Sigma 1.552 ± 0.650
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

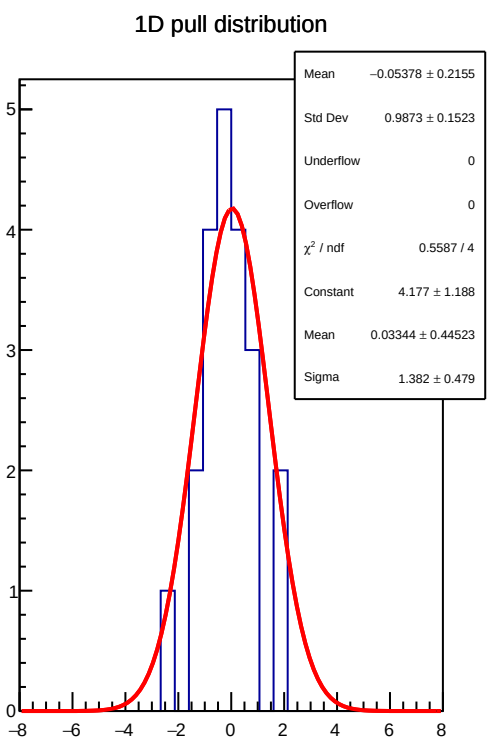

reg_asym_sam4 RMS (ppm)
RMS (ppm)
550
500
450
400
350
300
250
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

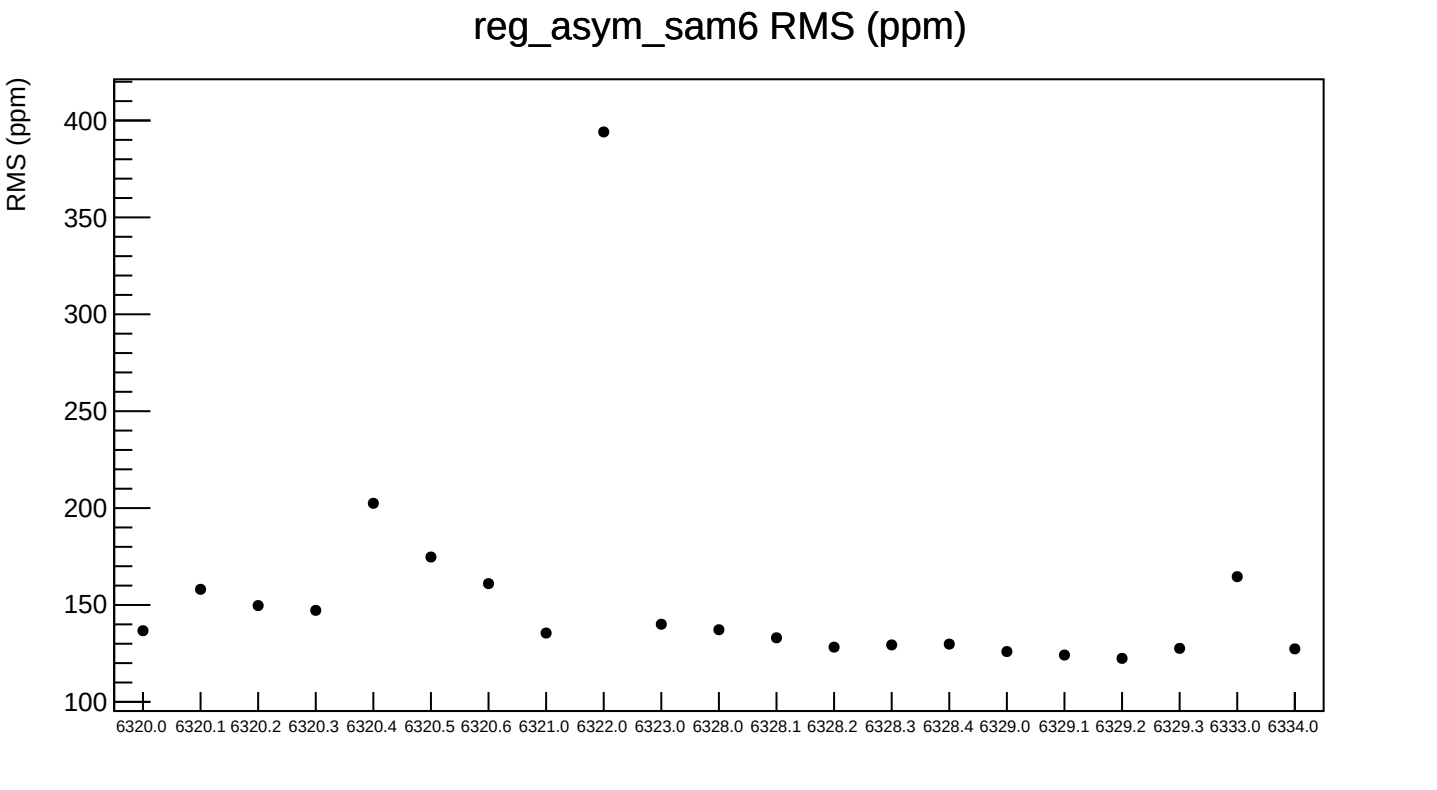

reg_asym_sam5
χ² / ndf 29.77 / 20
p0 −158.2 ± 311.4
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

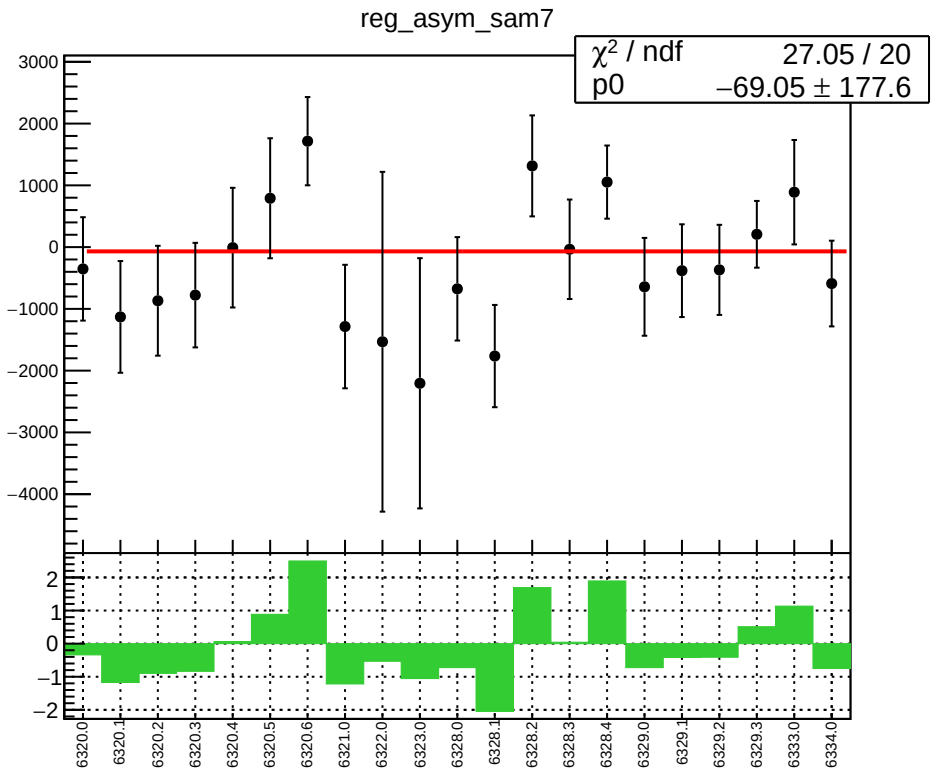

1D pull distribution
Mean −0.007867 ± 0.2598
Std Dev 1.191 ± 0.1837
Underflow 0
Overflow 0
χ² / ndf 3.213 / 6
Constant 2.85 ± 0.96
Mean −0.1529 ± 0.4736
Sigma 1.519 ± 0.613

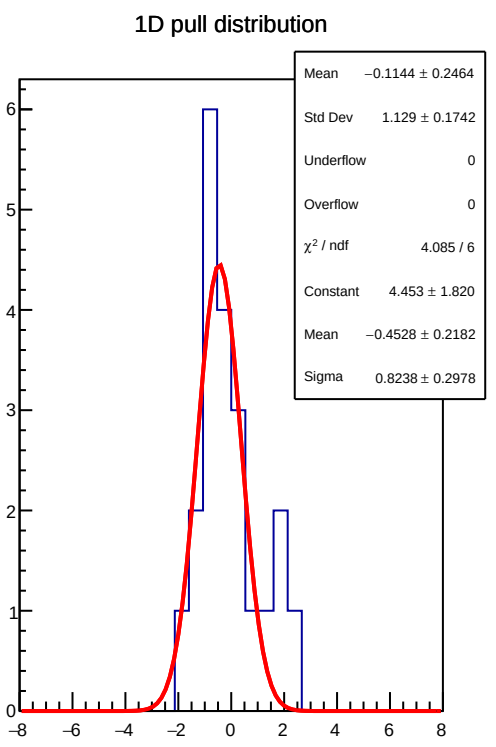

reg_asym_sam5 RMS (ppm)
RMS (ppm)
160
155
150
145
140
135
130
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

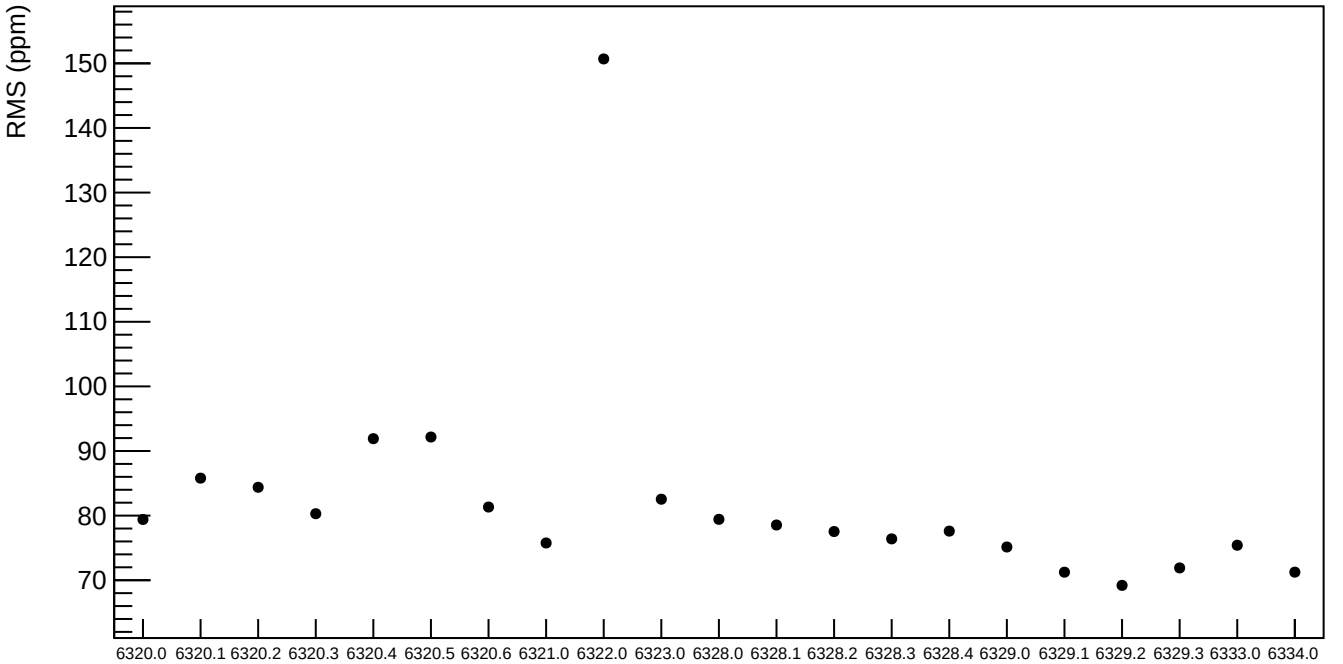

reg_asym_sam6
χ² / ndf 20.53 / 20
p0 −54.59 ± 316.9
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

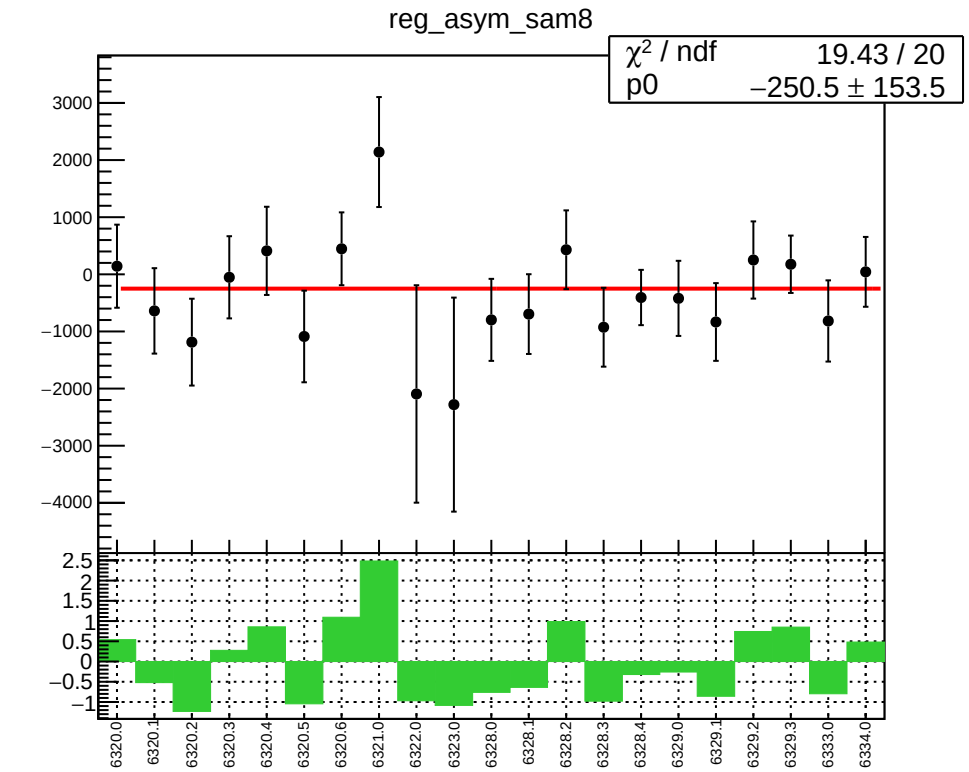

1D pull distribution
Mean −0.05378 ± 0.2155
Std Dev 0.9873 ± 0.1523
Underflow 0
Overflow 0
χ² / ndf 0.5587 / 4
Constant 4.177 ± 1.188
Mean 0.03344 ± 0.44523
Sigma 1.382 ± 0.479

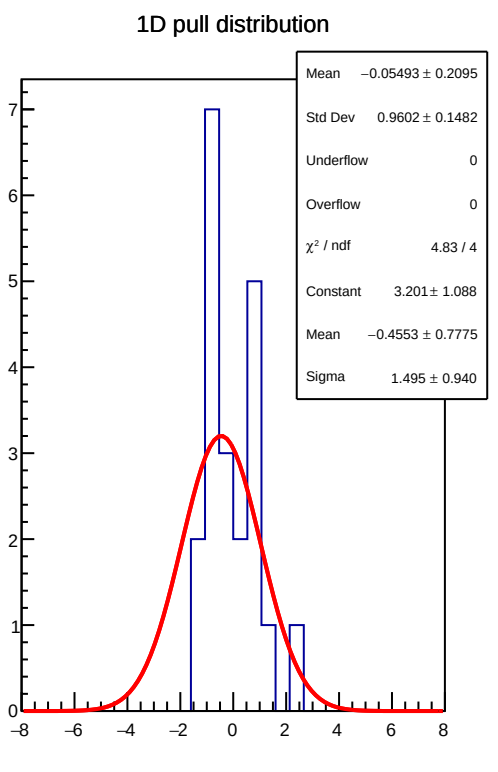

reg_asym_sam6 RMS (ppm)
RMS (ppm)
400
350
300
250
200
150
100
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

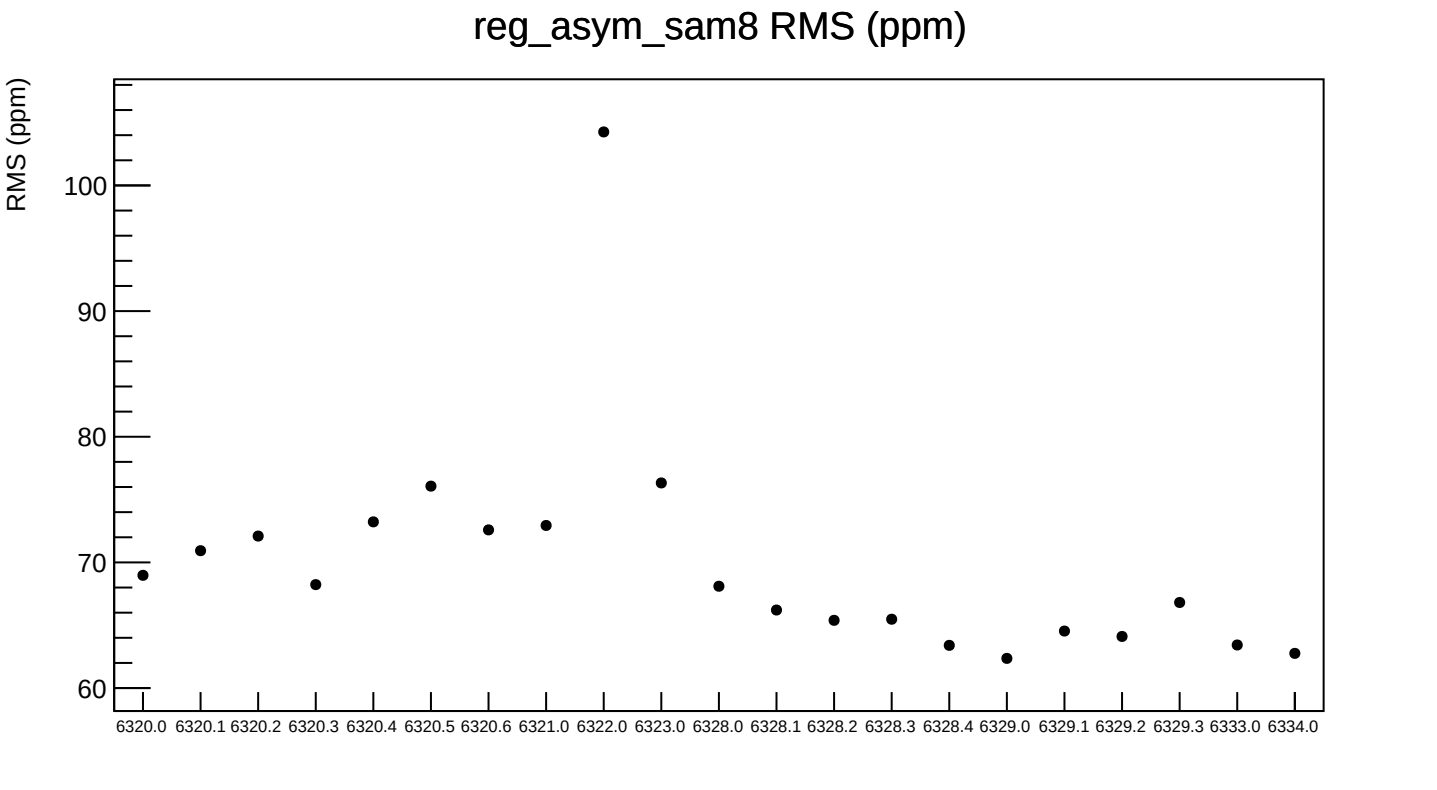

reg_asym_sam7
χ² / ndf 27.05 / 20
p0 −69.05 ± 177.6
3000
2000
1000
0
−1000
−2000
−3000
−4000
2
1
0
−1
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

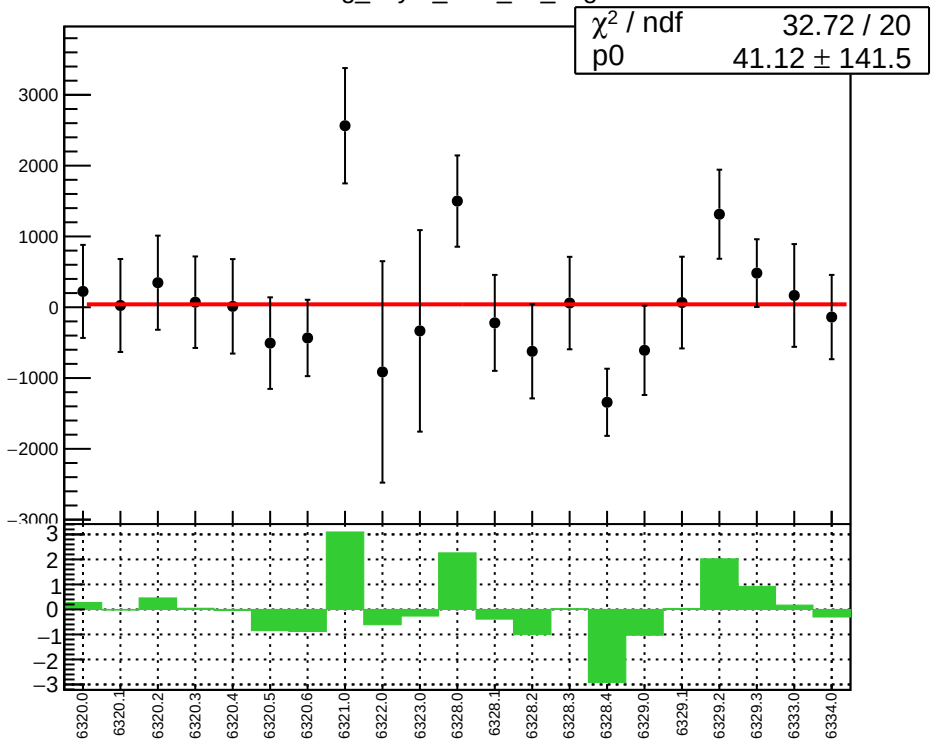

1D pull distribution
Mean −0.1144 ± 0.2464
Std Dev 1.129 ± 0.1742
Underflow 0
Overflow 0
χ² / ndf 4.085 / 6
Constant 4.453 ± 1.820
Mean −0.4528 ± 0.2182
Sigma 0.8238 ± 0.2978
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

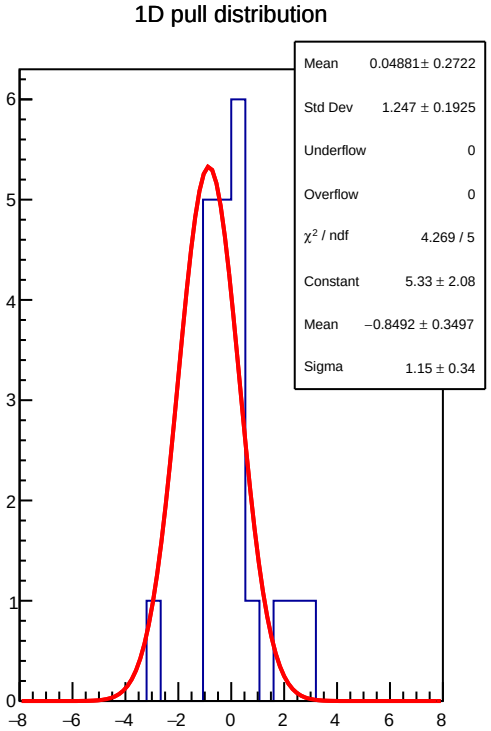

reg_asym_sam7 RMS (ppm)
RMS (ppm)
150
140
130
120
110
100
90
80
70
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

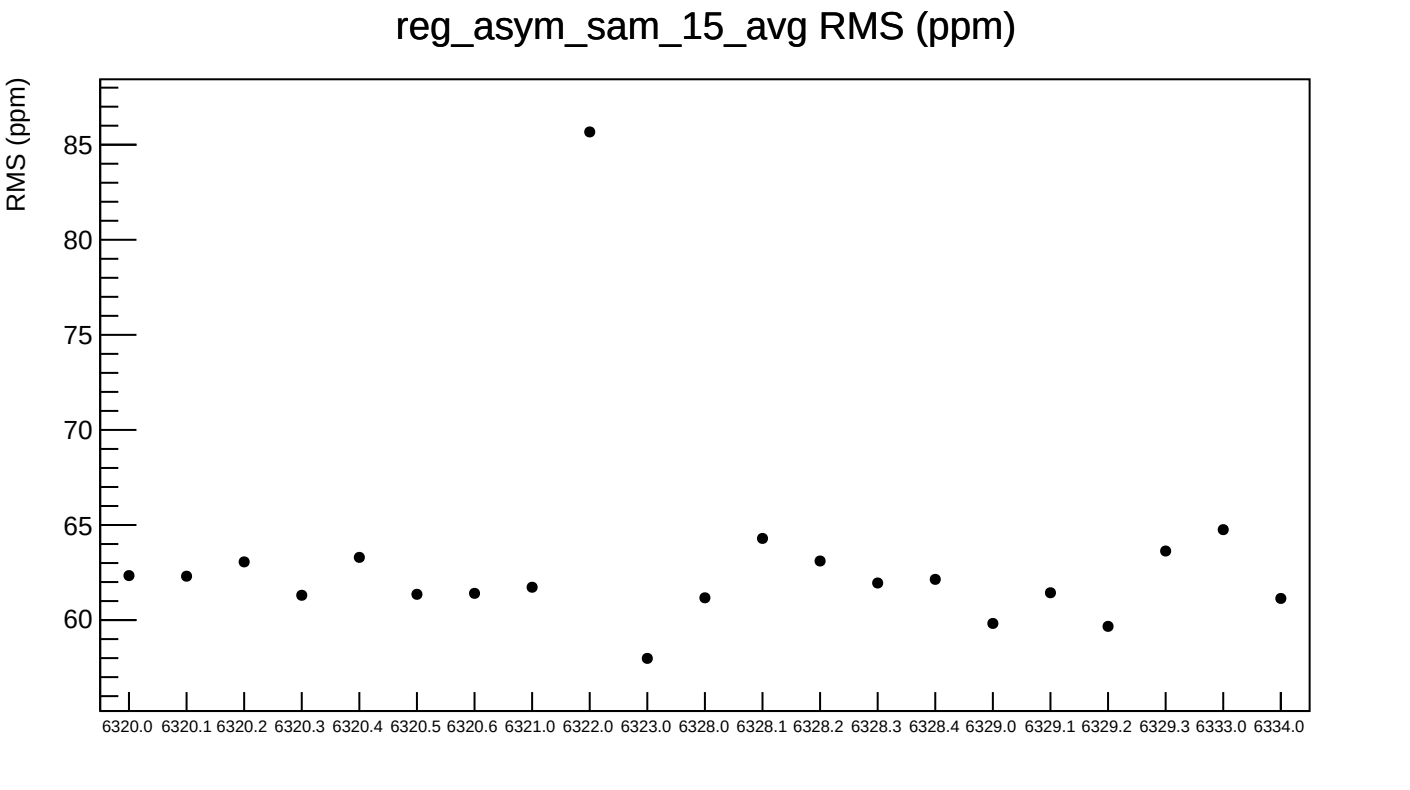

reg_asym_sam8
χ² / ndf 19.43 / 20
p0 −250.5 ± 153.5
3000
2000
1000
0
−1000
−2000
−3000
−4000
2.5
2
1.5
1
0.5
0
−0.5
−1
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

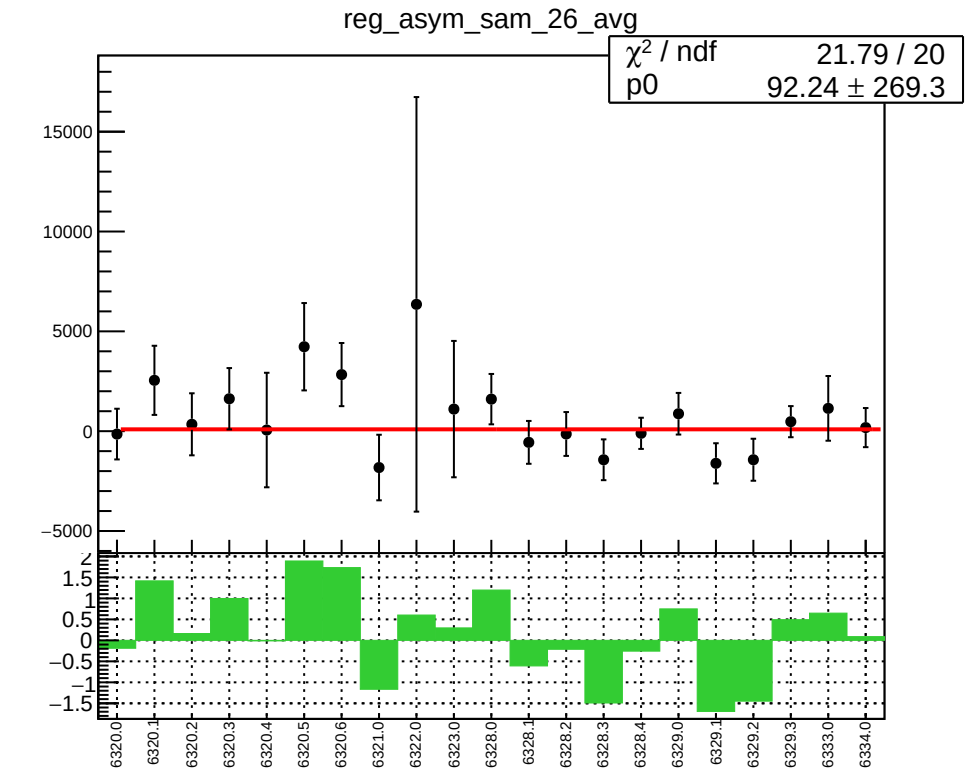

1D pull distribution
Mean −0.05493 ± 0.2095
Std Dev 0.9602 ± 0.1482
Underflow 0
Overflow 0
χ² / ndf 4.83 / 4
Constant 3.201 ± 1.088
Mean −0.4553 ± 0.7775
Sigma 1.495 ± 0.940
7
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

