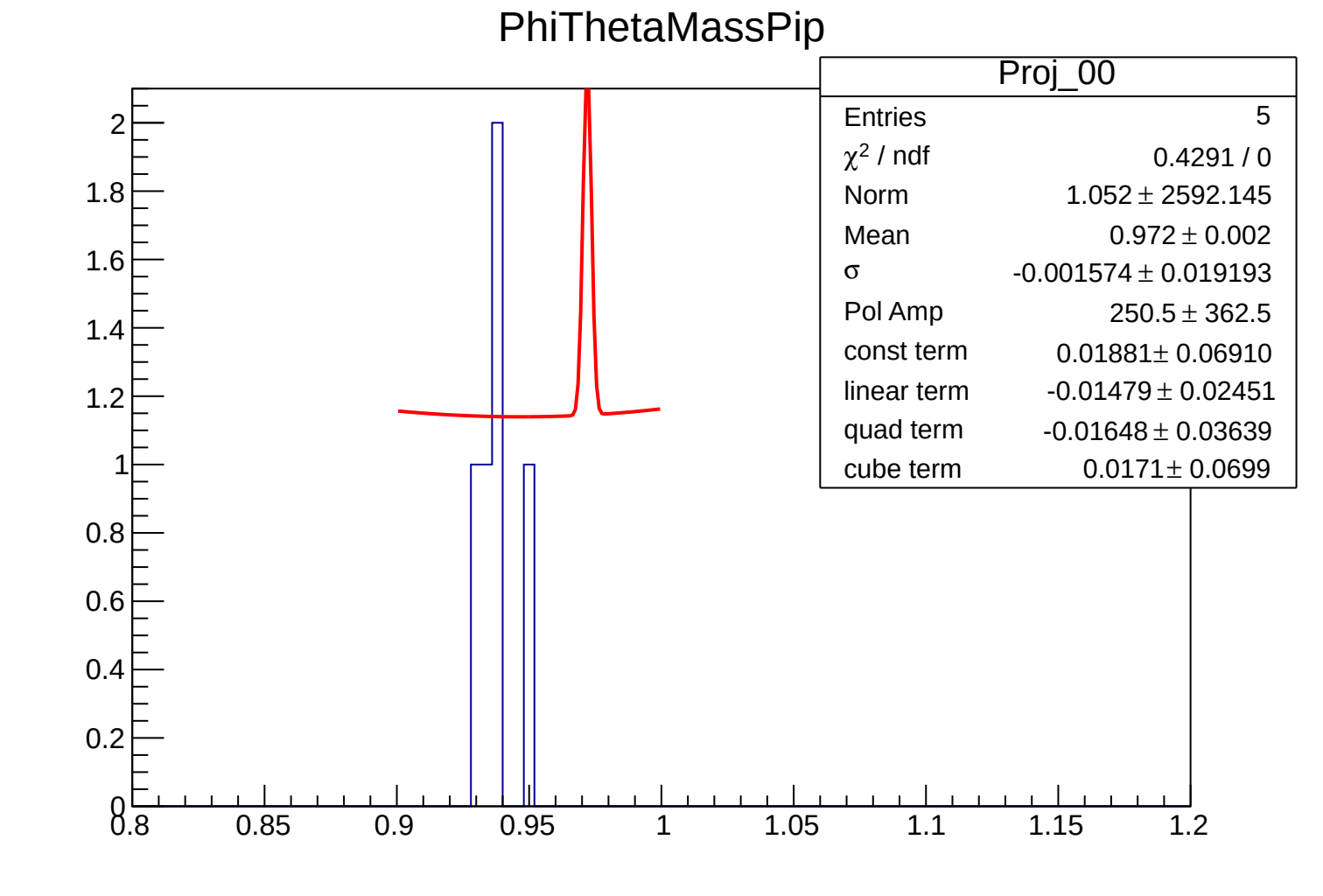
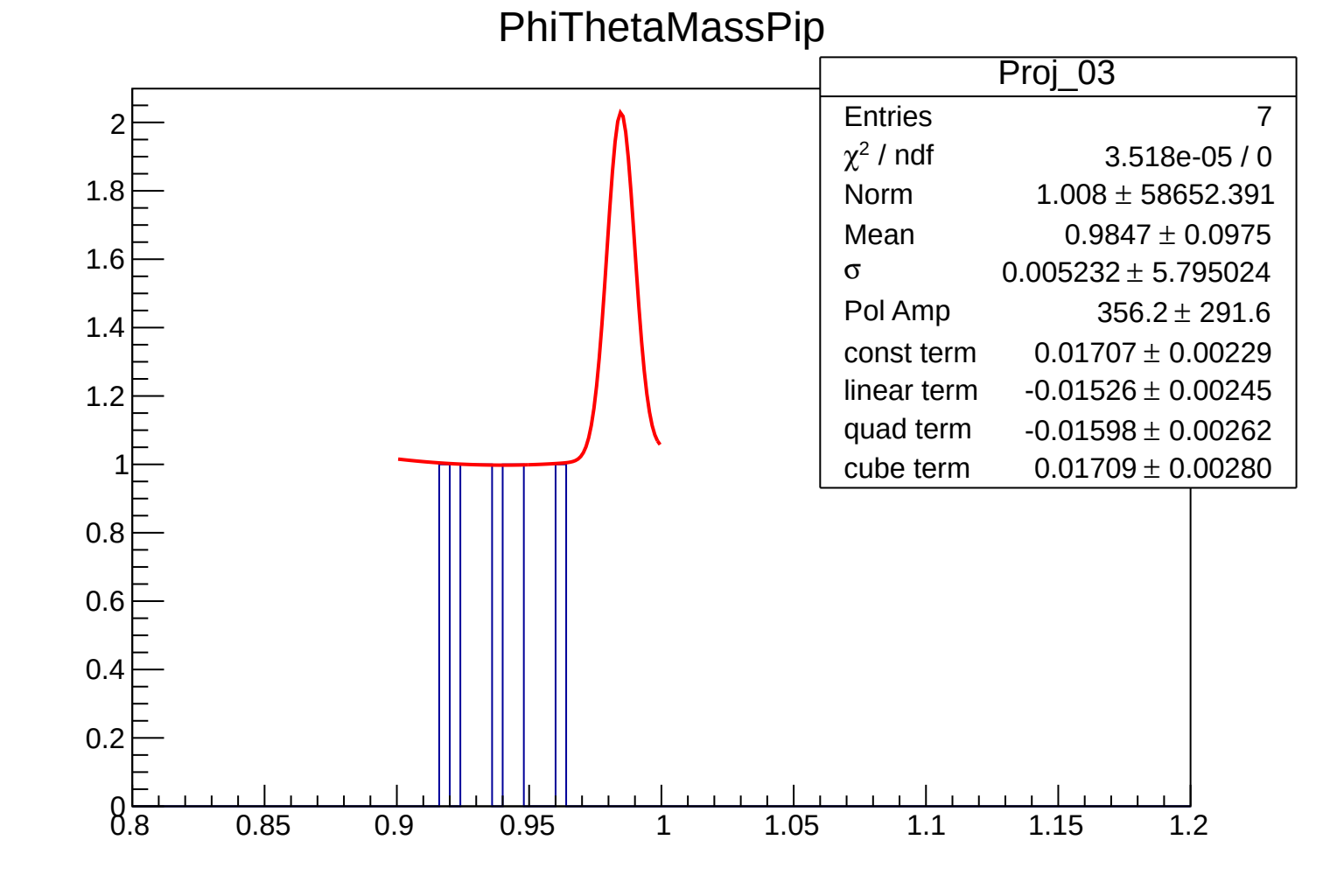
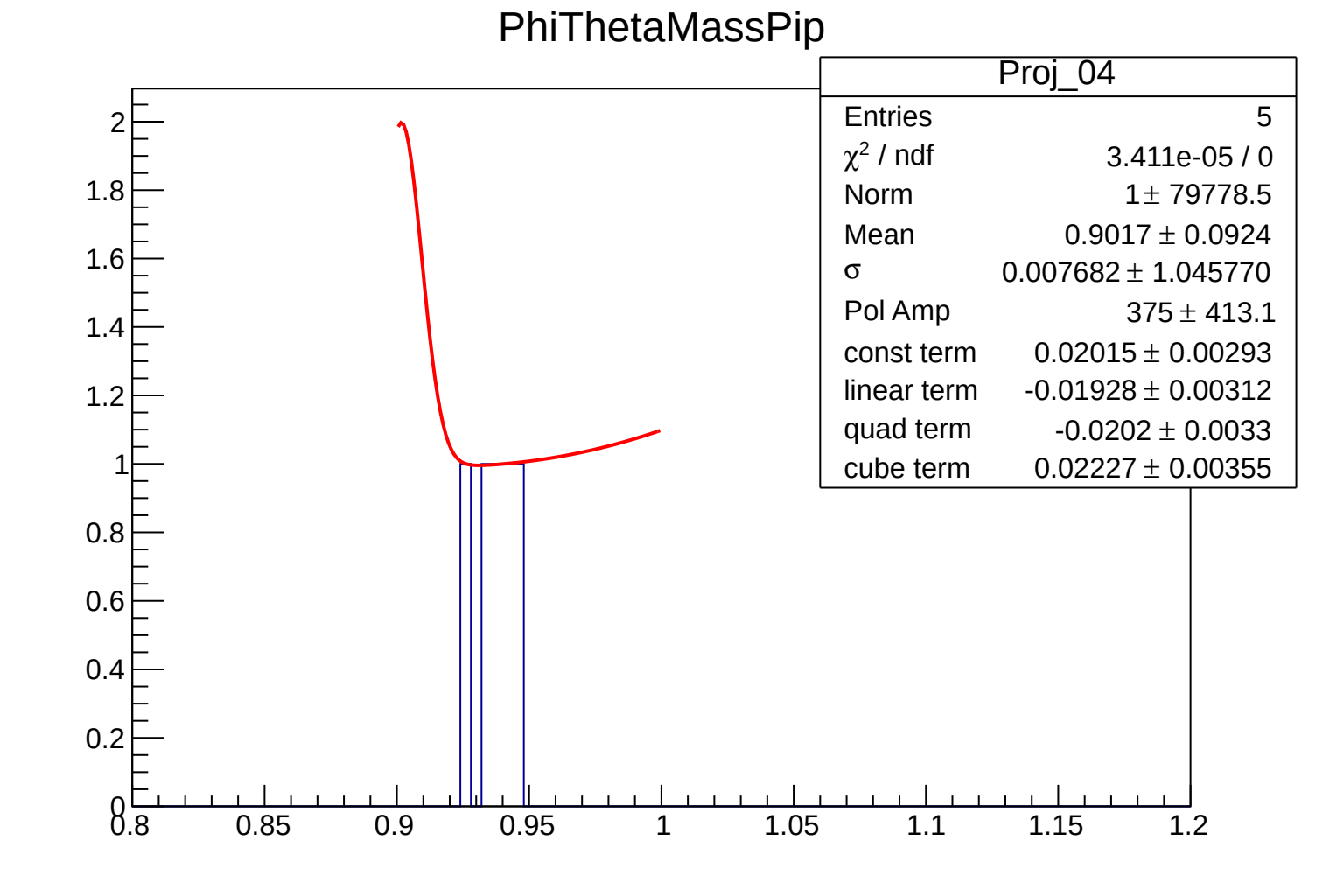
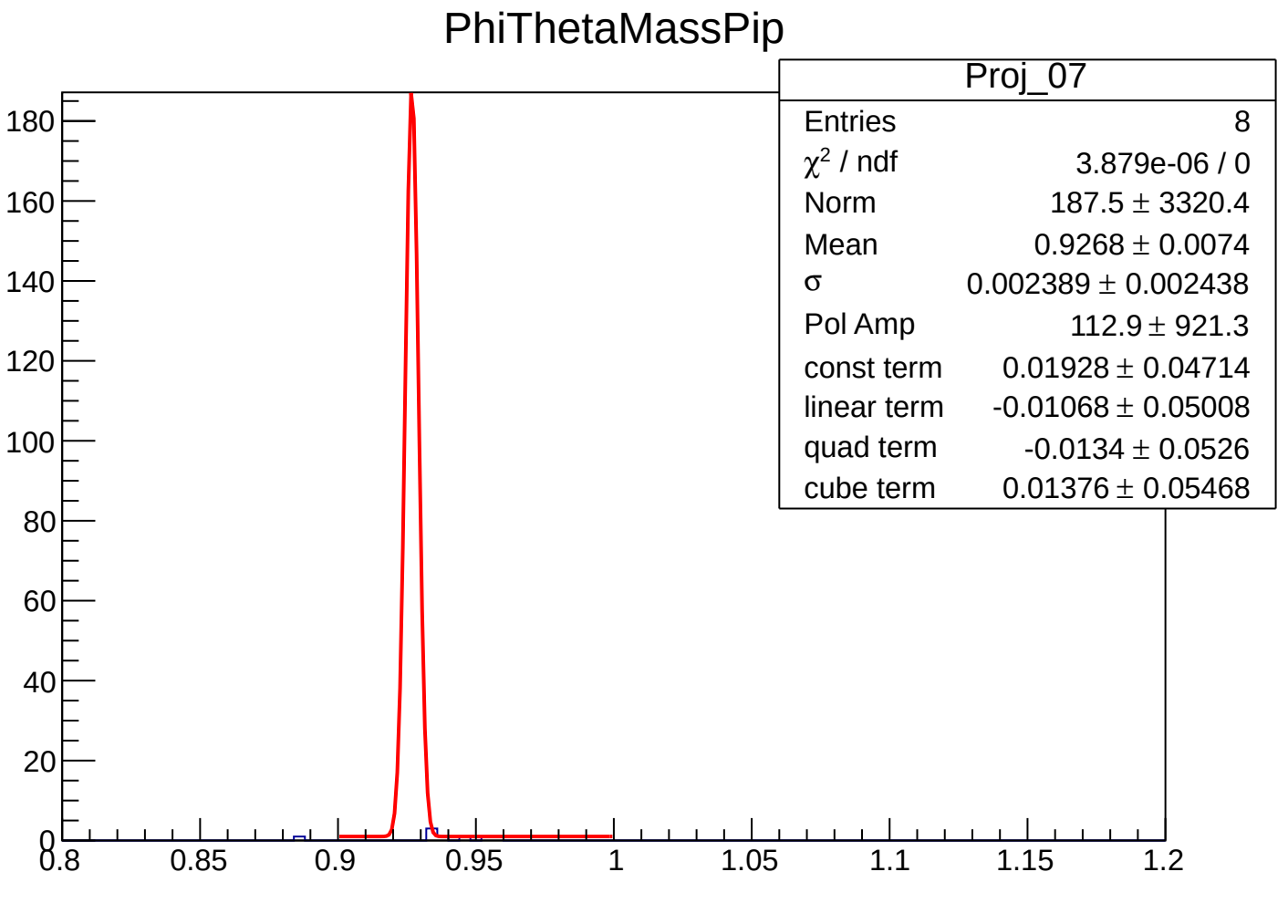
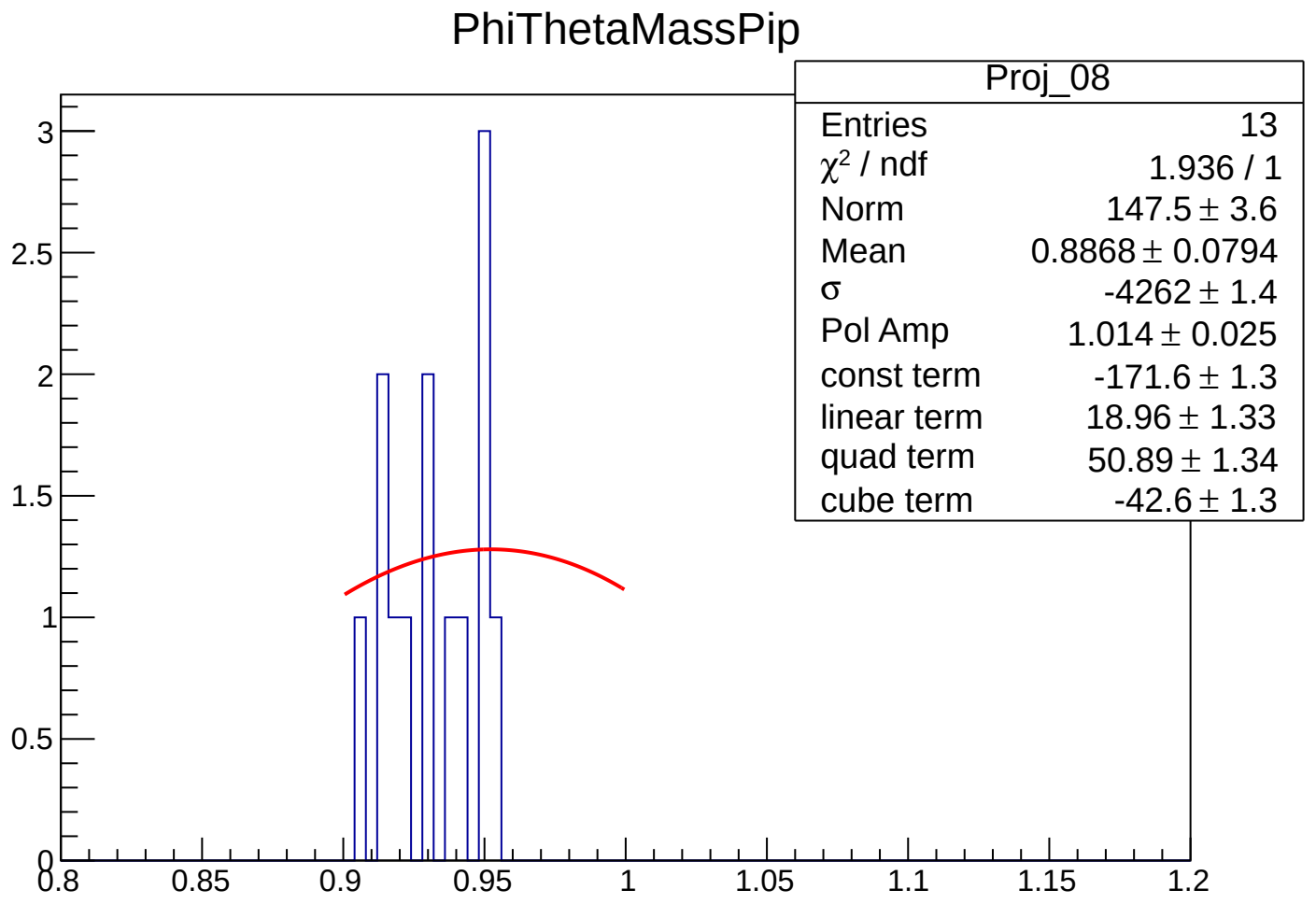
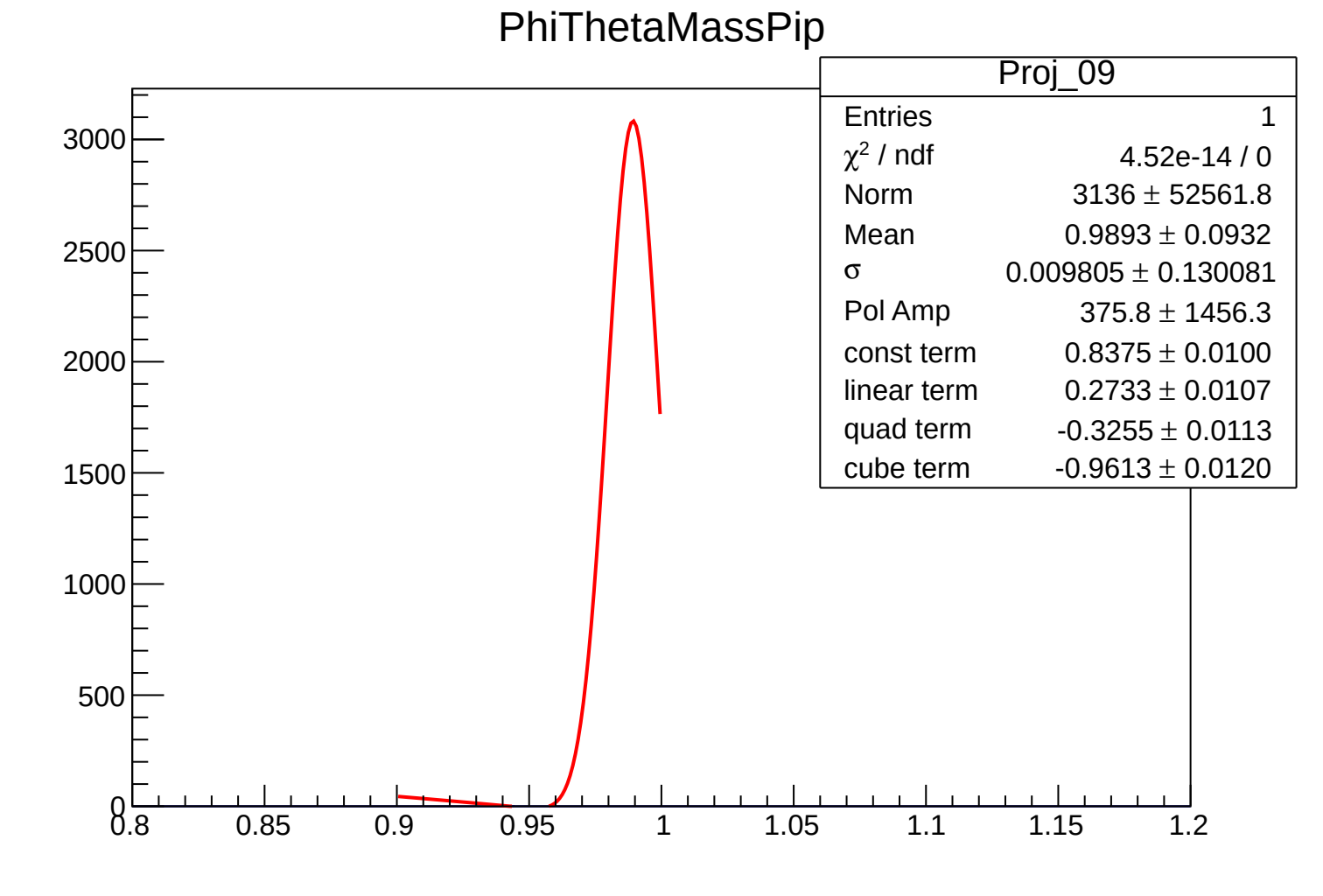

PhiThetaMassPip
Proj_00
Entries 5
χ² / ndf 0.4291 / 0
Norm 1.052 ± 2592.145
Mean 0.972 ± 0.002
σ -0.001574 ± 0.019193
Pol Amp 250.5 ± 362.5
const term 0.01881± 0.06910
linear term -0.01479 ± 0.02451
quad term -0.01648 ± 0.03639
cube term 0.0171± 0.0699
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

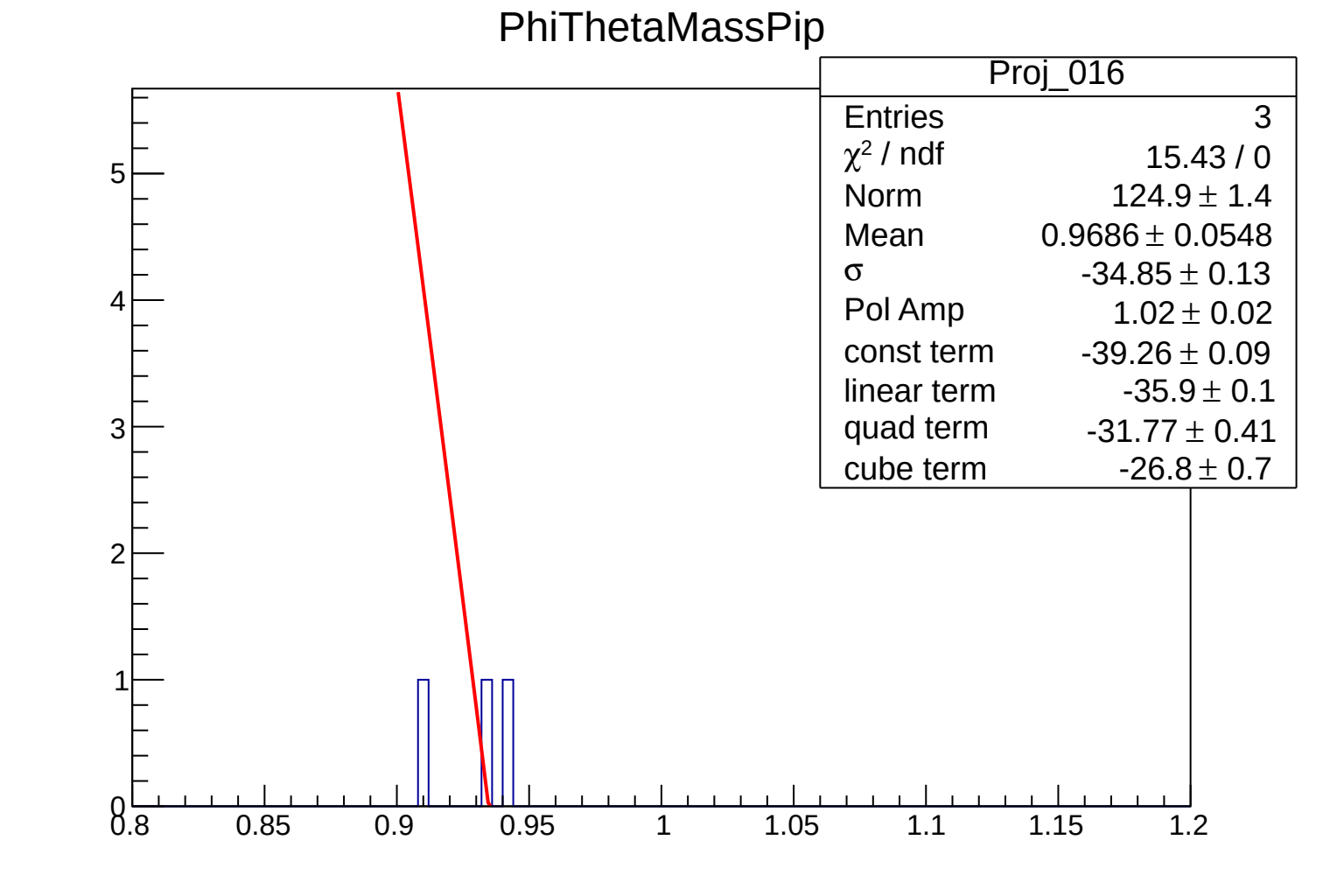

PhiThetaMassPip
Proj_03
Entries 7
χ² / ndf 3.518e-05 / 0
Norm 1.008 ± 58652.391
Mean 0.9847 ± 0.0975
σ 0.005232 ± 5.795024
Pol Amp 356.2 ± 291.6
const term 0.01707 ± 0.00229
linear term -0.01526 ± 0.00245
quad term -0.01598 ± 0.00262
cube term 0.01709 ± 0.00280
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