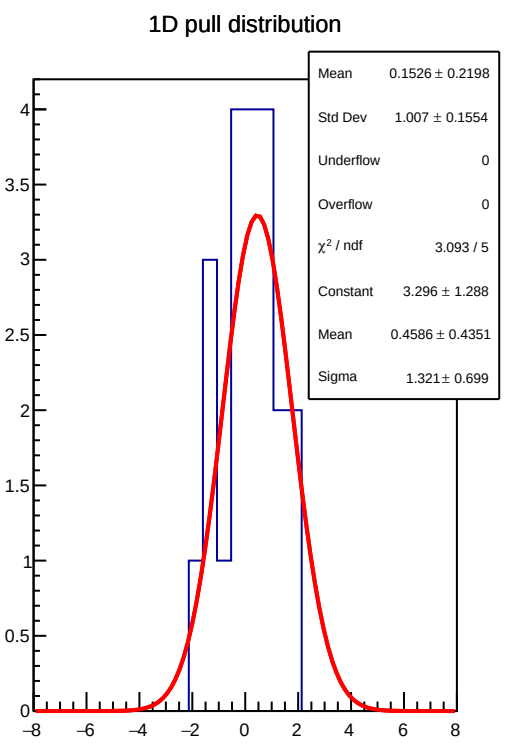

reg_asym_sam8 RMS (ppm)
RMS (ppm)
100
90
80
70
60
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

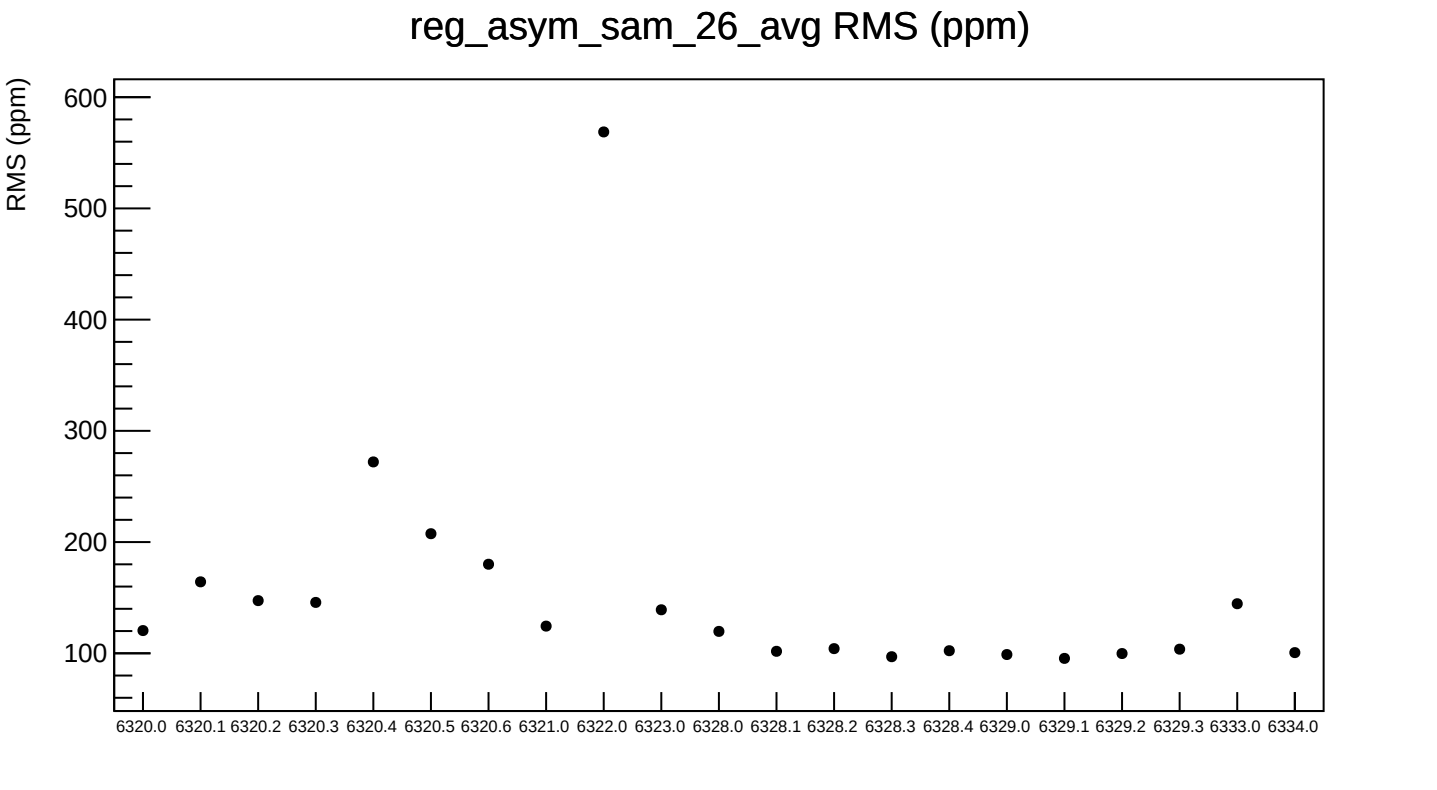

reg_asym_sam_15_avg
χ² / ndf 32.72 / 20
p0 41.12 ± 141.5
3000
2000
1000
0
−1000
−2000
−3000
3
2
1
0
−1
−2
−3
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

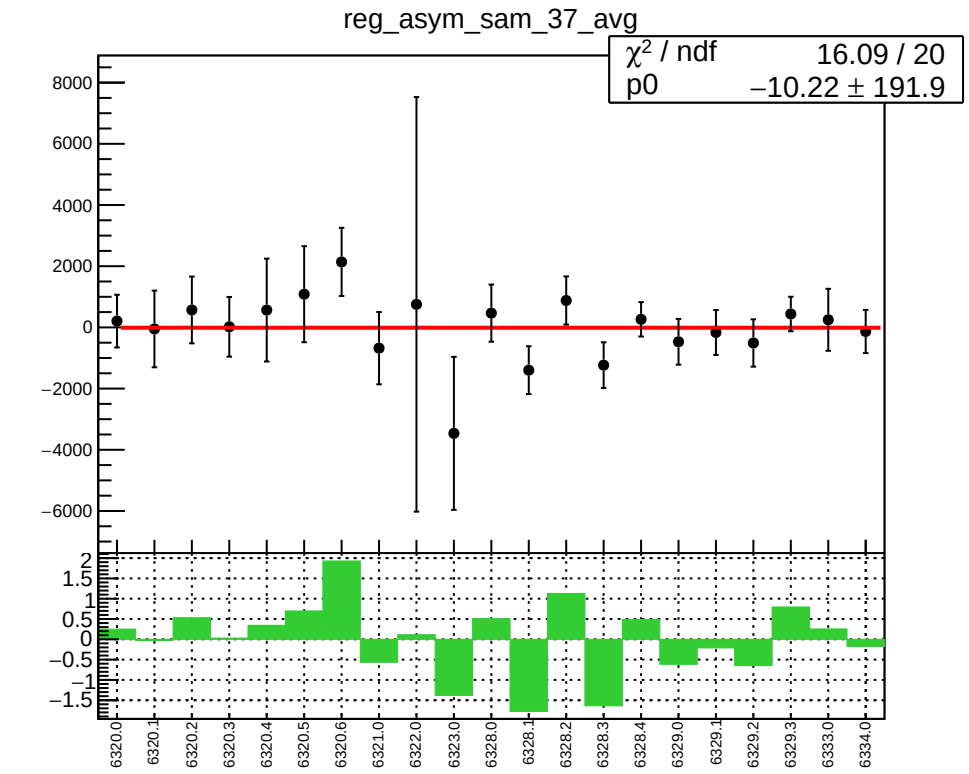

1D pull distribution
Mean 0.04881± 0.2722
Std Dev 1.247 ± 0.1925
Underflow 0
Overflow 0
χ² / ndf 4.269 / 5
Constant 5.33 ± 2.08
Mean −0.8492 ± 0.3497
Sigma 1.15 ± 0.34
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

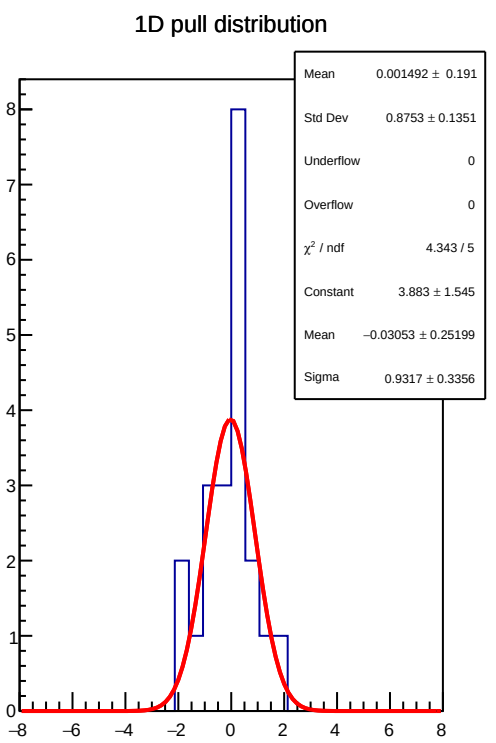

reg_asym_sam_15_avg RMS (ppm)
RMS (ppm)
85
80
75
70
65
60
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

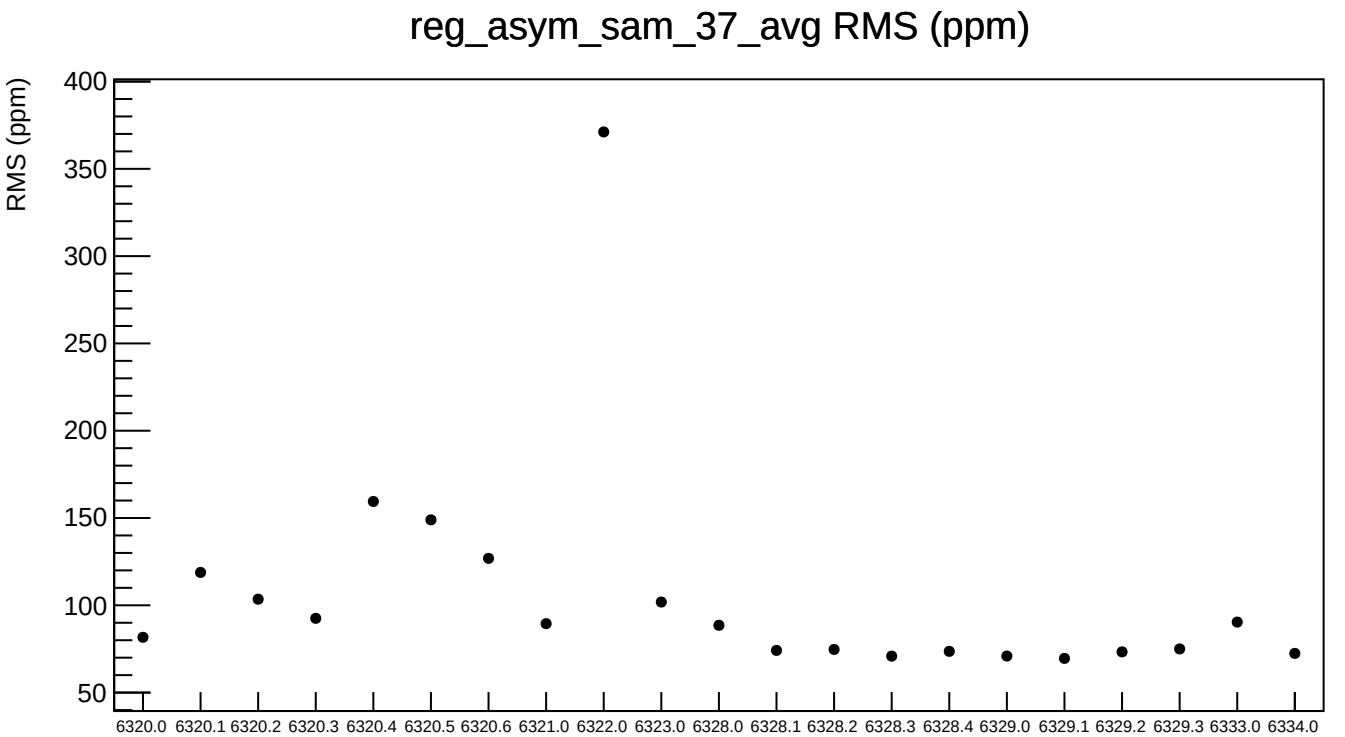

reg_asym_sam_26_avg
χ² / ndf 21.79 / 20
p0 92.24 ± 269.3
15000
10000
5000
0
−5000
2
1.5
1
0.5
0
−0.5
−1
−1.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

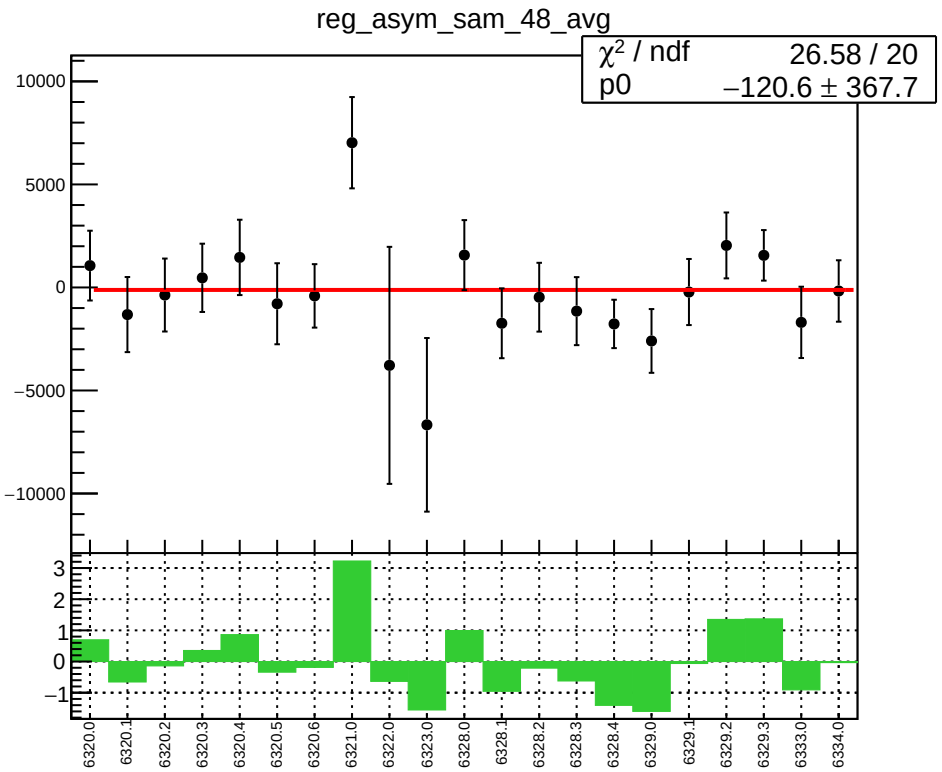

1D pull distribution
Mean 0.1526 ± 0.2198
Std Dev 1.007 ± 0.1554
Underflow 0
Overflow 0
χ² / ndf 3.093 / 5
Constant 3.296 ± 1.288
Mean 0.4586 ± 0.4351
Sigma 1.321 ± 0.699
4
3.5
3
2.5
2
1.5
1
0.5
0
−8
−6
−4
−2
0
2
4
6
8

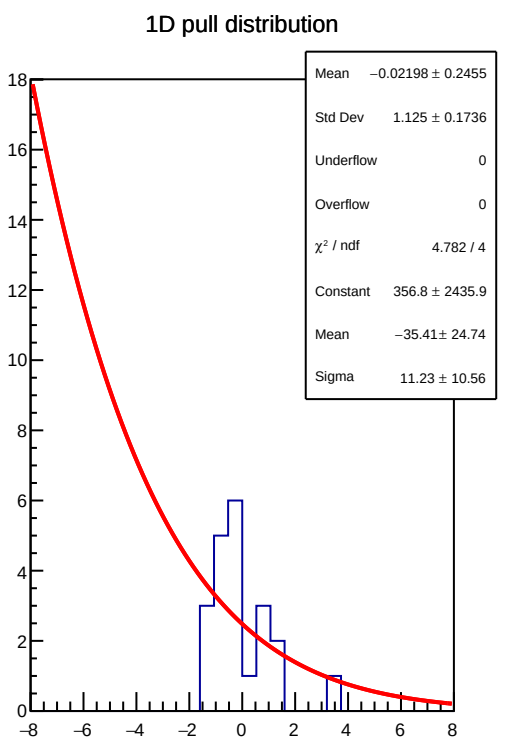

reg_asym_sam_26_avg RMS (ppm)
RMS (ppm)
600
500
400
300
200
100
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

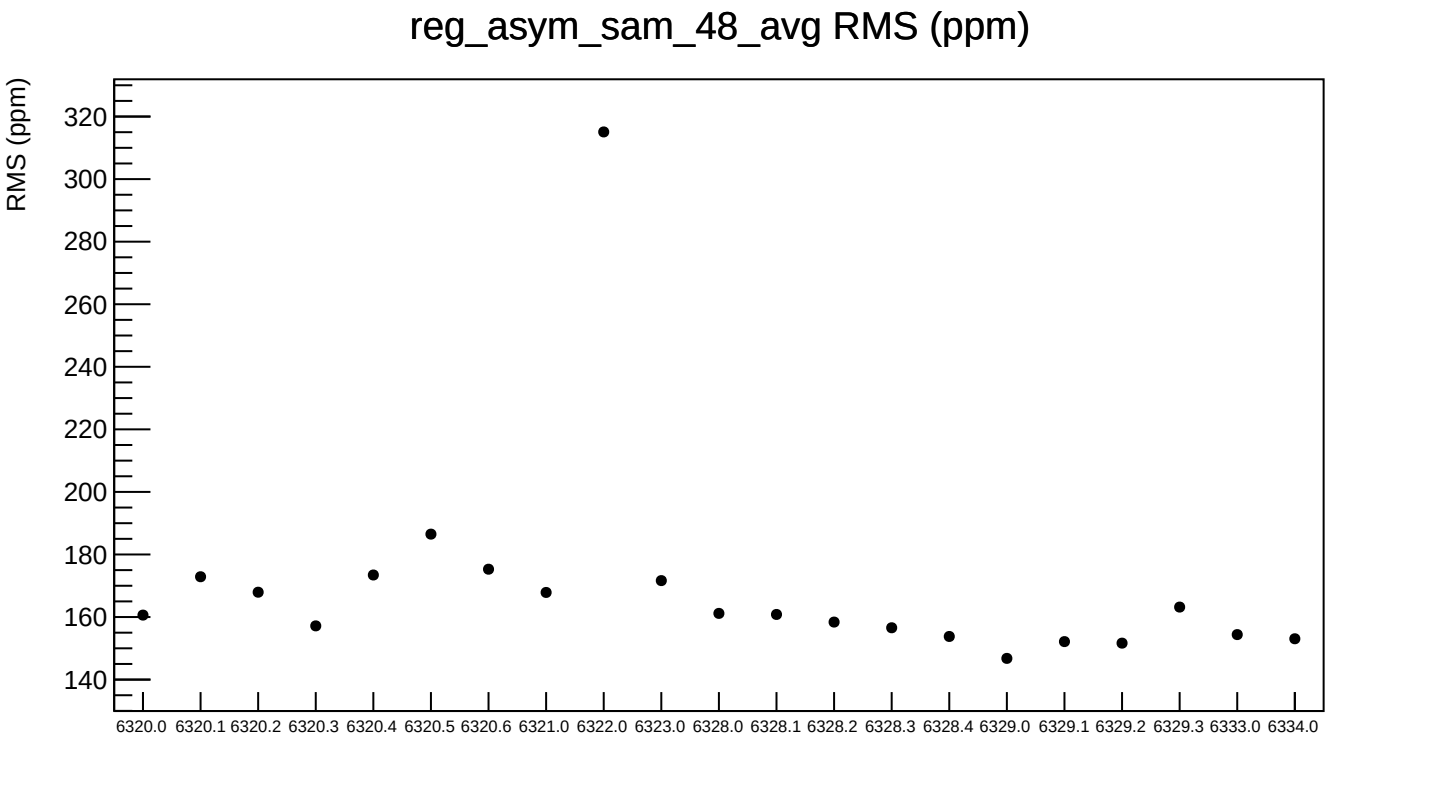

reg_asym_sam_37_avg
χ² / ndf 16.09 / 20
p0 −10.22 ± 191.9
8000
6000
4000
2000
0
−2000
−4000
−6000
2
1.5
1
0.5
0
−0.5
−1
−1.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

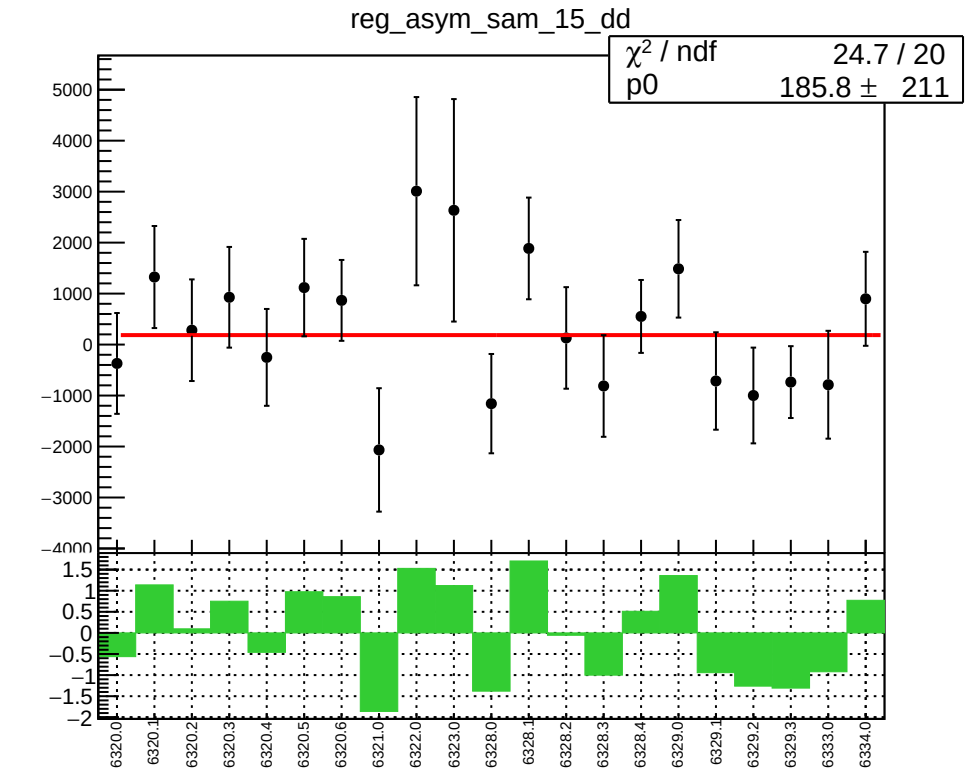

1D pull distribution
Mean 0.001492 ± 0.191
Std Dev 0.8753 ± 0.1351
Underflow 0
Overflow 0
χ² / ndf 4.343 / 5
Constant 3.883 ± 1.545
Mean −0.03053 ± 0.25199
Sigma 0.9317 ± 0.3356
8
7
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

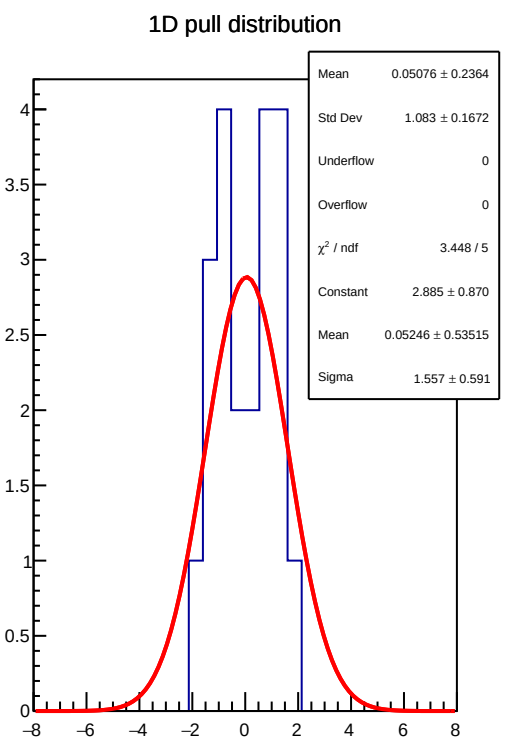

reg_asym_sam_37_avg RMS (ppm)
RMS (ppm)
400
350
300
250
200
150
100
50
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

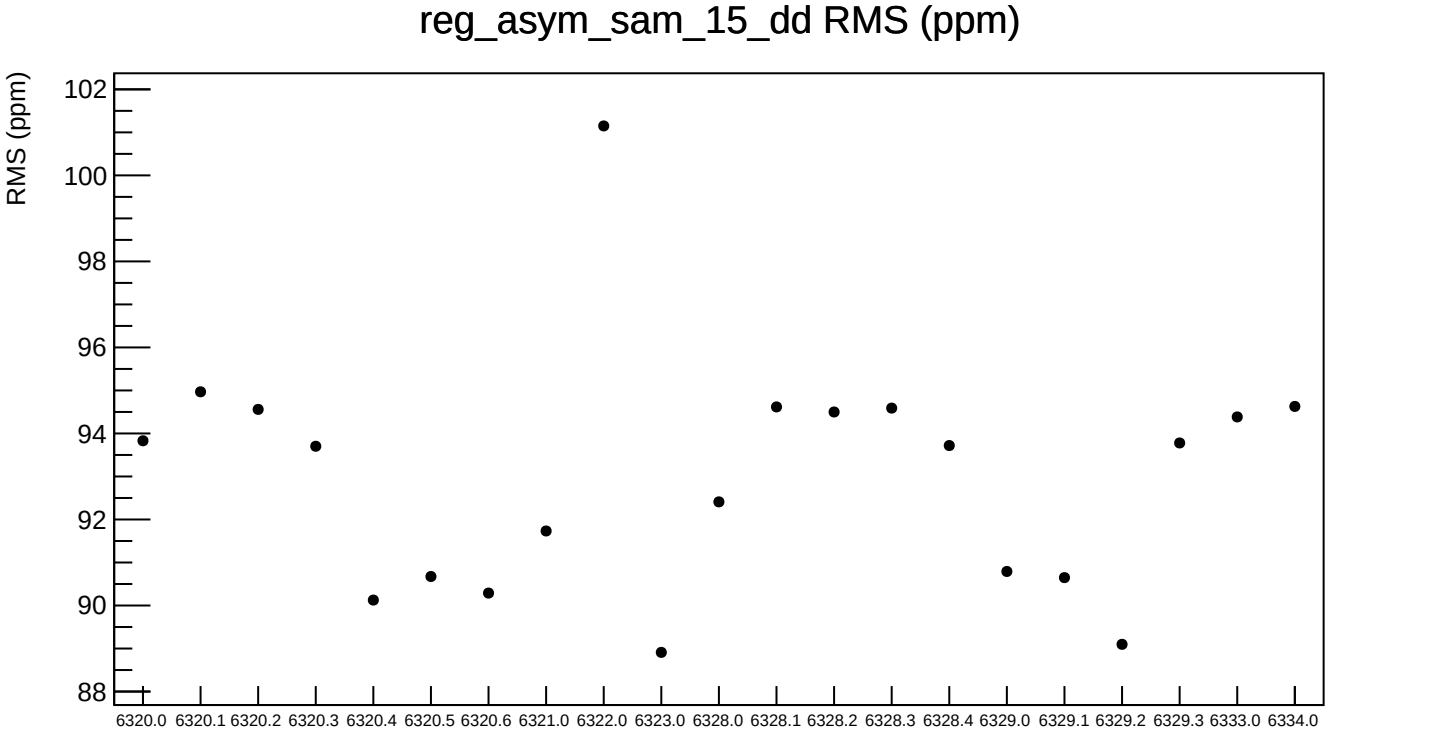

reg_asym_sam_48_avg
χ² / ndf 26.58 / 20
p0 −120.6 ± 367.7
10000
5000
0
−5000
−10000
3
2
1
0
−1
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

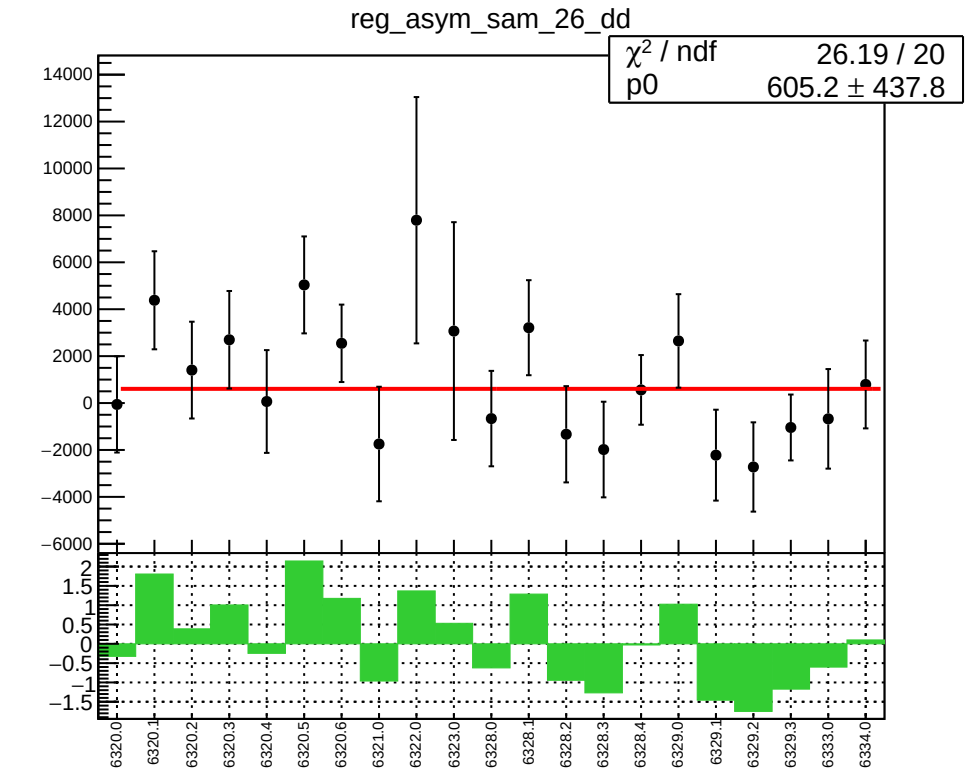

1D pull distribution
Mean −0.02198 ± 0.2455
Std Dev 1.125 ± 0.1736
Underflow 0
Overflow 0
χ² / ndf 4.782 / 4
Constant 356.8 ± 2435.9
Mean −35.41± 24.74
Sigma 11.23 ± 10.56
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