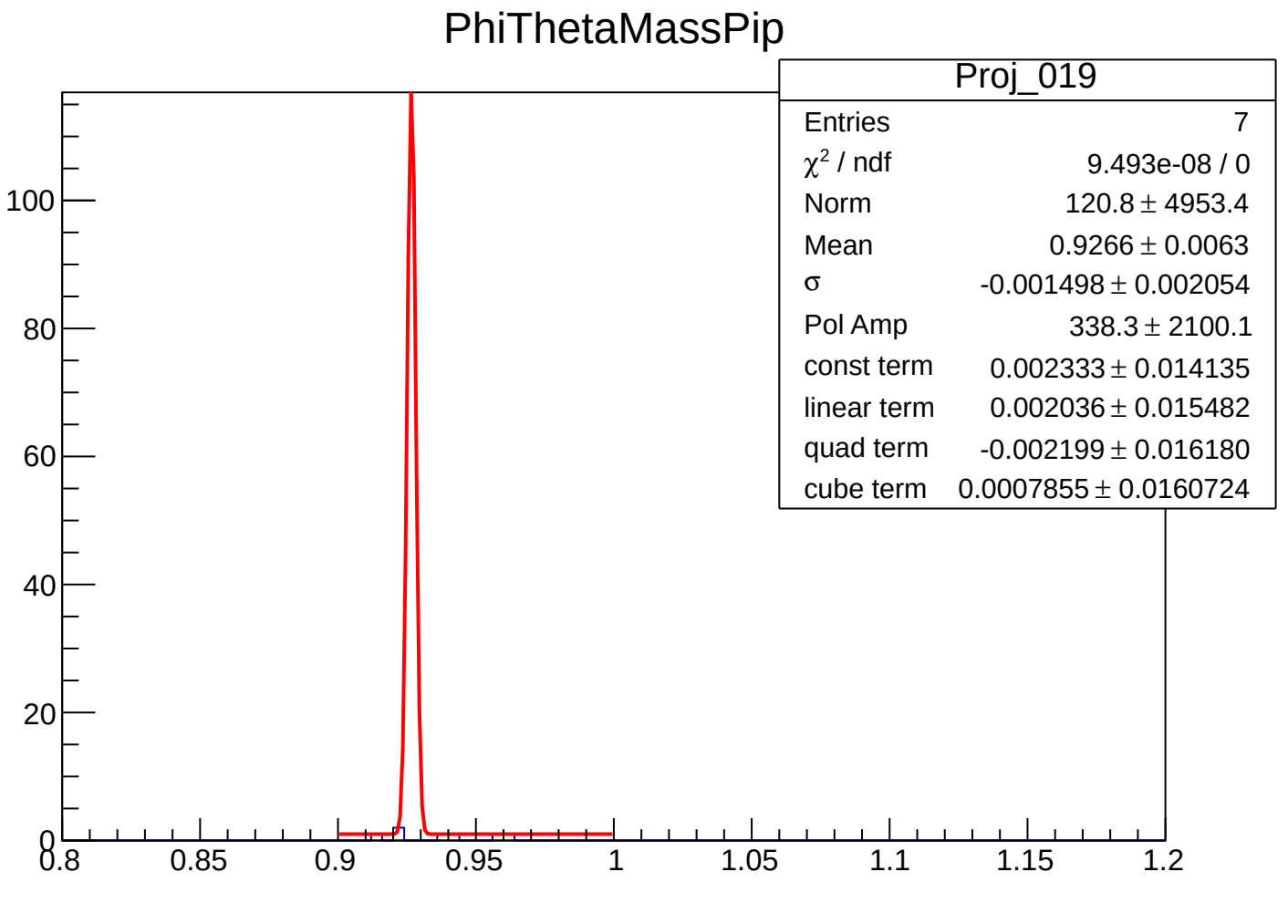

PhiThetaMassPip
Proj_04
Entries 5
χ² / ndf 3.411e-05 / 0
Norm 1 ± 79778.5
Mean 0.9017 ± 0.0924
σ 0.007682 ± 1.045770
Pol Amp 375 ± 413.1
const term 0.02015 ± 0.00293
linear term -0.01928 ± 0.00312
quad term -0.0202 ± 0.0033
cube term 0.02227 ± 0.00355
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

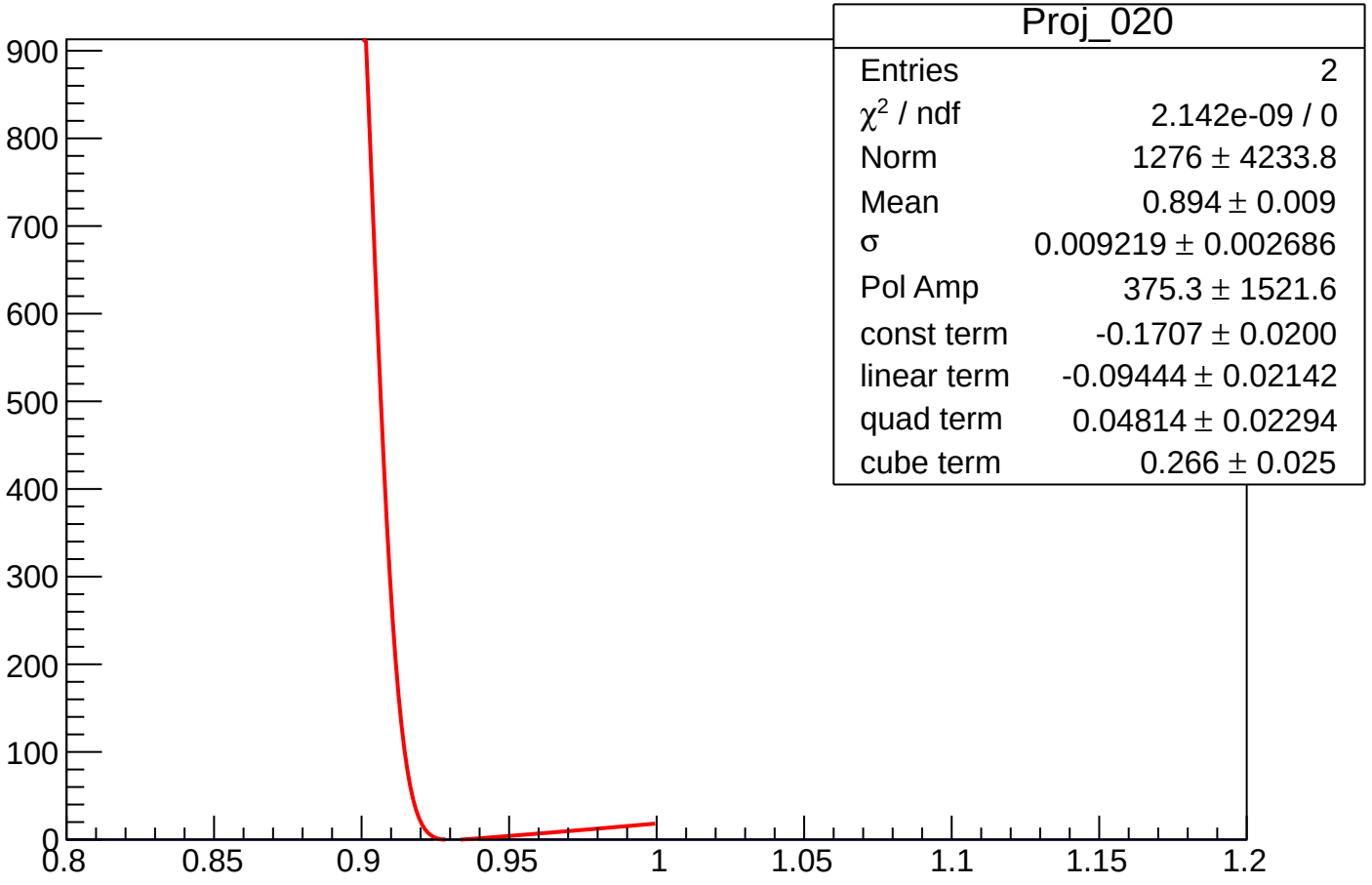

PhiThetaMassPip
Proj_07
Entries 8
χ² / ndf 3.879e-06 / 0
Norm 187.5 ± 3320.4
Mean 0.9268 ± 0.0074
σ 0.002389 ± 0.002438
Pol Amp 112.9 ± 921.3
const term 0.01928 ± 0.04714
linear term -0.01068 ± 0.05008
quad term -0.0134 ± 0.0526
cube term 0.01376 ± 0.05468
180
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

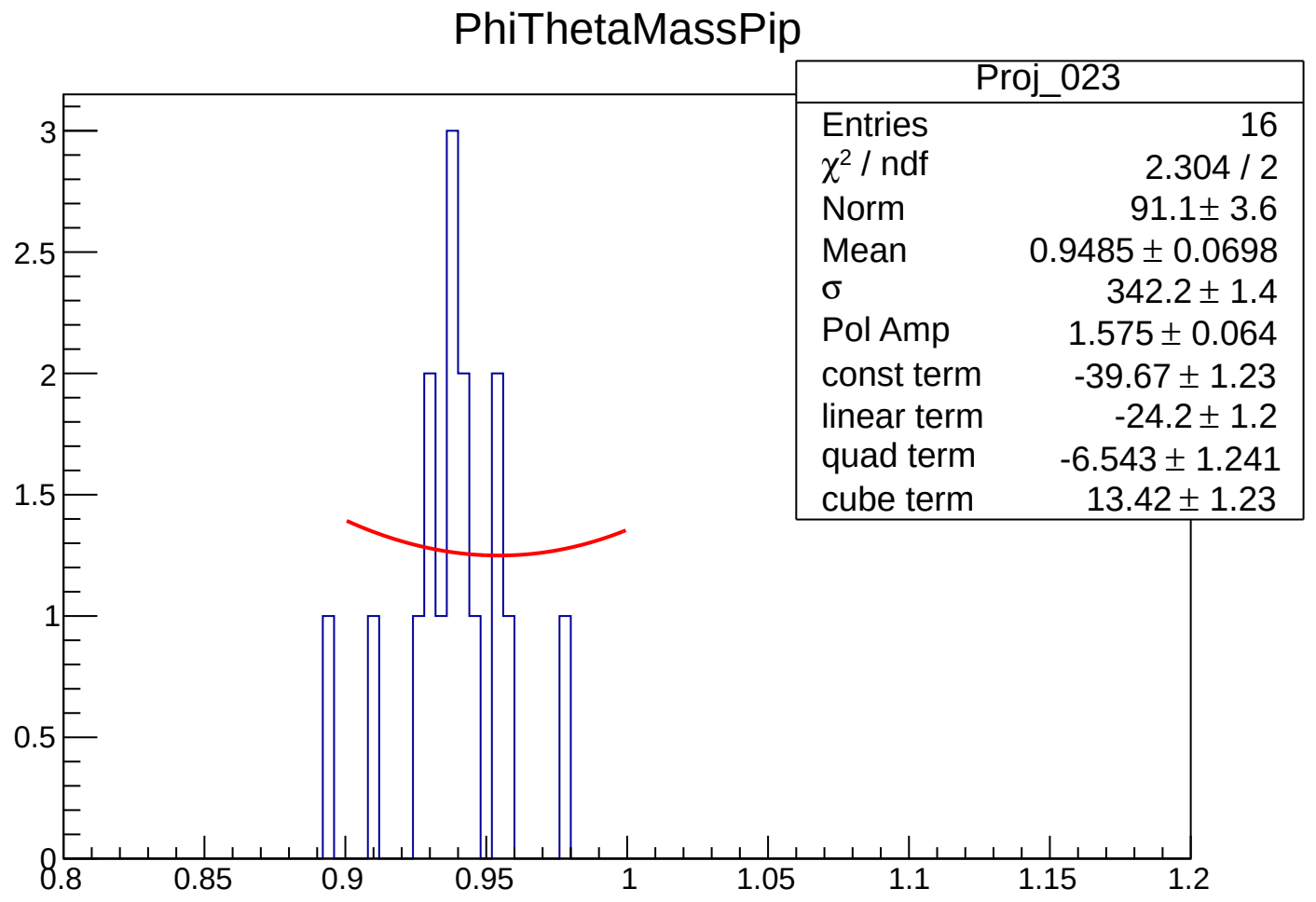

PhiThetaMassPip
Proj_08
Entries 13
χ² / ndf 1.936 / 1
Norm 147.5 ± 3.6
Mean 0.8868 ± 0.0794
σ -4262 ± 1.4
Pol Amp 1.014 ± 0.025
const term -171.6 ± 1.3
linear term 18.96 ± 1.33
quad term 50.89 ± 1.34
cube term -42.6 ± 1.3
0
0.5
1
1.5
2
2.5
3
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

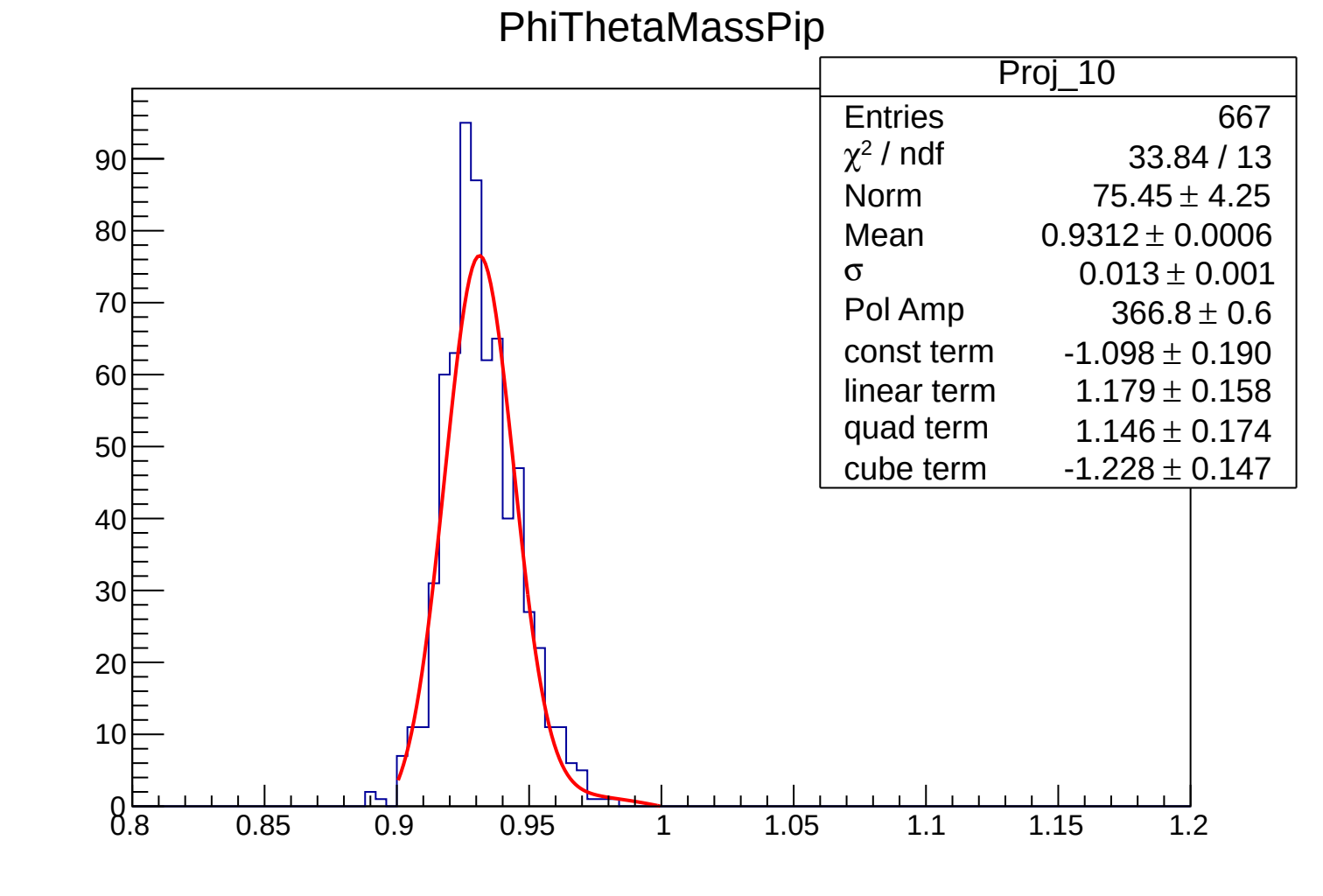

PhiThetaMassPip
Proj_09
Entries 1
χ² / ndf 4.52e-14 / 0
Norm 3136 ± 52561.8
Mean 0.9893 ± 0.0932
σ 0.009805 ± 0.130081
Pol Amp 375.8 ± 1456.3
const term 0.8375 ± 0.0100
linear term 0.2733 ± 0.0107
quad term -0.3255 ± 0.0113
cube term -0.9613 ± 0.0120
3000
2500
2000
1500
1000
500
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

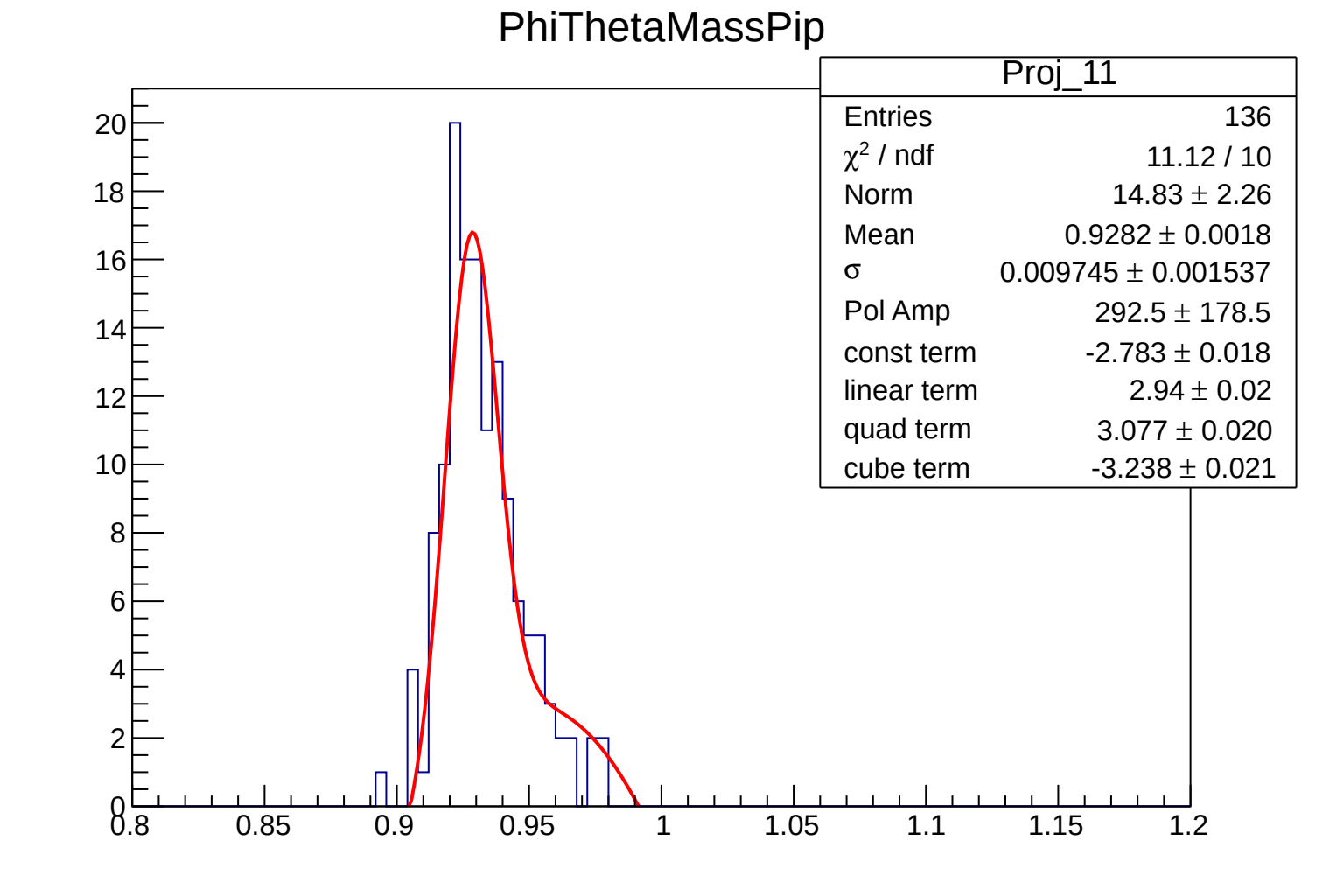

PhiThetaMassPip
Proj_016
Entries 3
χ² / ndf 15.43 / 0
Norm 124.9 ± 1.4
Mean 0.9686 ± 0.0548
σ -34.85 ± 0.13
Pol Amp 1.02 ± 0.02
const term -39.26 ± 0.09
linear term -35.9 ± 0.1
quad term -31.77 ± 0.41
cube term -26.8 ± 0.7
0
1
2
3
4
5
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

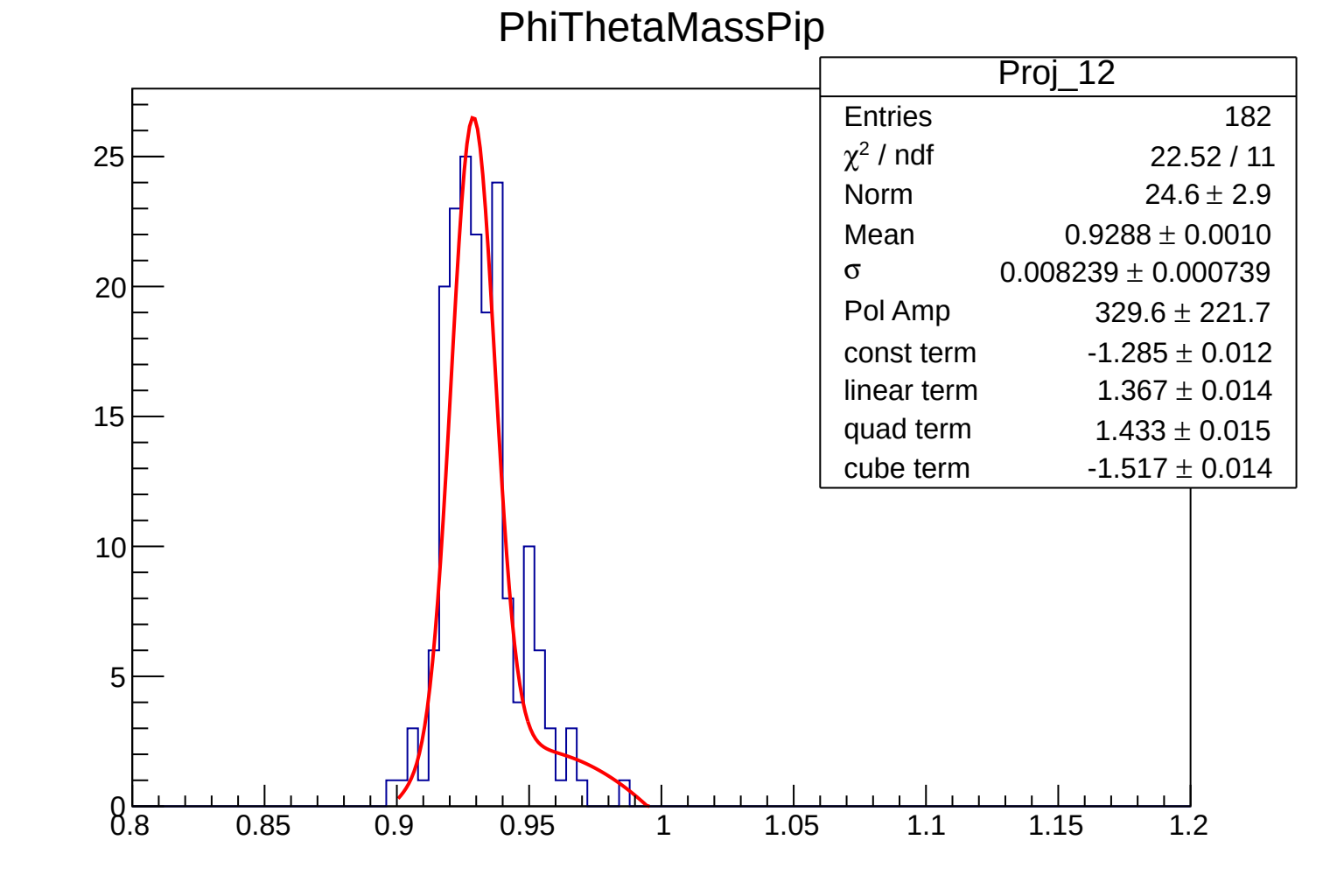

PhiThetaMassPip
Proj_019
Entries 7
χ² / ndf 9.493e-08 / 0
Norm 120.8 ± 4953.4
Mean 0.9266 ± 0.0063
σ -0.001498 ± 0.002054
Pol Amp 338.3 ± 2100.1
const term 0.002333 ± 0.014135
linear term 0.002036 ± 0.015482
quad term -0.002199 ± 0.016180
cube term 0.0007855 ± 0.0160724
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

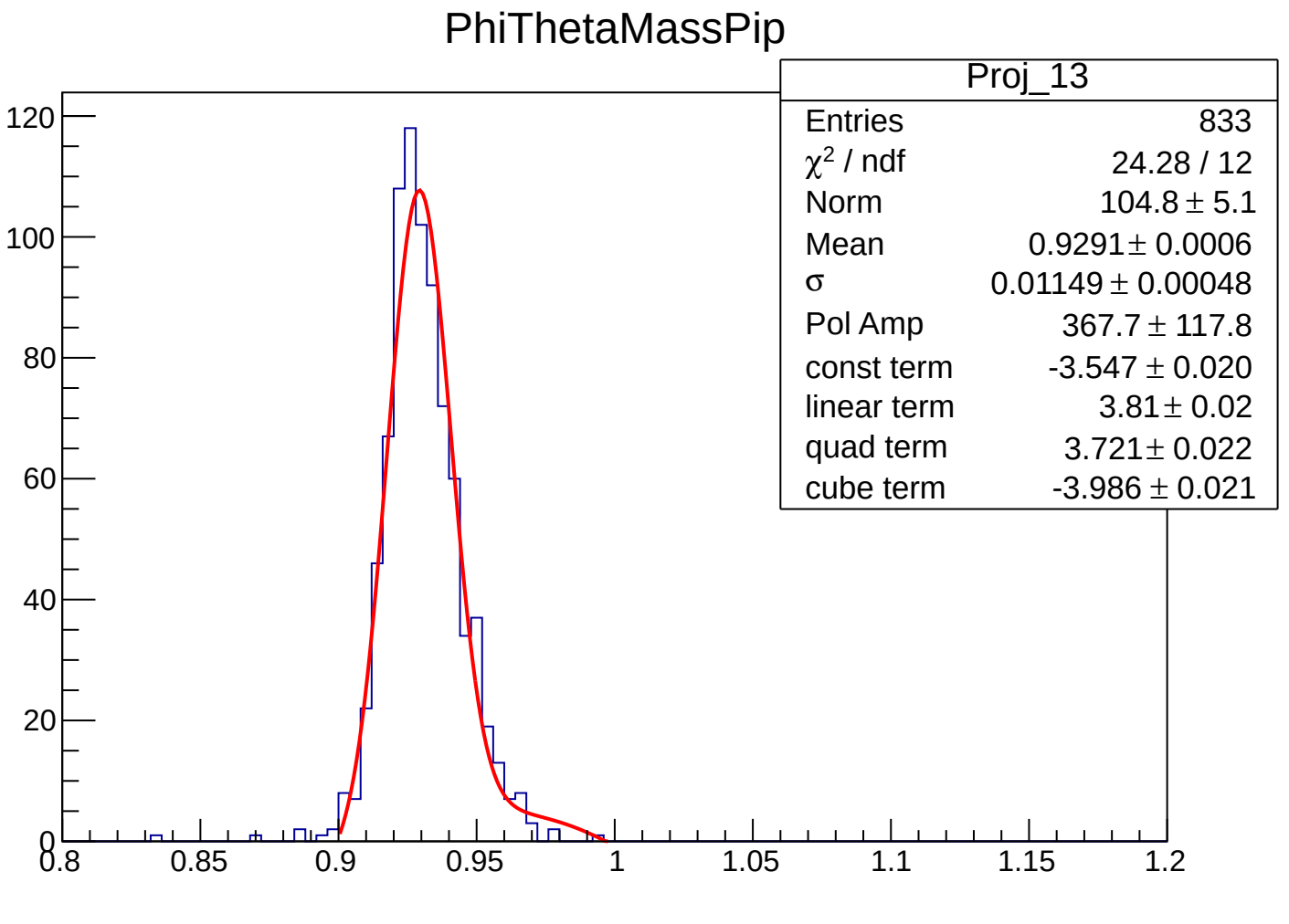

PhiThetaMassPip
Proj_020
Entries 2
χ² / ndf 2.142e-09 / 0
Norm 1276 ± 4233.8
Mean 0.894 ± 0.009
σ 0.009219 ± 0.002686
Pol Amp 375.3 ± 1521.6
const term -0.1707 ± 0.0200
linear term -0.09444 ± 0.02142
quad term 0.04814 ± 0.02294
cube term 0.266 ± 0.025
900
800
700
600
500
400
300
200
100
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