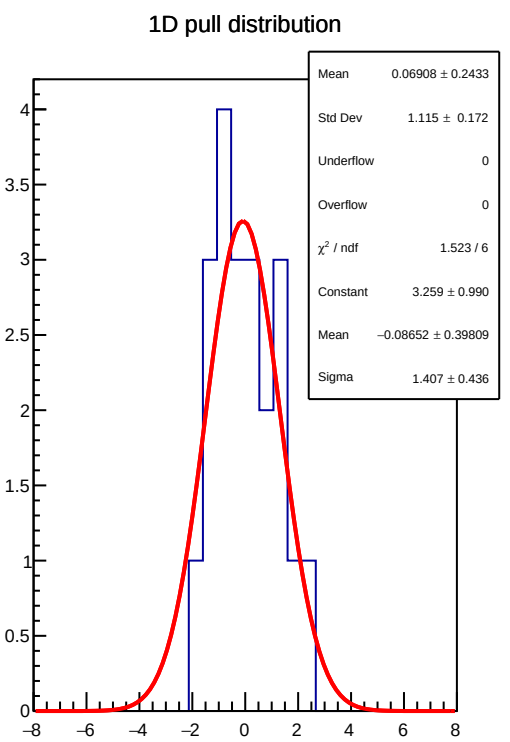

reg_asym_sam_48_avg RMS (ppm)
RMS (ppm)
320
300
280
260
240
220
200
180
160
140
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

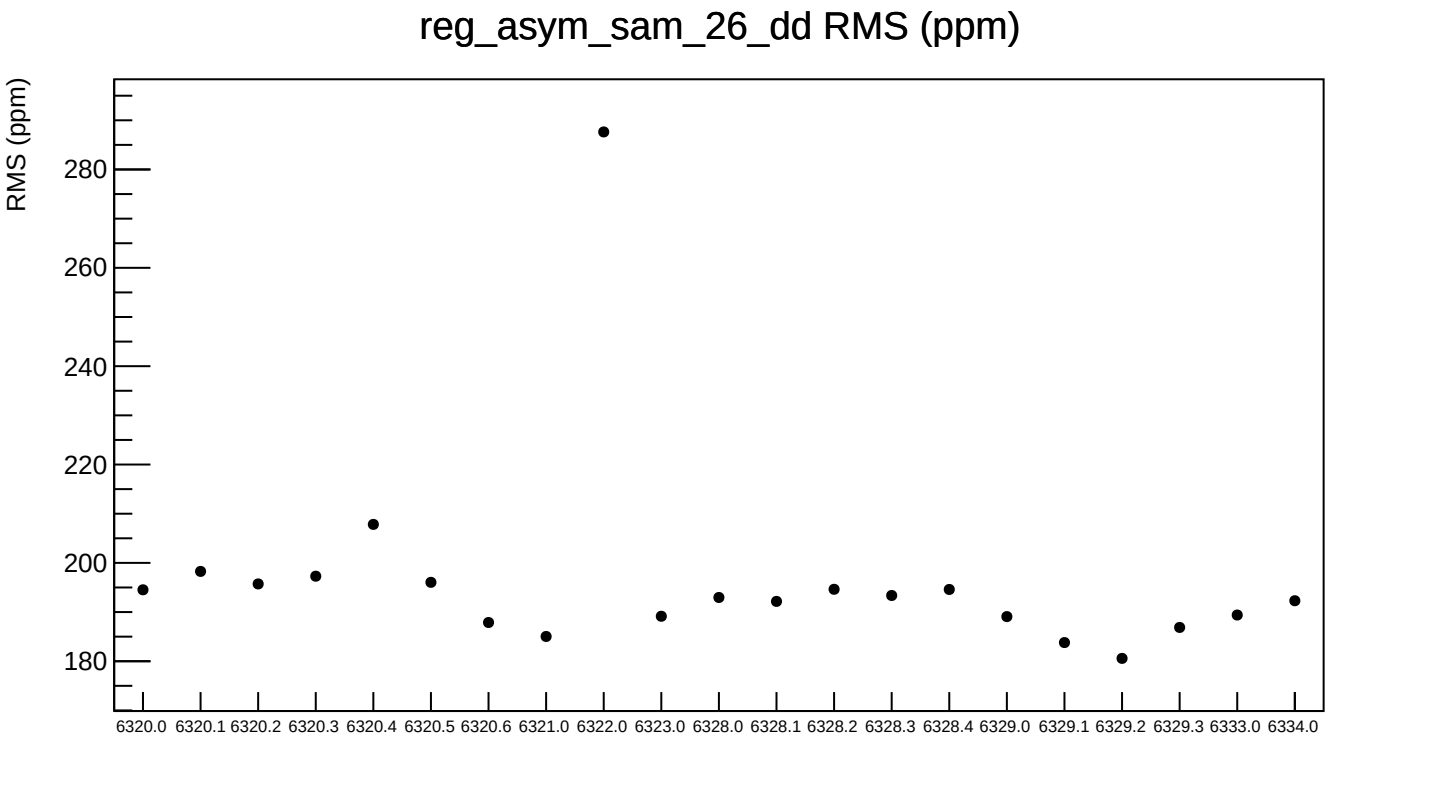

reg_asym_sam_15_dd
χ² / ndf 24.7 / 20
p0 185.8 ± 211
5000
4000
3000
2000
1000
0
−1000
−2000
−3000
−4000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

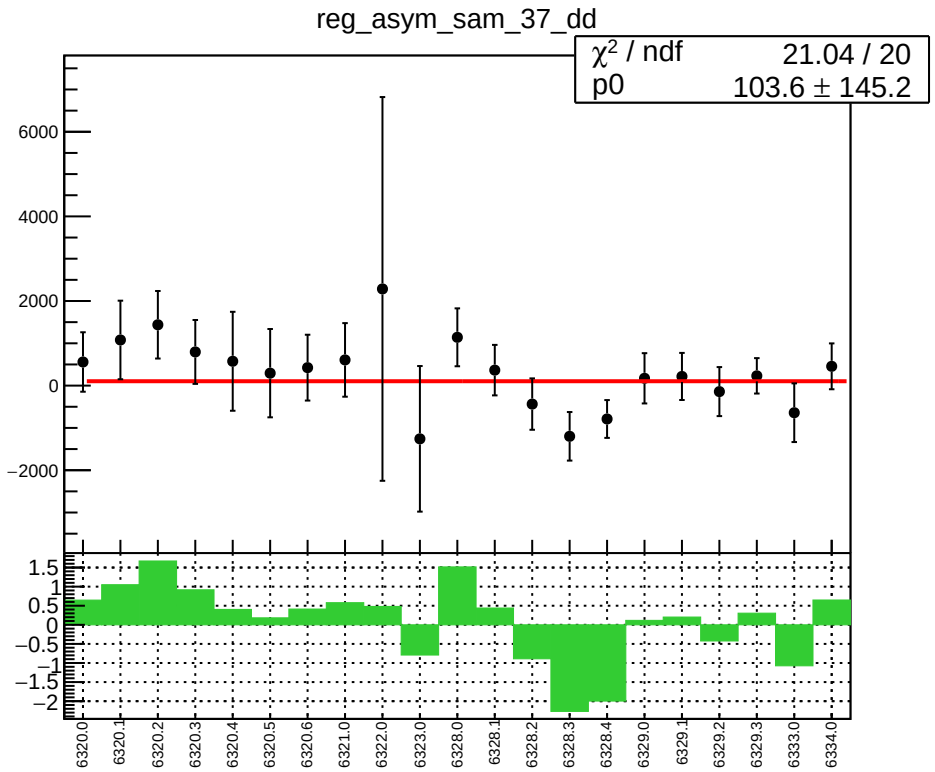

1D pull distribution
Mean 0.05076 ± 0.2364
Std Dev 1.083 ± 0.1672
Underflow 0
Overflow 0
χ² / ndf 3.448 / 5
Constant 2.885 ± 0.870
Mean 0.05246 ± 0.53515
Sigma 1.557 ± 0.591
4
3.5
3
2.5
2
1.5
1
0.5
0
−8
−6
−4
−2
0
2
4
6
8

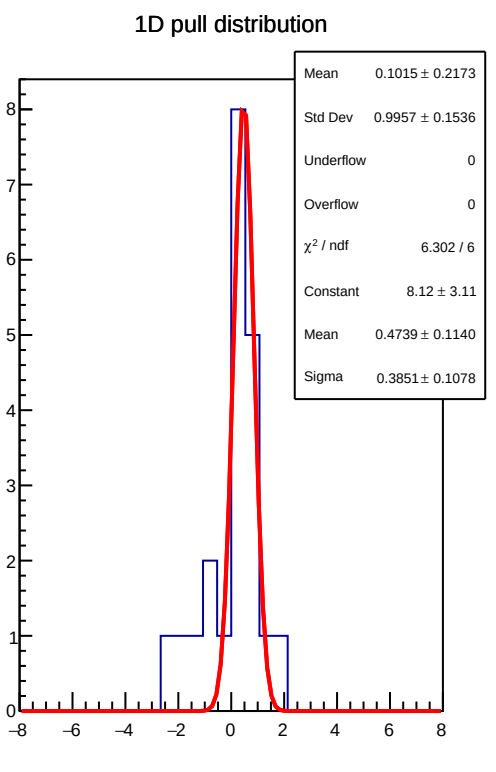

reg_asym_sam_15_dd RMS (ppm)
RMS (ppm)
102
100
98
96
94
92
90
88
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

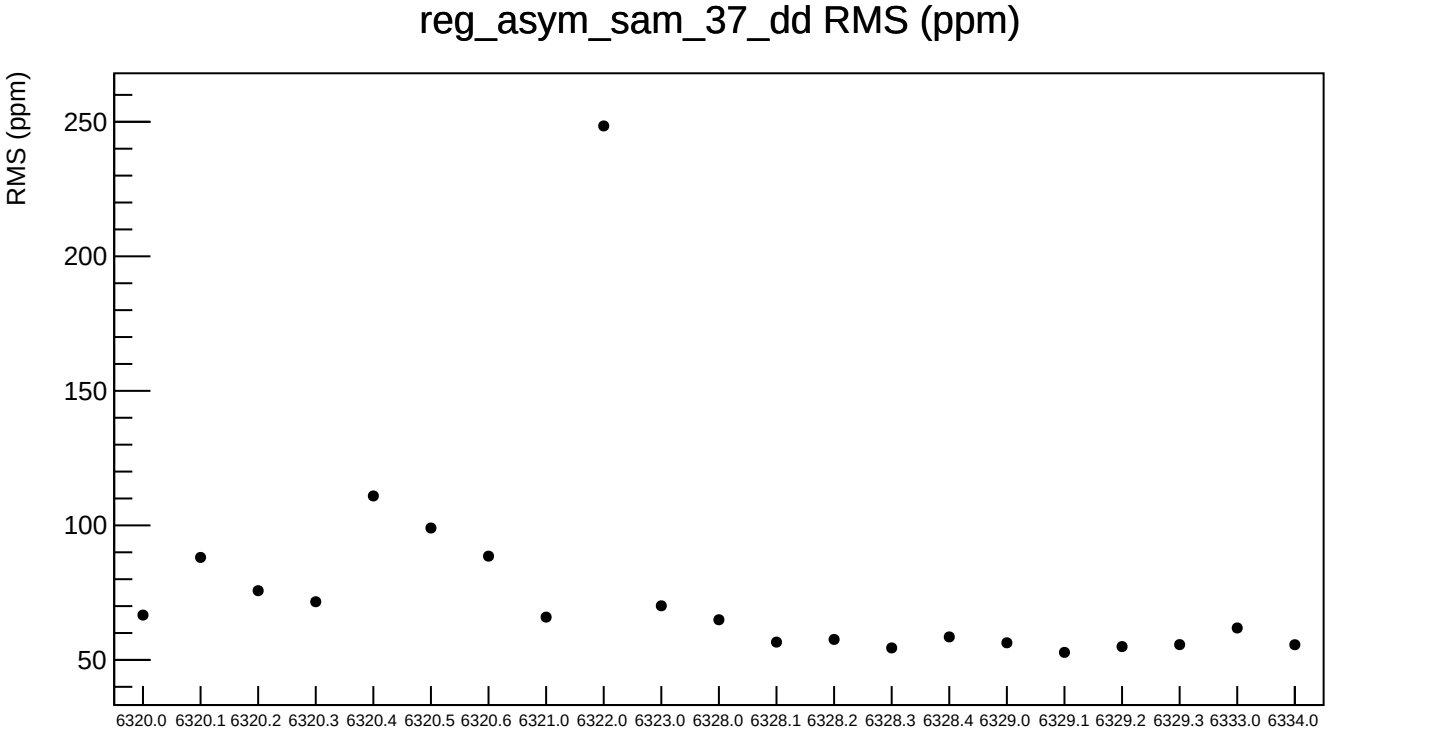

reg_asym_sam_26_dd
χ² / ndf 26.19 / 20
p0 605.2 ± 437.8
14000
12000
10000
8000
6000
4000
2000
0
−2000
−4000
−6000
2
1.5
1
0.5
0
−0.5
−1
−1.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

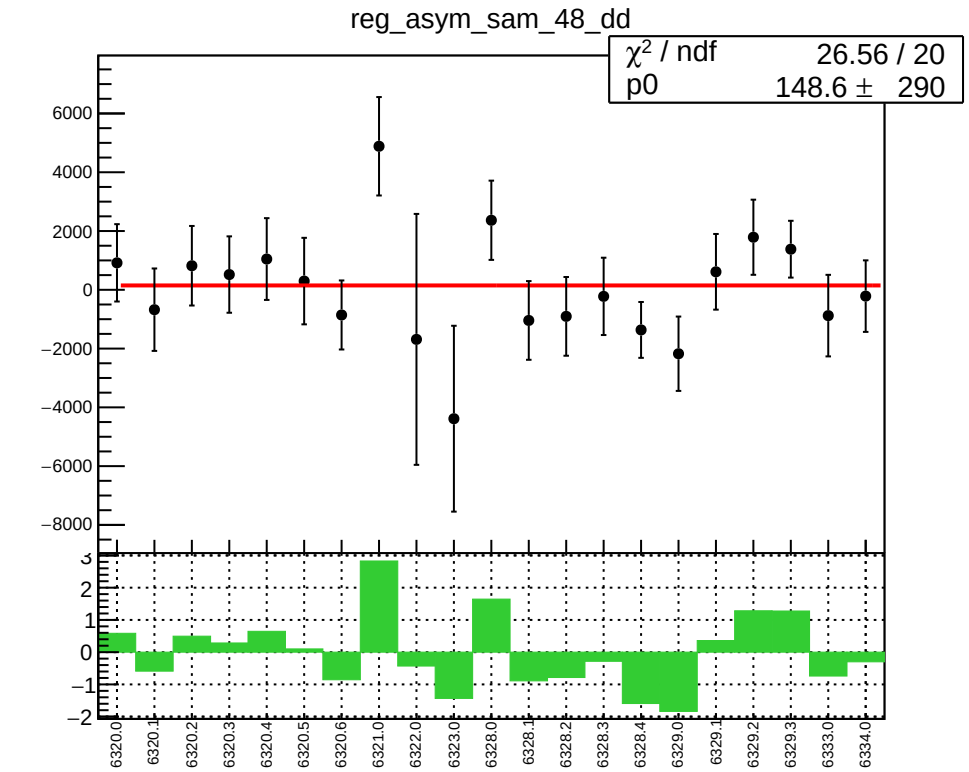

1D pull distribution
Mean 0.06908 ± 0.2433
Std Dev 1.115 ± 0.172
Underflow 0
Overflow 0
χ² / ndf 1.523 / 6
Constant 3.259 ± 0.990
Mean −0.08652 ± 0.39809
Sigma 1.407 ± 0.436
4
3.5
3
2.5
2
1.5
1
0.5
0
−8
−6
−4
−2
0
2
4
6
8

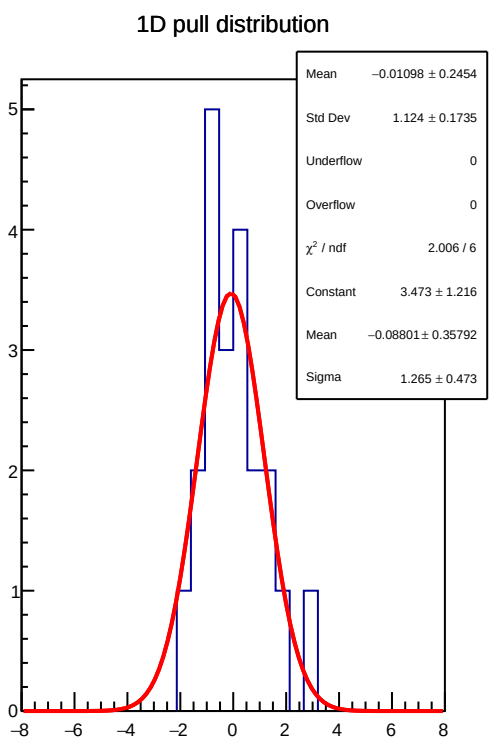

reg_asym_sam_26_dd RMS (ppm)
RMS (ppm)
280
260
240
220
200
180
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

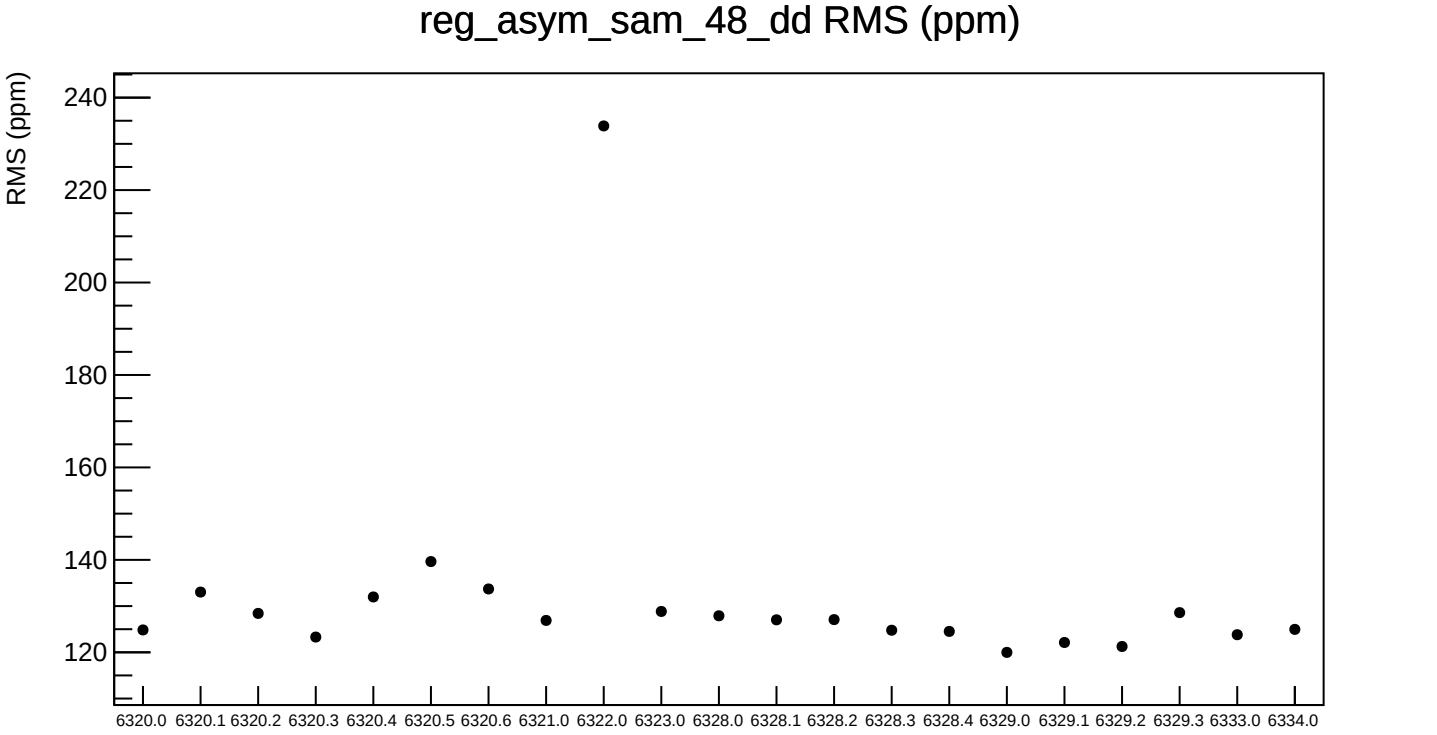

reg_asym_sam_37_dd
χ² / ndf 21.04 / 20
p0 103.6 ± 145.2
6000
4000
2000
0
−2000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

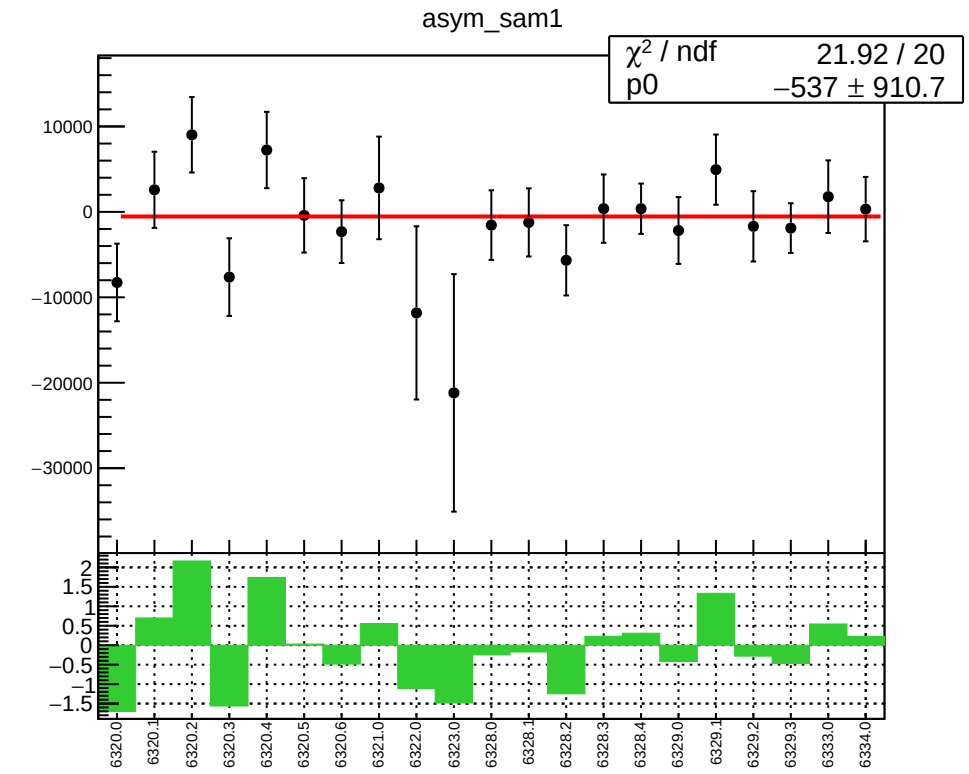

1D pull distribution
Mean 0.1015 ± 0.2173
Std Dev 0.9957 ± 0.1536
Underflow 0
Overflow 0
χ² / ndf 6.302 / 6
Constant 8.12 ± 3.11
Mean 0.4739 ± 0.1140
Sigma 0.3851 ± 0.1078
8
7
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

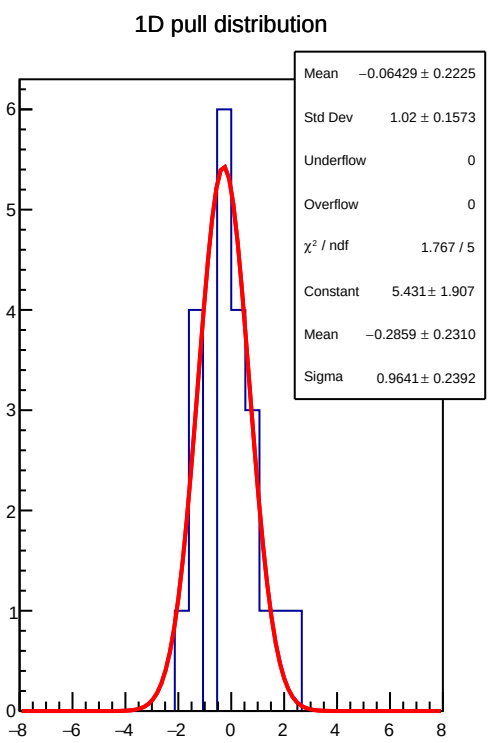

reg_asym_sam_37_dd RMS (ppm)
RMS (ppm)
250
200
150
100
50
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

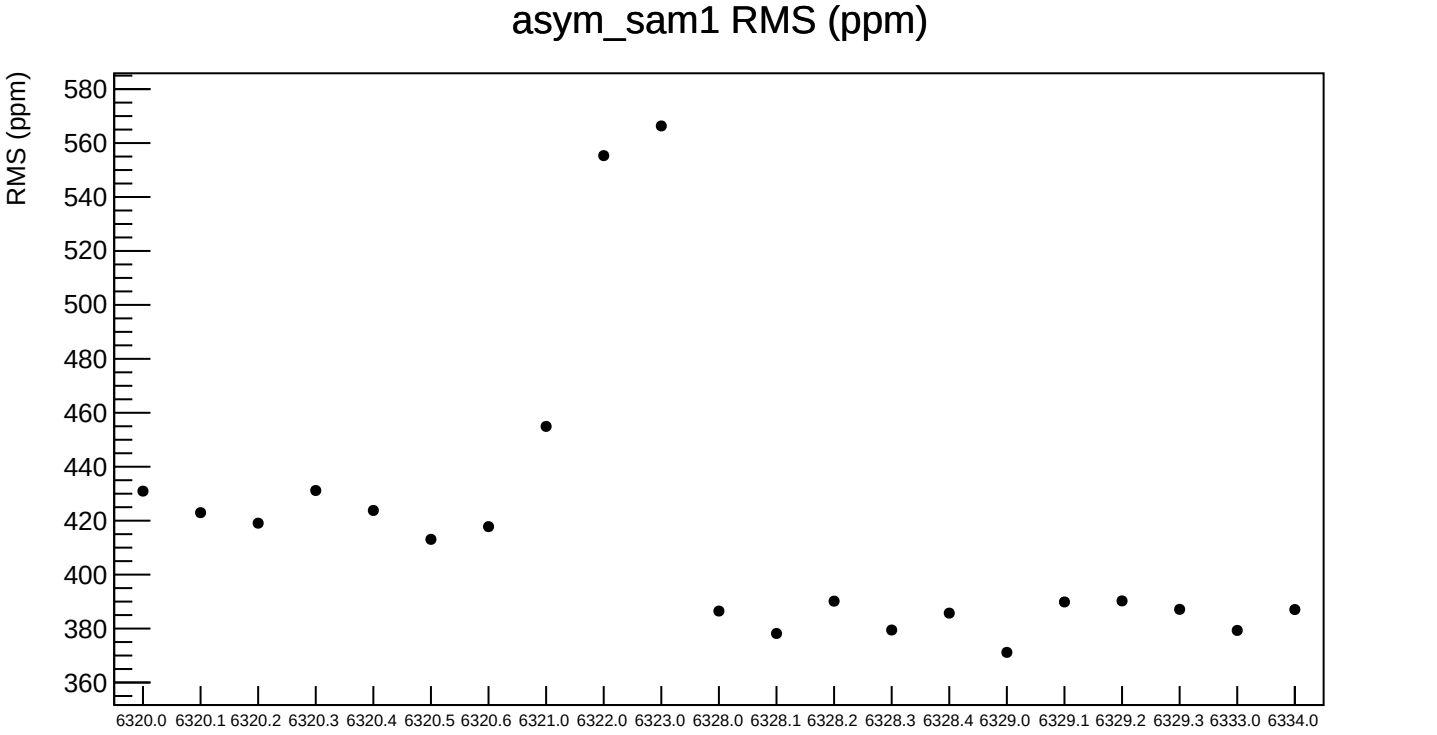

reg_asym_sam_48_dd
χ² / ndf 26.56 / 20
p0 148.6 ± 290
6000
4000
2000
0
−2000
−4000
−6000
−8000
3
2
1
0
−1
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

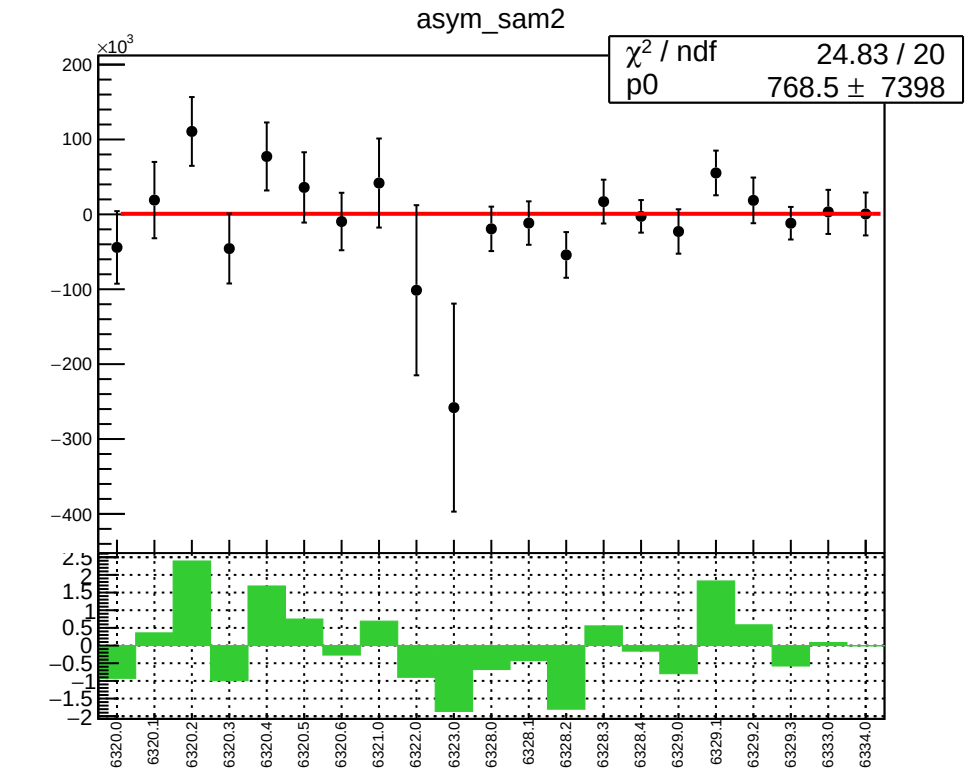

1D pull distribution
Mean −0.01098 ± 0.2454
Std Dev 1.124 ± 0.1735
Underflow 0
Overflow 0
χ² / ndf 2.006 / 6
Constant 3.473 ± 1.216
Mean −0.08801 ± 0.35792
Sigma 1.265 ± 0.473
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