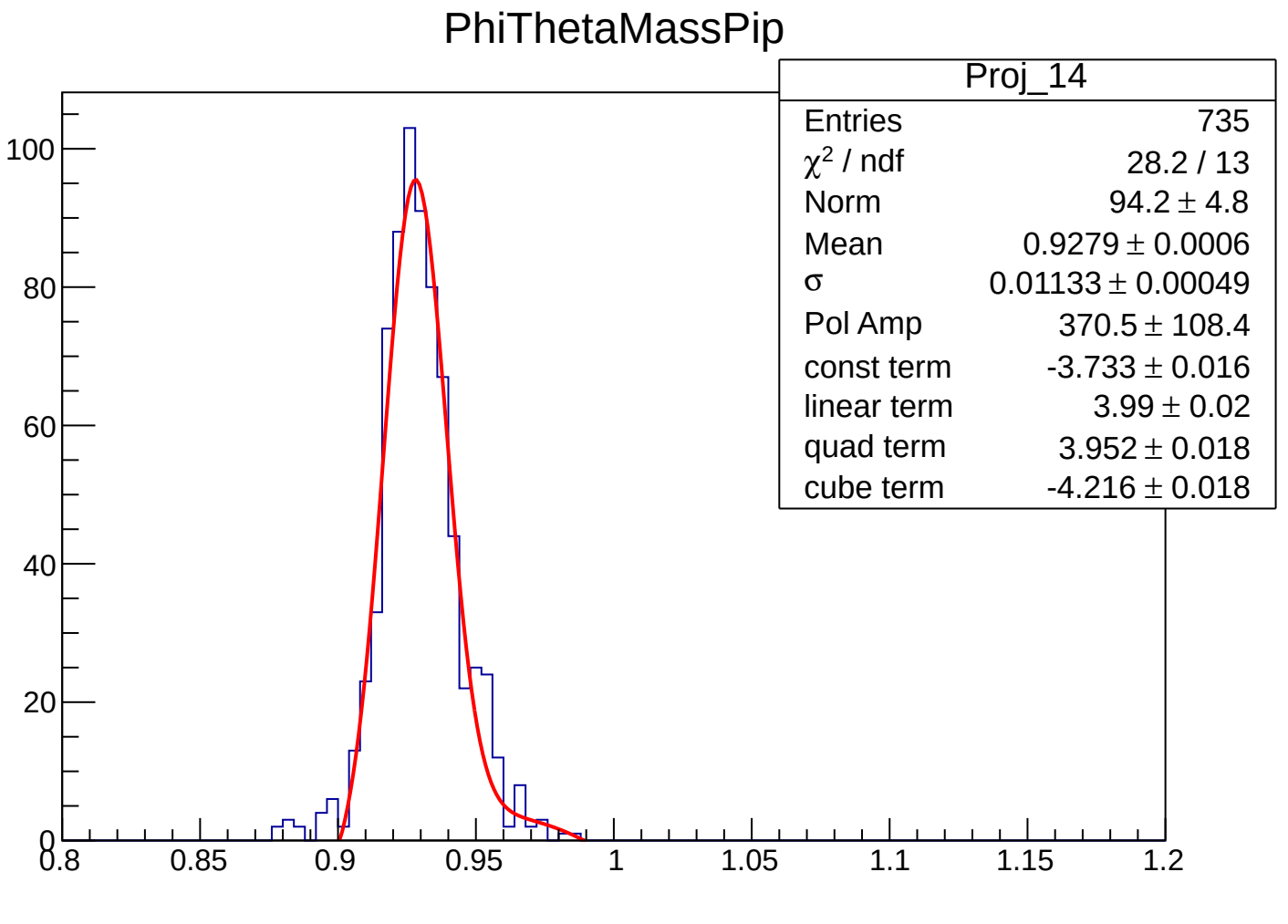

PhiThetaMassPip
Proj_023
Entries 16
χ² / ndf 2.304 / 2
Norm 91.1 ± 3.6
Mean 0.9485 ± 0.0698
σ 342.2 ± 1.4
Pol Amp 1.575 ± 0.064
const term -39.67 ± 1.23
linear term -24.2 ± 1.2
quad term -6.543 ± 1.241
cube term 13.42 ± 1.23
0
0.5
1
1.5
2
2.5
3
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

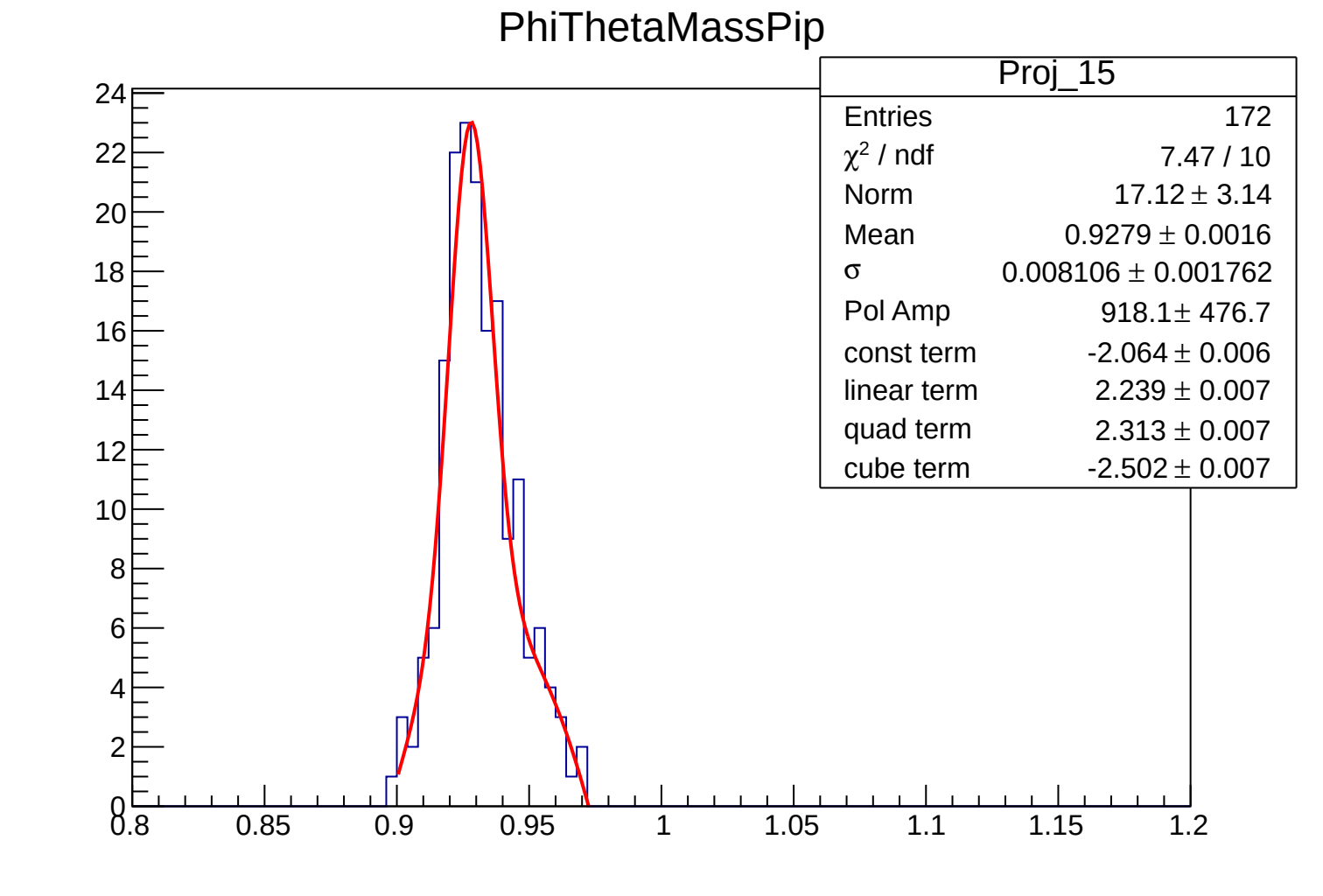

PhiThetaMassPip
Proj_10
Entries 667
χ² / ndf 33.84 / 13
Norm 75.45 ± 4.25
Mean 0.9312 ± 0.0006
σ 0.013 ± 0.001
Pol Amp 366.8 ± 0.6
const term -1.098 ± 0.190
linear term 1.179 ± 0.158
quad term 1.146 ± 0.174
cube term -1.228 ± 0.147
0
10
20
30
40
50
60
70
80
90
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

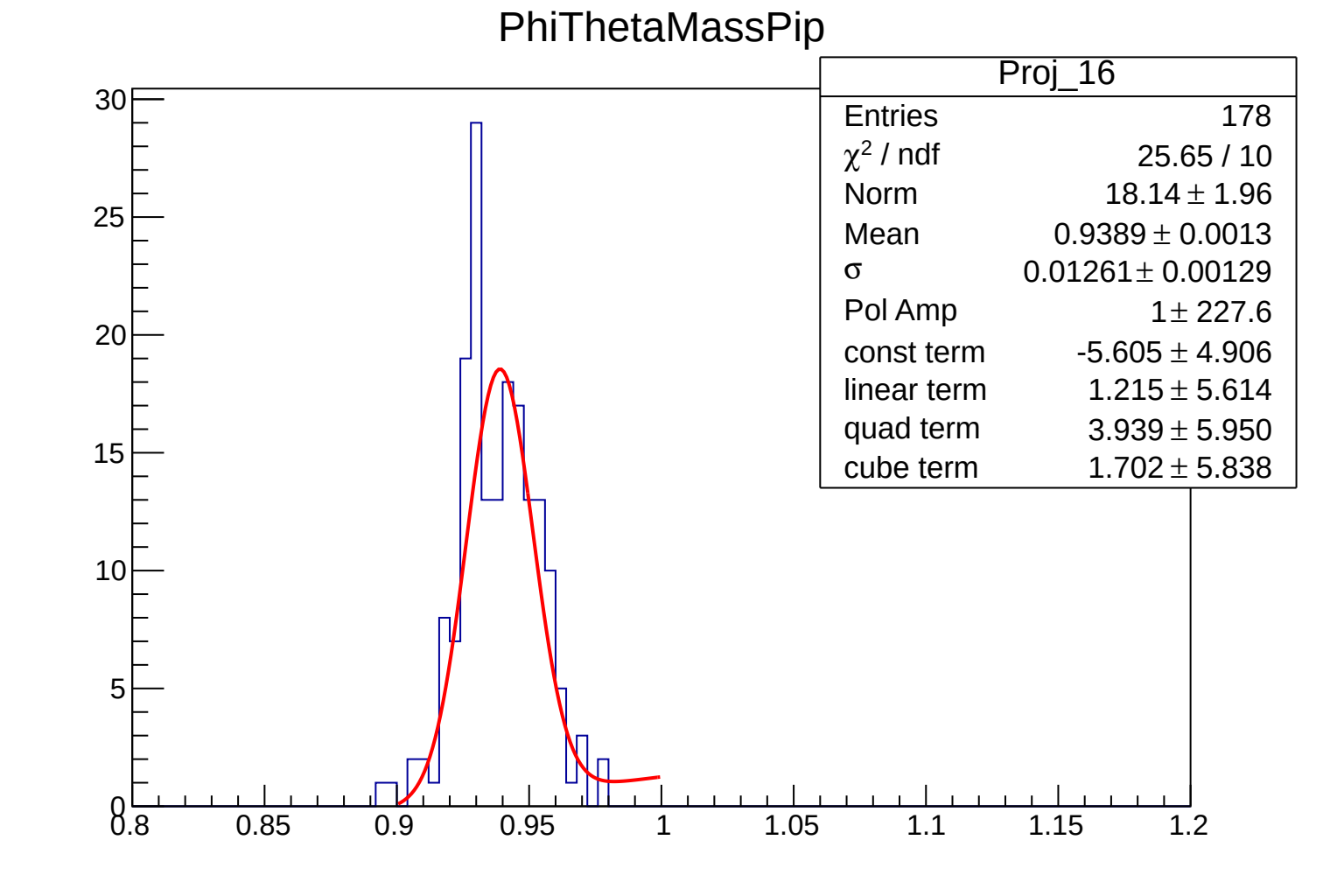

PhiThetaMassPip
Proj_11
Entries 136
χ² / ndf 11.12 / 10
Norm 14.83 ± 2.26
Mean 0.9282 ± 0.0018
σ 0.009745 ± 0.001537
Pol Amp 292.5 ± 178.5
const term -2.783 ± 0.018
linear term 2.94 ± 0.02
quad term 3.077 ± 0.020
cube term -3.238 ± 0.021
0 2 4 6 8 10 12 14 16 18 20
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

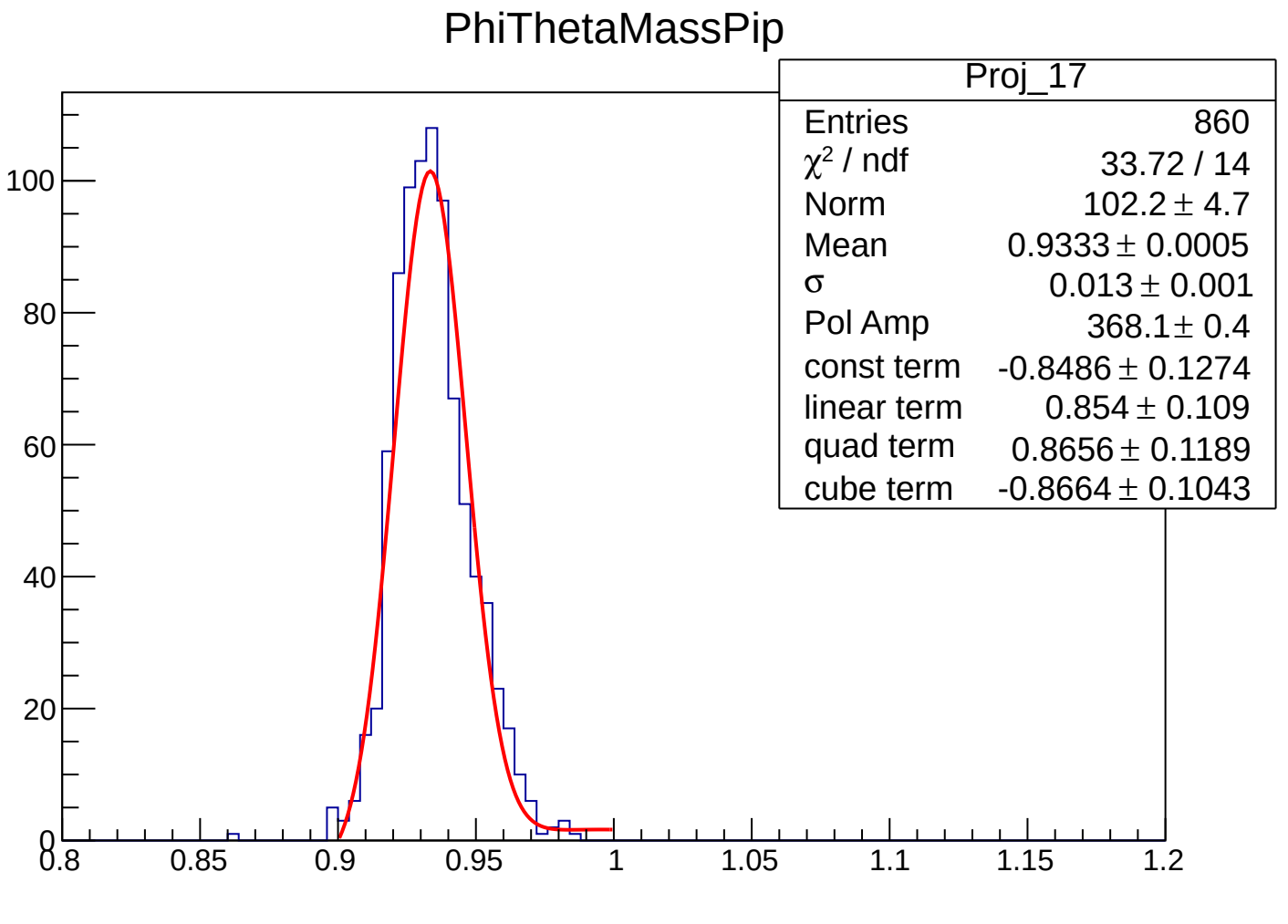

PhiThetaMassPip
Proj_12
Entries 182
χ² / ndf 22.52 / 11
Norm 24.6 ± 2.9
Mean 0.9288 ± 0.0010
σ 0.008239 ± 0.000739
Pol Amp 329.6 ± 221.7
const term -1.285 ± 0.012
linear term 1.367 ± 0.014
quad term 1.433 ± 0.015
cube term -1.517 ± 0.014
0
5
10
15
20
25
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

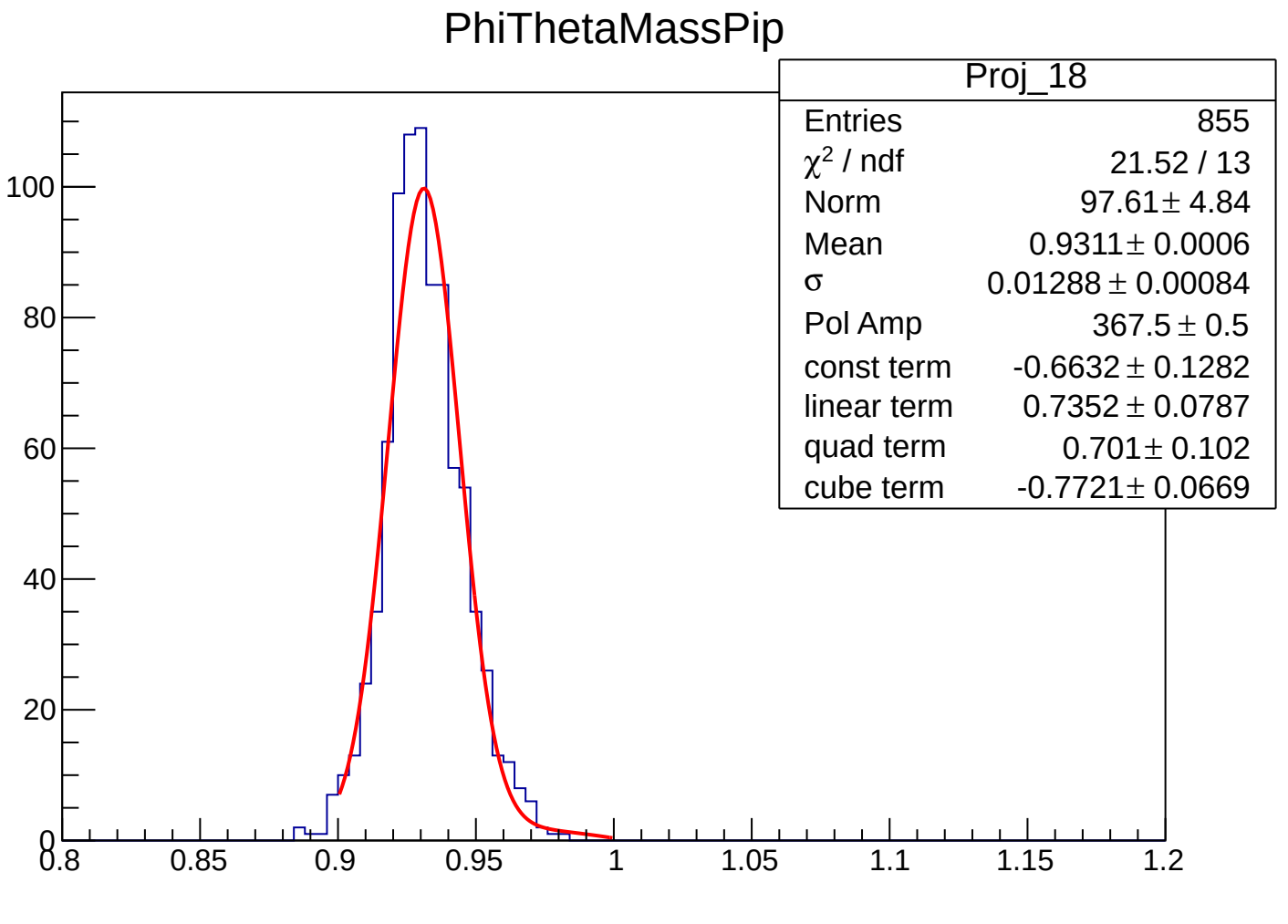

PhiThetaMassPip
Proj_13
Entries 833
χ² / ndf 24.28 / 12
Norm 104.8 ± 5.1
Mean 0.9291 ± 0.0006
σ 0.01149 ± 0.00048
Pol Amp 367.7 ± 117.8
const term -3.547 ± 0.020
linear term 3.81 ± 0.02
quad term 3.721 ± 0.022
cube term -3.986 ± 0.021
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

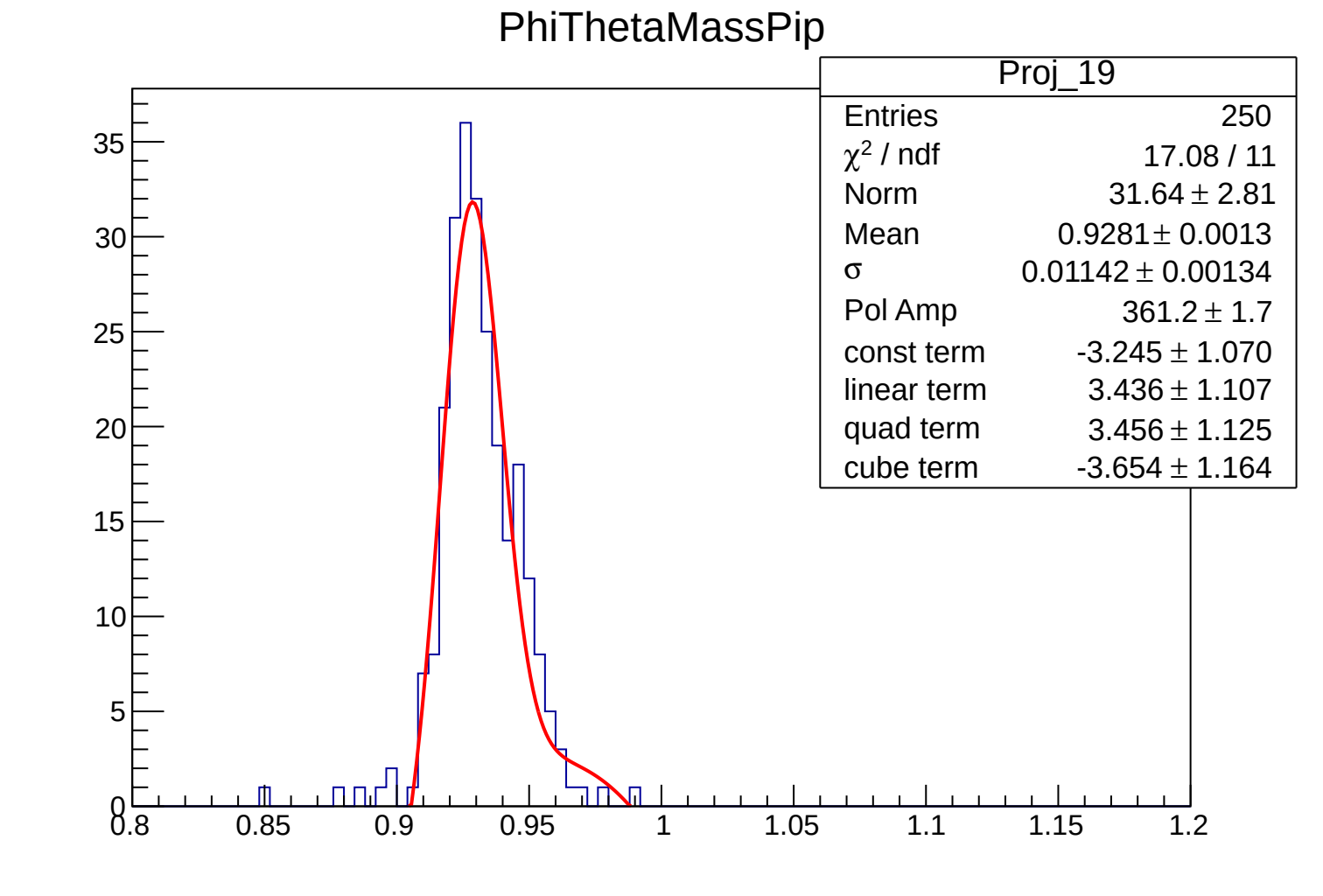

PhiThetaMassPip
Proj_14
Entries 735
χ² / ndf 28.2 / 13
Norm 94.2 ± 4.8
Mean 0.9279 ± 0.0006
σ 0.01133 ± 0.00049
Pol Amp 370.5 ± 108.4
const term -3.733 ± 0.016
linear term 3.99 ± 0.02
quad term 3.952 ± 0.018
cube term -4.216 ± 0.018
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

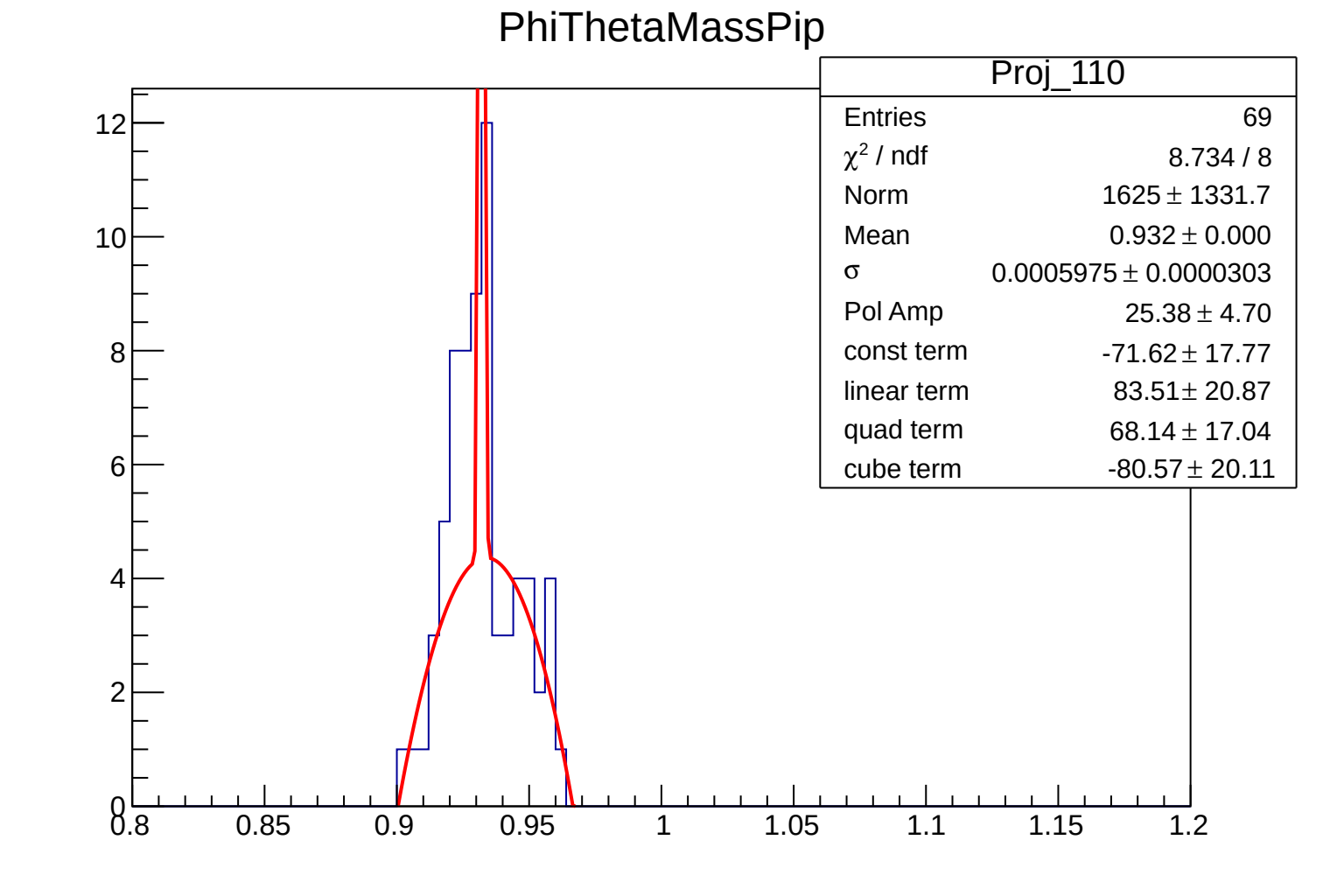

PhiThetaMassPip
Proj_15
Entries 172
χ² / ndf 7.47 / 10
Norm 17.12 ± 3.14
Mean 0.9279 ± 0.0016
σ 0.008106 ± 0.001762
Pol Amp 918.1 ± 476.7
const term -2.064 ± 0.006
linear term 2.239 ± 0.007
quad term 2.313 ± 0.007
cube term -2.502 ± 0.007
0 2 4 6 8 10 12 14 16 18 20 22 24
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