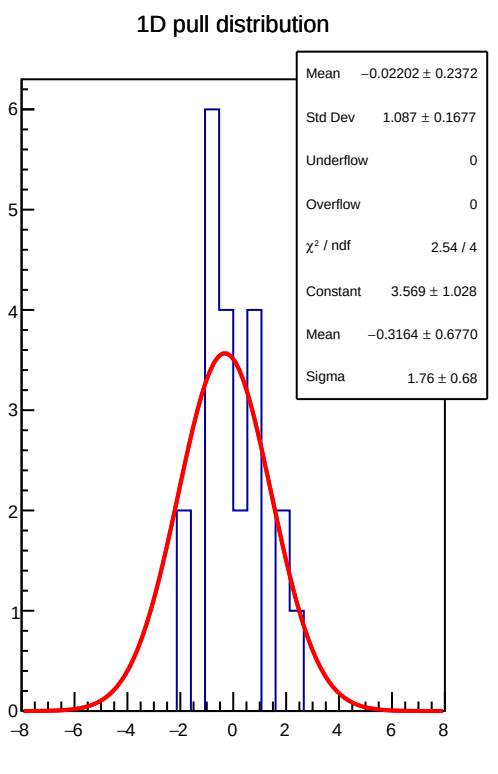

reg_asym_sam_48_dd RMS (ppm)
RMS (ppm)
240
220
200
180
160
140
120
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

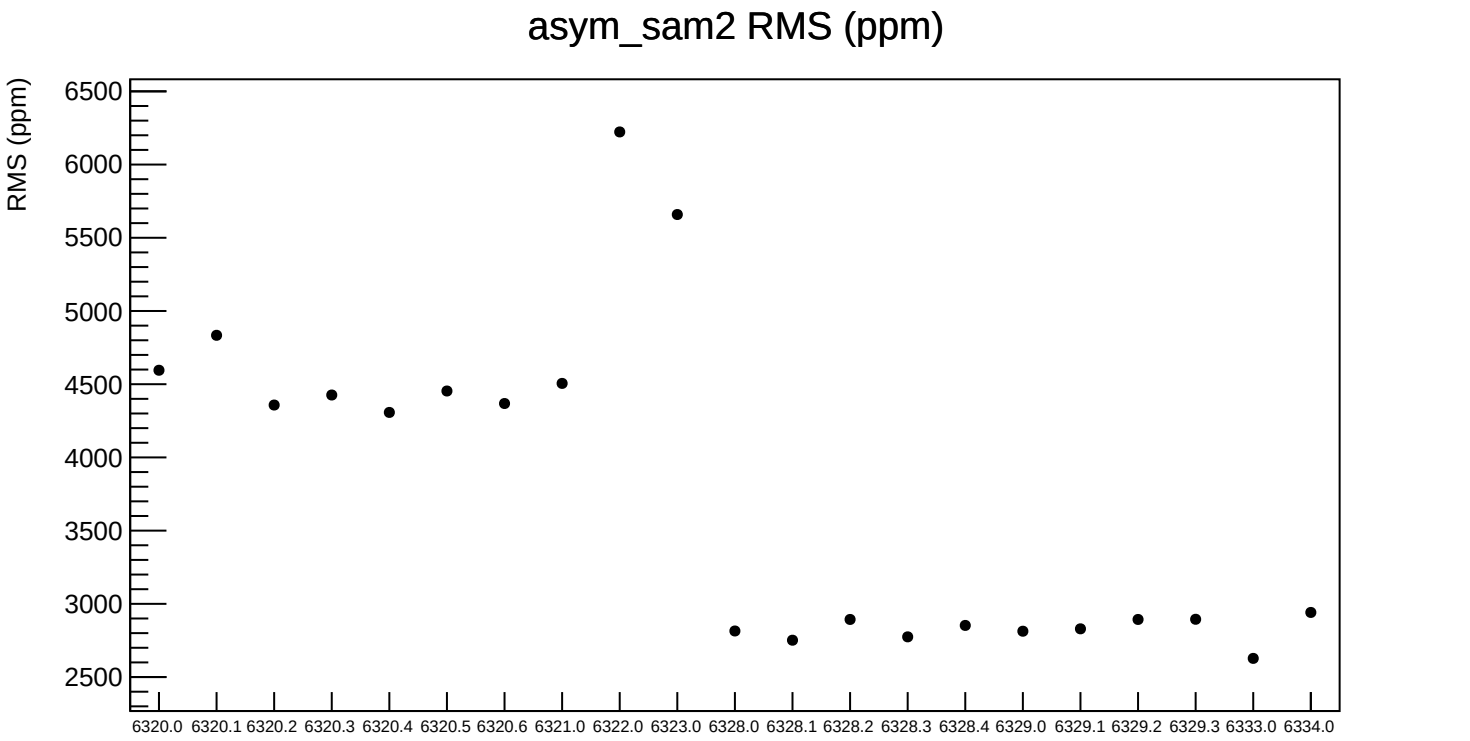

asym_sam1
χ² / ndf 21.92 / 20
p0 −537 ± 910.7
10000
0
−10000
−20000
−30000
2
1.5
1
0.5
0
−0.5
−1
−1.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

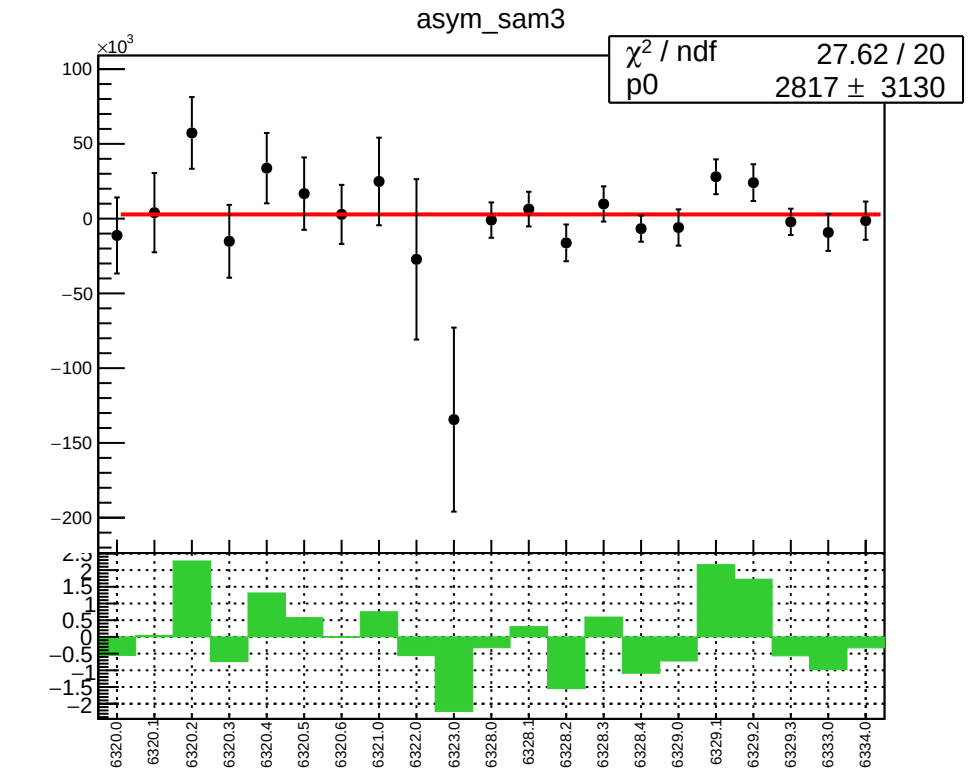

1D pull distribution
Mean −0.06429 ± 0.2225
Std Dev 1.02 ± 0.1573
Underflow 0
Overflow 0
χ² / ndf 1.767 / 5
Constant 5.431 ± 1.907
Mean −0.2859 ± 0.2310
Sigma 0.9641 ± 0.2392
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

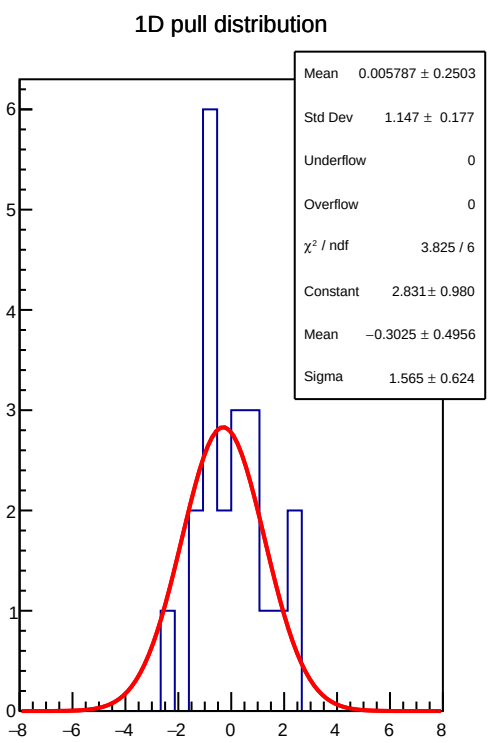

asym_sam1 RMS (ppm)
RMS (ppm)
580
560
540
520
500
480
460
440
420
400
380
360
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

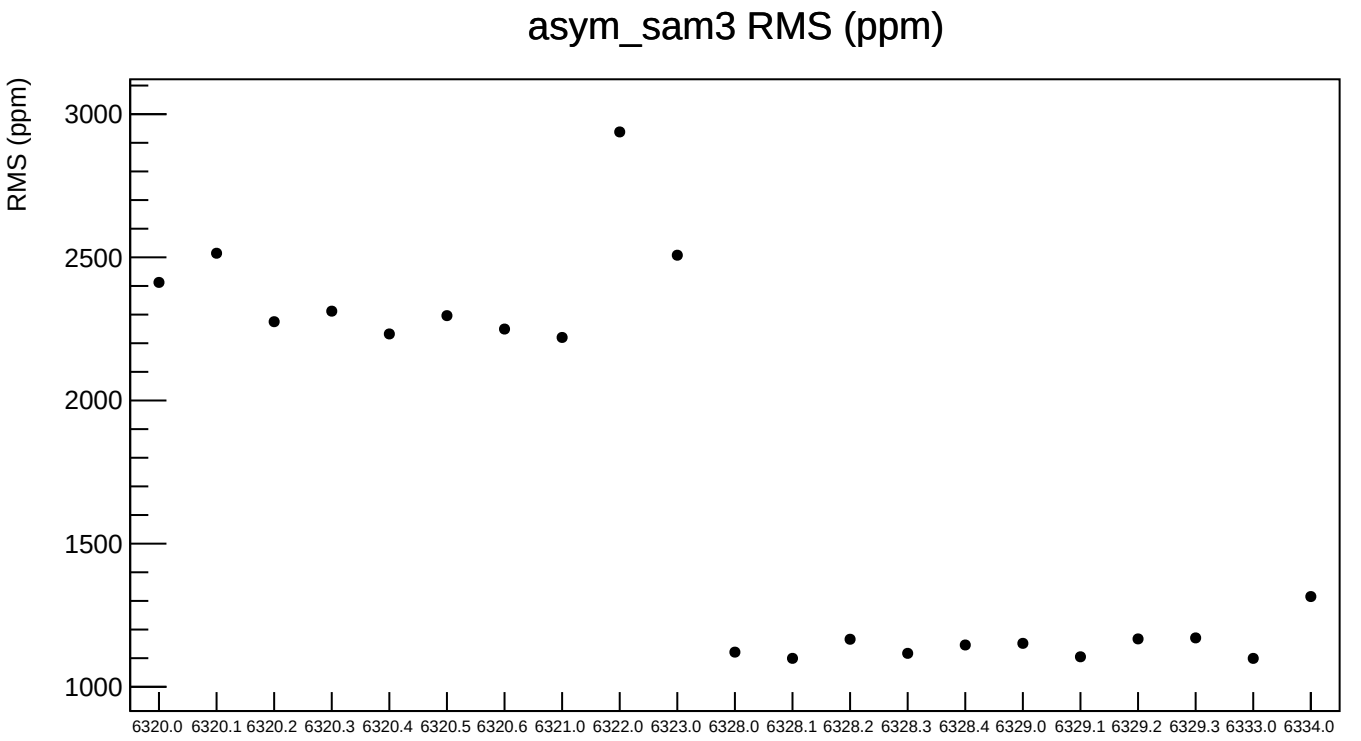

asym_sam2
×10^3
χ² / ndf 24.83 / 20
p0 768.5 ± 7398
200
100
0
−100
−200
−300
−400
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

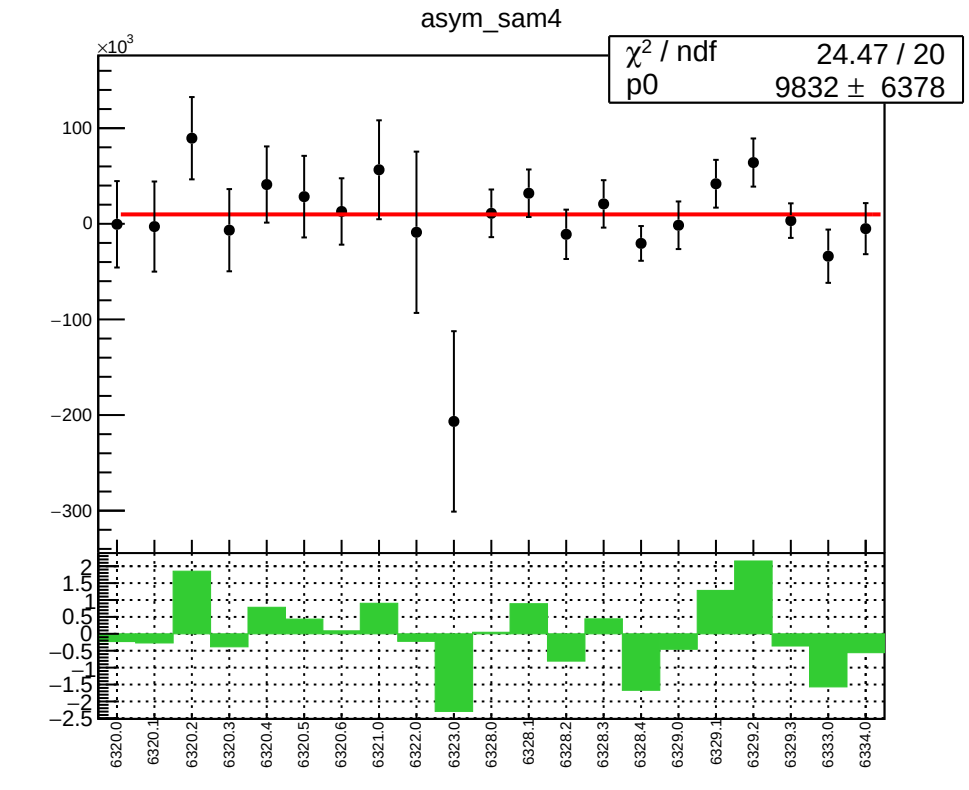

1D pull distribution
Mean −0.02202 ± 0.2372
Std Dev 1.087 ± 0.1677
Underflow 0
Overflow 0
χ² / ndf 2.54 / 4
Constant 3.569 ± 1.028
Mean −0.3164 ± 0.6770
Sigma 1.76 ± 0.68
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

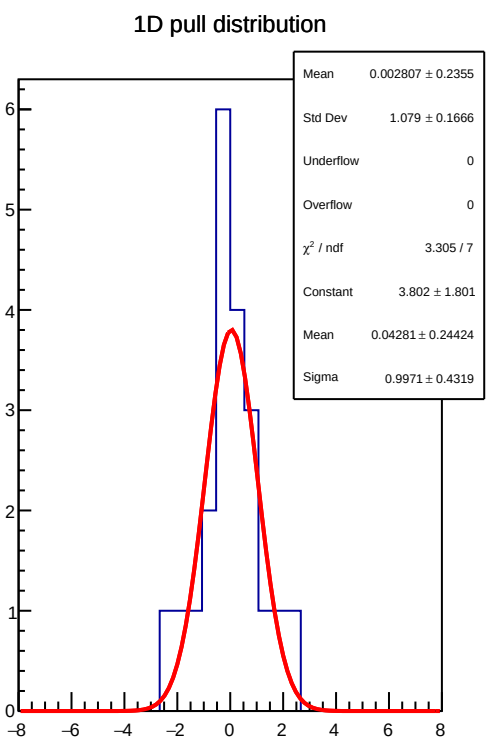

asym_sam2 RMS (ppm)
RMS (ppm)
6500
6000
5500
5000
4500
4000
3500
3000
2500
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

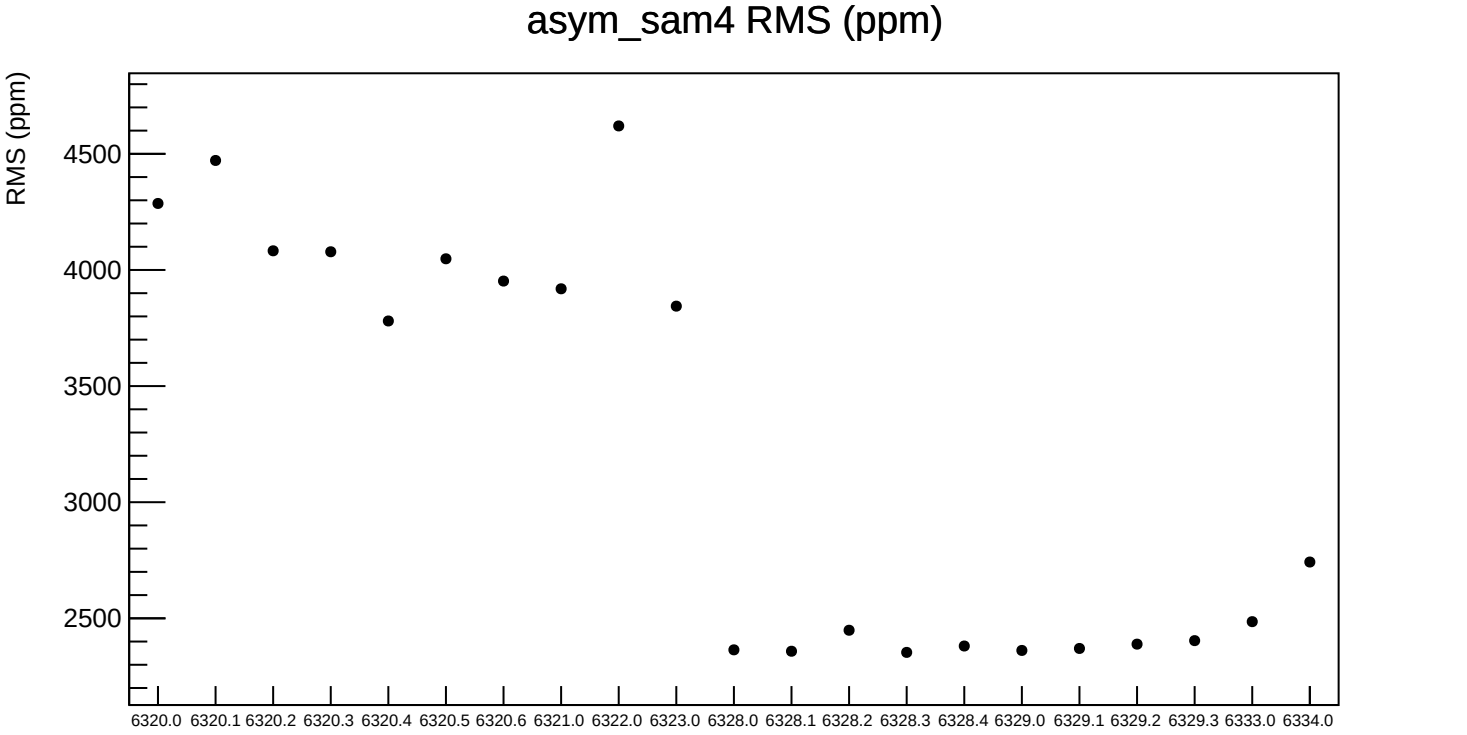

asym_sam3
×10^3
χ² / ndf 27.62 / 20
p0 2817 ± 3130
100
50
0
−50
−100
−150
−200
2
1.5
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

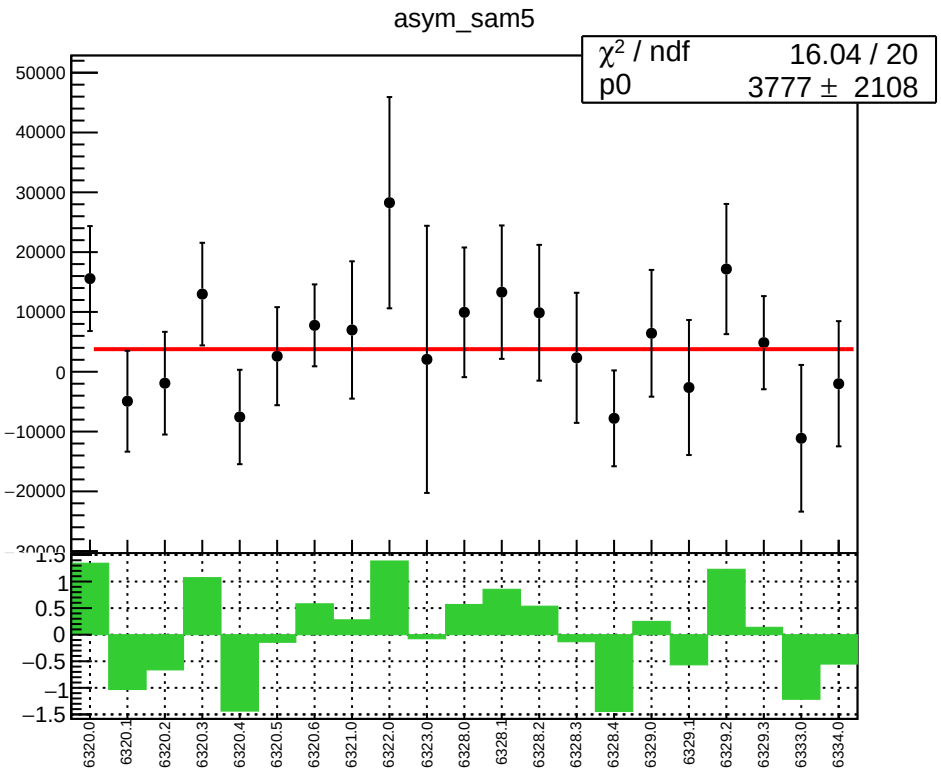

1D pull distribution
Mean 0.005787 ± 0.2503
Std Dev 1.147 ± 0.177
Underflow 0
Overflow 0
χ² / ndf 3.825 / 6
Constant 2.831 ± 0.980
Mean −0.3025 ± 0.4956
Sigma 1.565 ± 0.624
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

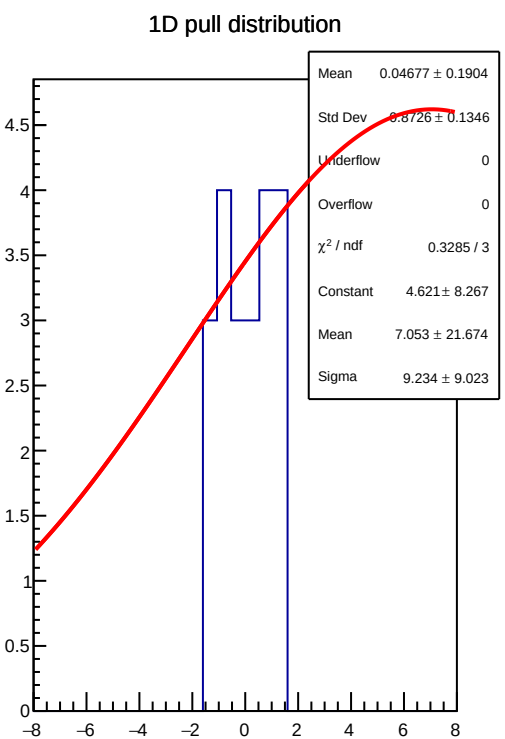

asym_sam3 RMS (ppm)
RMS (ppm)
3000
2500
2000
1500
1000
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

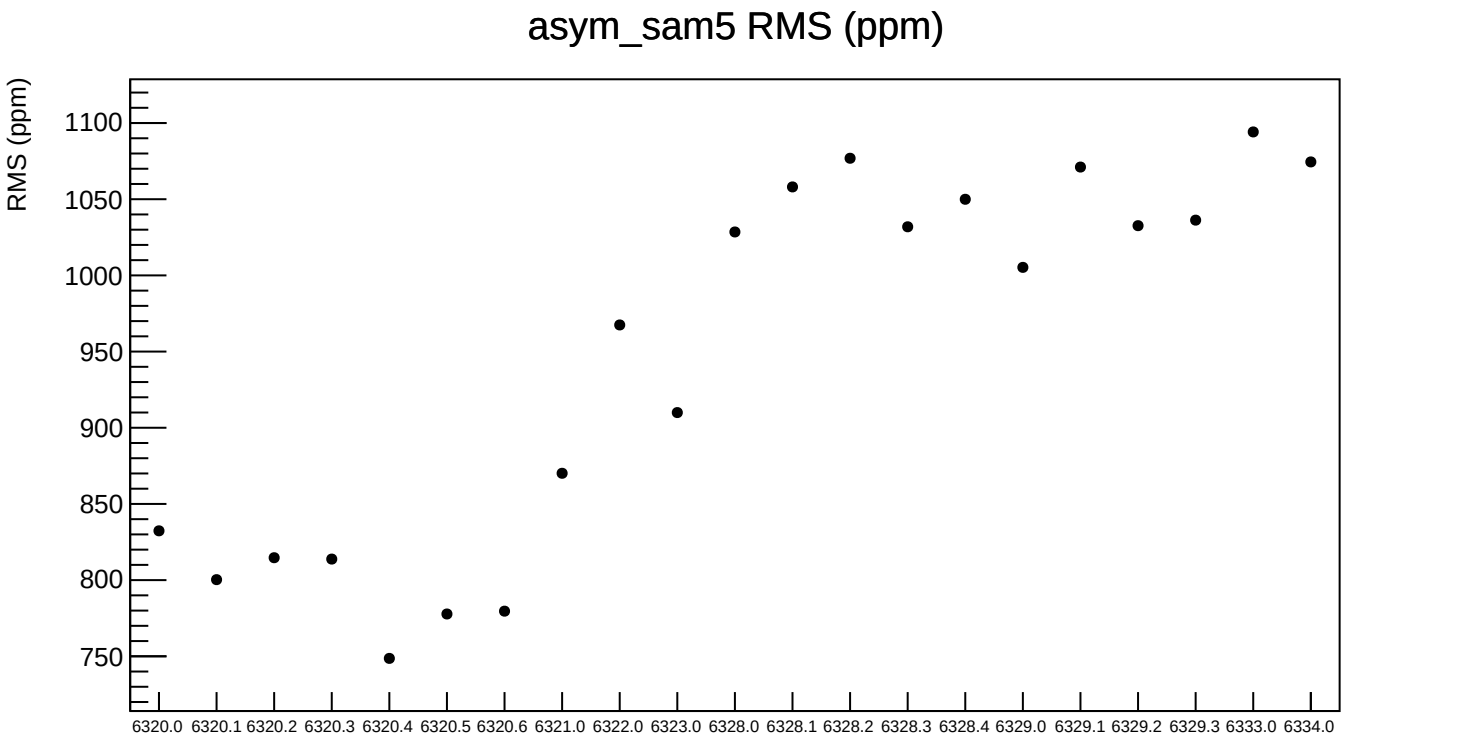

asym_sam4
×10^3
χ² / ndf 24.47 / 20
p0 9832 ± 6378
100
0
−100
−200
−300
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

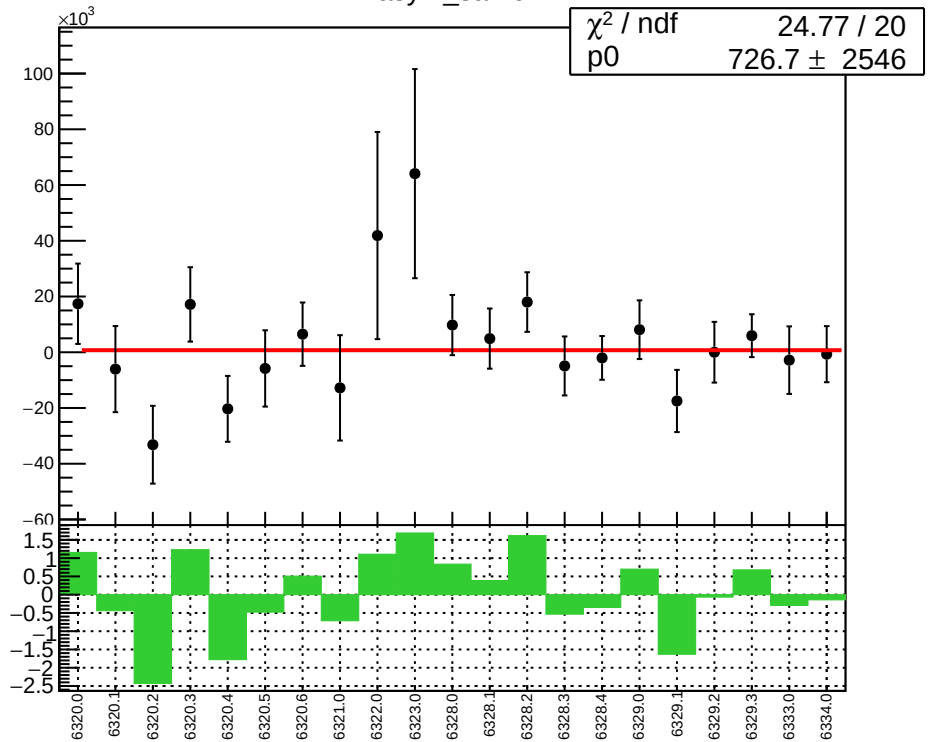

1D pull distribution
Mean 0.002807 ± 0.2355
Std Dev 1.079 ± 0.1666
Underflow 0
Overflow 0
χ² / ndf 3.305 / 7
Constant 3.802 ± 1.801
Mean 0.04281 ± 0.24424
Sigma 0.9971 ± 0.4319
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

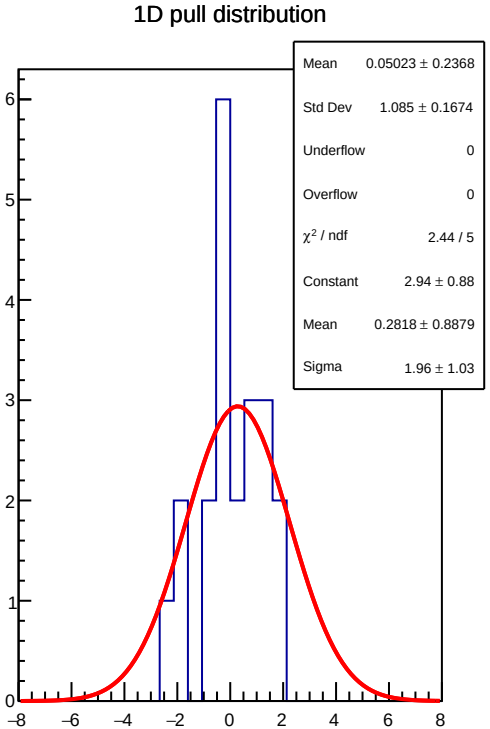

asym_sam4 RMS (ppm)
RMS (ppm)
4500
4000
3500
3000
2500
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

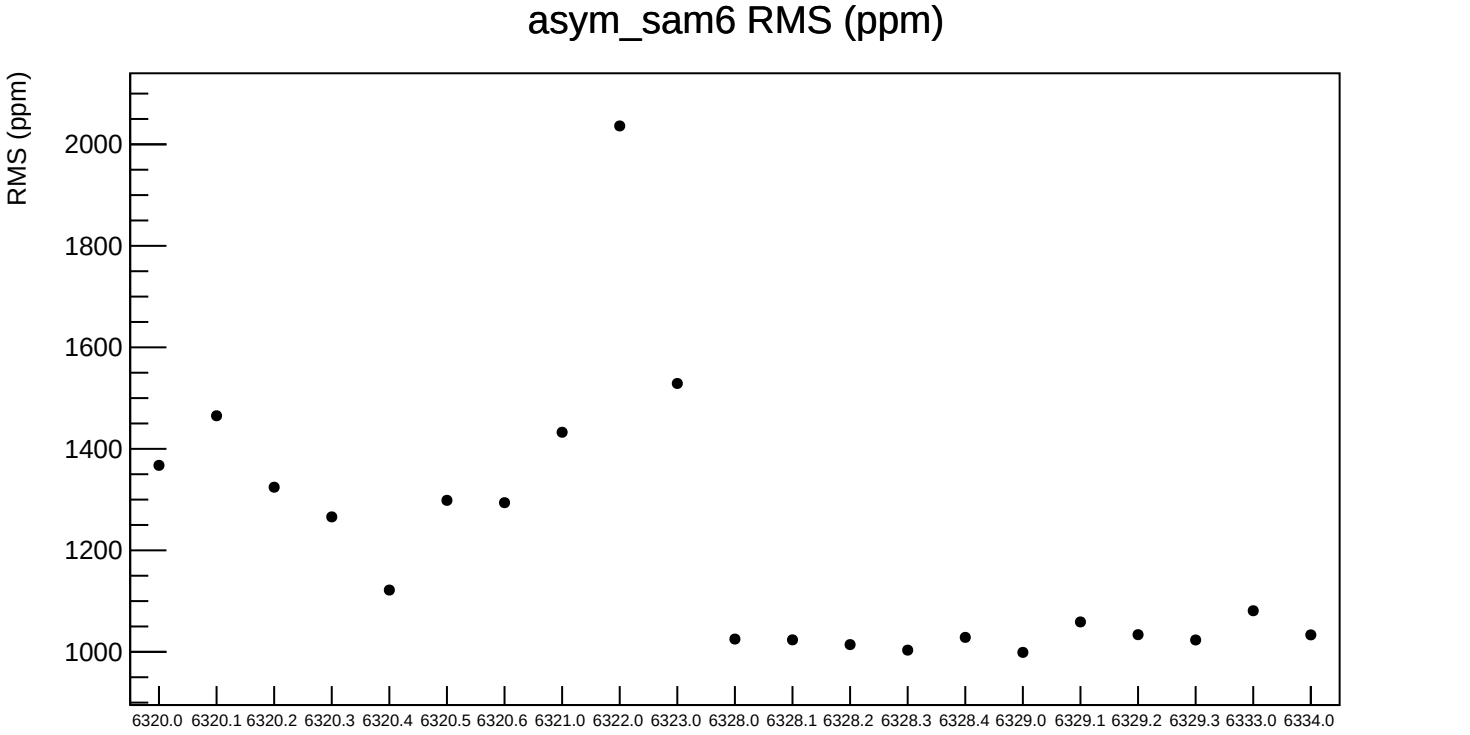

asym_sam5
χ² / ndf 16.04 / 20
p0 3777 ± 2108
50000
40000
30000
20000
10000
0
−10000
−20000
1.5
1
0.5
0
−0.5
−1
−1.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

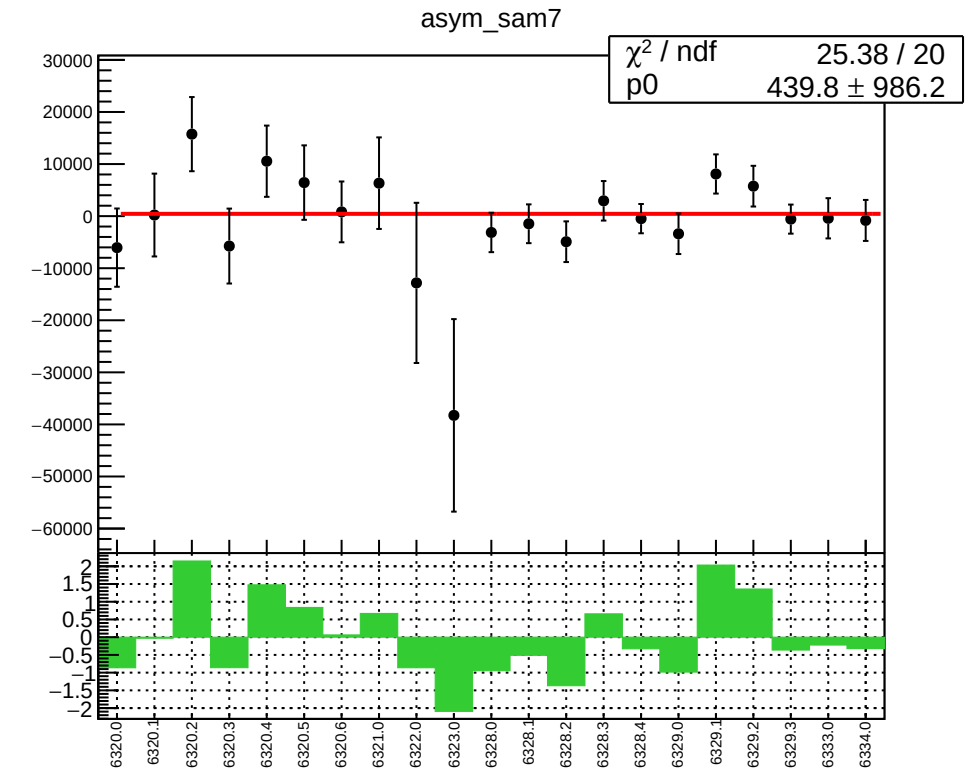

1D pull distribution
Mean 0.04677 ± 0.1904
Std Dev 0.8726 ± 0.1346
Underflow 0
Overflow 0
χ² / ndf 0.3285 / 3
Constant 4.621 ± 8.267
Mean 7.053 ± 21.674
Sigma 9.234 ± 9.023
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
−8
−6
−4
−2
0
2
4
6
8

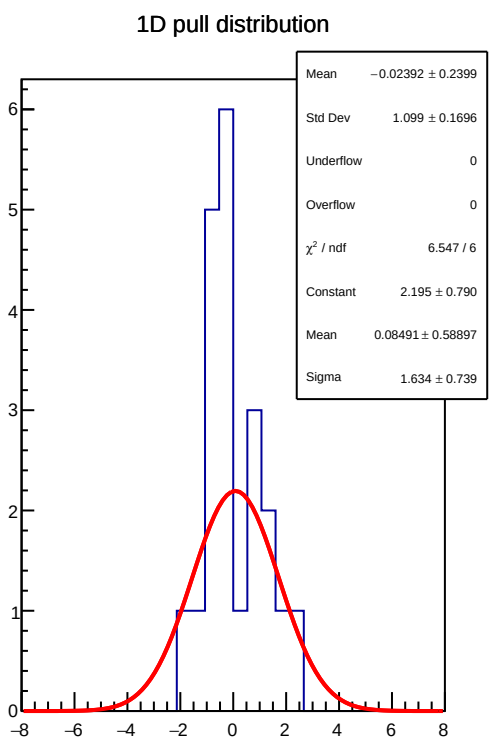

asym_sam5 RMS (ppm)
RMS (ppm)
1100
1050
1000
950
900
850
800
750
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

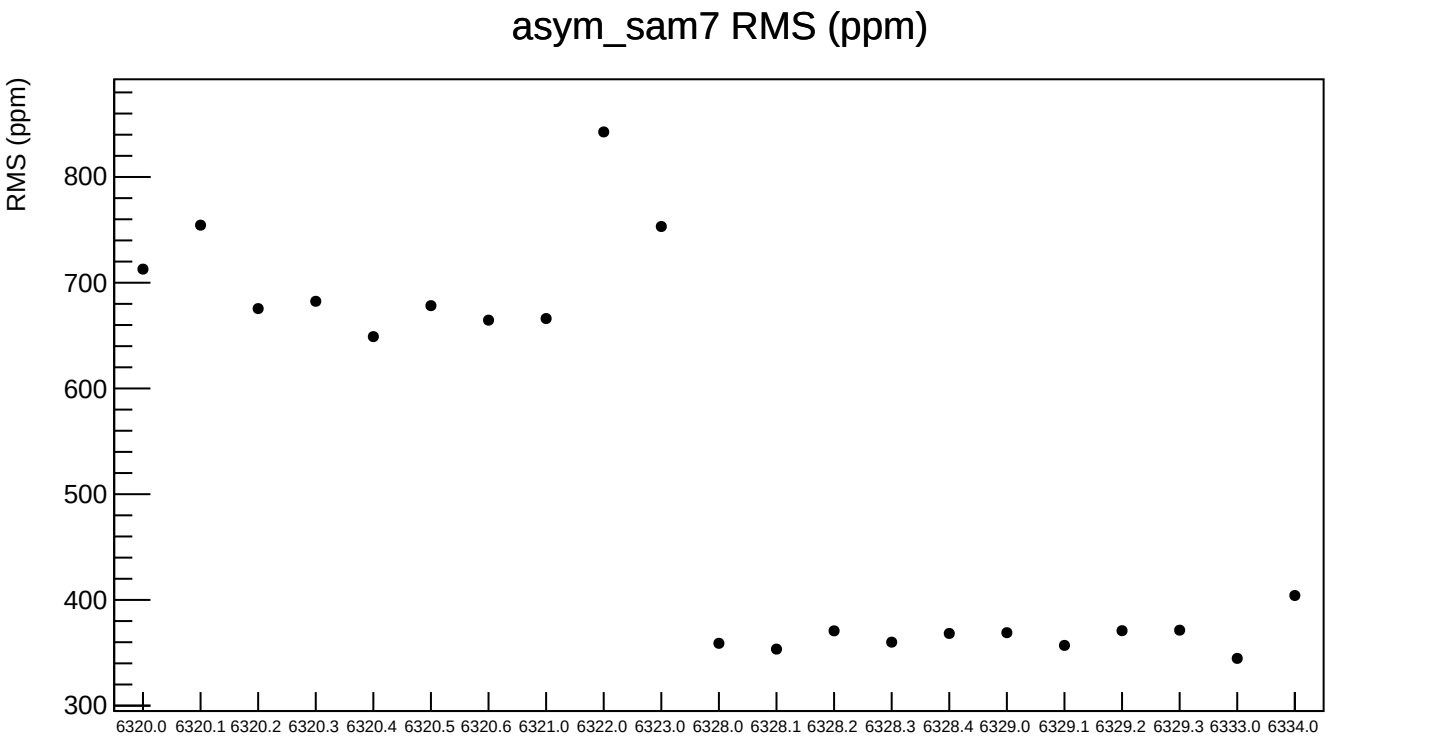

asym_sam6
×10^3
χ² / ndf 24.77 / 20
p0 726.7 ± 2546
100
80
60
40
20
0
−20
−40
−60
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

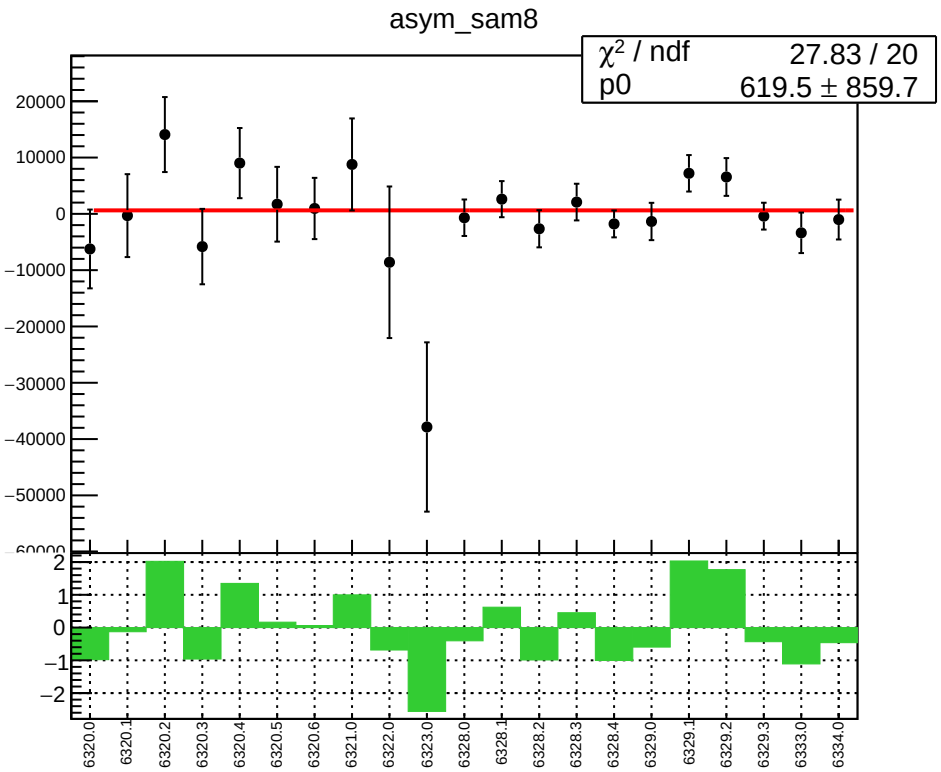

1D pull distribution
Mean 0.05023 ± 0.2368
Std Dev 1.085 ± 0.1674
Underflow 0
Overflow 0
χ² / ndf 2.44 / 5
Constant 2.94 ± 0.88
Mean 0.2818 ± 0.8879
Sigma 1.96 ± 1.03
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

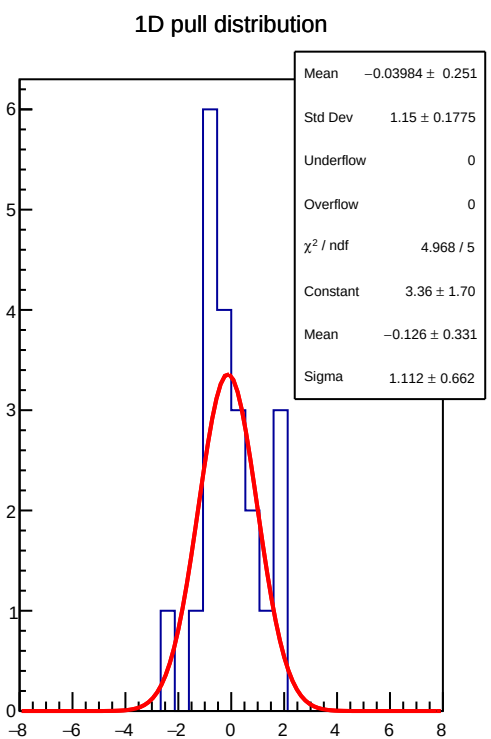

asym_sam6 RMS (ppm)
RMS (ppm)
2000
1800
1600
1400
1200
1000
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

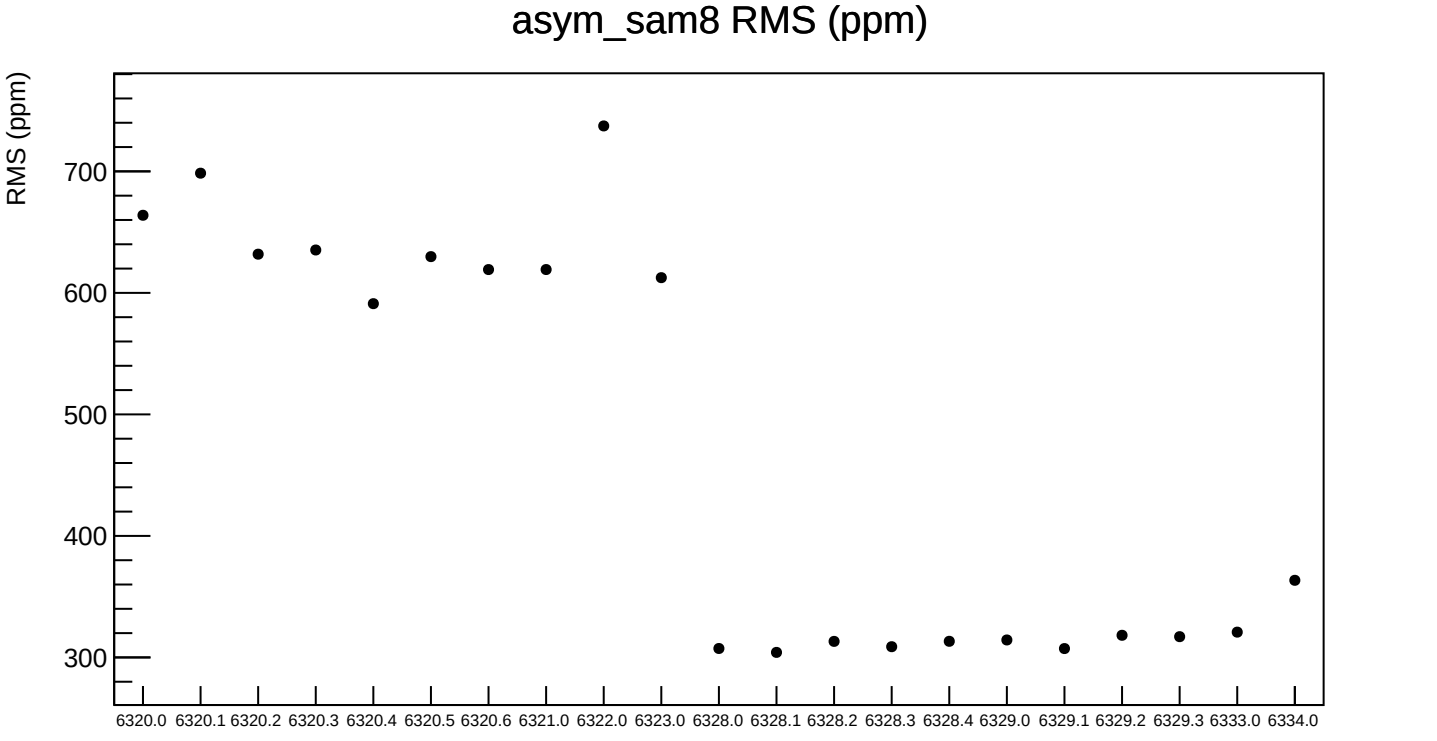

asym_sam7
χ² / ndf 25.38 / 20
p0 439.8 ± 986.2
30000
20000
10000
0
−10000
−20000
−30000
−40000
−50000
−60000
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

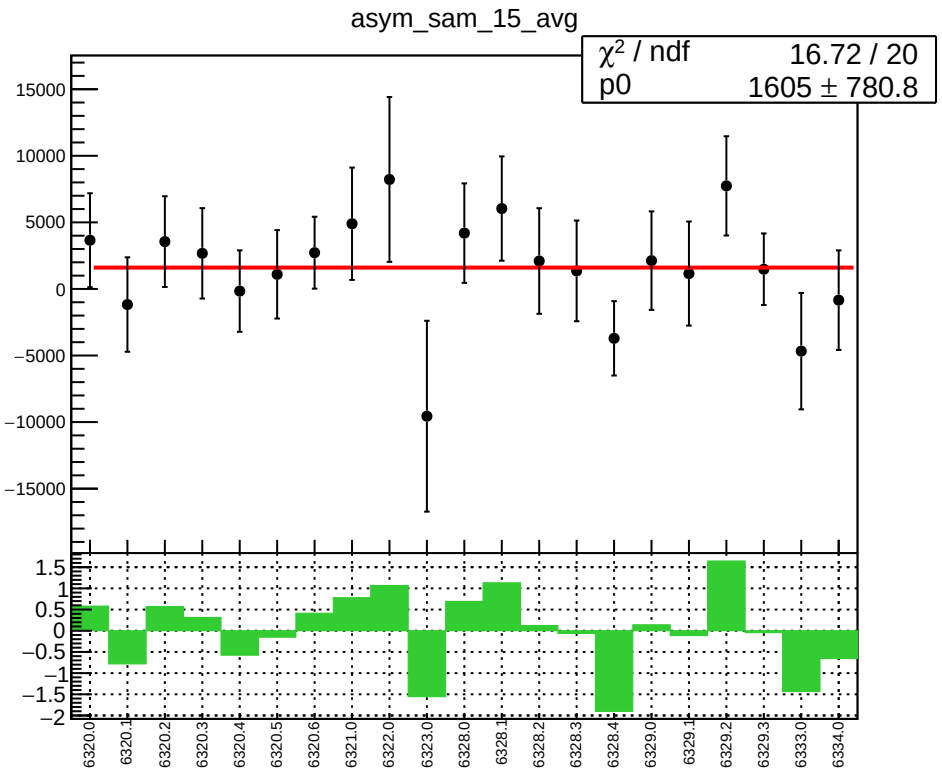

1D pull distribution
Mean −0.02392 ± 0.2399
Std Dev 1.099 ± 0.1696
Underflow 0
Overflow 0
χ² / ndf 6.547 / 6
Constant 2.195 ± 0.790
Mean 0.08491 ± 0.58897
Sigma 1.634 ± 0.739
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

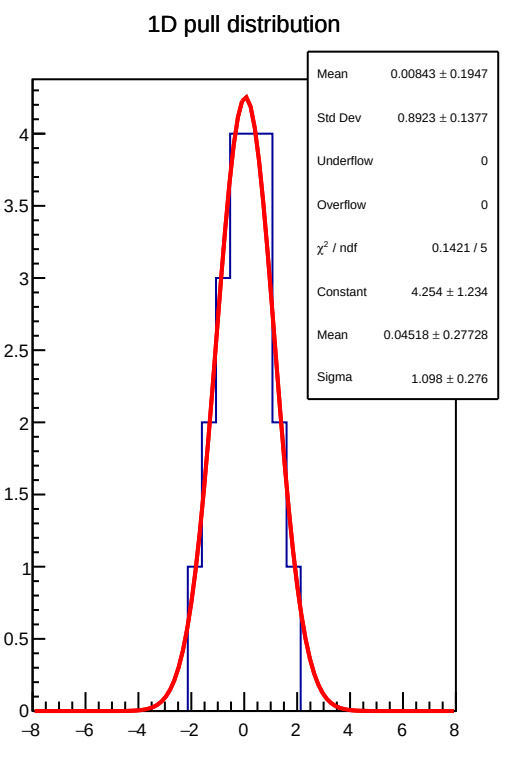

asym_sam7 RMS (ppm)
RMS (ppm)
800
700
600
500
400
300
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

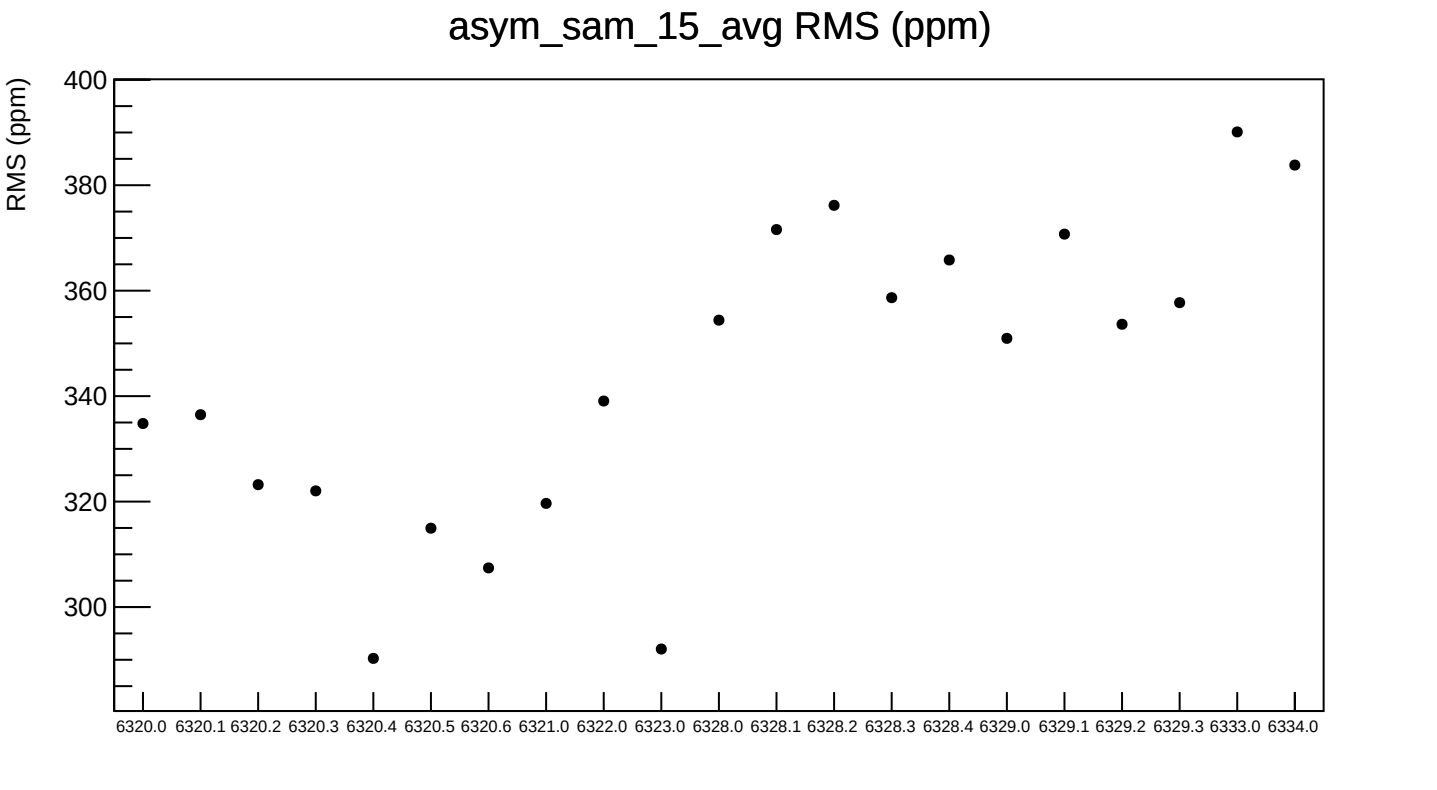

asym_sam8
χ² / ndf 27.83 / 20
p0 619.5 ± 859.7
20000
10000
0
−10000
−20000
−30000
−40000
−50000
2
1
0
−1
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

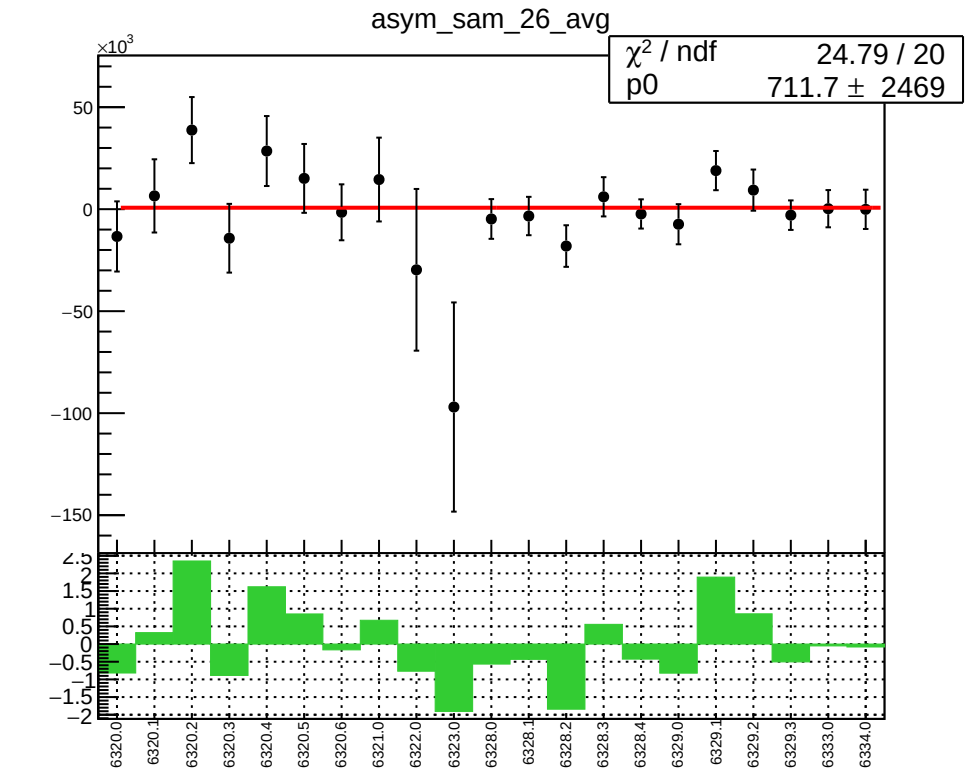

1D pull distribution
Mean −0.03984 ± 0.251
Std Dev 1.15 ± 0.1775
Underflow 0
Overflow 0
χ² / ndf 4.968 / 5
Constant 3.36 ± 1.70
Mean −0.126 ± 0.331
Sigma 1.112 ± 0.662
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