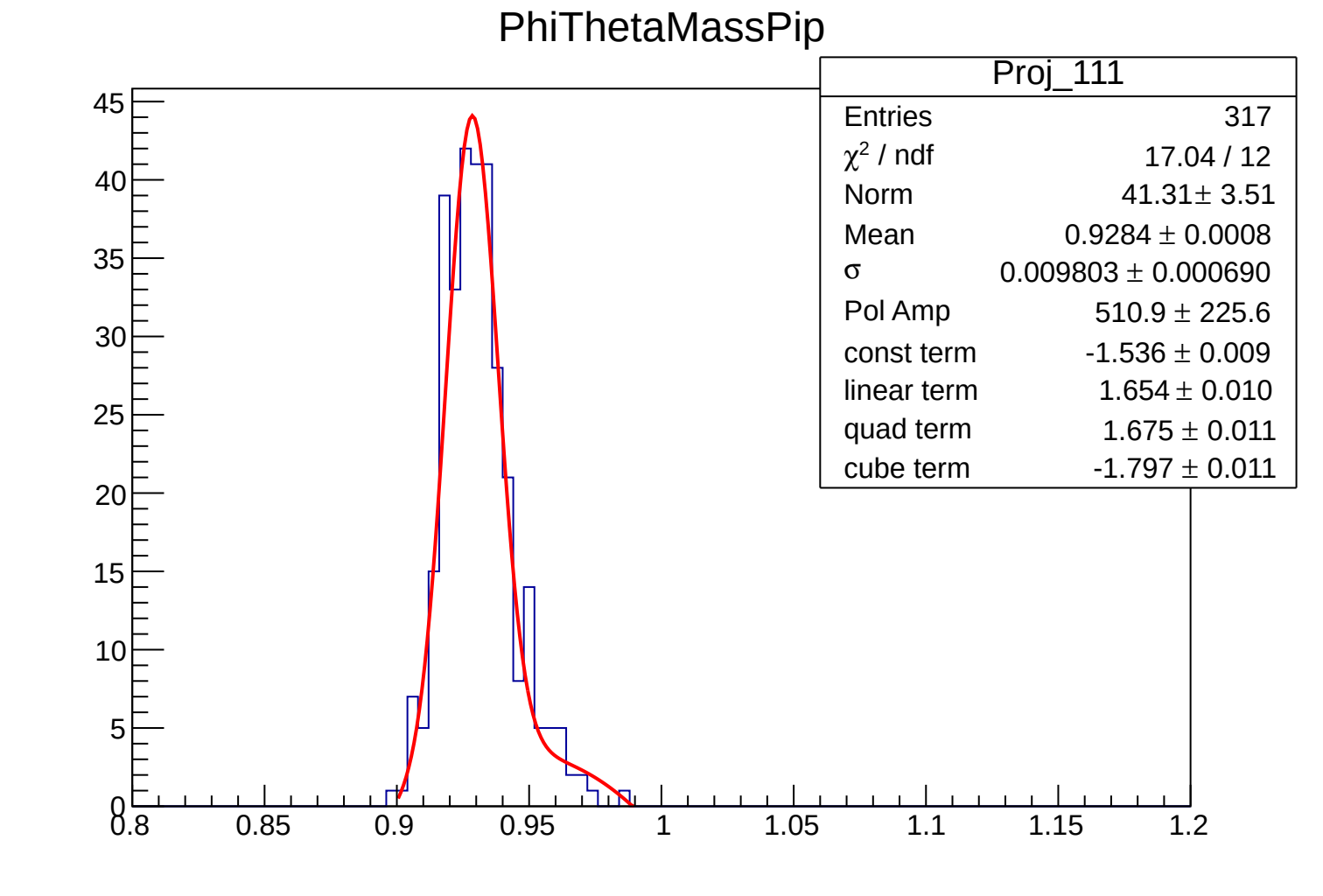

PhiThetaMassPip
Proj_16
Entries 178
χ² / ndf 25.65 / 10
Norm 18.14 ± 1.96
Mean 0.9389 ± 0.0013
σ 0.01261 ± 0.00129
Pol Amp 1 ± 227.6
const term -5.605 ± 4.906
linear term 1.215 ± 5.614
quad term 3.939 ± 5.950
cube term 1.702 ± 5.838
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

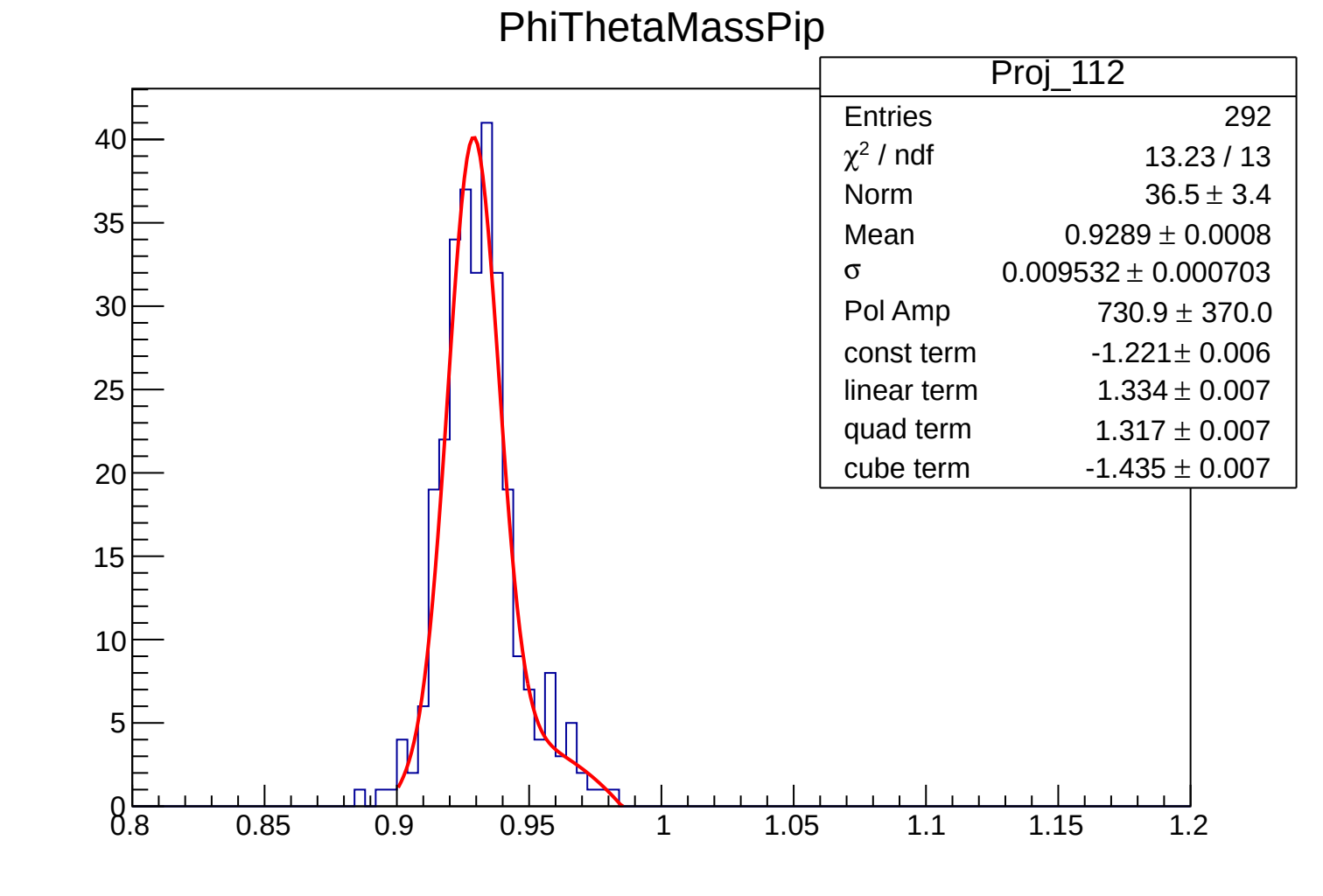

PhiThetaMassPip
Proj_17
Entries 860
χ² / ndf 33.72 / 14
Norm 102.2 ± 4.7
Mean 0.9333 ± 0.0005
σ 0.013 ± 0.001
Pol Amp 368.1 ± 0.4
const term -0.8486 ± 0.1274
linear term 0.854 ± 0.109
quad term 0.8656 ± 0.1189
cube term -0.8664 ± 0.1043
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

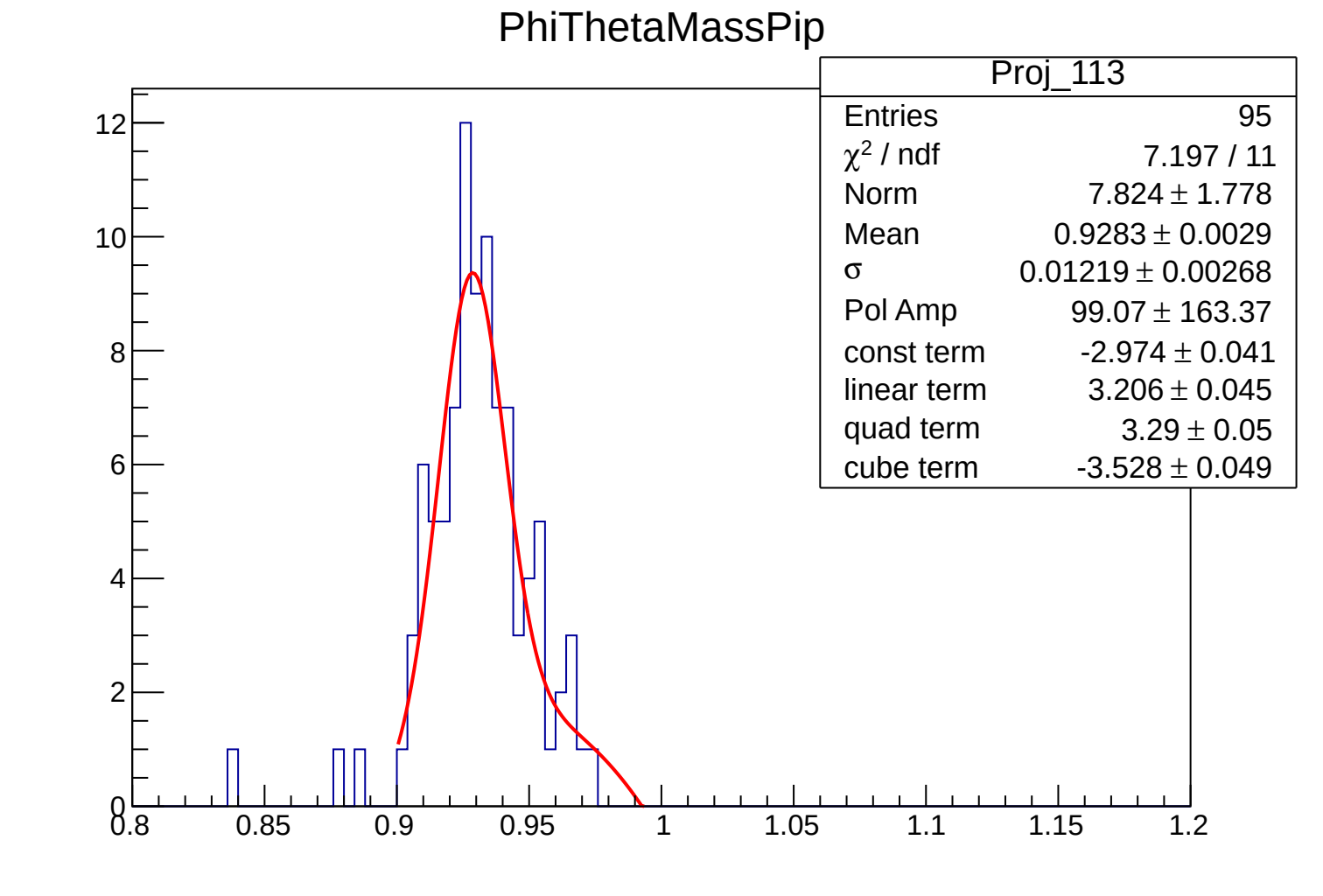

PhiThetaMassPip
Proj_18
Entries 855
χ² / ndf 21.52 / 13
Norm 97.61 ± 4.84
Mean 0.9311 ± 0.0006
σ 0.01288 ± 0.00084
Pol Amp 367.5 ± 0.5
const term -0.6632 ± 0.1282
linear term 0.7352 ± 0.0787
quad term 0.701 ± 0.102
cube term -0.7721 ± 0.0669
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

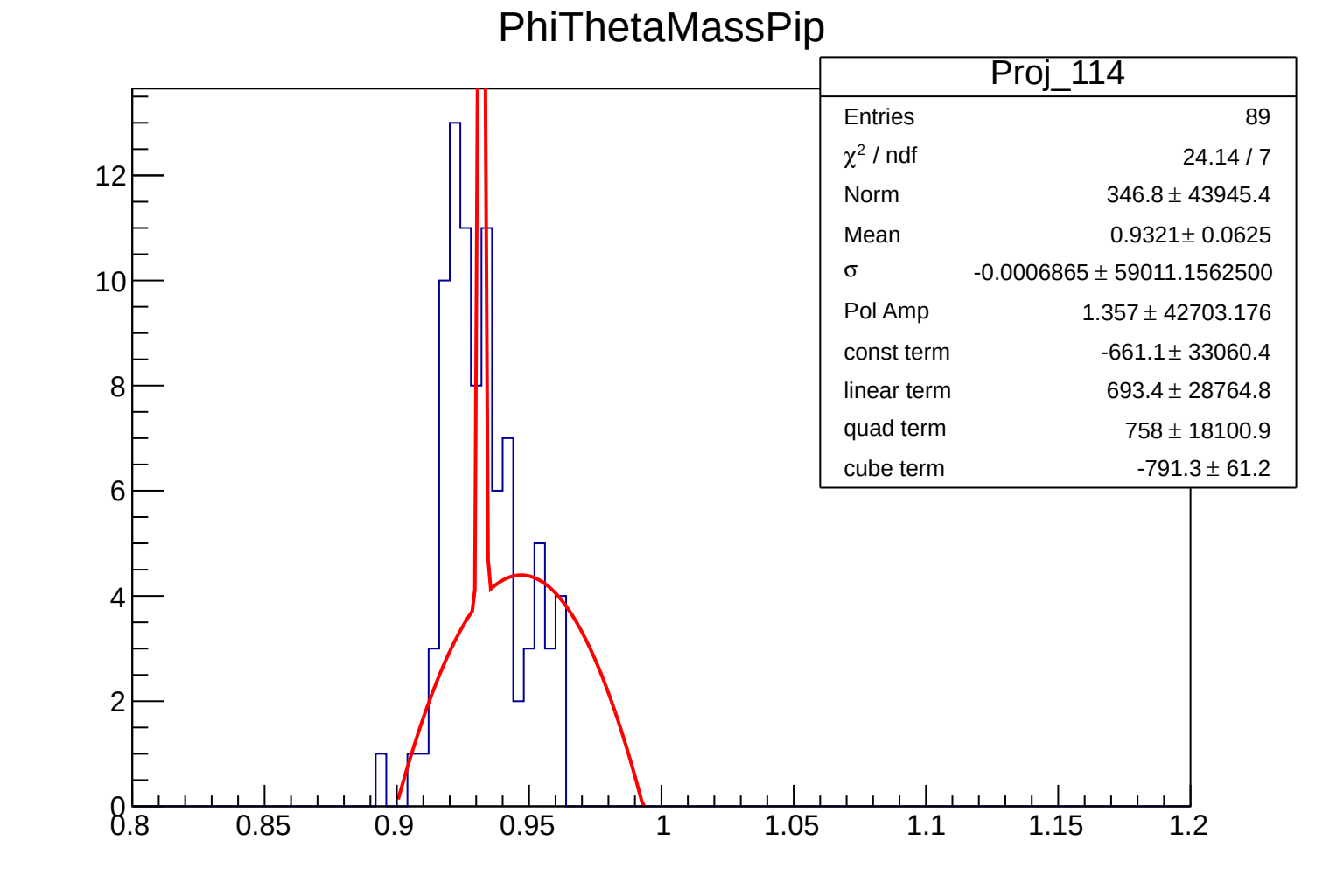

PhiThetaMassPip
Proj_19
Entries 250
χ² / ndf 17.08 / 11
Norm 31.64 ± 2.81
Mean 0.9281 ± 0.0013
σ 0.01142 ± 0.00134
Pol Amp 361.2 ± 1.7
const term -3.245 ± 1.070
linear term 3.436 ± 1.107
quad term 3.456 ± 1.125
cube term -3.654 ± 1.164
0
5
10
15
20
25
30
35
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

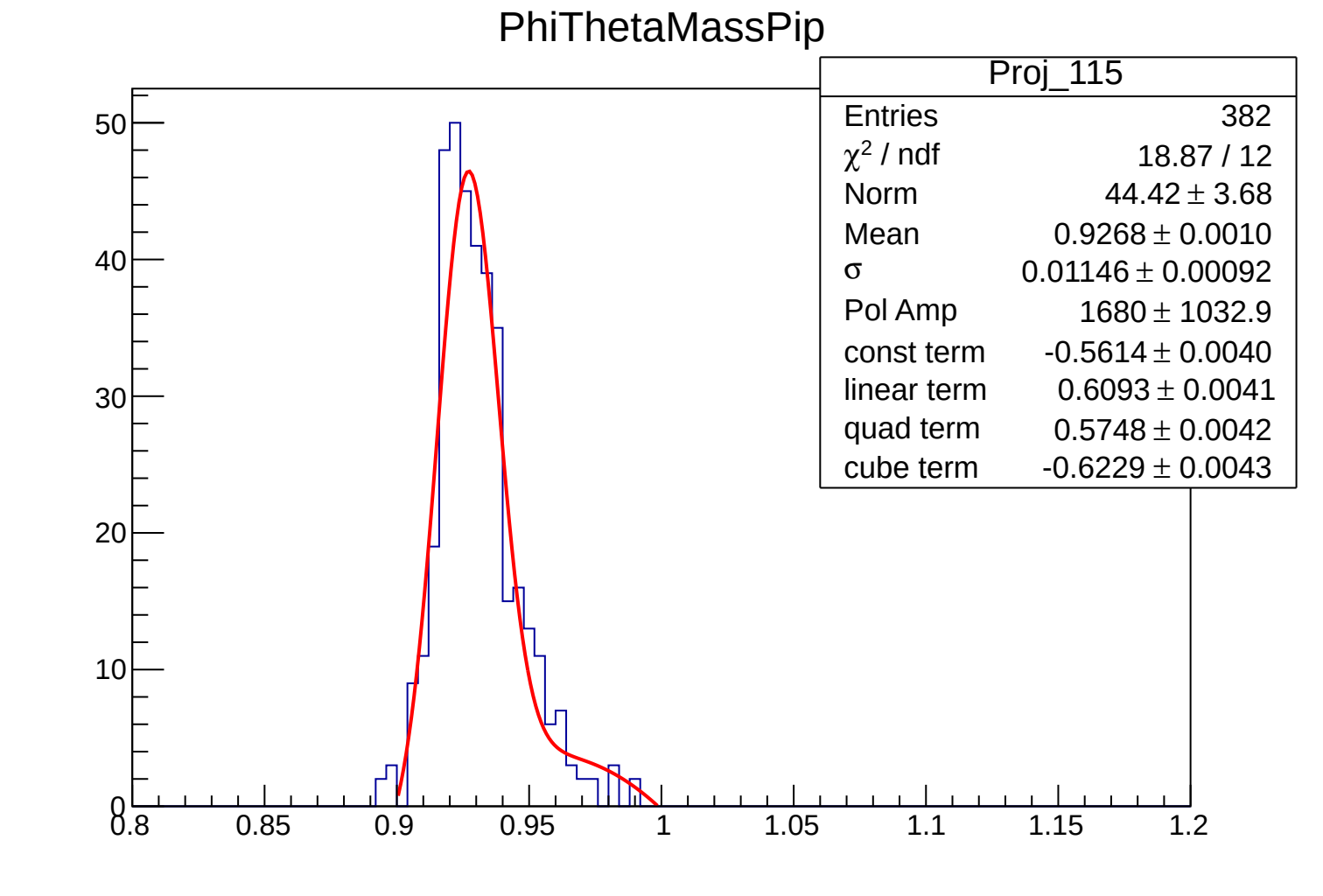

PhiThetaMassPip
Proj_110
Entries 69
χ² / ndf 8.734 / 8
Norm 1625 ± 1331.7
Mean 0.932 ± 0.000
σ 0.0005975 ± 0.0000303
Pol Amp 25.38 ± 4.70
const term -71.62 ± 17.77
linear term 83.51 ± 20.87
quad term 68.14 ± 17.04
cube term -80.57 ± 20.11
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

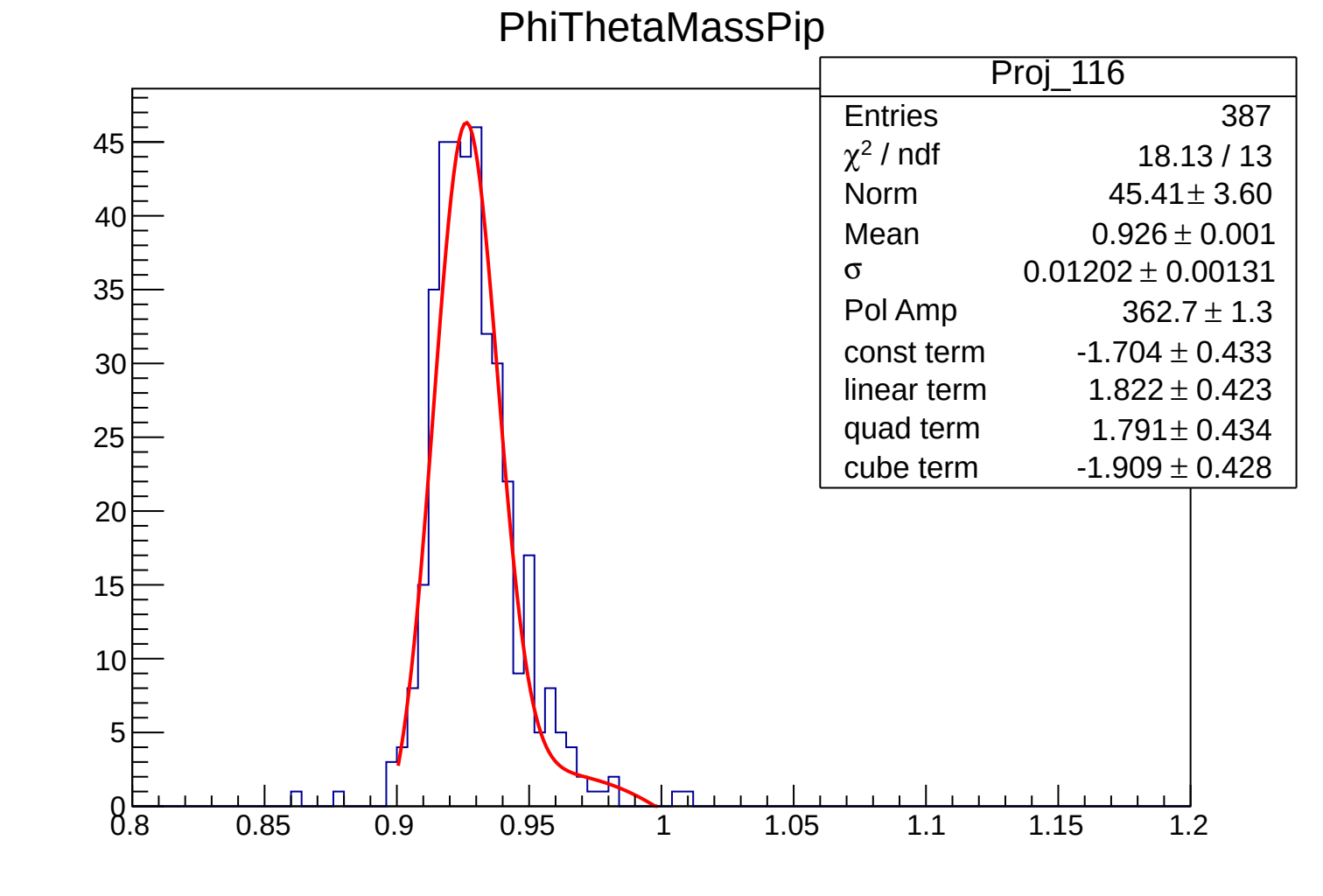

PhiThetaMassPip
Proj_111
Entries 317
χ² / ndf 17.04 / 12
Norm 41.31± 3.51
Mean 0.9284 ± 0.0008
σ 0.009803 ± 0.000690
Pol Amp 510.9 ± 225.6
const term -1.536 ± 0.009
linear term 1.654 ± 0.010
quad term 1.675 ± 0.011
cube term -1.797 ± 0.011
45
40
35
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

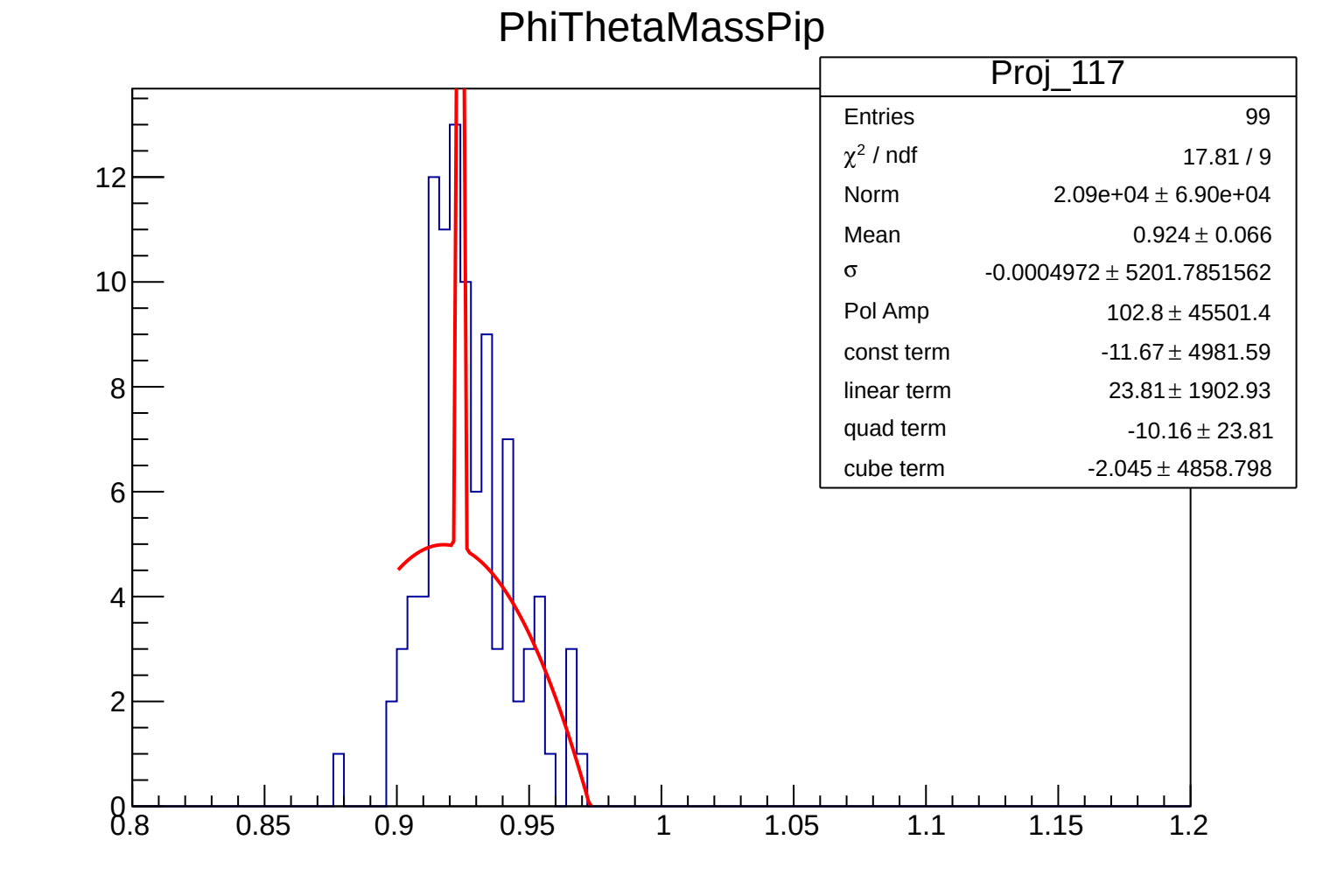

PhiThetaMassPip
Proj_112
Entries 292
χ² / ndf 13.23 / 13
Norm 36.5 ± 3.4
Mean 0.9289 ± 0.0008
σ 0.009532 ± 0.000703
Pol Amp 730.9 ± 370.0
const term -1.221 ± 0.006
linear term 1.334 ± 0.007
quad term 1.317 ± 0.007
cube term -1.435 ± 0.007
0
5
10
15
20
25
30
35
40
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

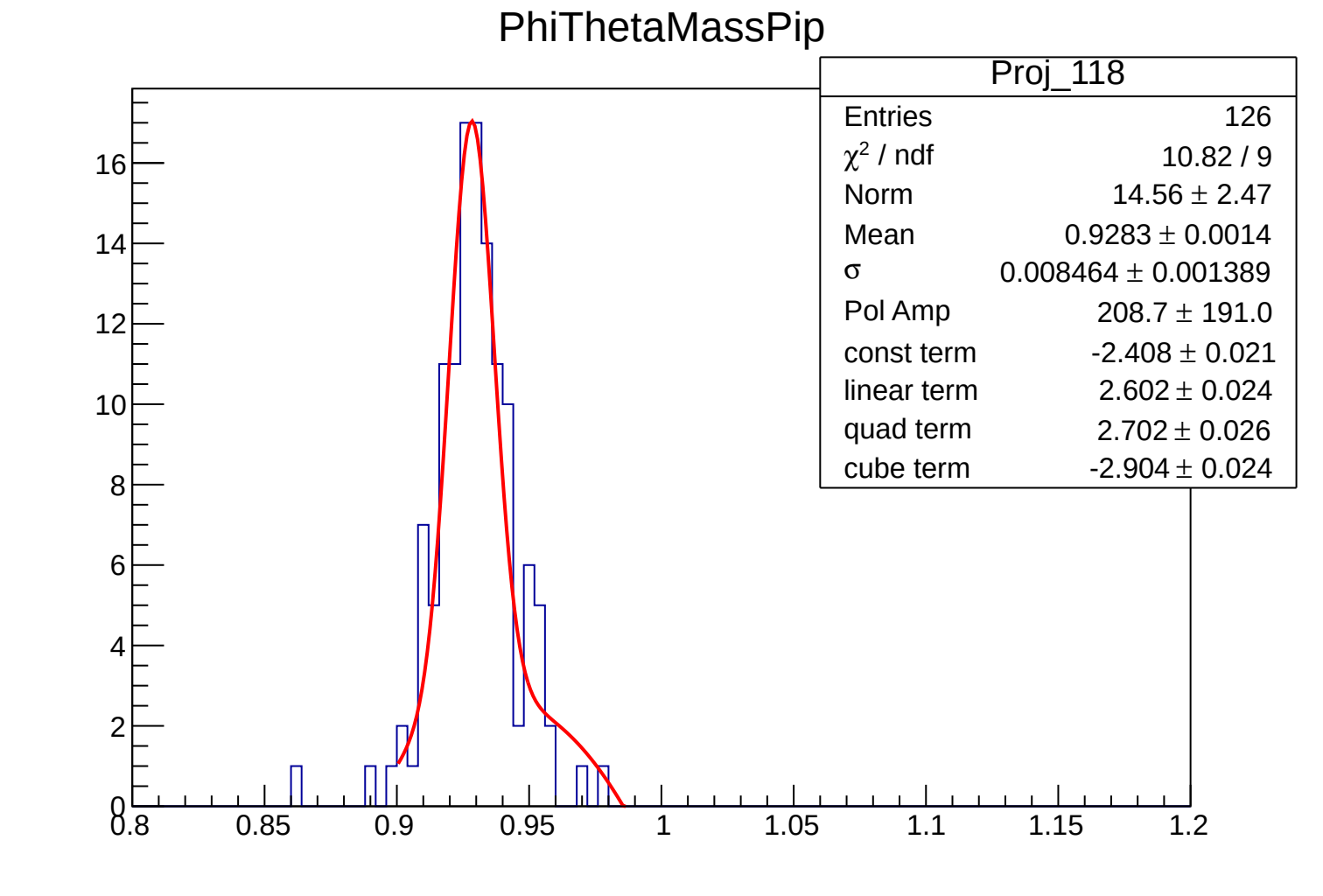

PhiThetaMassPip
Proj_113
Entries 95
χ² / ndf 7.197 / 11
Norm 7.824 ± 1.778
Mean 0.9283 ± 0.0029
σ 0.01219 ± 0.00268
Pol Amp 99.07 ± 163.37
const term -2.974 ± 0.041
linear term 3.206 ± 0.045
quad term 3.29 ± 0.05
cube term -3.528 ± 0.049
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

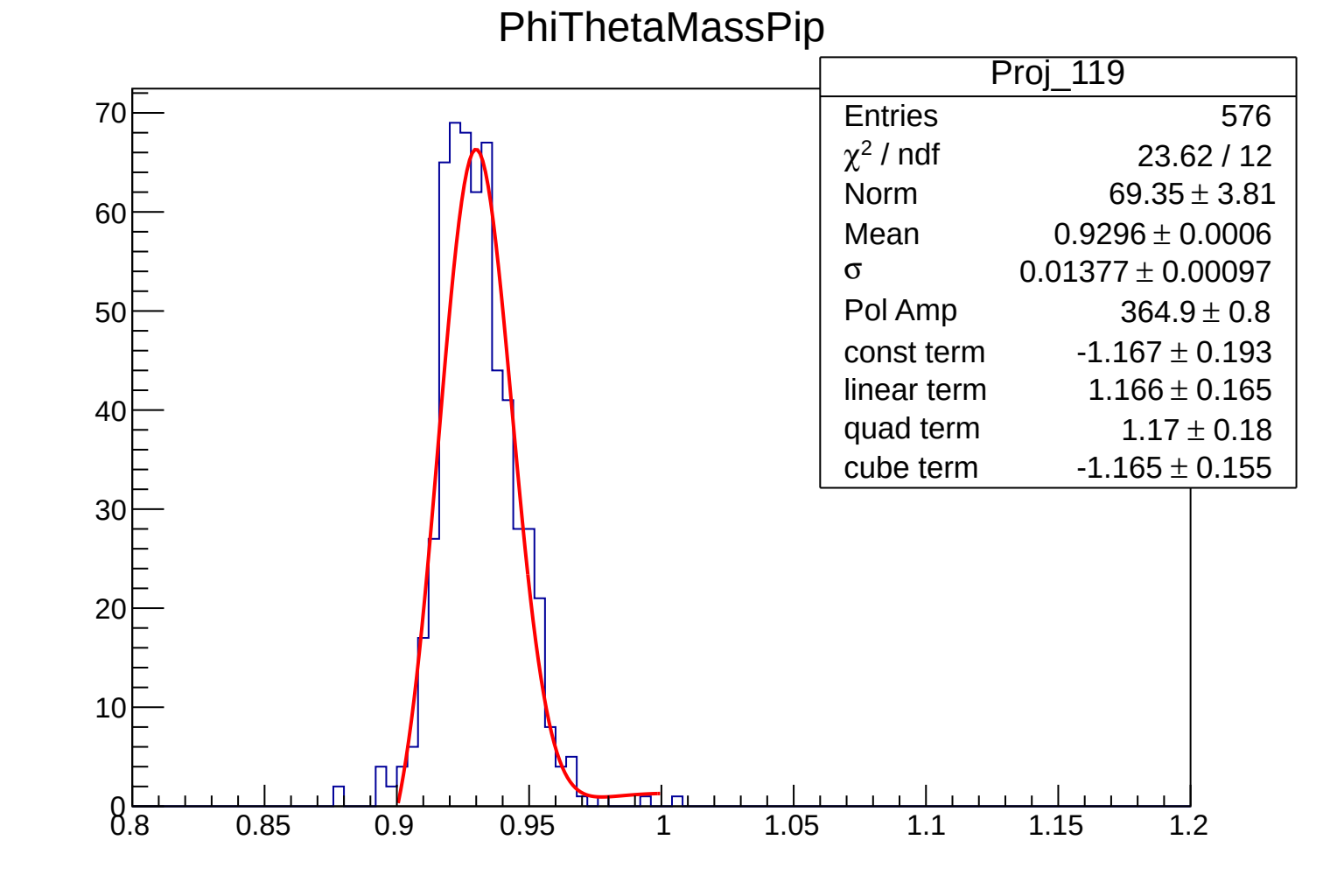

PhiThetaMassPip
Proj_114
Entries 89
χ² / ndf 24.14 / 7
Norm 346.8 ± 43945.4
Mean 0.9321 ± 0.0625
σ -0.0006865 ± 59011.1562500
Pol Amp 1.357 ± 42703.176
const term -661.1 ± 33060.4
linear term 693.4 ± 28764.8
quad term 758 ± 18100.9
cube term -791.3 ± 61.2
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

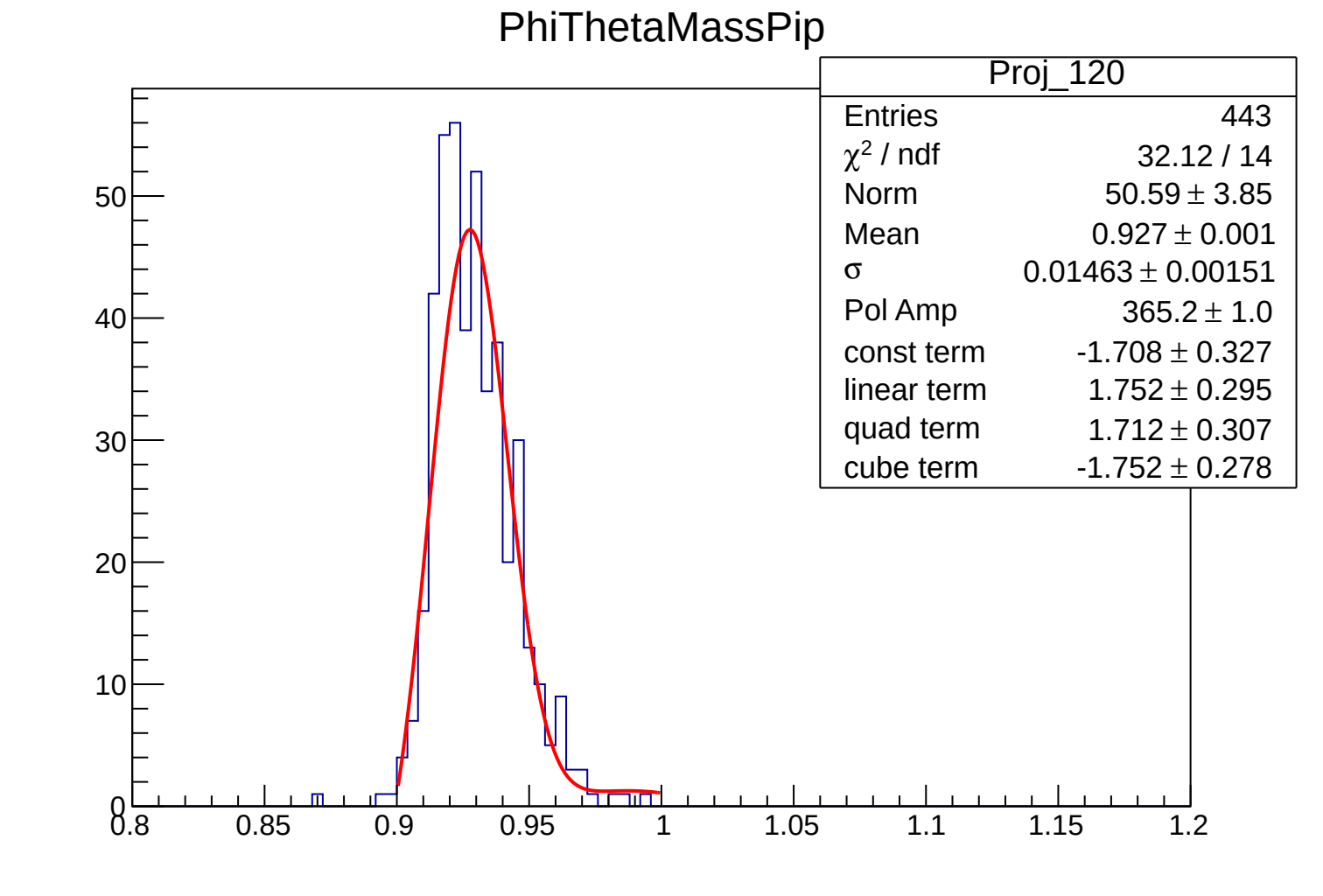

PhiThetaMassPip
Proj_115
Entries 382
χ² / ndf 18.87 / 12
Norm 44.42 ± 3.68
Mean 0.9268 ± 0.0010
σ 0.01146 ± 0.00092
Pol Amp 1680 ± 1032.9
const term -0.5614 ± 0.0040
linear term 0.6093 ± 0.0041
quad term 0.5748 ± 0.0042
cube term -0.6229 ± 0.0043
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

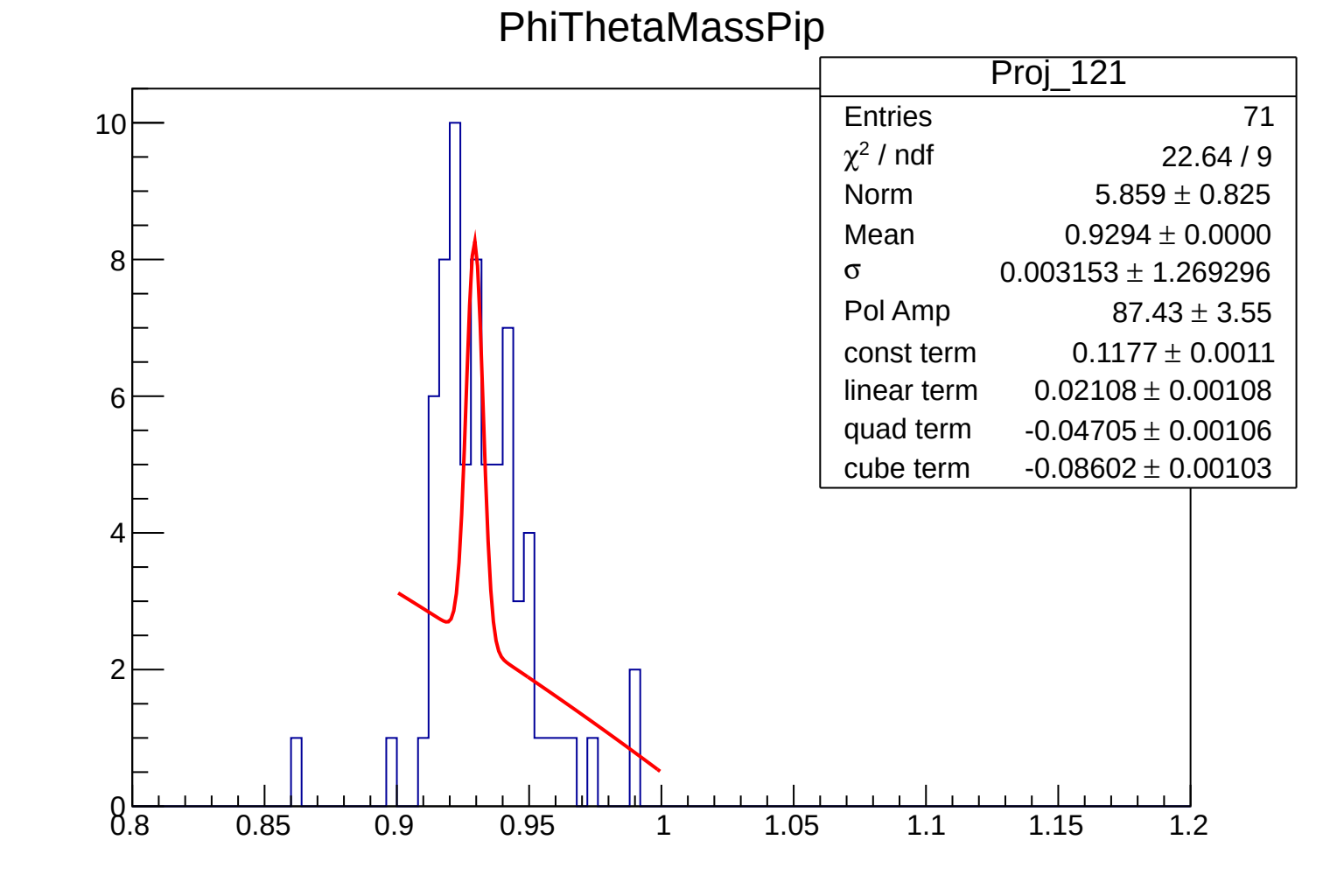

PhiThetaMassPip
Proj_116
Entries 387
χ² / ndf 18.13 / 13
Norm 45.41 ± 3.60
Mean 0.926 ± 0.001
σ 0.01202 ± 0.00131
Pol Amp 362.7 ± 1.3
const term -1.704 ± 0.433
linear term 1.822 ± 0.423
quad term 1.791 ± 0.434
cube term -1.909 ± 0.428
0
5
10
15
20
25
30
35
40
45
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

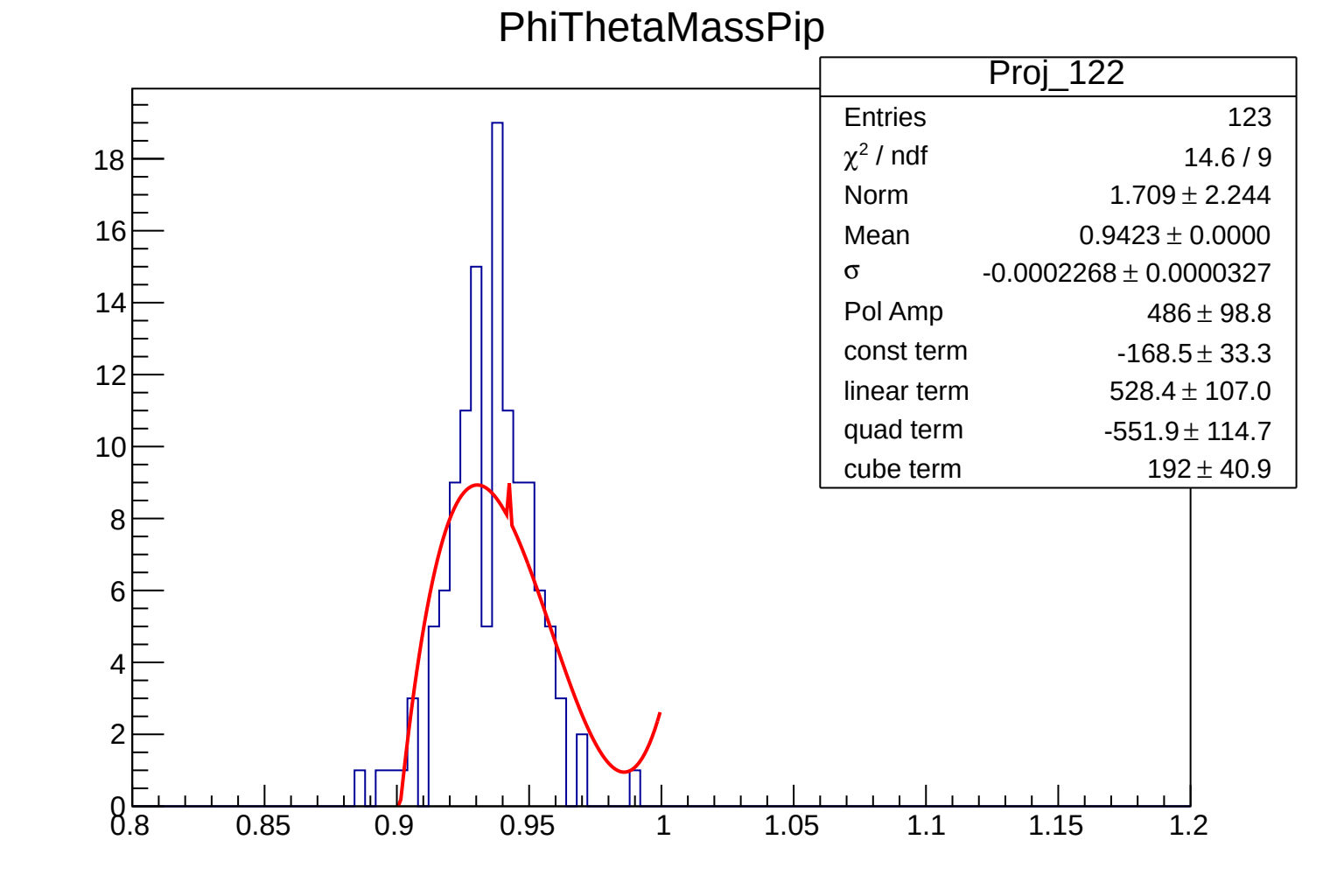

PhiThetaMassPip
Proj_117
Entries 99
χ² / ndf 17.81 / 9
Norm 2.09e+04 ± 6.90e+04
Mean 0.924 ± 0.066
σ -0.0004972 ± 5201.7851562
Pol Amp 102.8 ± 45501.4
const term -11.67 ± 4981.59
linear term 23.81 ± 1902.93
quad term -10.16 ± 23.81
cube term -2.045 ± 4858.798
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

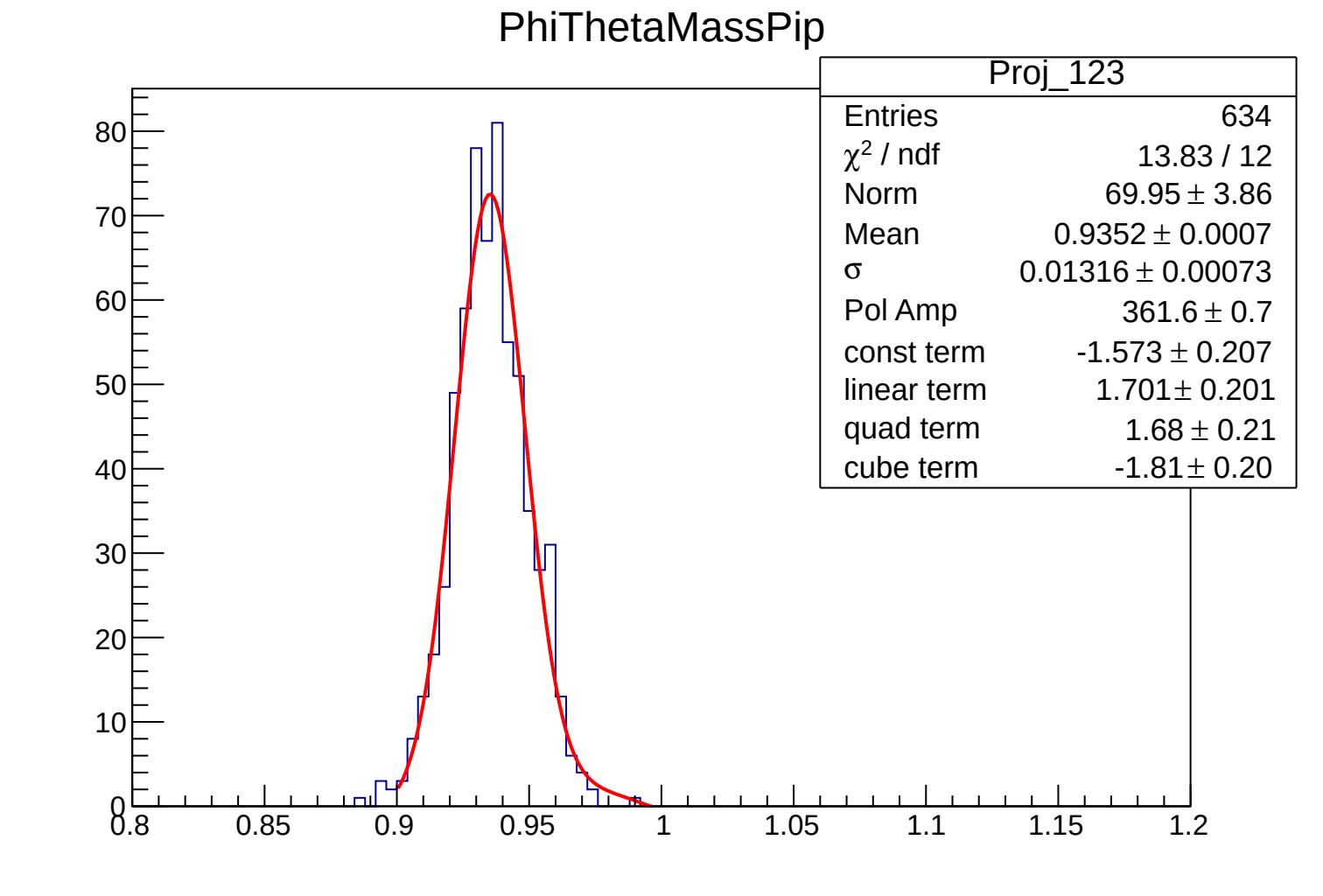

PhiThetaMassPip
Proj_118
Entries 126
χ² / ndf 10.82 / 9
Norm 14.56 ± 2.47
Mean 0.9283 ± 0.0014
σ 0.008464 ± 0.001389
Pol Amp 208.7 ± 191.0
const term -2.408 ± 0.021
linear term 2.602 ± 0.024
quad term 2.702 ± 0.026
cube term -2.904 ± 0.024
0
2
4
6
8
10
12
14
16
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