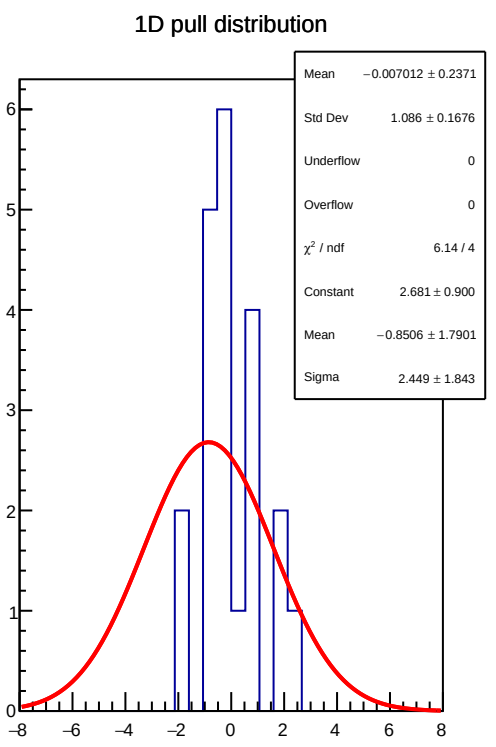

asym_sam8 RMS (ppm)
RMS (ppm)
700
600
500
400
300
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

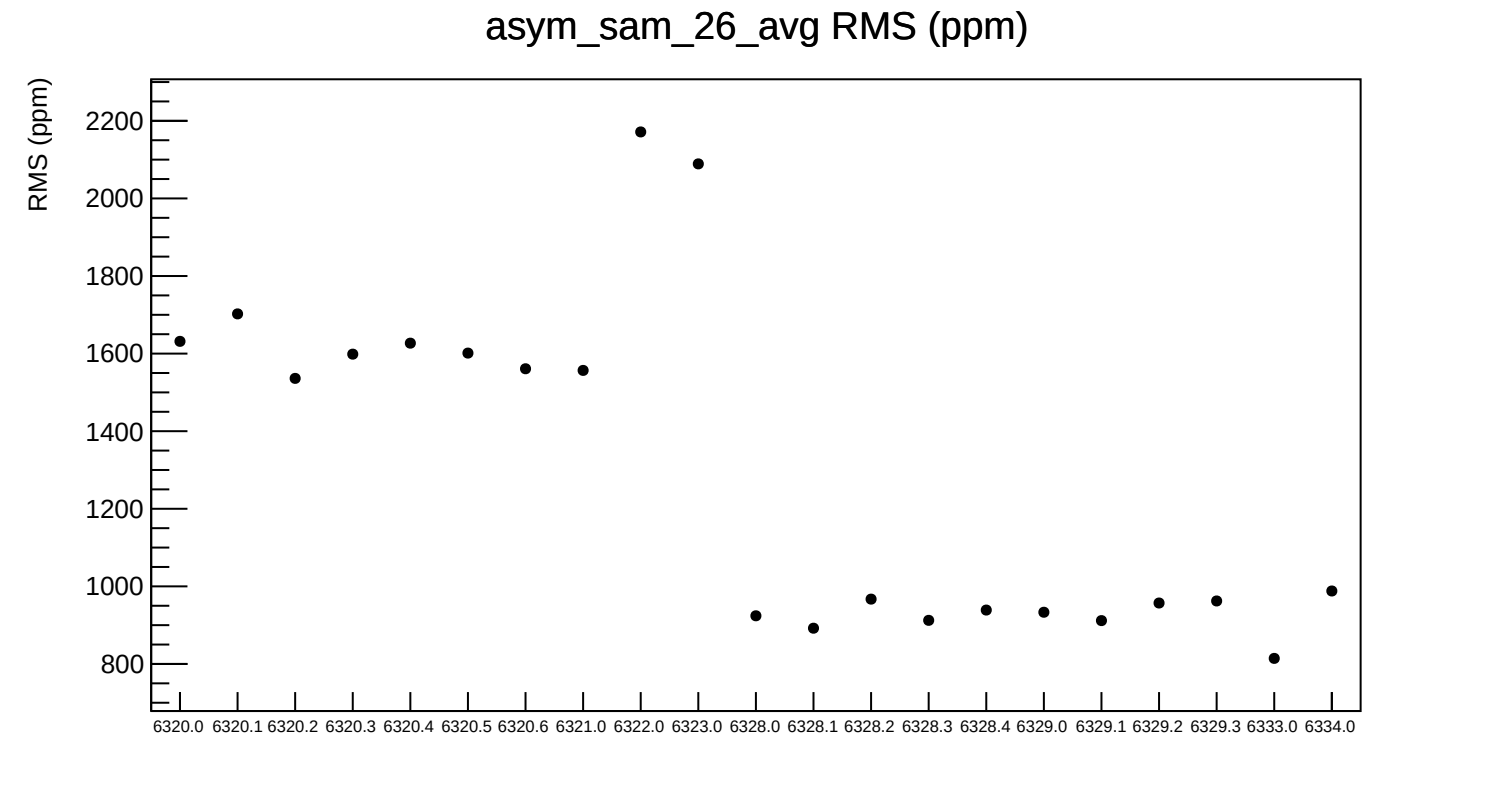

asym_sam_15_avg
χ² / ndf 16.72 / 20
p0 1605 ± 780.8
15000
10000
5000
0
−5000
−10000
−15000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

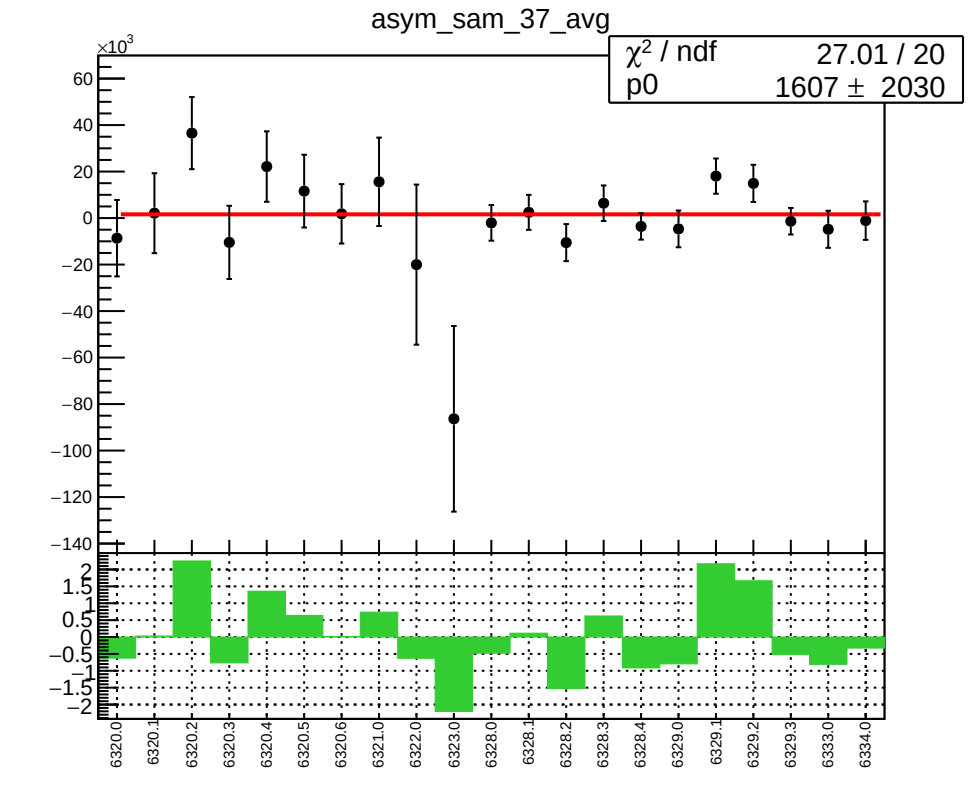

1D pull distribution
Mean 0.00843 ± 0.1947
Std Dev 0.8923 ± 0.1377
Underflow 0
Overflow 0
χ² / ndf 0.1421 / 5
Constant 4.254 ± 1.234
Mean 0.04518 ± 0.27728
Sigma 1.098 ± 0.276
4
3.5
3
2.5
2
1.5
1
0.5
0
−8
−6
−4
−2
0
2
4
6
8

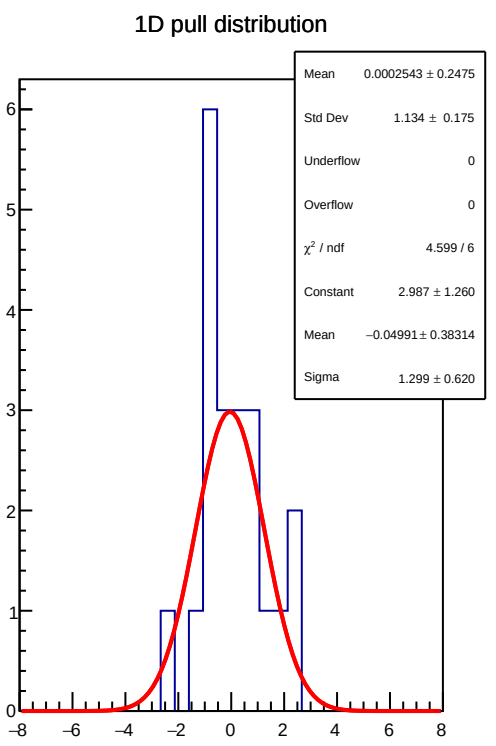

asym_sam_15_avg RMS (ppm)
RMS (ppm)
400
380
360
340
320
300
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

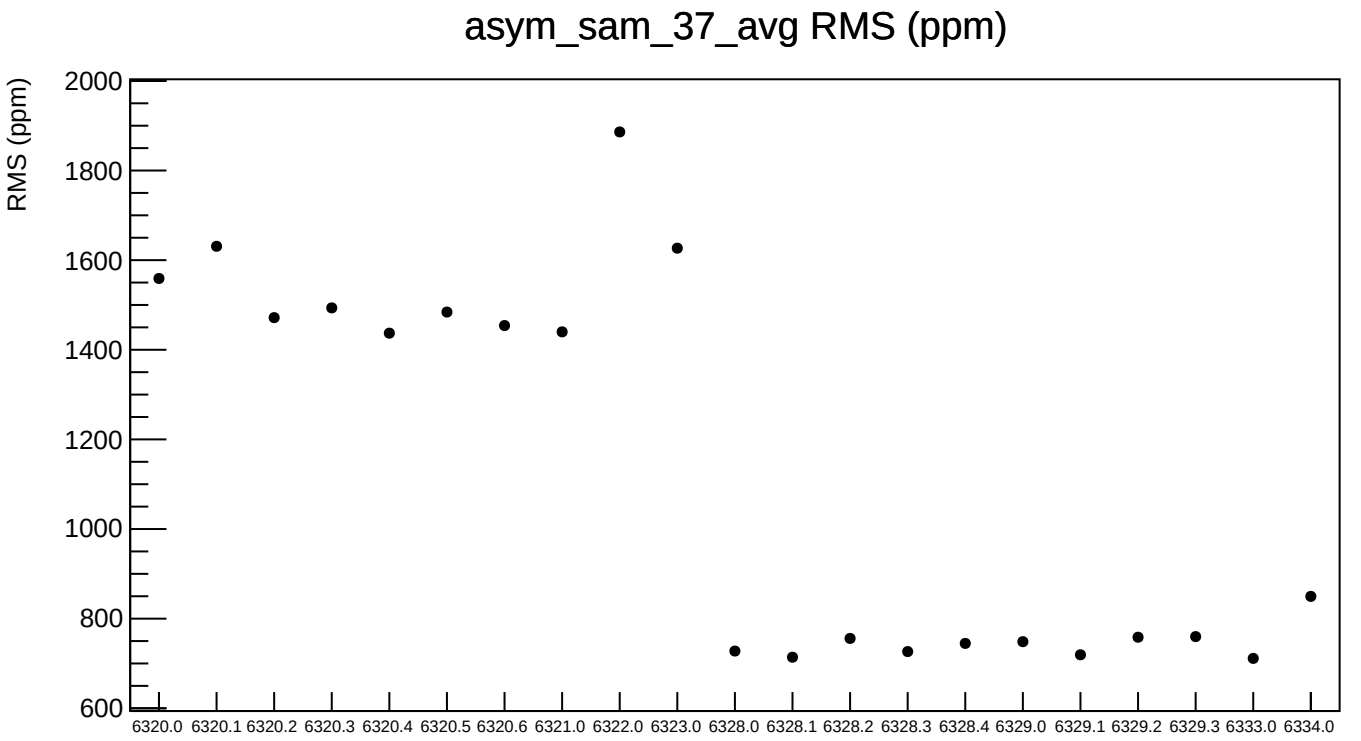

asym_sam_26_avg
×10^3
χ² / ndf 24.79 / 20
p0 711.7 ± 2469
50
0
−50
−100
−150
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

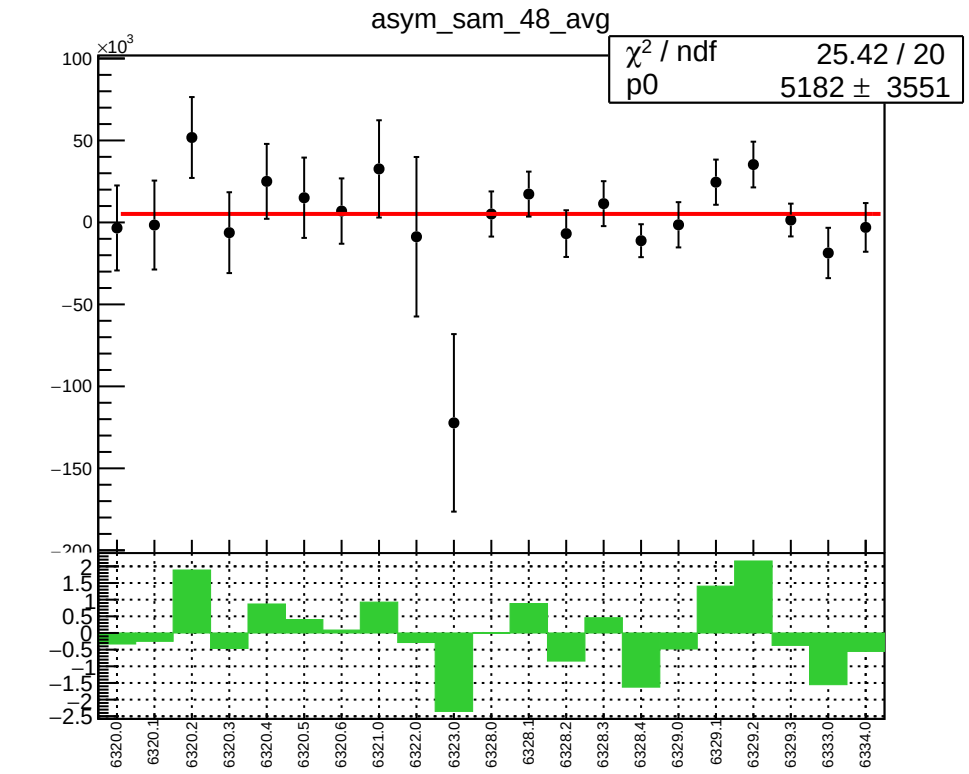

1D pull distribution
Mean −0.007012 ± 0.2371
Std Dev 1.086 ± 0.1676
Underflow 0
Overflow 0
χ² / ndf 6.14 / 4
Constant 2.681 ± 0.900
Mean −0.8506 ± 1.7901
Sigma 2.449 ± 1.843
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

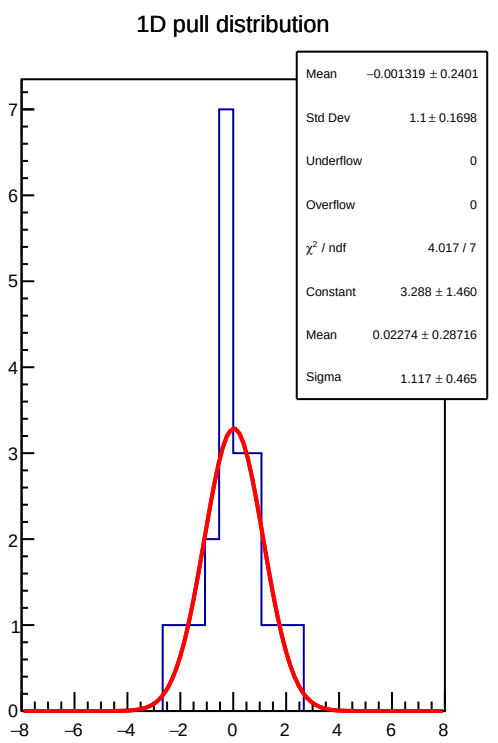

asym_sam_26_avg RMS (ppm)
RMS (ppm)
2200
2000
1800
1600
1400
1200
1000
800
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

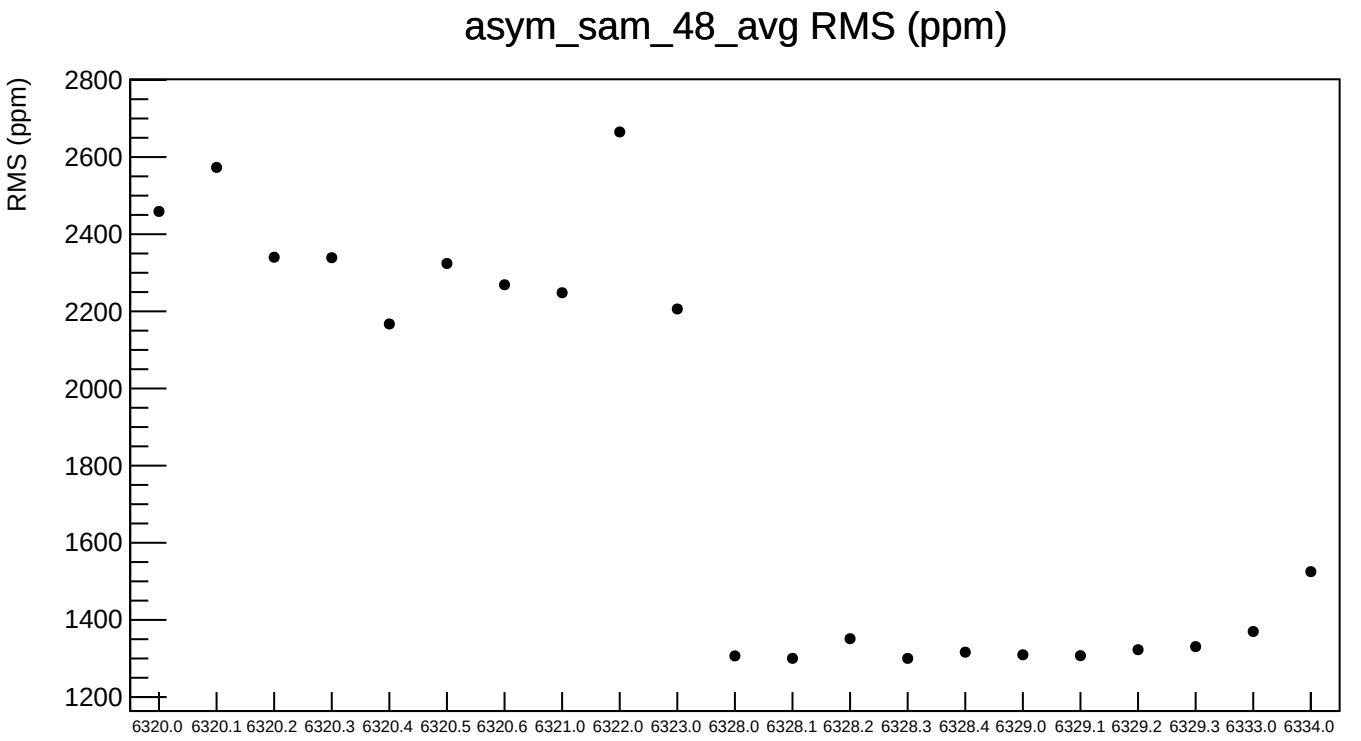

asym_sam_37_avg
χ² / ndf 27.01 / 20
p0 1607 ± 2030
×10³
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

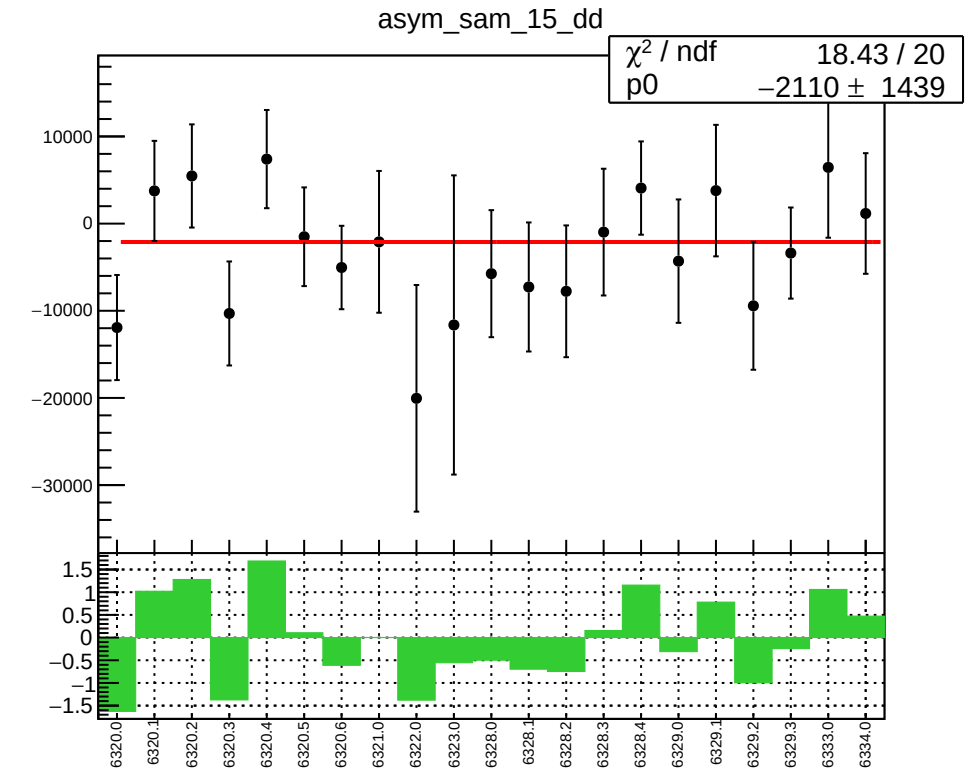

1D pull distribution
Mean 0.0002543 ± 0.2475
Std Dev 1.134 ± 0.175
Underflow 0
Overflow 0
χ² / ndf 4.599 / 6
Constant 2.987 ± 1.260
Mean −0.04991 ± 0.38314
Sigma 1.299 ± 0.620

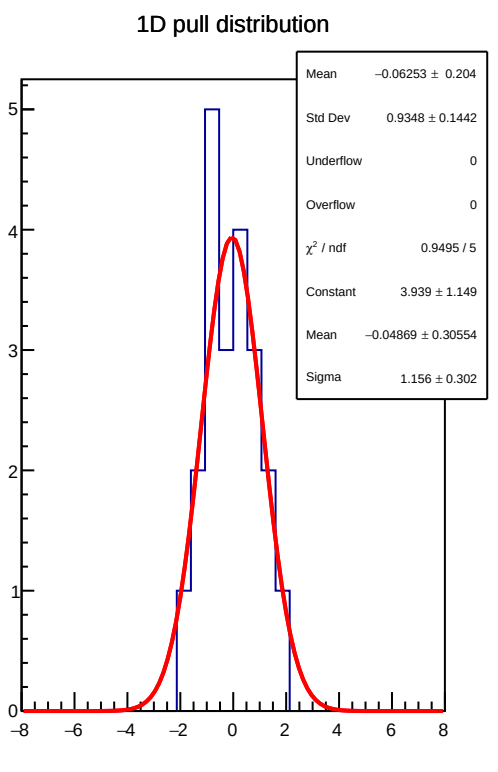

asym_sam_37_avg RMS (ppm)
RMS (ppm)
2000
1800
1600
1400
1200
1000
800
600
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

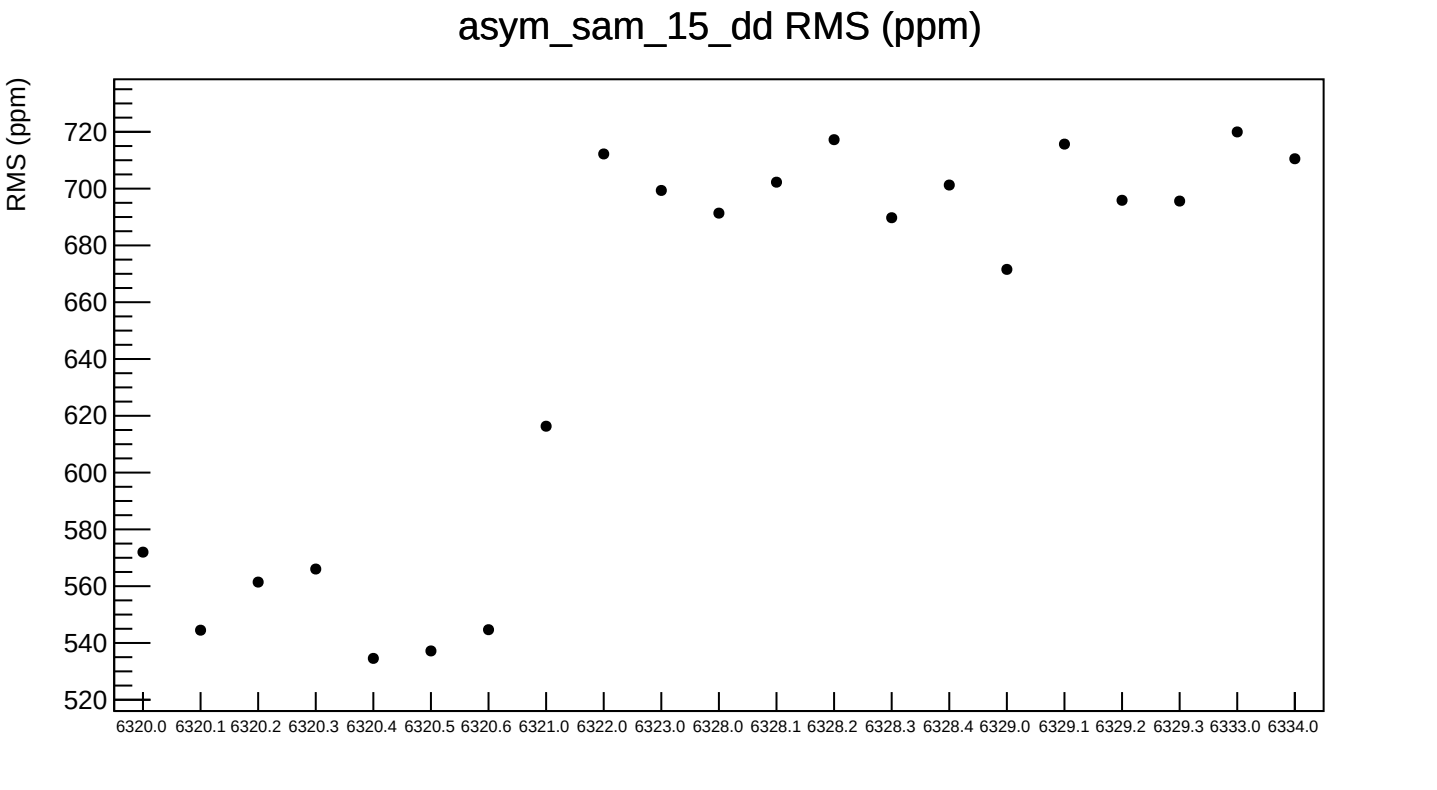

asym_sam_48_avg
χ^2 / ndf 25.42 / 20
p0 5182 ± 3551
×10^3
100
50
0
−50
−100
−150
2
1.5
0.5
0
−0.5
−1
−1.5
−2
−2.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

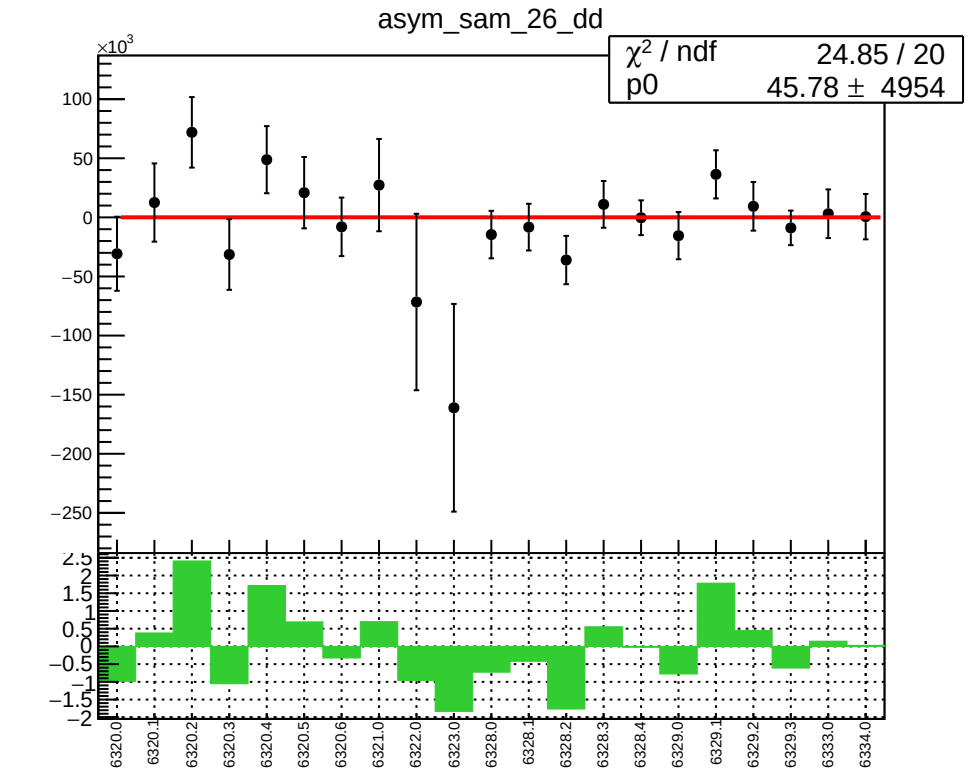

1D pull distribution
Mean −0.001319 ± 0.2401
Std Dev 1.1 ± 0.1698
Underflow 0
Overflow 0
χ^2 / ndf 4.017 / 7
Constant 3.288 ± 1.460
Mean 0.02274 ± 0.28716
Sigma 1.117 ± 0.465
7
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