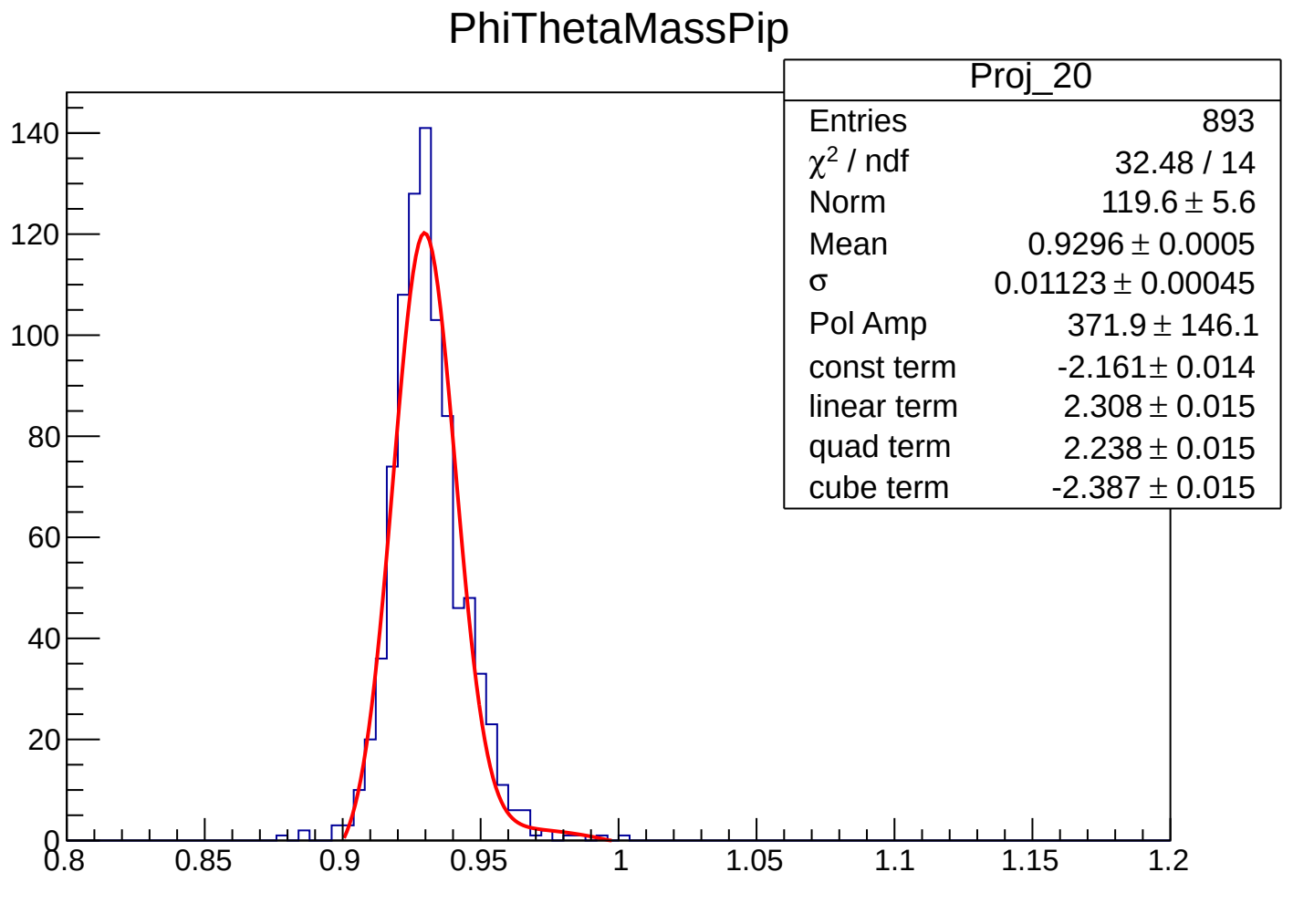

PhiThetaMassPip
Proj_119
Entries 576
χ² / ndf 23.62 / 12
Norm 69.35 ± 3.81
Mean 0.9296 ± 0.0006
σ 0.01377 ± 0.00097
Pol Amp 364.9 ± 0.8
const term -1.167 ± 0.193
linear term 1.166 ± 0.165
quad term 1.17 ± 0.18
cube term -1.165 ± 0.155
0
10
20
30
40
50
60
70
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

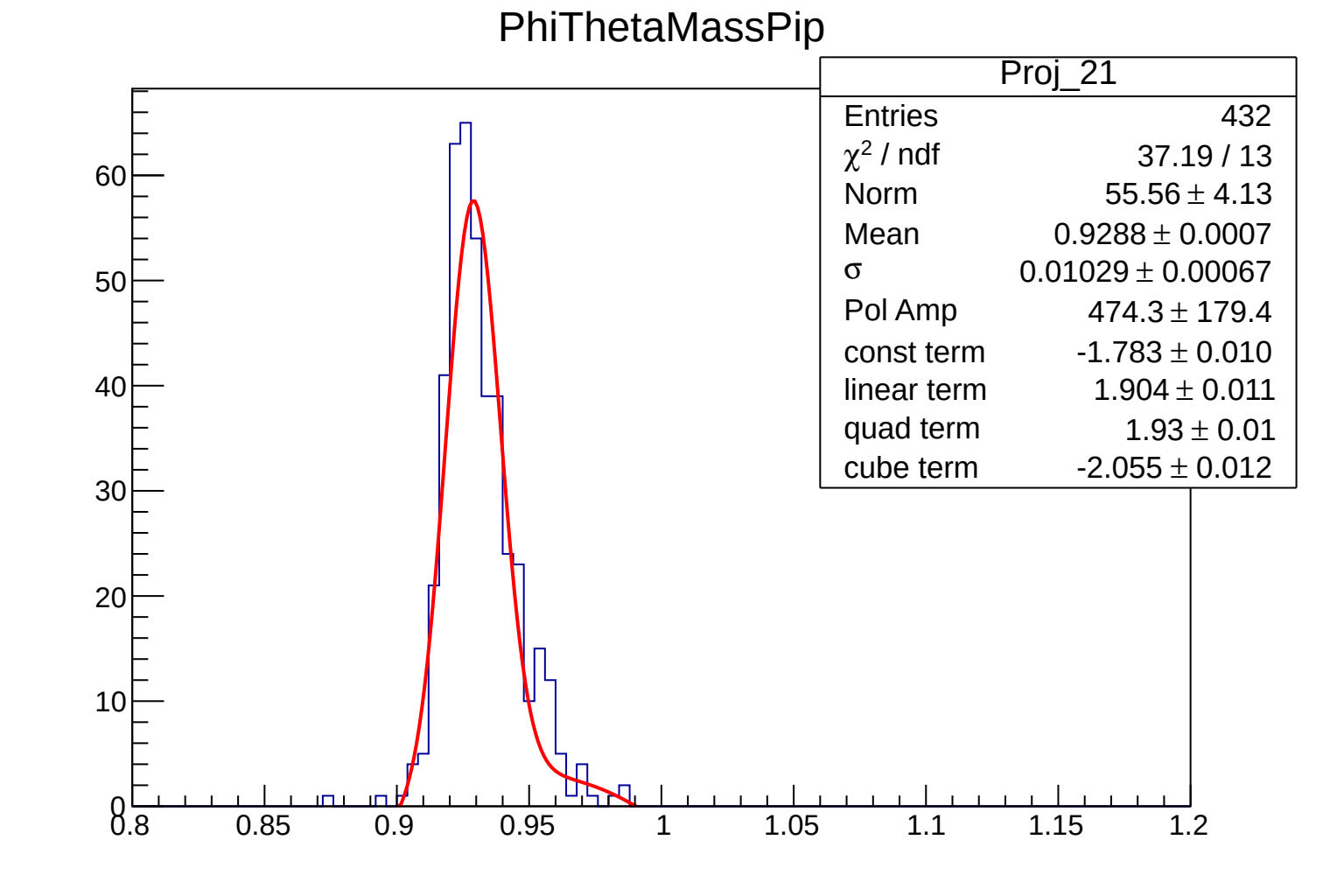

PhiThetaMassPip
Proj_120
Entries 443
χ² / ndf 32.12 / 14
Norm 50.59 ± 3.85
Mean 0.927 ± 0.001
σ 0.01463 ± 0.00151
Pol Amp 365.2 ± 1.0
const term -1.708 ± 0.327
linear term 1.752 ± 0.295
quad term 1.712 ± 0.307
cube term -1.752 ± 0.278
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

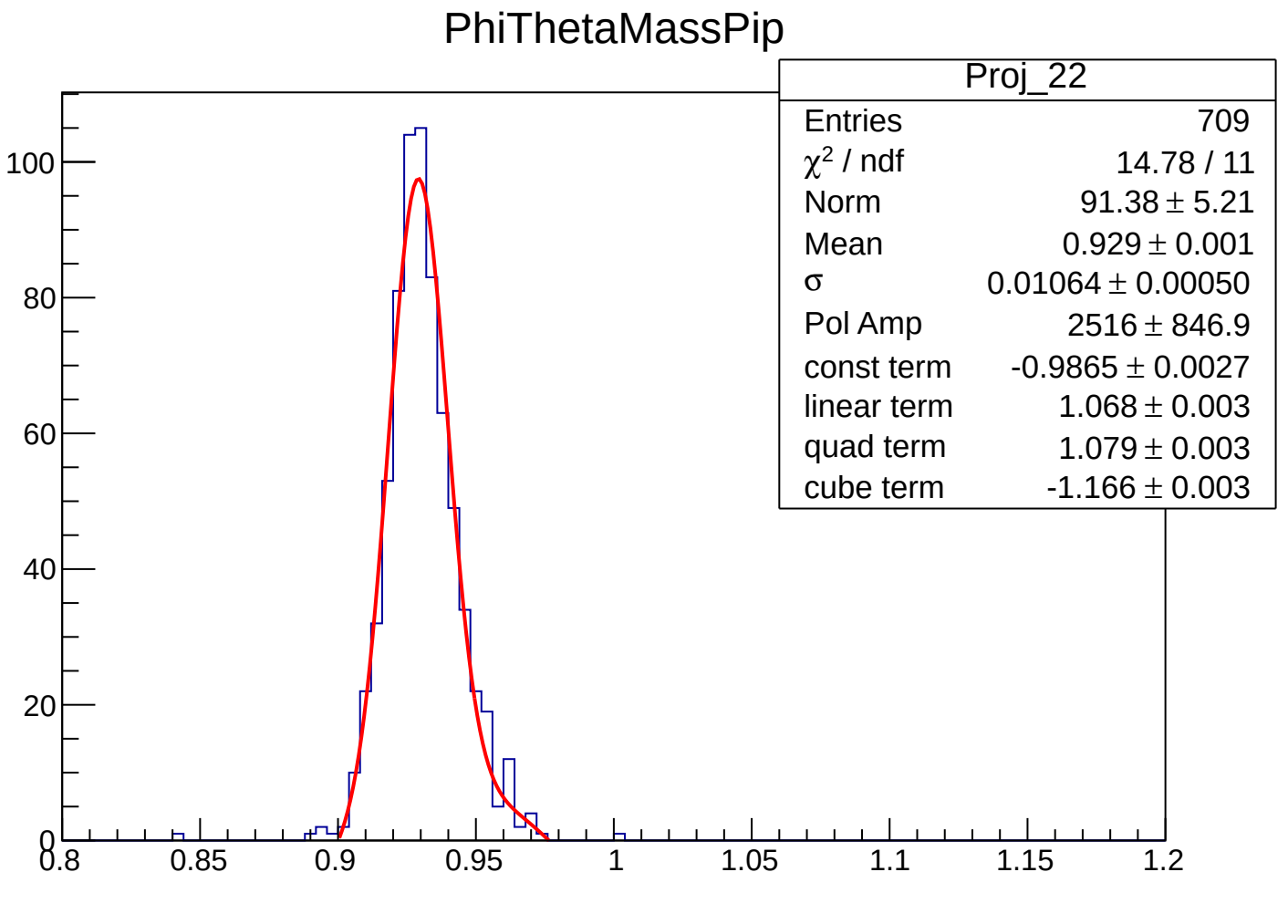

PhiThetaMassPip
Proj_121
Entries 71
χ² / ndf 22.64 / 9
Norm 5.859 ± 0.825
Mean 0.9294 ± 0.0000
σ 0.003153 ± 1.269296
Pol Amp 87.43 ± 3.55
const term 0.1177 ± 0.0011
linear term 0.02108 ± 0.00108
quad term -0.04705 ± 0.00106
cube term -0.08602 ± 0.00103
0
2
4
6
8
10
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

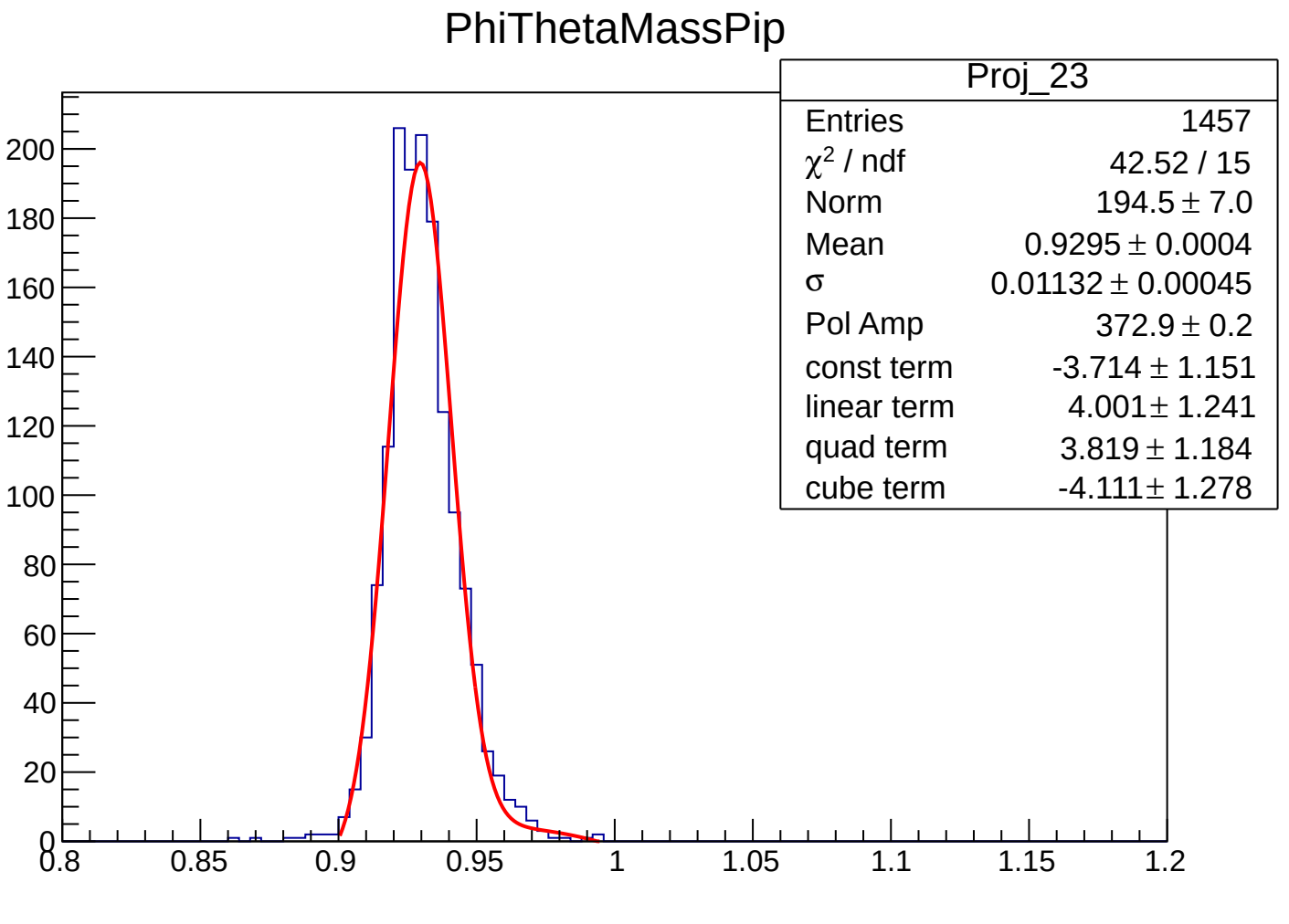

PhiThetaMassPip
Proj_122
Entries 123
χ² / ndf 14.6 / 9
Norm 1.709 ± 2.244
Mean 0.9423 ± 0.0000
σ -0.0002268 ± 0.0000327
Pol Amp 486 ± 98.8
const term -168.5 ± 33.3
linear term 528.4 ± 107.0
quad term -551.9 ± 114.7
cube term 192 ± 40.9
0
2
4
6
8
10
12
14
16
18
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

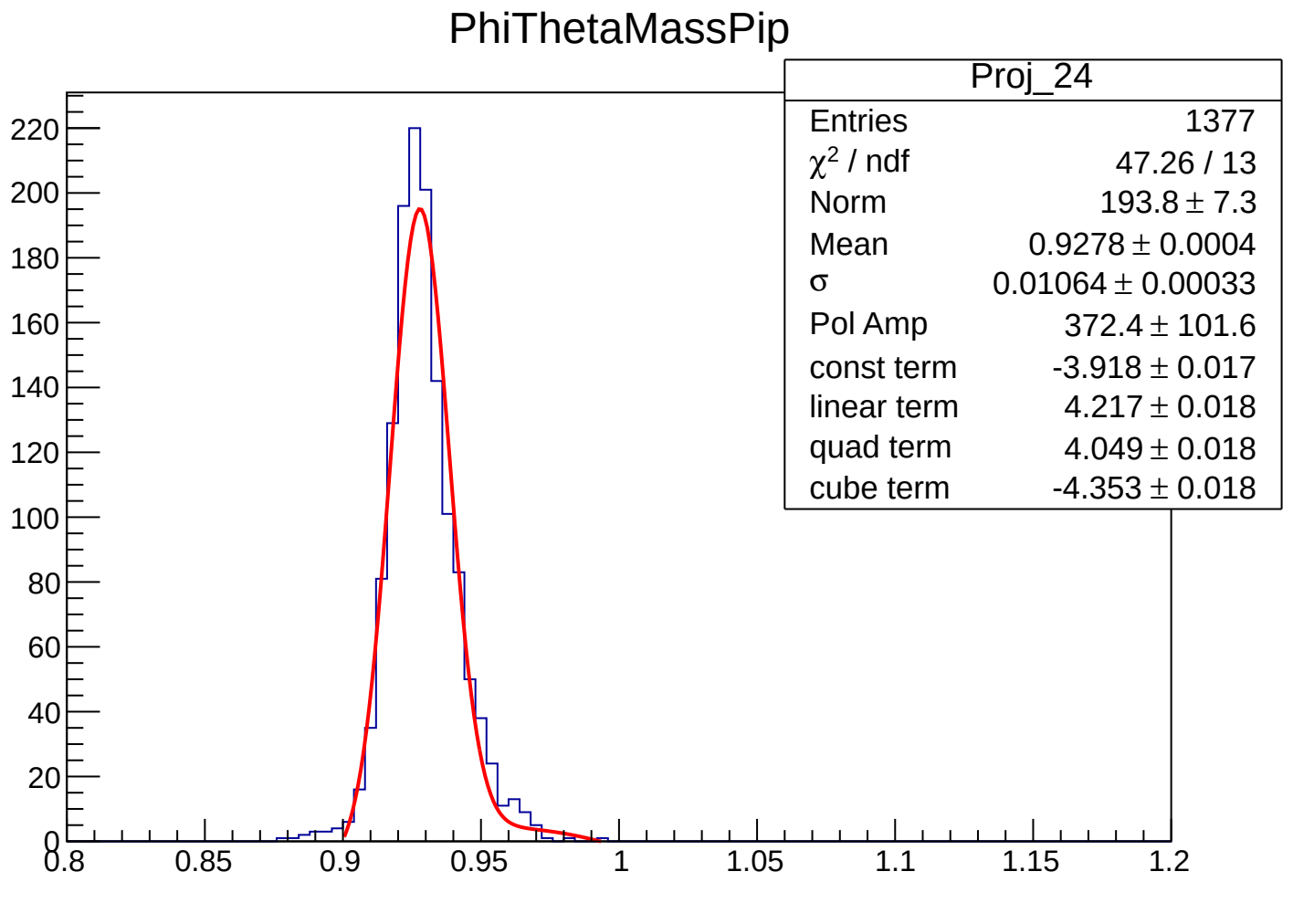

PhiThetaMassPip
Proj_123
Entries 634
χ² / ndf 13.83 / 12
Norm 69.95 ± 3.86
Mean 0.9352 ± 0.0007
σ 0.01316 ± 0.00073
Pol Amp 361.6 ± 0.7
const term -1.573 ± 0.207
linear term 1.701 ± 0.201
quad term 1.68 ± 0.21
cube term -1.81 ± 0.20
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

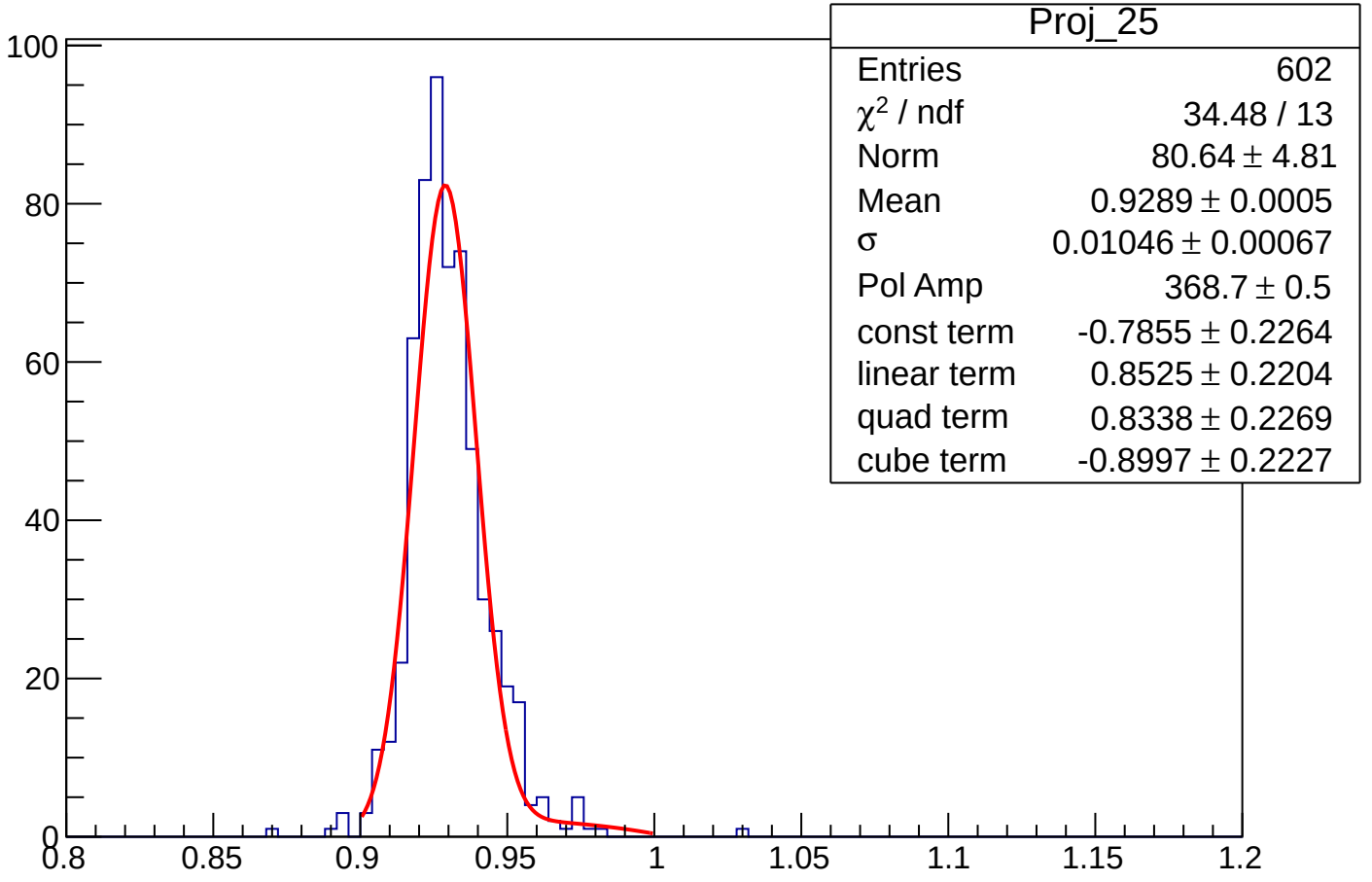

PhiThetaMassPip
Proj_20
Entries 893
χ² / ndf 32.48 / 14
Norm 119.6 ± 5.6
Mean 0.9296 ± 0.0005
σ 0.01123 ± 0.00045
Pol Amp 371.9 ± 146.1
const term -2.161 ± 0.014
linear term 2.308 ± 0.015
quad term 2.238 ± 0.015
cube term -2.387 ± 0.015
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

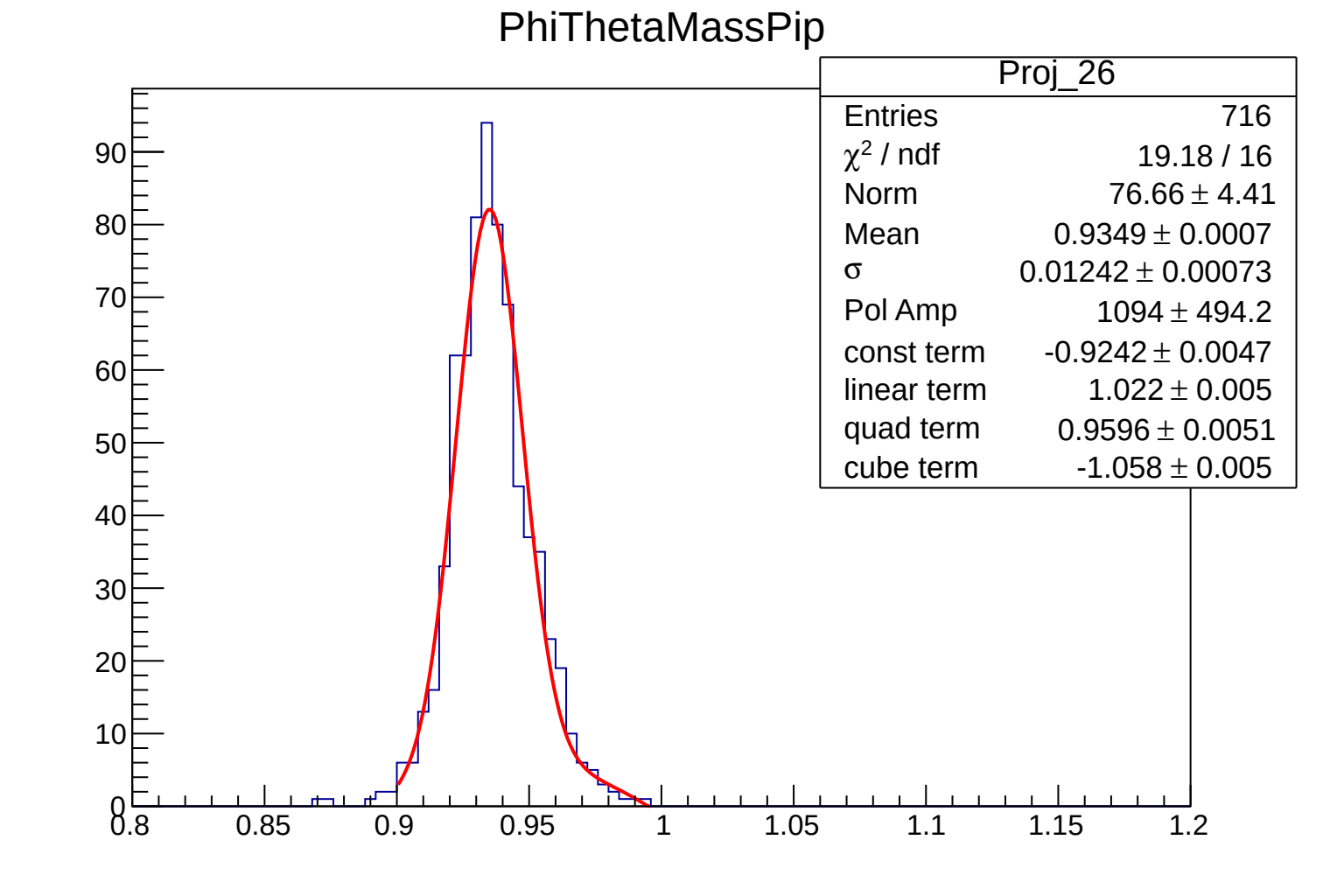

PhiThetaMassPip
Proj_21
Entries 432
χ² / ndf 37.19 / 13
Norm 55.56 ± 4.13
Mean 0.9288 ± 0.0007
σ 0.01029 ± 0.00067
Pol Amp 474.3 ± 179.4
const term -1.783 ± 0.010
linear term 1.904 ± 0.011
quad term 1.93 ± 0.01
cube term -2.055 ± 0.012
0
10
20
30
40
50
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

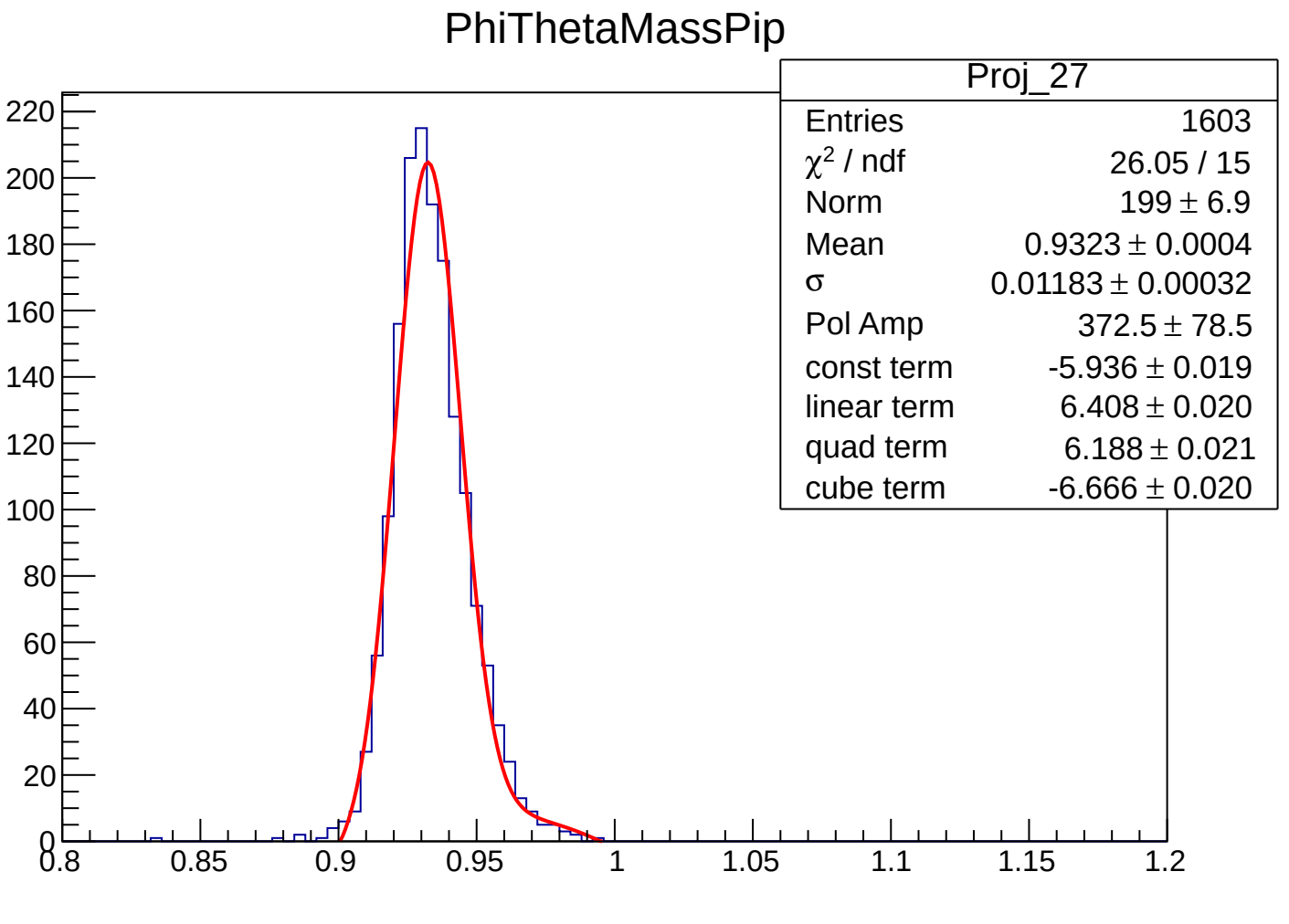

PhiThetaMassPip
Proj_22
Entries 709
χ² / ndf 14.78 / 11
Norm 91.38 ± 5.21
Mean 0.929 ± 0.001
σ 0.01064 ± 0.00050
Pol Amp 2516 ± 846.9
const term -0.9865 ± 0.0027
linear term 1.068 ± 0.003
quad term 1.079 ± 0.003
cube term -1.166 ± 0.003
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

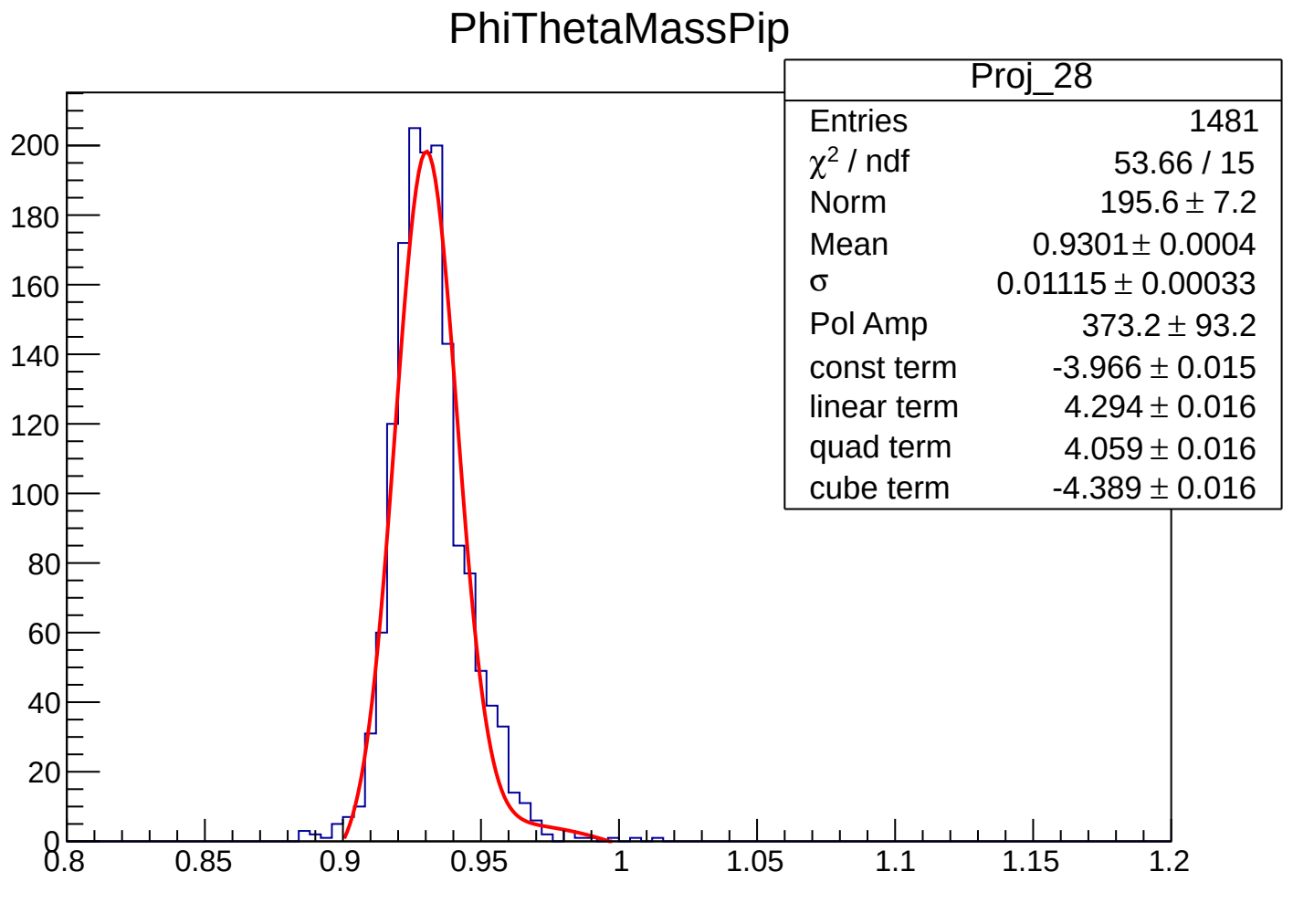

PhiThetaMassPip
Proj_23
Entries 1457
χ² / ndf 42.52 / 15
Norm 194.5 ± 7.0
Mean 0.9295 ± 0.0004
σ 0.01132 ± 0.00045
Pol Amp 372.9 ± 0.2
const term -3.714 ± 1.151
linear term 4.001 ± 1.241
quad term 3.819 ± 1.184
cube term -4.111 ± 1.278
0
20
40
60
80
100
120
140
160
180
200
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

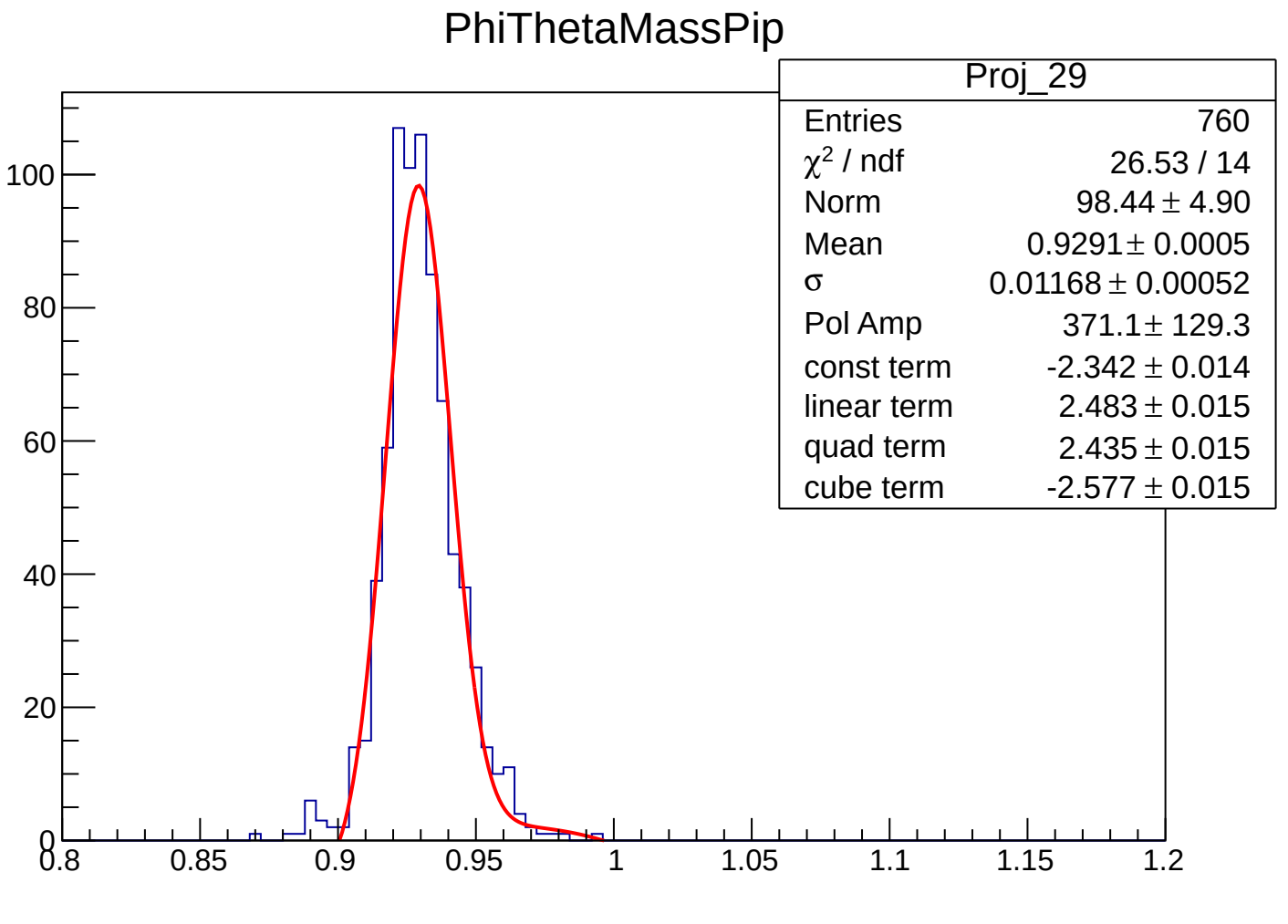

PhiThetaMassPip
Proj_24
Entries 1377
χ² / ndf 47.26 / 13
Norm 193.8 ± 7.3
Mean 0.9278 ± 0.0004
σ 0.01064 ± 0.00033
Pol Amp 372.4 ± 101.6
const term -3.918 ± 0.017
linear term 4.217 ± 0.018
quad term 4.049 ± 0.018
cube term -4.353 ± 0.018
0
20
40
60
80
100
120
140
160
180
200
220
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

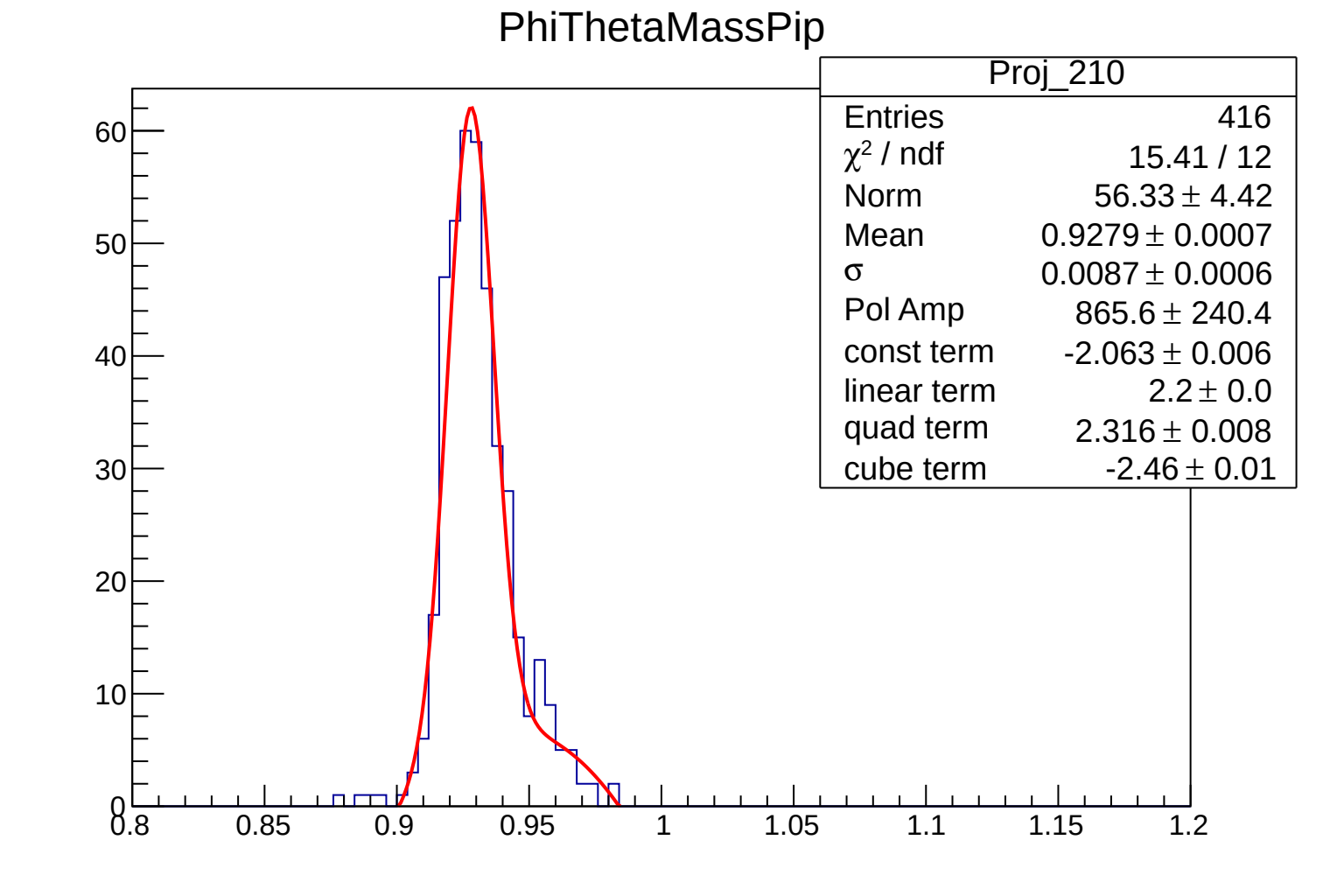

PhiThetaMassPip
Proj_25
Entries 602
χ² / ndf 34.48 / 13
Norm 80.64 ± 4.81
Mean 0.9289 ± 0.0005
σ 0.01046 ± 0.00067
Pol Amp 368.7 ± 0.5
const term -0.7855 ± 0.2264
linear term 0.8525 ± 0.2204
quad term 0.8338 ± 0.2269
cube term -0.8997 ± 0.2227
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

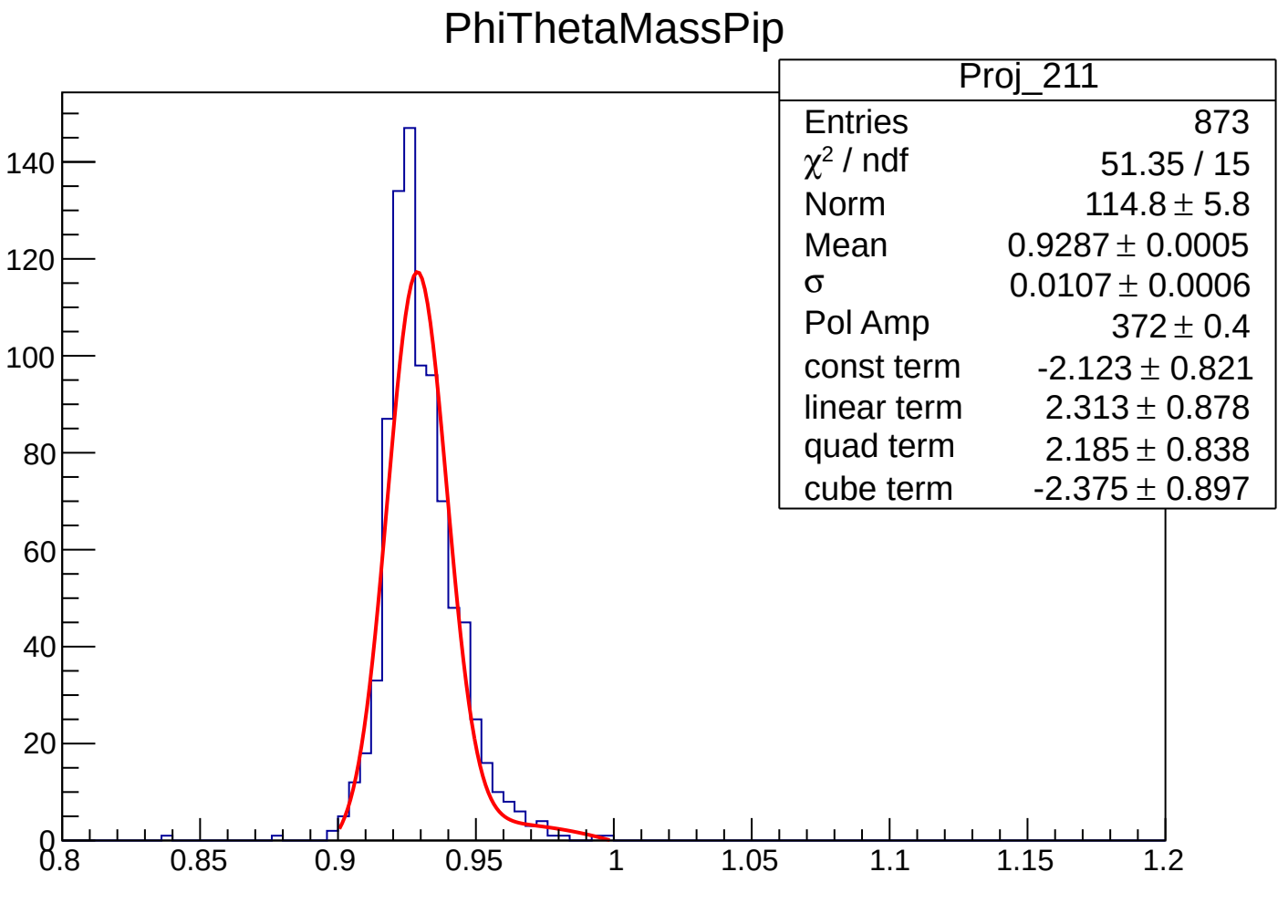

PhiThetaMassPip
Proj_26
Entries 716
χ² / ndf 19.18 / 16
Norm 76.66 ± 4.41
Mean 0.9349 ± 0.0007
σ 0.01242 ± 0.00073
Pol Amp 1094 ± 494.2
const term -0.9242 ± 0.0047
linear term 1.022 ± 0.005
quad term 0.9596 ± 0.0051
cube term -1.058 ± 0.005
0
10
20
30
40
50
60
70
80
90
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

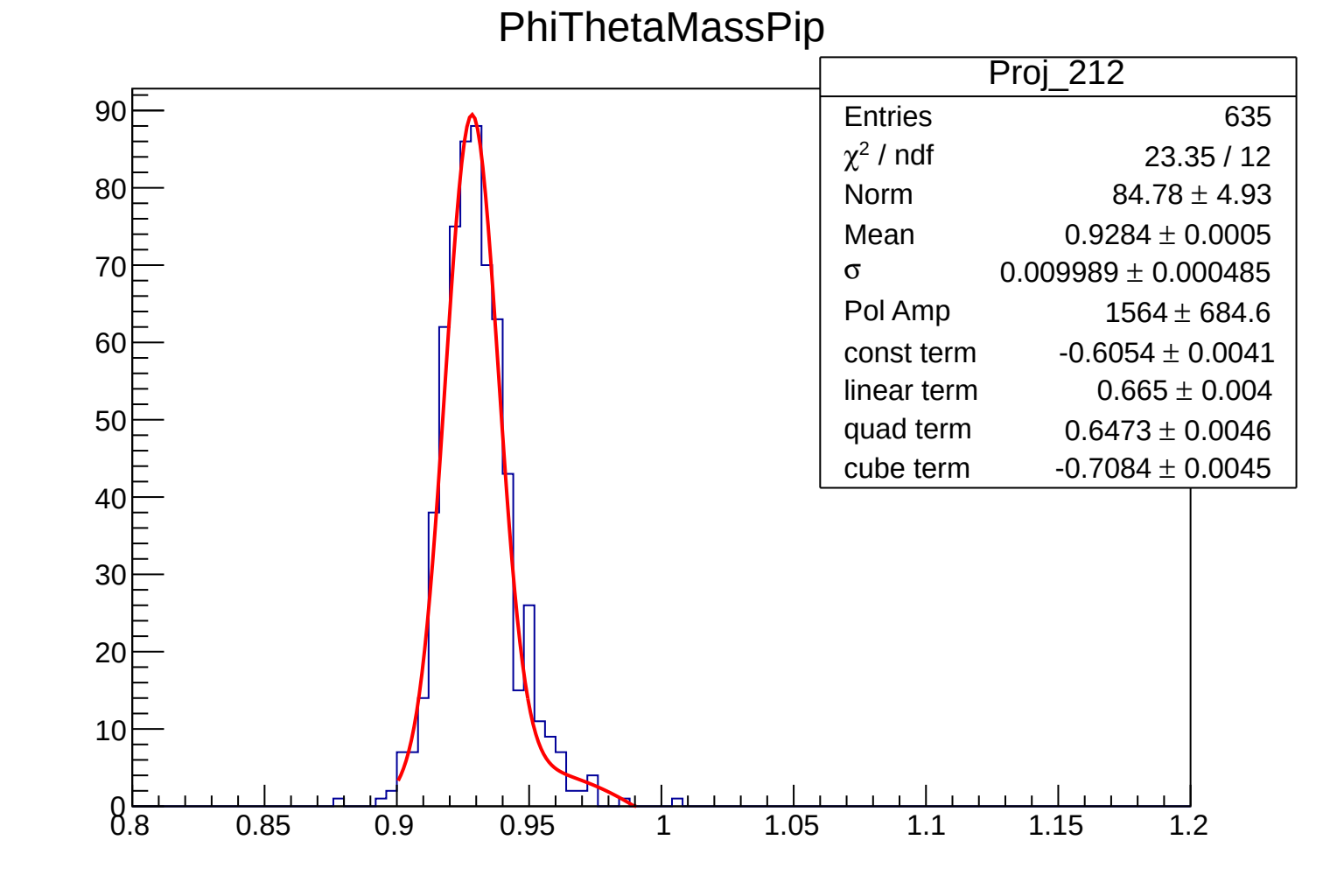

PhiThetaMassPip
Proj_27
Entries 1603
χ² / ndf 26.05 / 15
Norm 199 ± 6.9
Mean 0.9323 ± 0.0004
σ 0.01183 ± 0.00032
Pol Amp 372.5 ± 78.5
const term -5.936 ± 0.019
linear term 6.408 ± 0.020
quad term 6.188 ± 0.021
cube term -6.666 ± 0.020
220
200
180
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