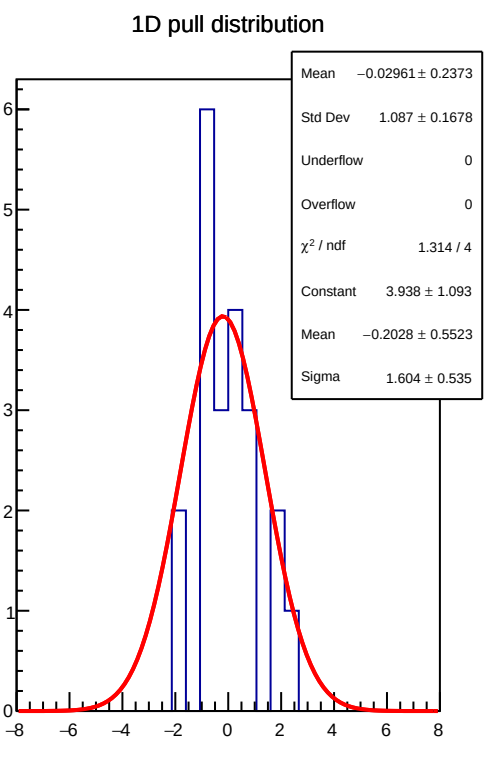

asym_sam_48_avg RMS (ppm)
RMS (ppm)
2800
2600
2400
2200
2000
1800
1600
1400
1200
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

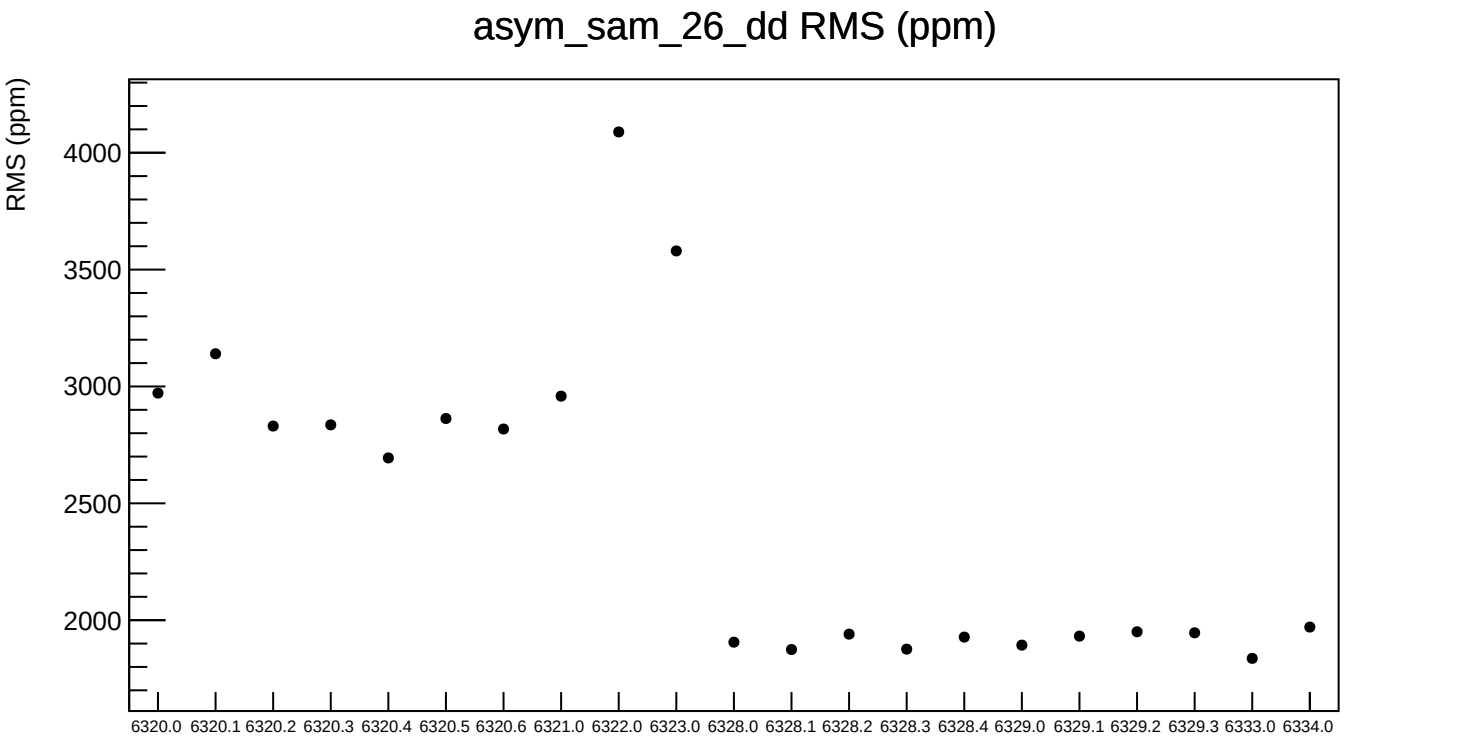

asym_sam_15_dd
χ² / ndf 18.43 / 20
p0 −2110 ± 1439
10000
0
−10000
−20000
−30000
1.5
1
0.5
0
−0.5
−1
−1.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

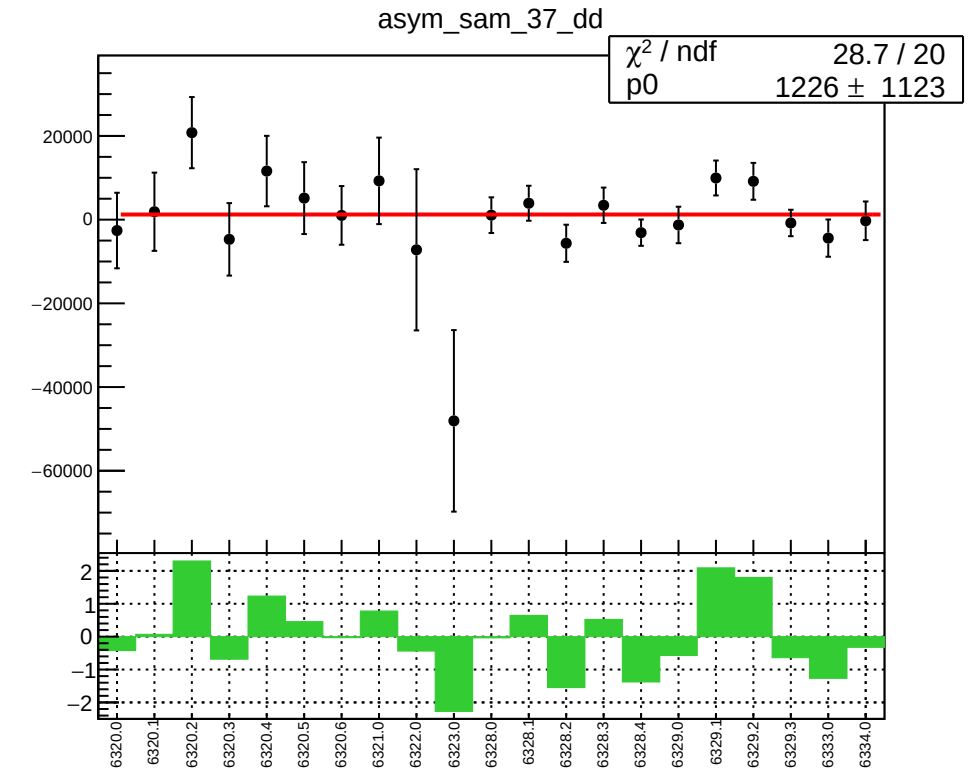

1D pull distribution
Mean −0.06253 ± 0.204
Std Dev 0.9348 ± 0.1442
Underflow 0
Overflow 0
χ² / ndf 0.9495 / 5
Constant 3.939 ± 1.149
Mean −0.04869 ± 0.30554
Sigma 1.156 ± 0.302
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

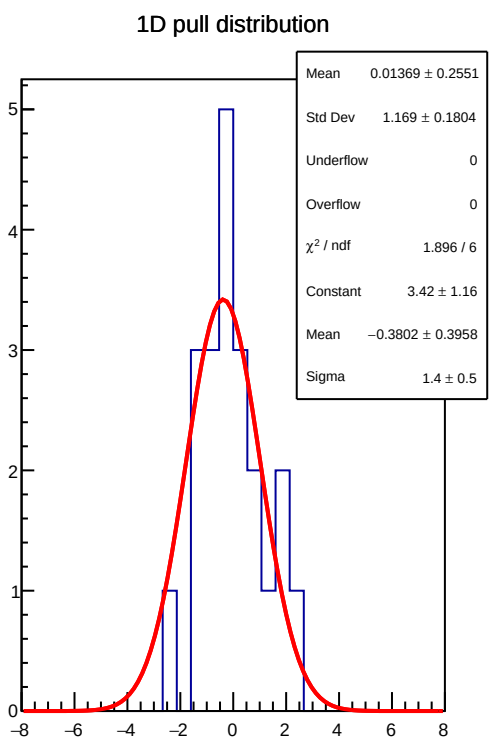

asym_sam_15_dd RMS (ppm)
RMS (ppm)
720
700
680
660
640
620
600
580
560
540
520
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

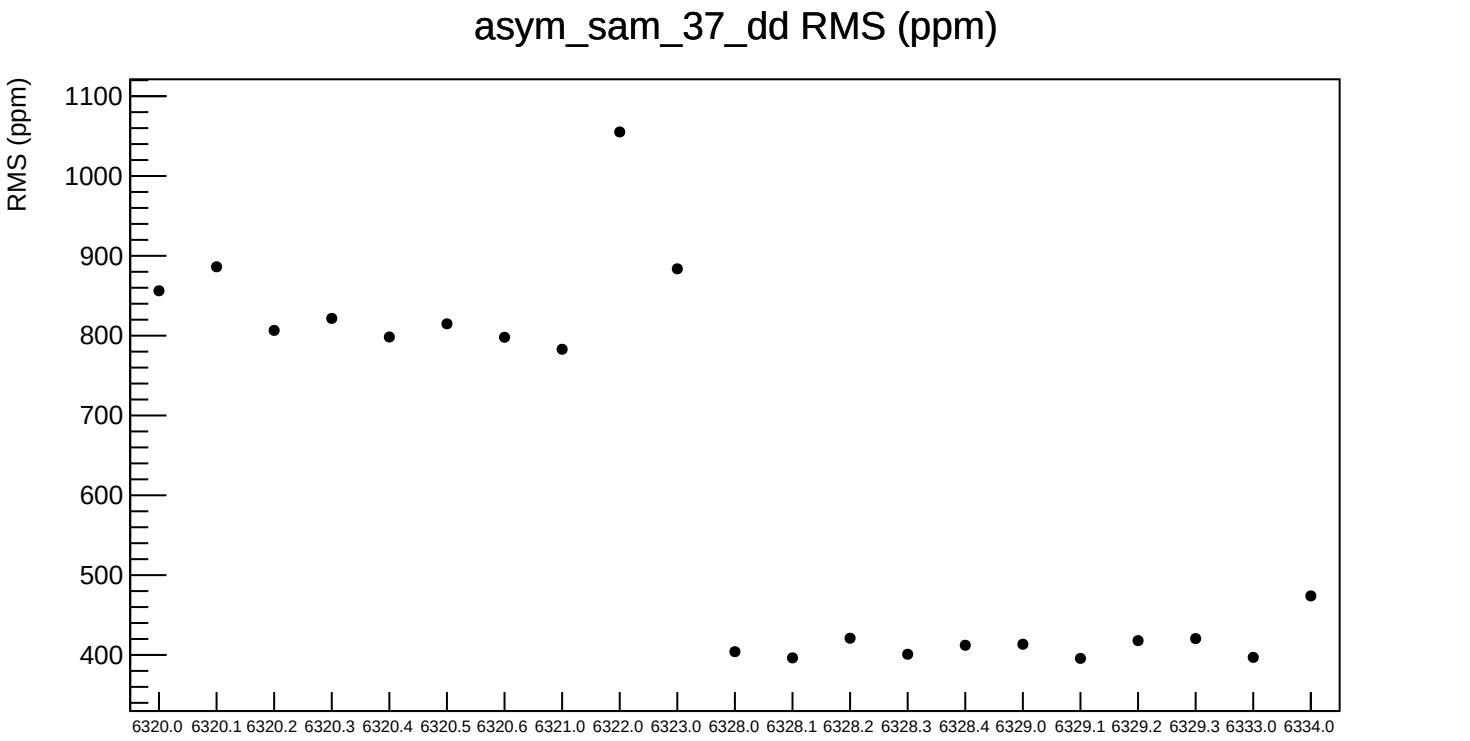

asym_sam_26_dd
×10^3
χ² / ndf 24.85 / 20
p0 45.78 ± 4954
100
50
0
−50
−100
−150
−200
−250
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

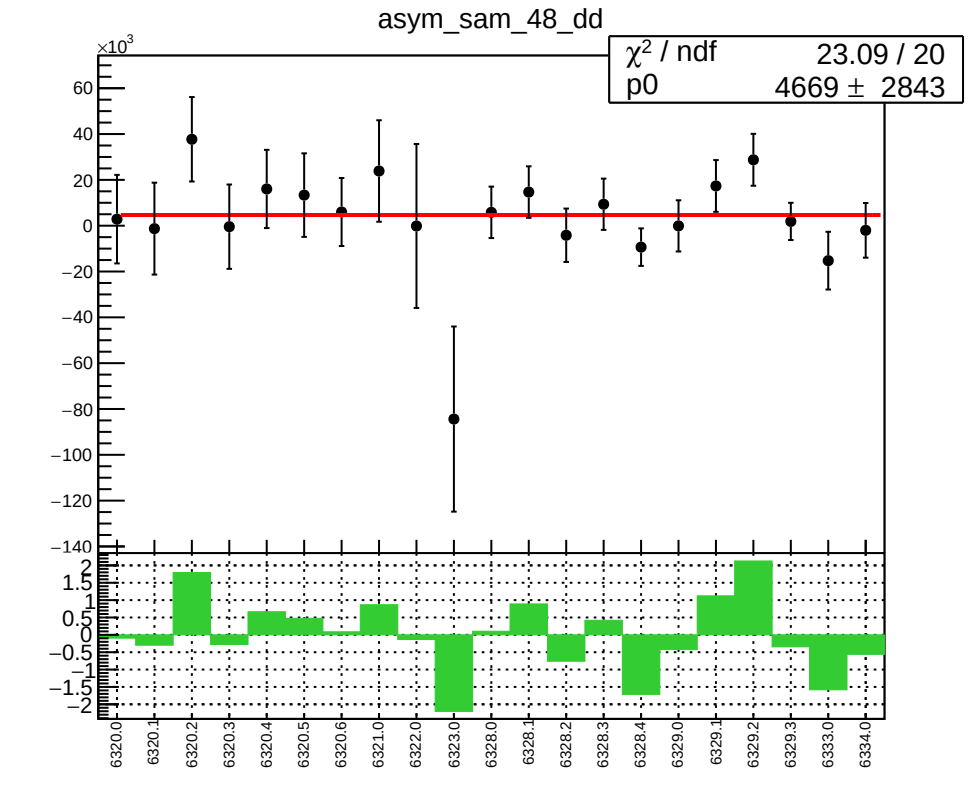

1D pull distribution
Mean −0.02961 ± 0.2373
Std Dev 1.087 ± 0.1678
Underflow 0
Overflow 0
χ² / ndf 1.314 / 4
Constant 3.938 ± 1.093
Mean −0.2028 ± 0.5523
Sigma 1.604 ± 0.535
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

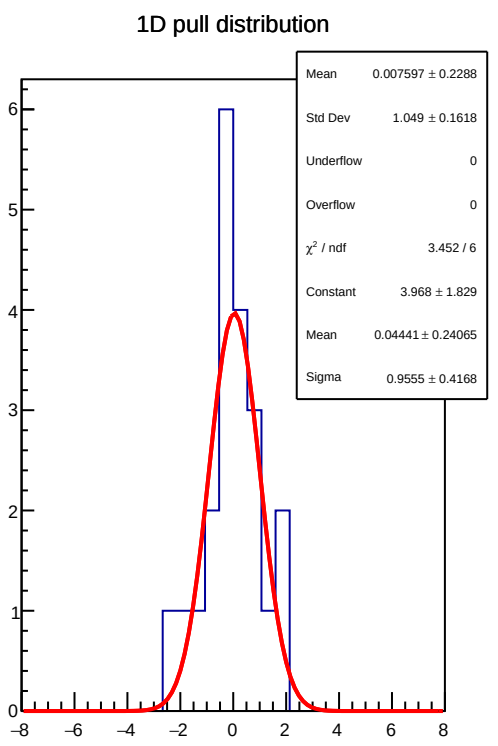

asym_sam_26_dd RMS (ppm)
RMS (ppm)
4000
3500
3000
2500
2000
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

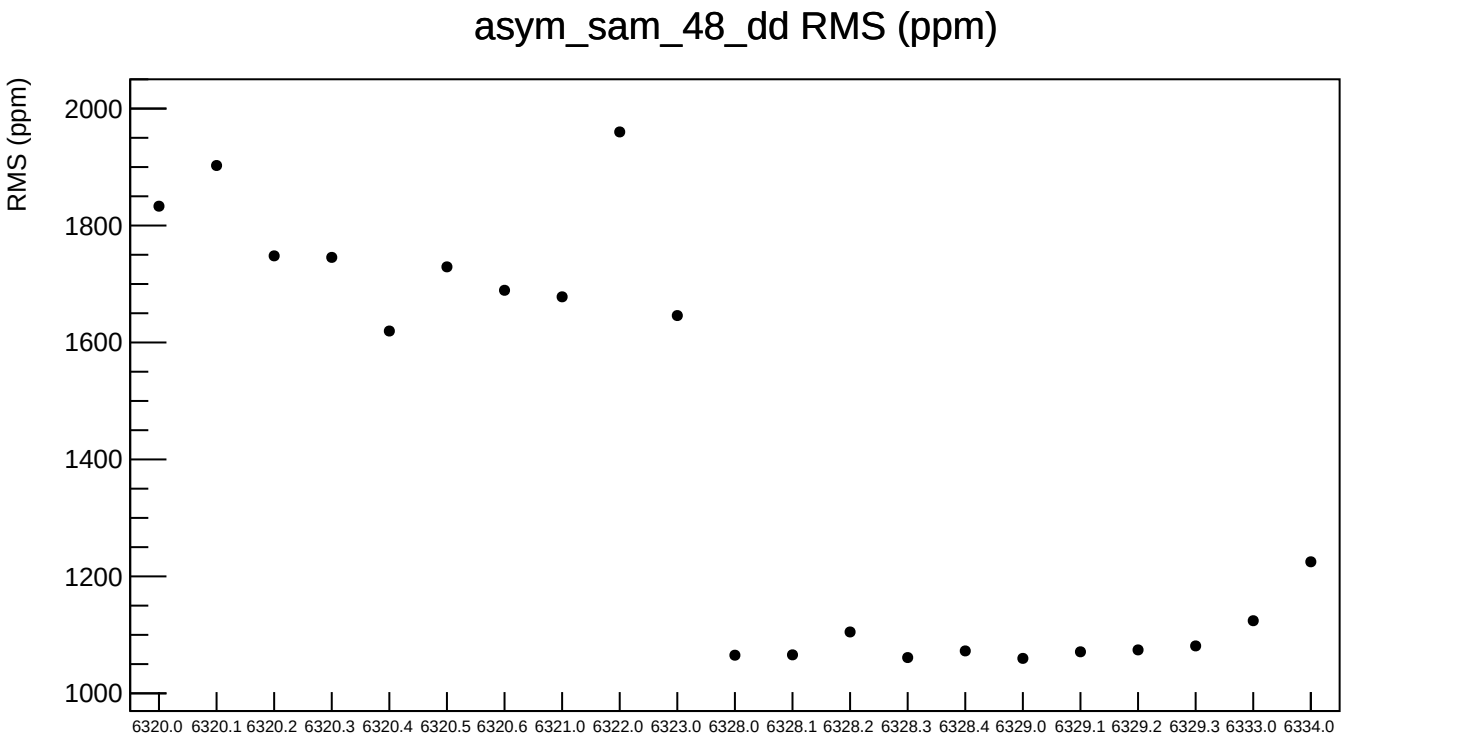

asym_sam_37_dd
χ² / ndf 28.7 / 20
p0 1226 ± 1123
20000
0
−20000
−40000
−60000
2
1
0
−1
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

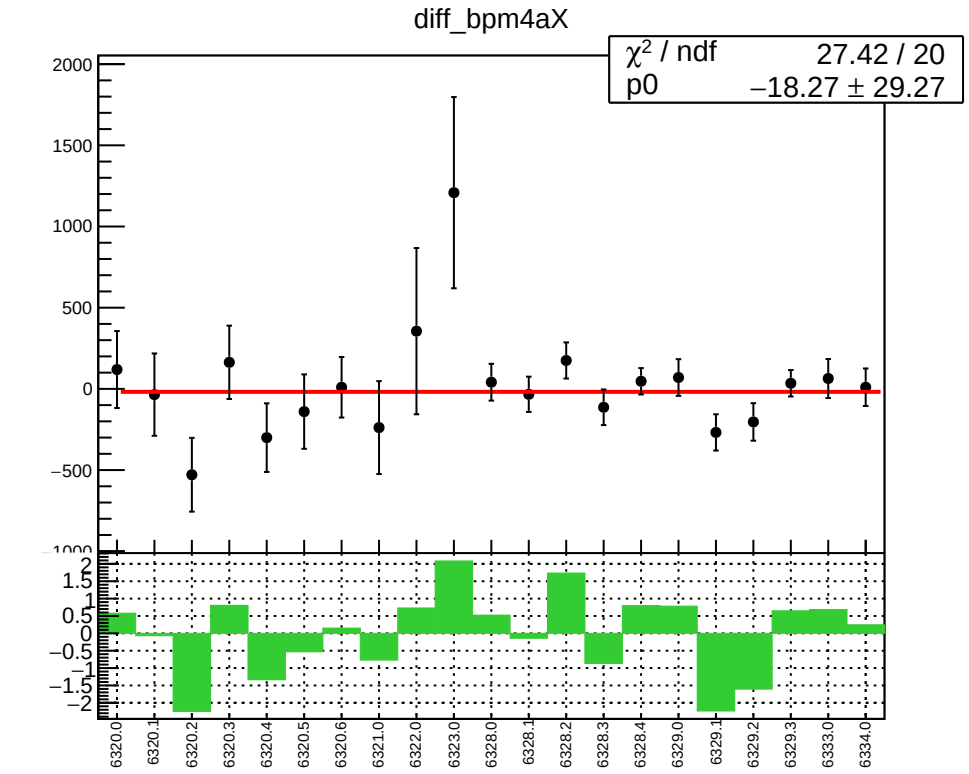

1D pull distribution
Mean 0.01369 ± 0.2551
Std Dev 1.169 ± 0.1804
Underflow 0
Overflow 0
χ² / ndf 1.896 / 6
Constant 3.42 ± 1.16
Mean −0.3802 ± 0.3958
Sigma 1.4 ± 0.5
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

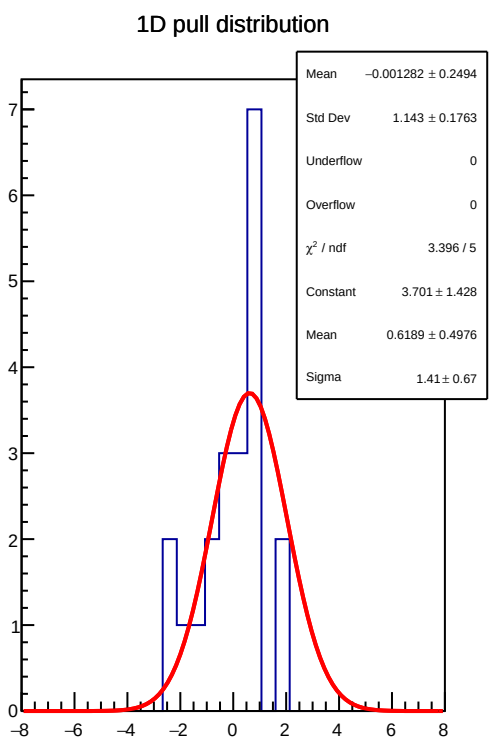

asym_sam_37_dd RMS (ppm)
RMS (ppm)
1100
1000
900
800
700
600
500
400
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

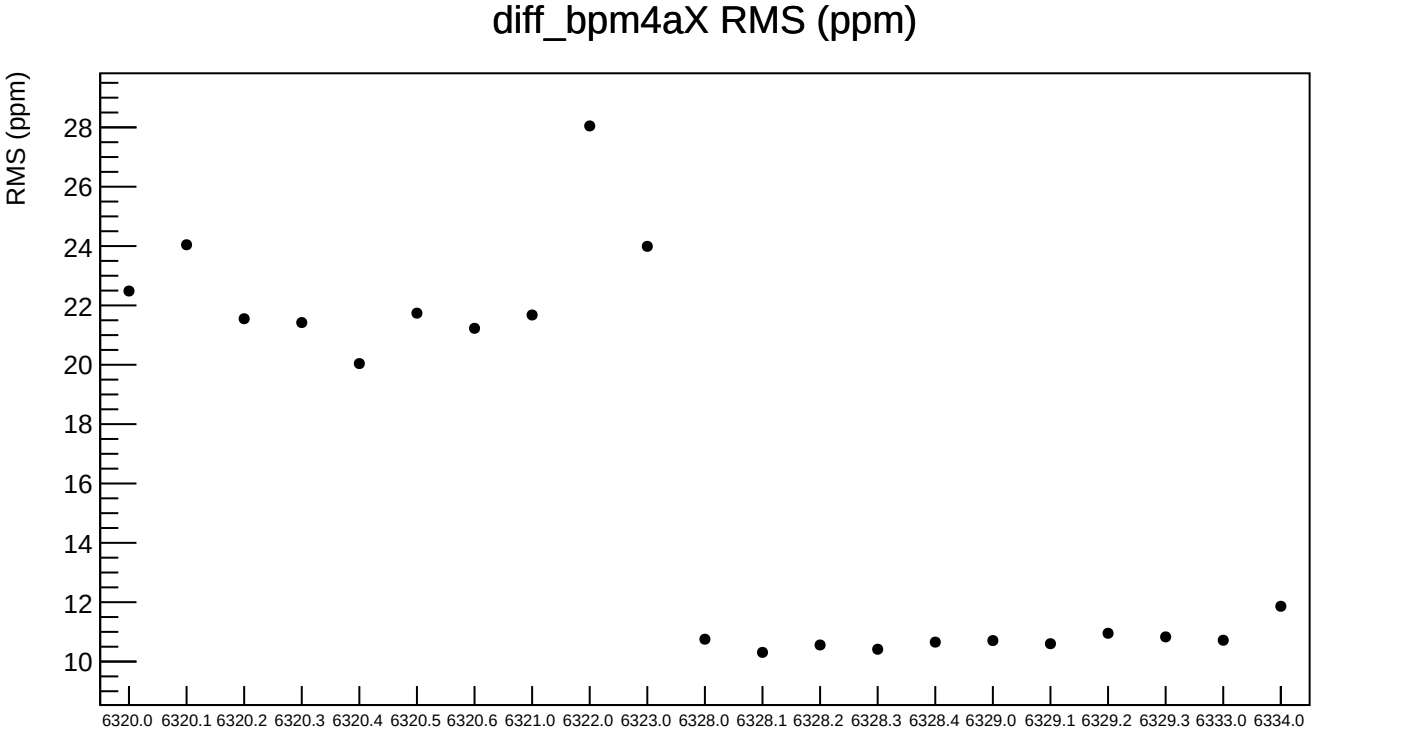

asym_sam_48_dd
×10^3
χ² / ndf 23.09 / 20
p0 4669 ± 2843
60
40
20
0
−20
−40
−60
−80
−100
−120
−140
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

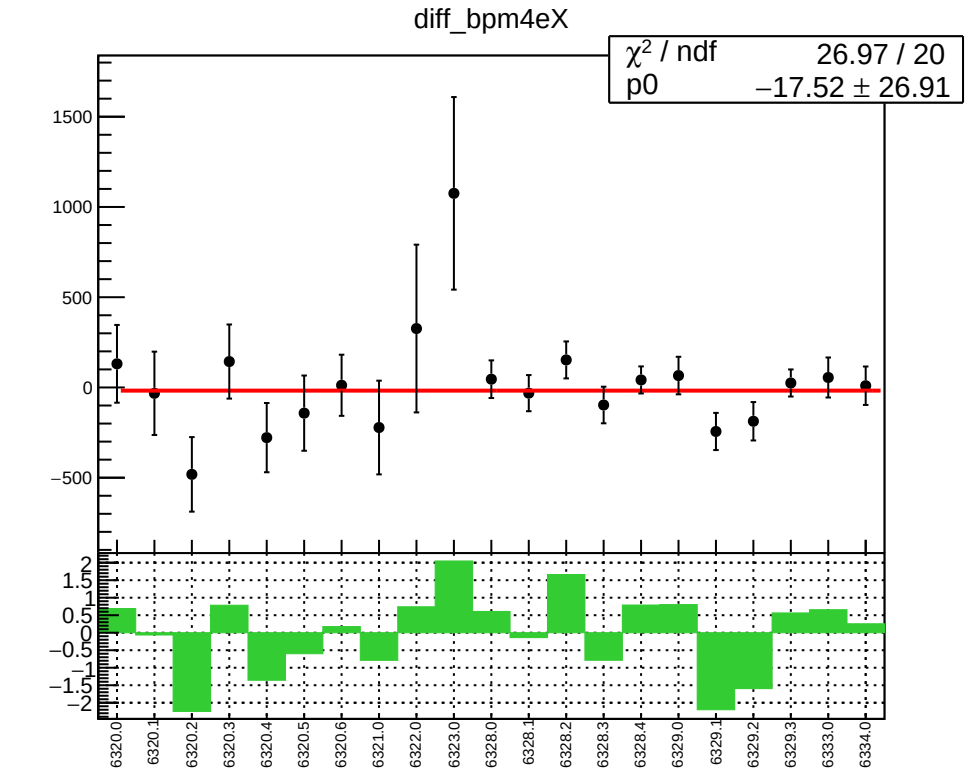

1D pull distribution
Mean 0.007597 ± 0.2288
Std Dev 1.049 ± 0.1618
Underflow 0
Overflow 0
χ² / ndf 3.452 / 6
Constant 3.968 ± 1.829
Mean 0.04441 ± 0.24065
Sigma 0.9555 ± 0.4168
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

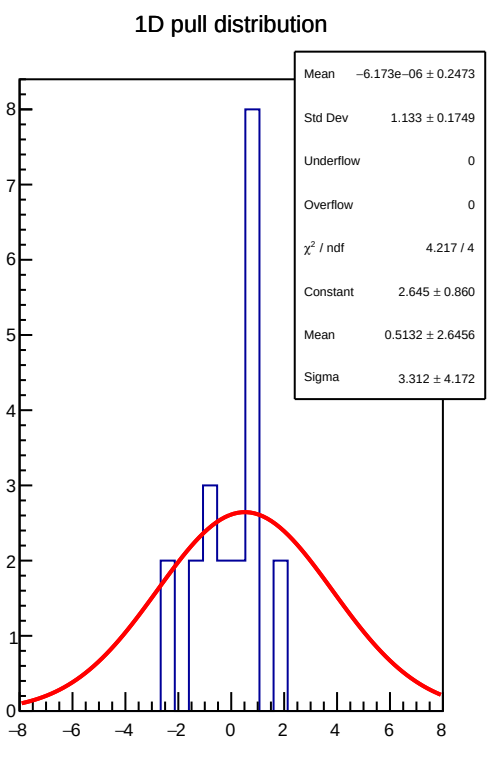

asym_sam_48_dd RMS (ppm)
RMS (ppm)
2000
1800
1600
1400
1200
1000
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

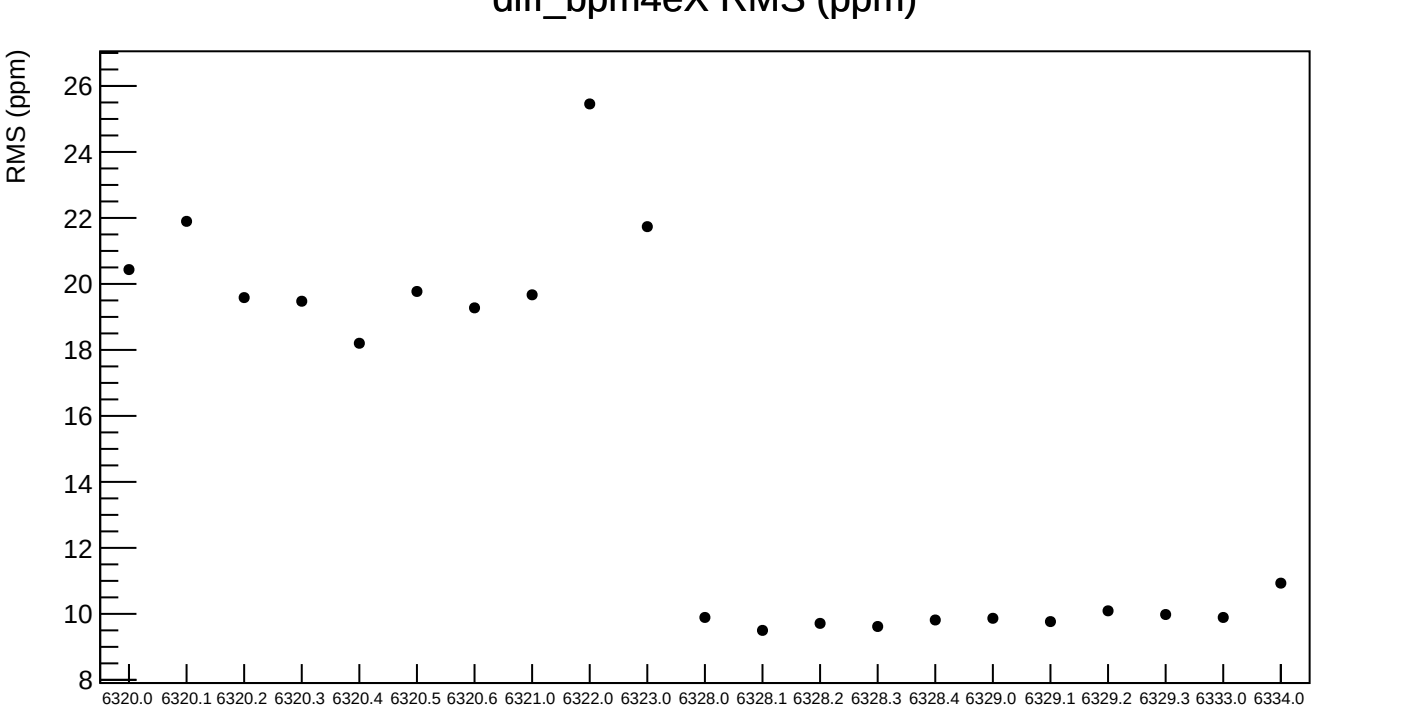

diff_bpm4aX
χ² / ndf 27.42 / 20
p0 −18.27 ± 29.27
2000
1500
1000
500
0
−500
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

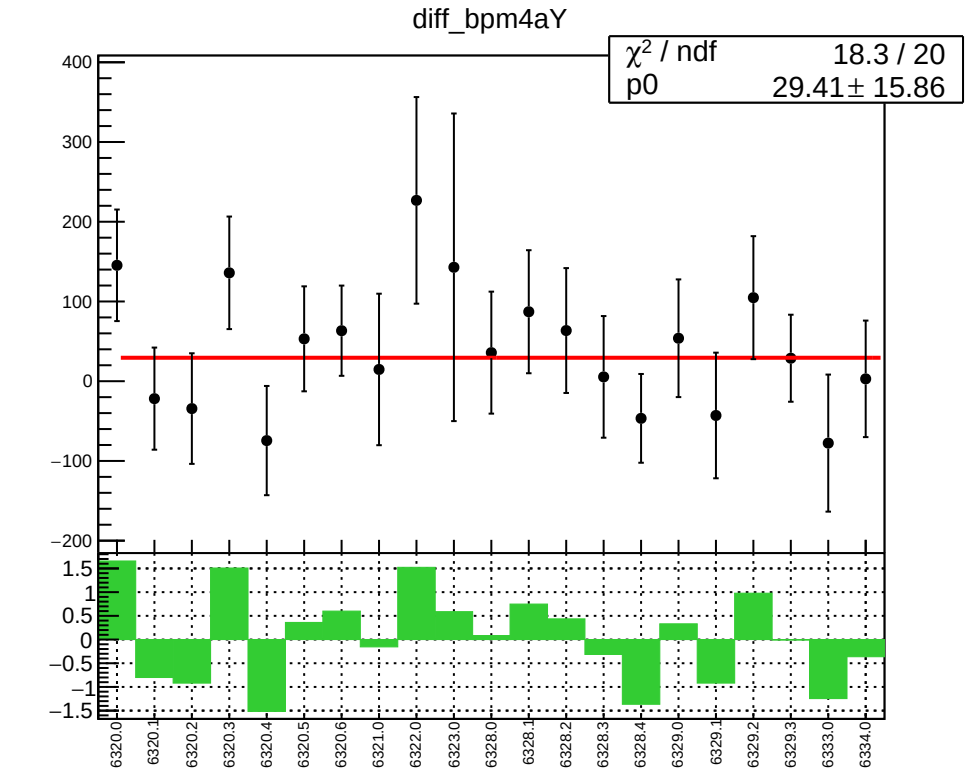

1D pull distribution
Mean −0.001282 ± 0.2494
Std Dev 1.143 ± 0.1763
Underflow 0
Overflow 0
χ² / ndf 3.396 / 5
Constant 3.701 ± 1.428
Mean 0.6189 ± 0.4976
Sigma 1.41 ± 0.67
7
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

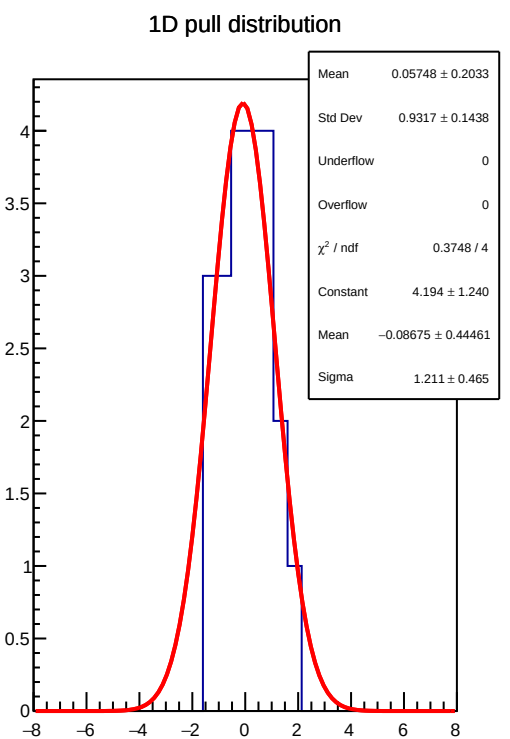

diff_bpm4aX RMS (ppm)
RMS (ppm)
28
26
24
22
20
18
16
14
12
10
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

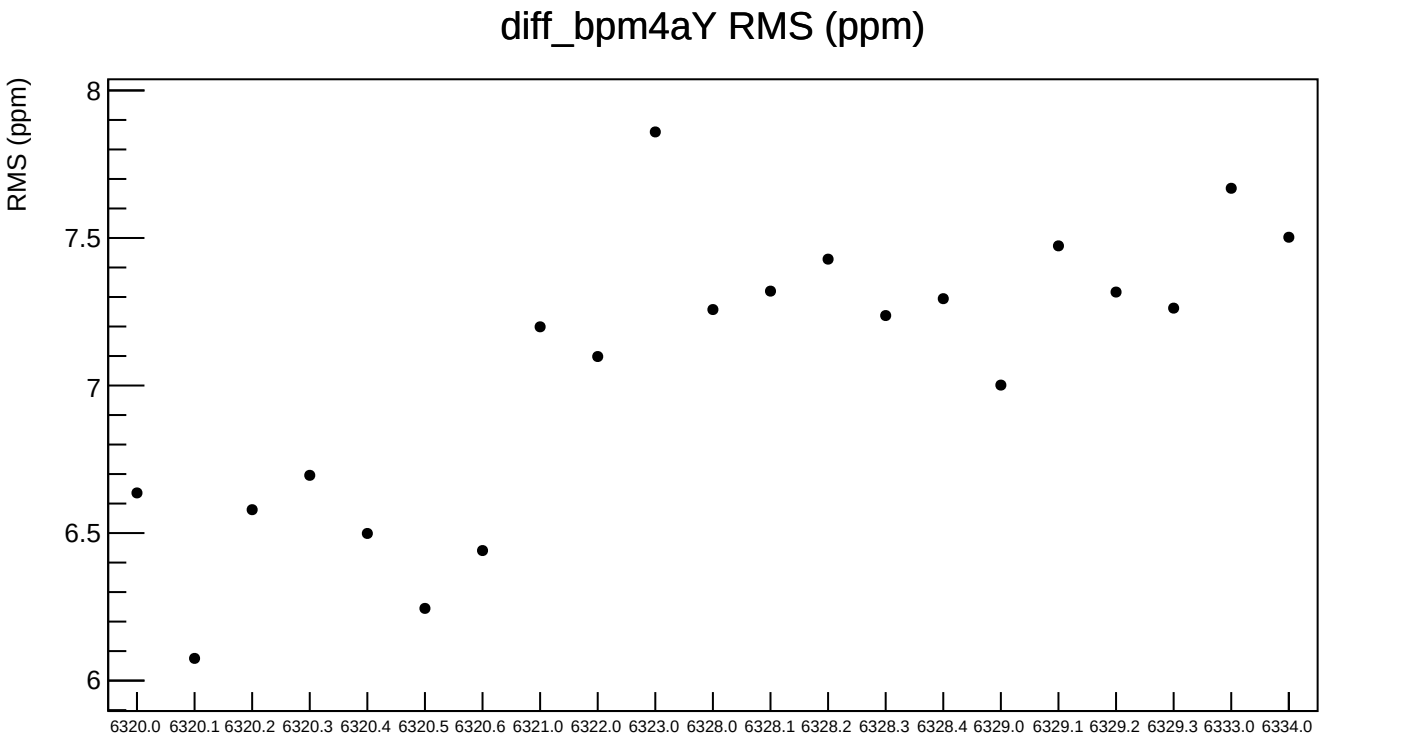

diff_bpm4eX
χ² / ndf 26.97 / 20
p0 −17.52 ± 26.91
1500
1000
500
0
−500
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

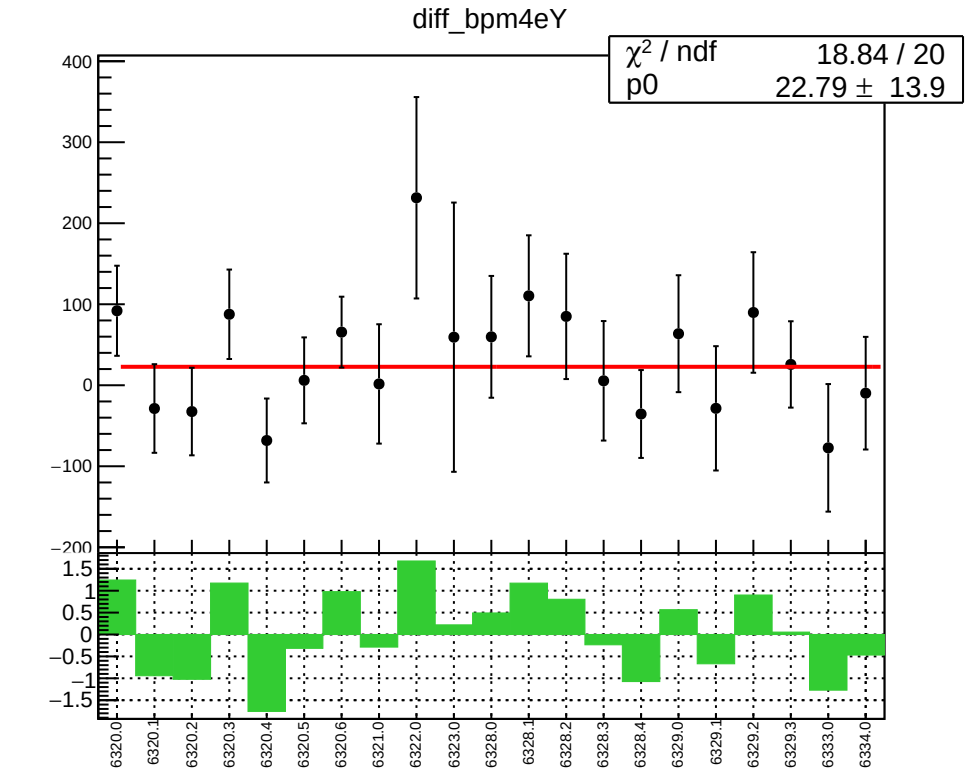

1D pull distribution
Mean −6.173e−06 ± 0.2473
Std Dev 1.133 ± 0.1749
Underflow 0
Overflow 0
χ² / ndf 4.217 / 4
Constant 2.645 ± 0.860
Mean 0.5132 ± 2.6456
Sigma 3.312 ± 4.172
8
7
6
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8

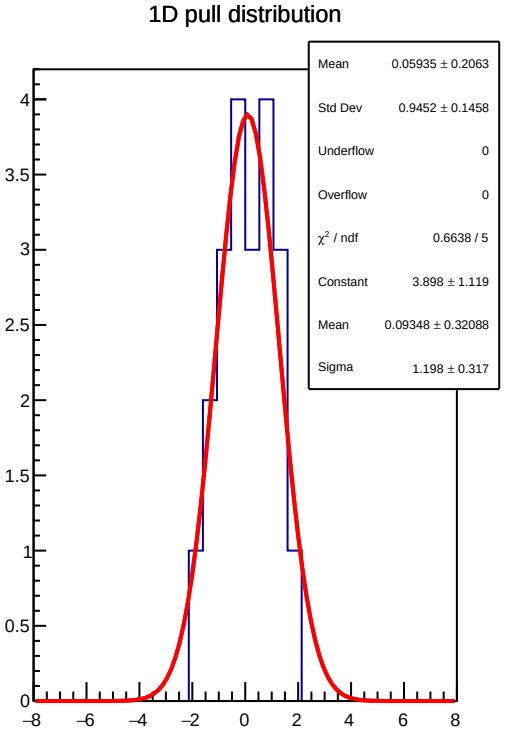

diff_bpm4eX RMS (ppm)
RMS (ppm)
26
24
22
20
18
16
14
12
10
8
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

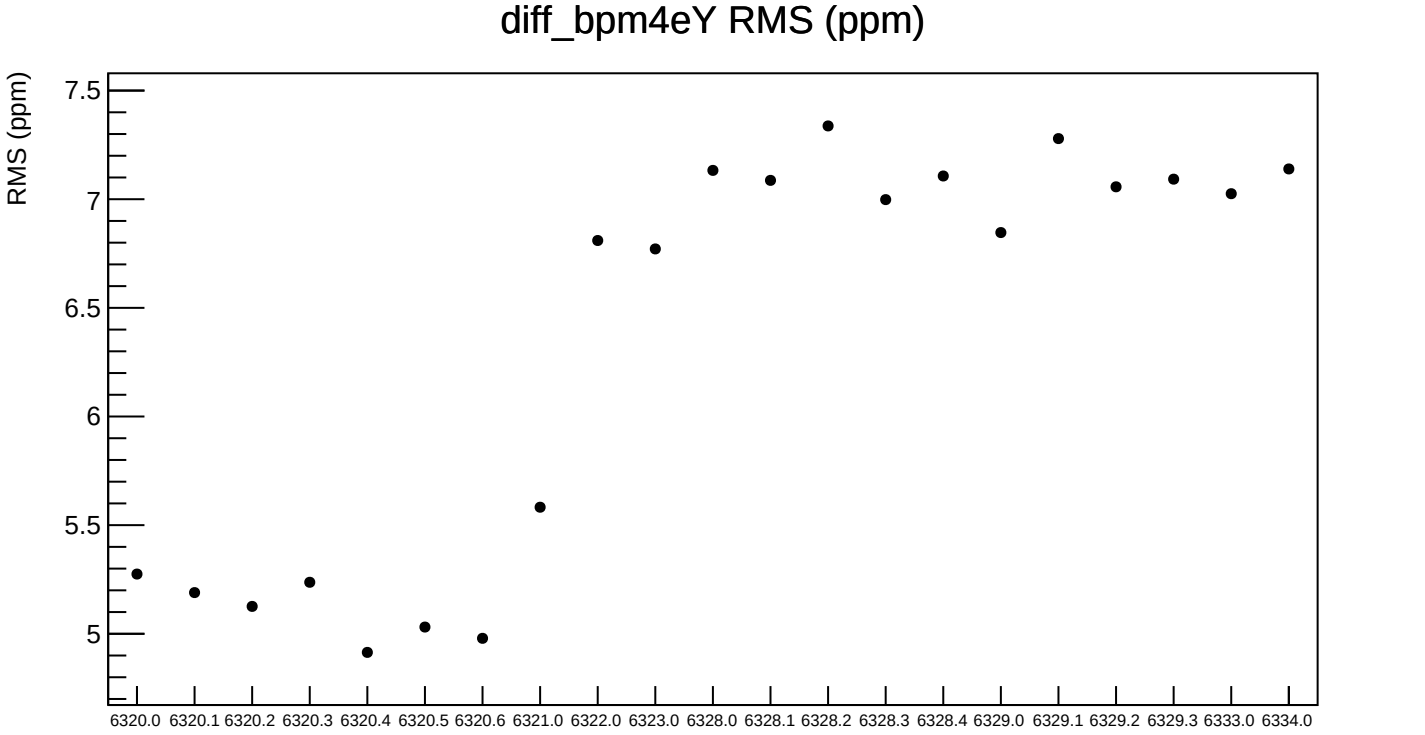

diff_bpm4aY
χ² / ndf 18.3 / 20
p0 29.41 ± 15.86
400
300
200
100
0
−100
−200
1.5
1
0.5
0
−0.5
−1
−1.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

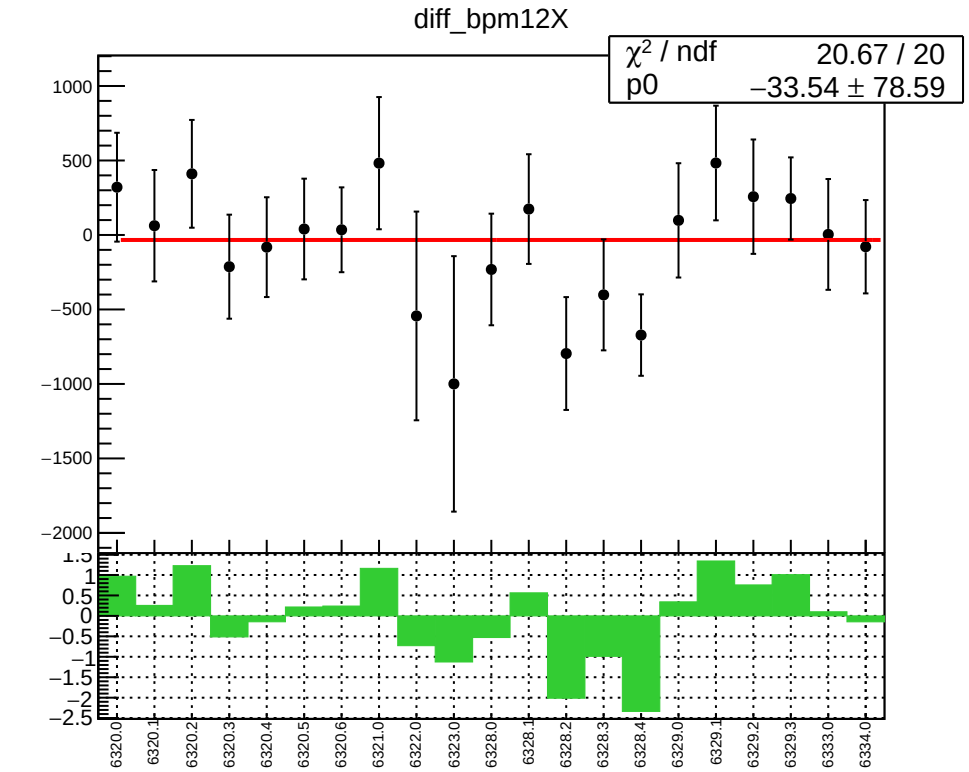

1D pull distribution
Mean 0.05748 ± 0.2033
Std Dev 0.9317 ± 0.1438
Underflow 0
Overflow 0
χ² / ndf 0.3748 / 4
Constant 4.194 ± 1.240
Mean −0.08675 ± 0.44461
Sigma 1.211 ± 0.465
4
3.5
3
2.5
2
1.5
1
0.5
0
−8
−6
−4
−2
0
2
4
6
8

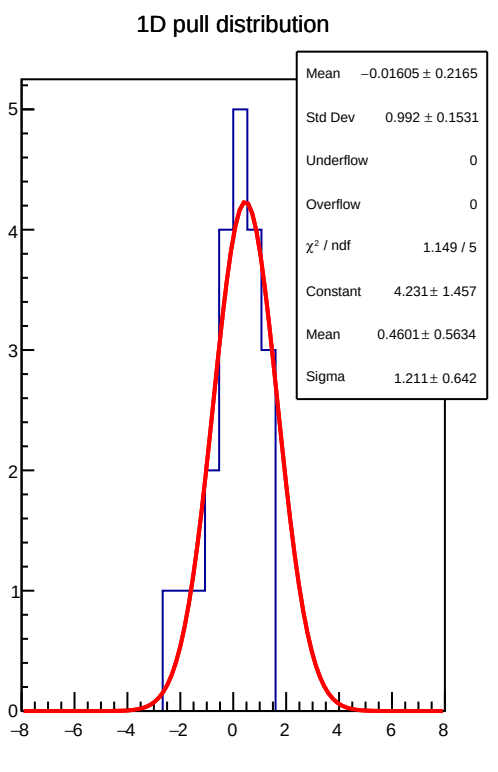

diff_bpm4aY RMS (ppm)
RMS (ppm)
8
7.5
7
6.5
6
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0

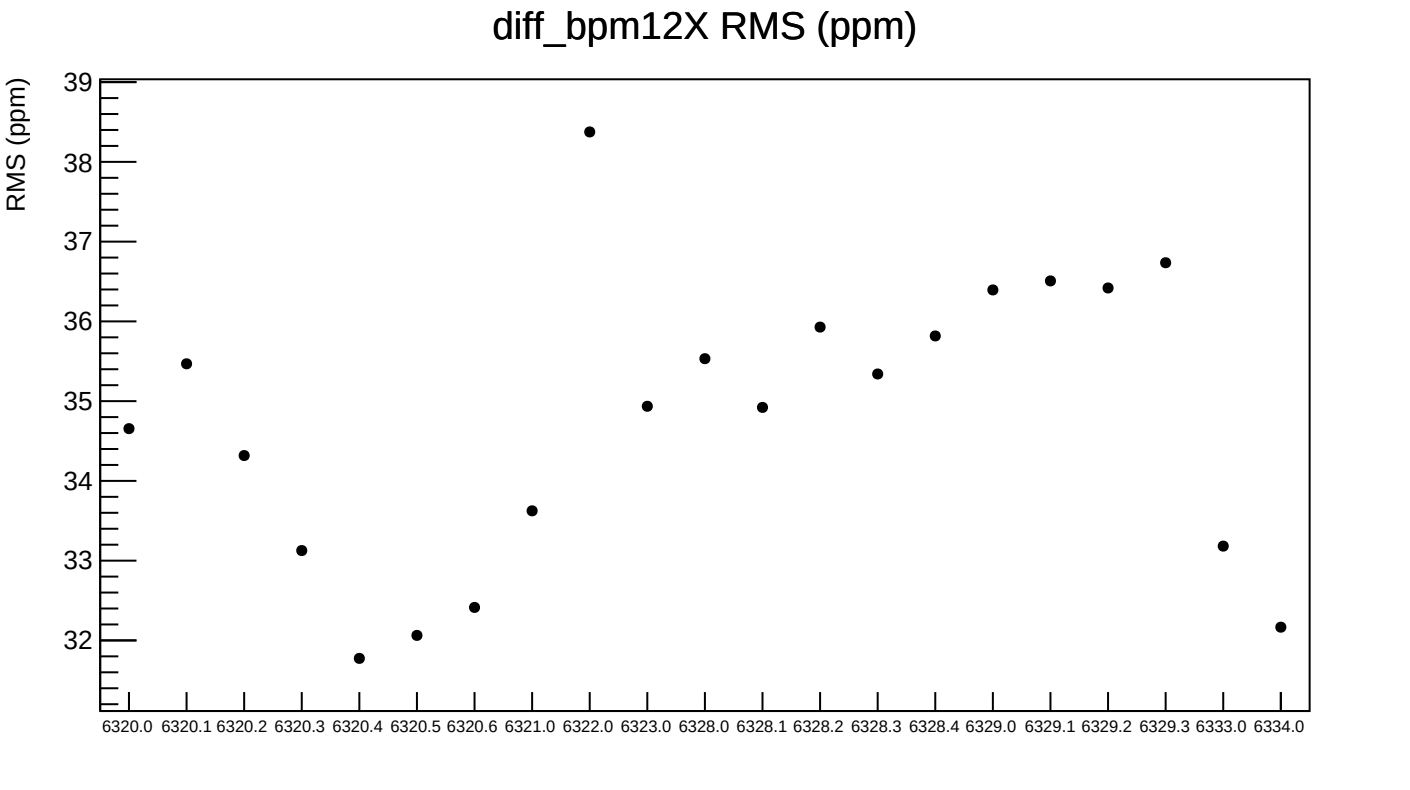

diff_bpm4eY
χ² / ndf 18.84 / 20
p0 22.79 ± 13.9
400
300
200
100
0
−100
−200
1.5
1
0.5
0
−0.5
−1
−1.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0


1D pull distribution
Mean 0.05935 ± 0.2063
Std Dev 0.9452 ± 0.1458
Underflow 0
Overflow 0
χ² / ndf 0.6638 / 5
Constant 3.898 ± 1.119
Mean 0.09348 ± 0.32088
Sigma 1.198 ± 0.317
4
3.5
3
2.5
2
1.5
1
0.5
0
−8
−6
−4
−2
0
2
4
6
8


diff_bpm4eY RMS (ppm)
RMS (ppm)
7.5
7
6.5
6
5.5
5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0


diff_bpm12X
χ² / ndf 20.67 / 20
p0 −33.54 ± 78.59
1000
500
0
−500
−1000
−1500
−2000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0


1D pull distribution
Mean −0.01605 ± 0.2165
Std Dev 0.992 ± 0.1531
Underflow 0
Overflow 0
χ² / ndf 1.149 / 5
Constant 4.231 ± 1.457
Mean 0.4601 ± 0.5634
Sigma 1.211 ± 0.642
5
4
3
2
1
0
−8
−6
−4
−2
0
2
4
6
8


diff_bpm12X RMS (ppm)
RMS (ppm)
39
38
37
36
35
34
33
32
6320.0
6320.1
6320.2
6320.3
6320.4
6320.5
6320.6
6321.0
6322.0
6323.0
6328.0
6328.1
6328.2
6328.3
6328.4
6329.0
6329.1
6329.2
6329.3
6333.0
6334.0