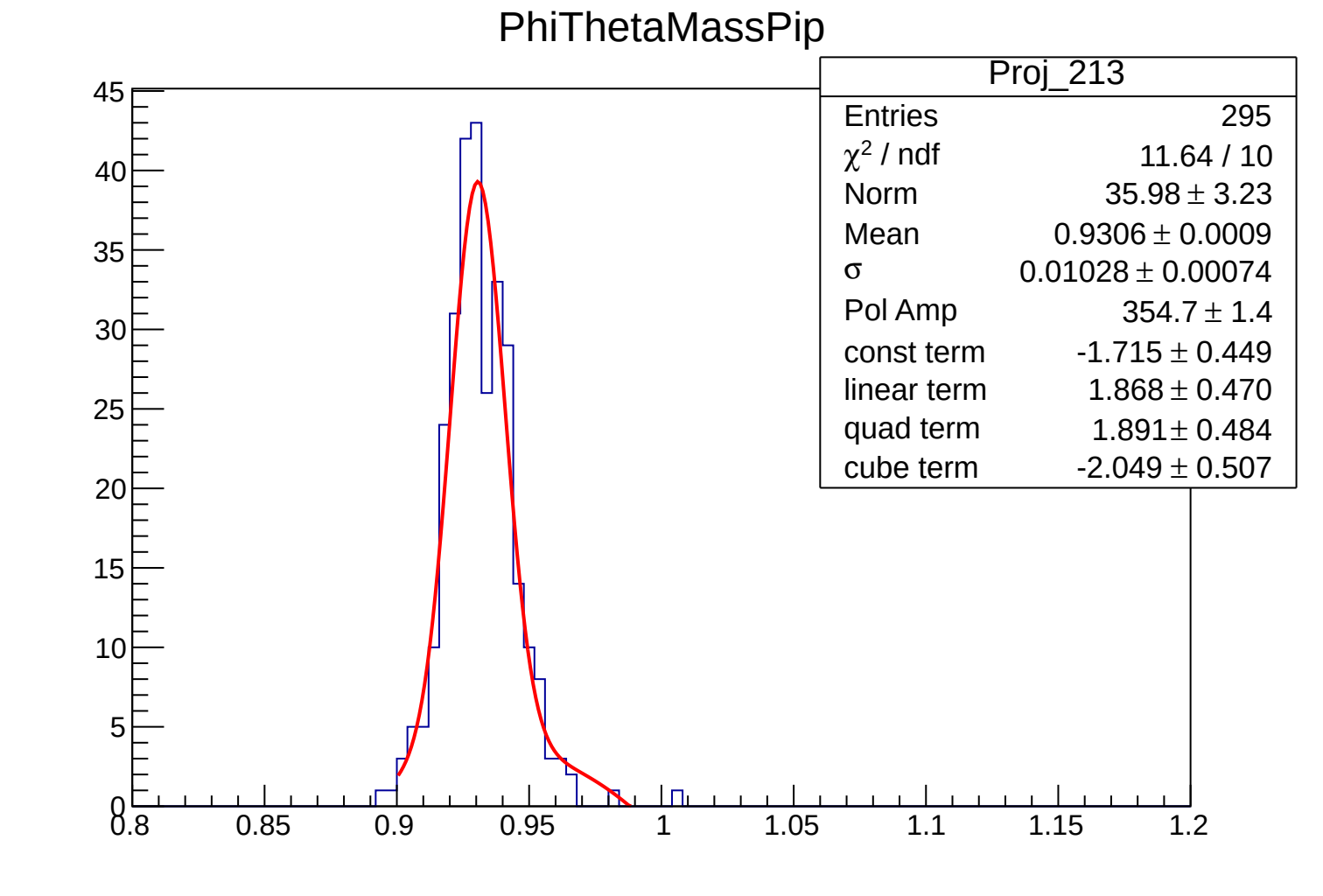

PhiThetaMassPip
Proj_28
Entries 1481
χ² / ndf 53.66 / 15
Norm 195.6 ± 7.2
Mean 0.9301 ± 0.0004
σ 0.01115 ± 0.00033
Pol Amp 373.2 ± 93.2
const term -3.966 ± 0.015
linear term 4.294 ± 0.016
quad term 4.059 ± 0.016
cube term -4.389 ± 0.016
200
180
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

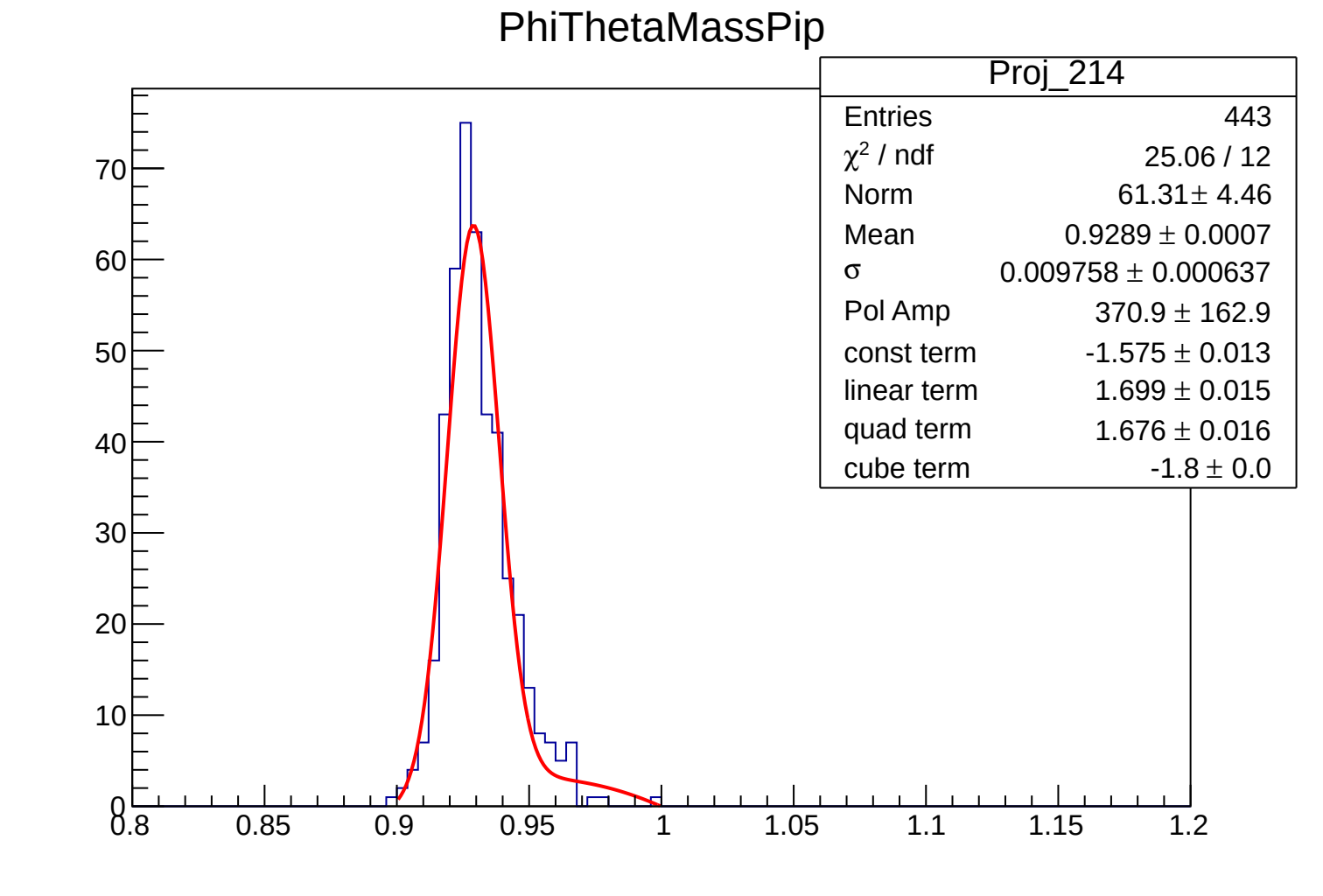

PhiThetaMassPip
Proj_29
Entries 760
χ² / ndf 26.53 / 14
Norm 98.44 ± 4.90
Mean 0.9291 ± 0.0005
σ 0.01168 ± 0.00052
Pol Amp 371.1 ± 129.3
const term -2.342 ± 0.014
linear term 2.483 ± 0.015
quad term 2.435 ± 0.015
cube term -2.577 ± 0.015
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

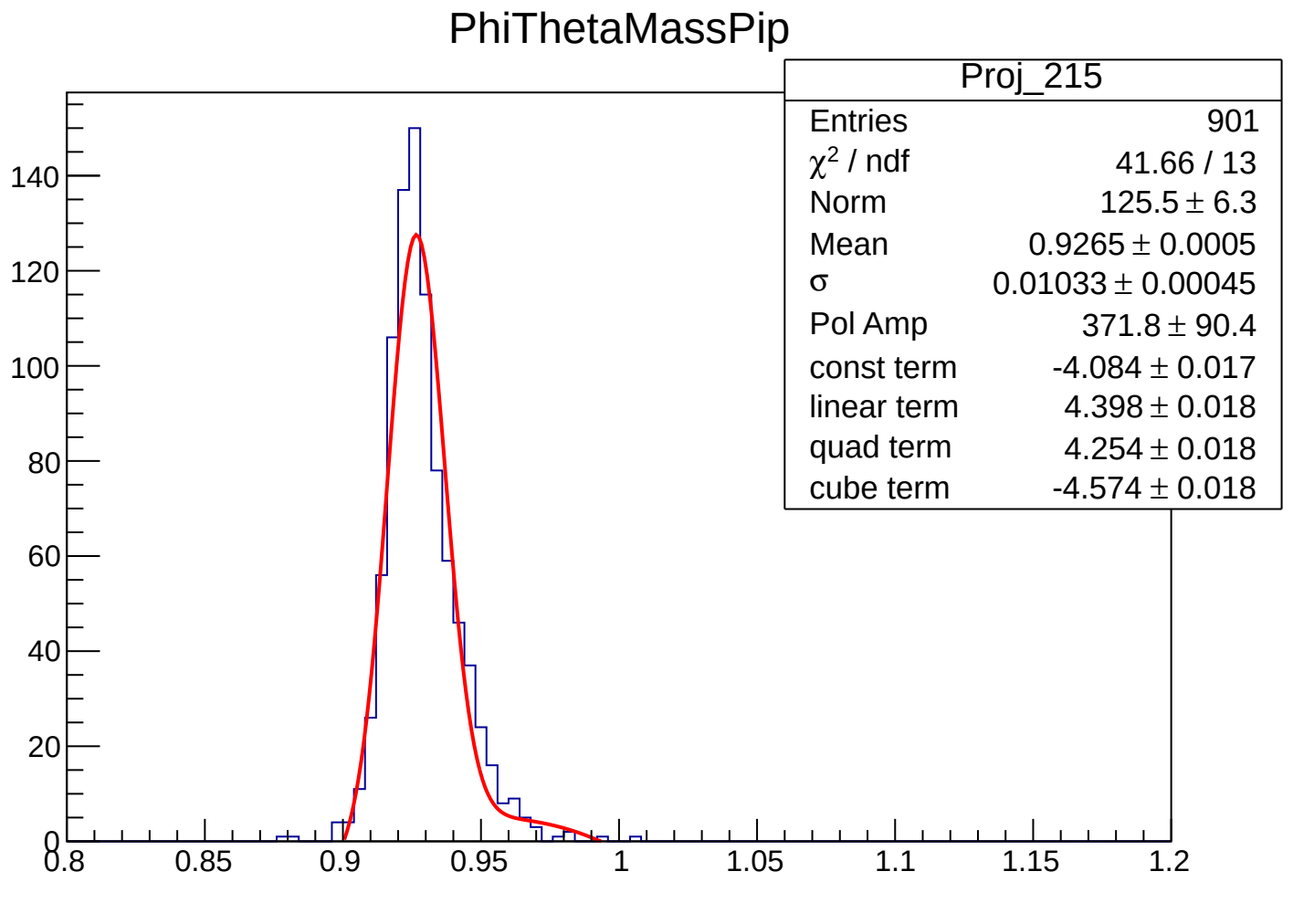

PhiThetaMassPip
Proj_210
Entries 416
χ² / ndf 15.41 / 12
Norm 56.33 ± 4.42
Mean 0.9279 ± 0.0007
σ 0.0087 ± 0.0006
Pol Amp 865.6 ± 240.4
const term -2.063 ± 0.006
linear term 2.2 ± 0.0
quad term 2.316 ± 0.008
cube term -2.46 ± 0.01
0
10
20
30
40
50
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

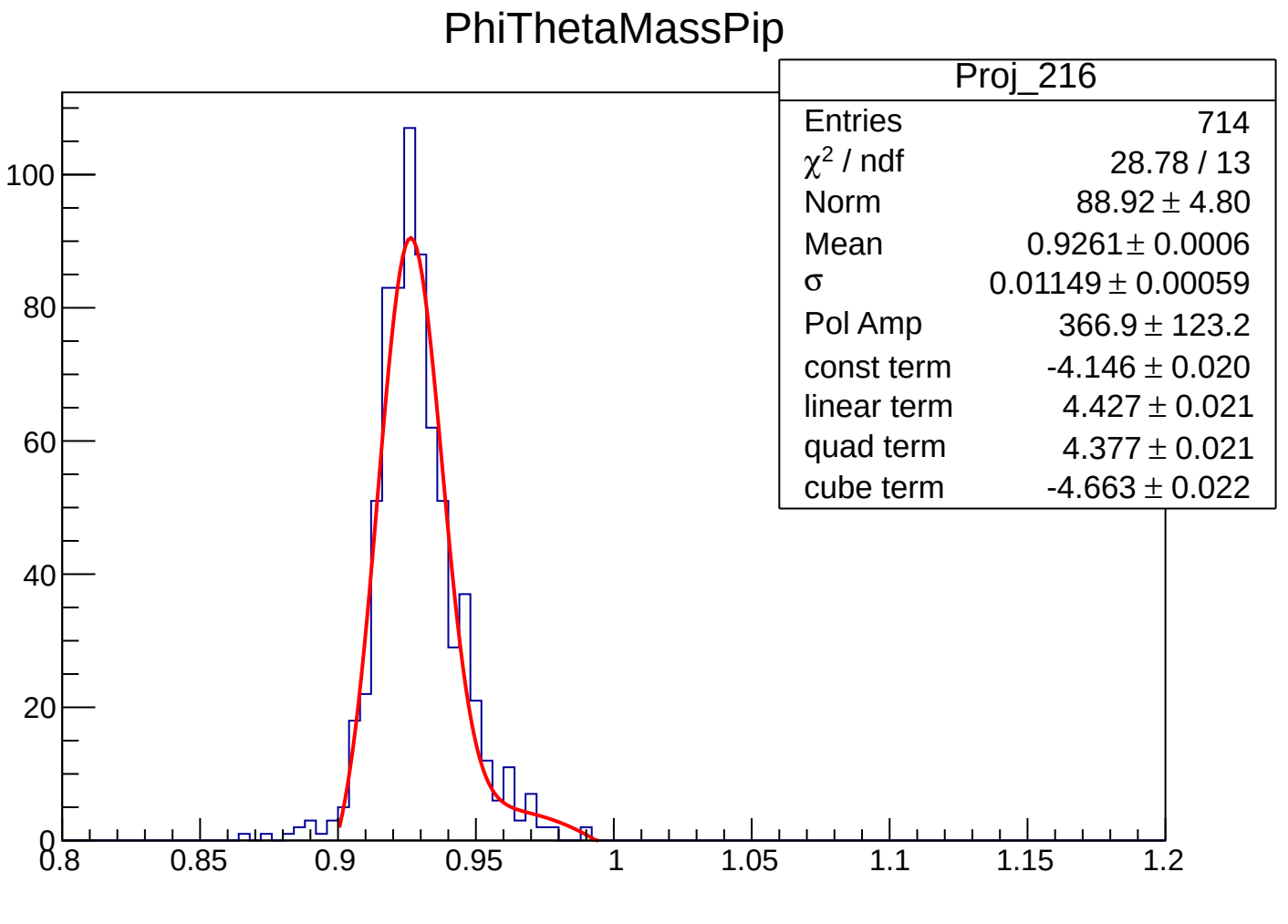

PhiThetaMassPip
Proj_211
Entries 873
χ² / ndf 51.35 / 15
Norm 114.8 ± 5.8
Mean 0.9287 ± 0.0005
σ 0.0107 ± 0.0006
Pol Amp 372 ± 0.4
const term -2.123 ± 0.821
linear term 2.313 ± 0.878
quad term 2.185 ± 0.838
cube term -2.375 ± 0.897
0
20
40
60
80
100
120
140
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

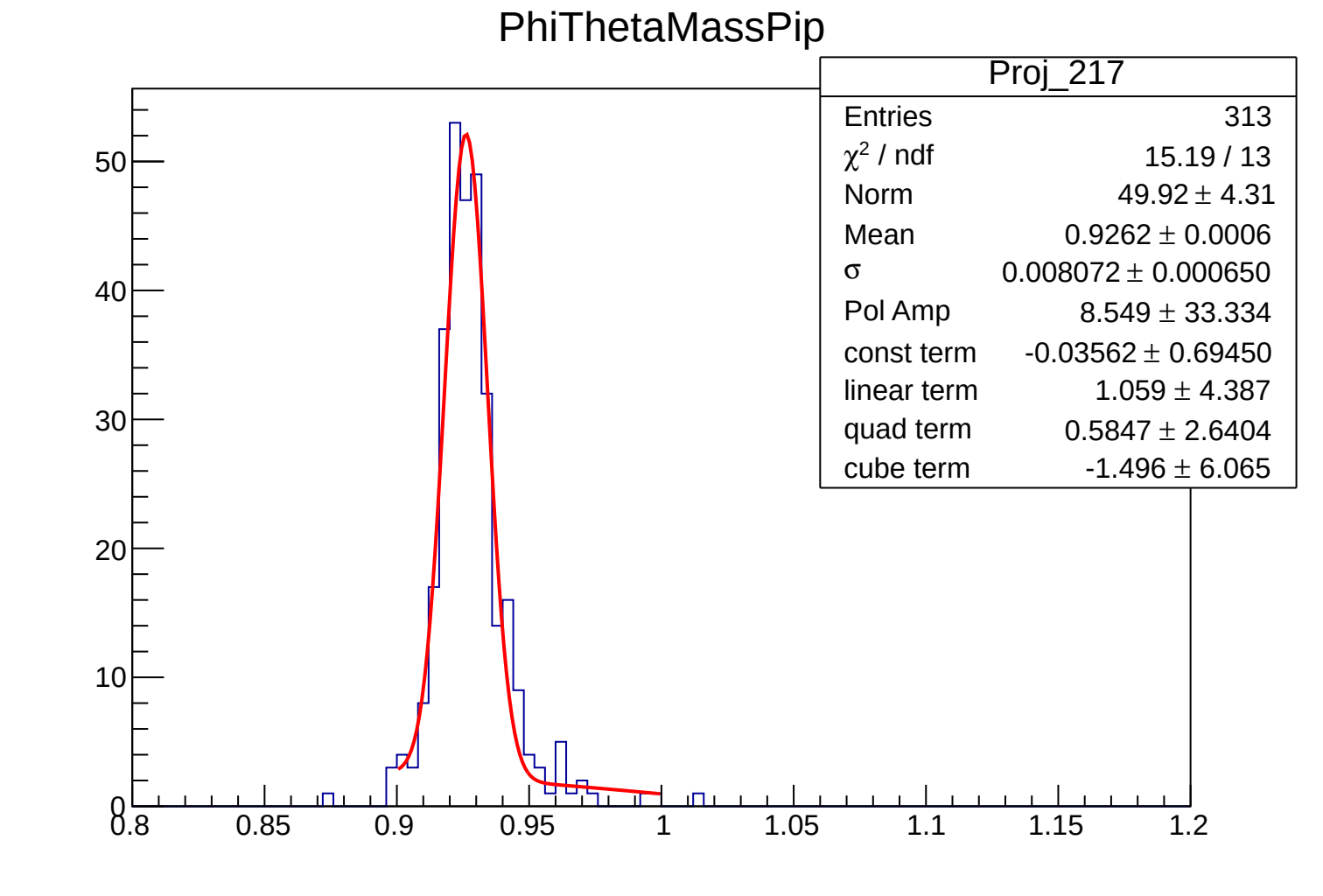

PhiThetaMassPip
Proj_212
Entries 635
χ² / ndf 23.35 / 12
Norm 84.78 ± 4.93
Mean 0.9284 ± 0.0005
σ 0.009989 ± 0.000485
Pol Amp 1564 ± 684.6
const term -0.6054 ± 0.0041
linear term 0.665 ± 0.004
quad term 0.6473 ± 0.0046
cube term -0.7084 ± 0.0045
0 10 20 30 40 50 60 70 80 90
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

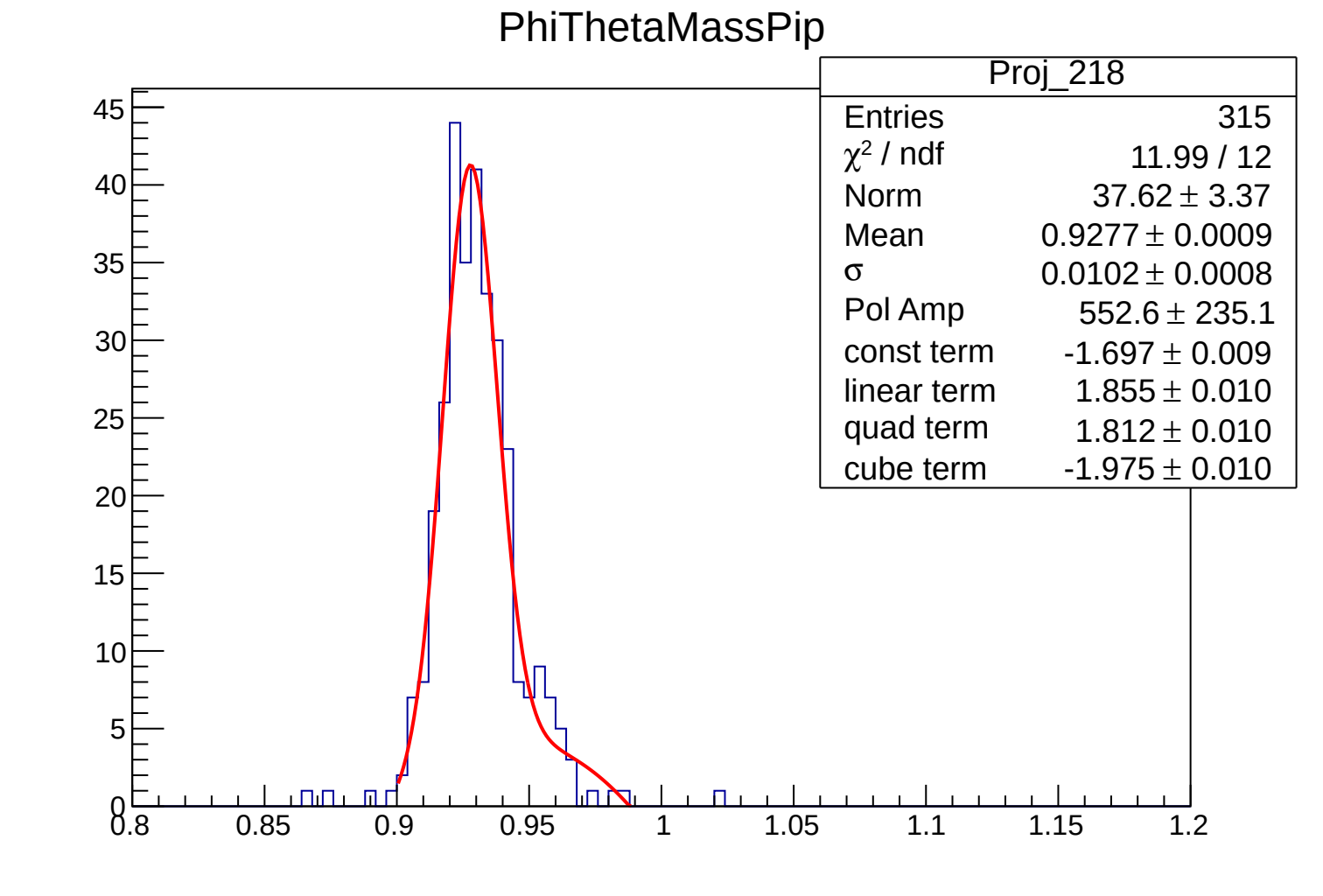

PhiThetaMassPip
Proj_213
Entries 295
χ² / ndf 11.64 / 10
Norm 35.98 ± 3.23
Mean 0.9306 ± 0.0009
σ 0.01028 ± 0.00074
Pol Amp 354.7 ± 1.4
const term -1.715 ± 0.449
linear term 1.868 ± 0.470
quad term 1.891 ± 0.484
cube term -2.049 ± 0.507
45
40
35
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

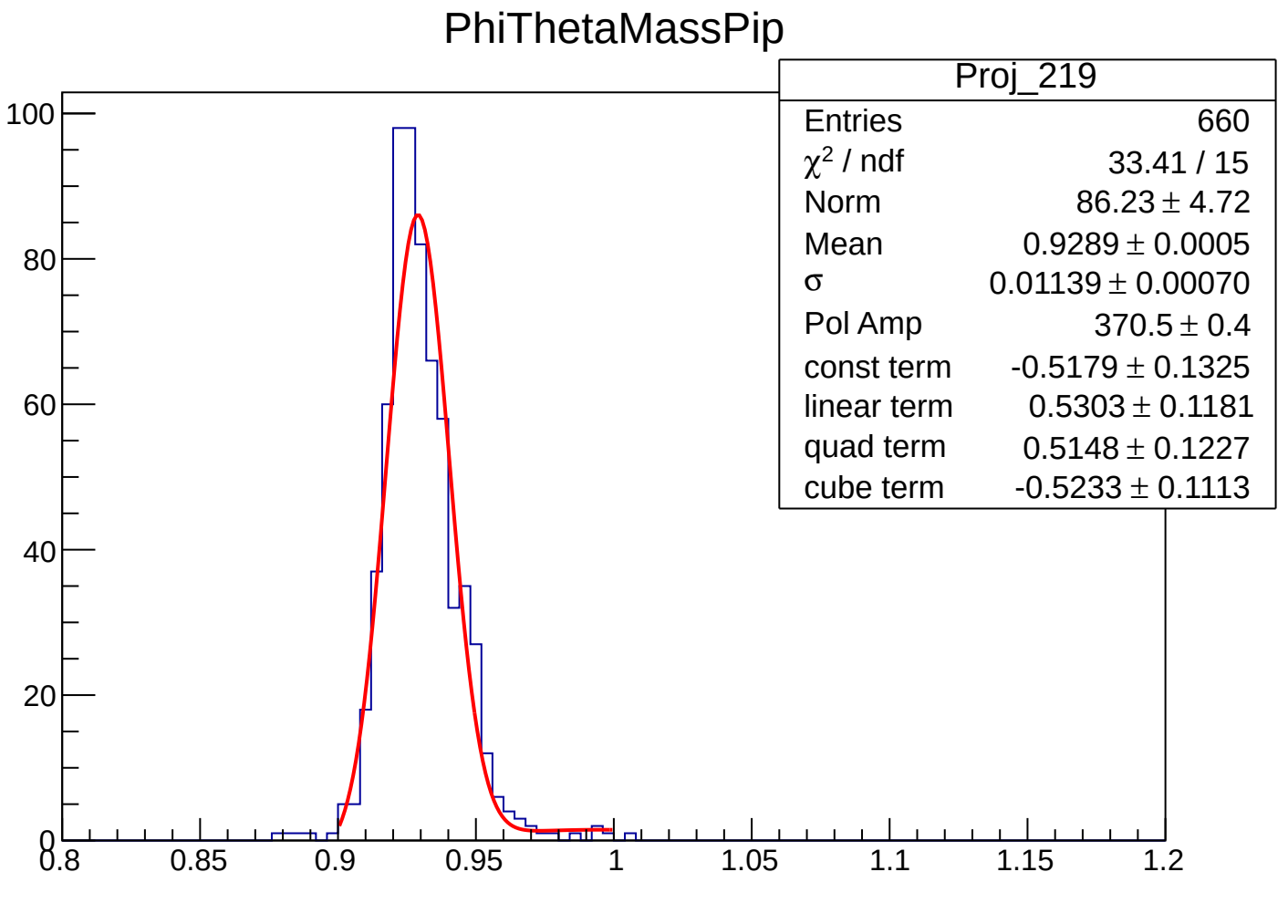

PhiThetaMassPip
Proj_214
Entries 443
χ² / ndf 25.06 / 12
Norm 61.31 ± 4.46
Mean 0.9289 ± 0.0007
σ 0.009758 ± 0.000637
Pol Amp 370.9 ± 162.9
const term -1.575 ± 0.013
linear term 1.699 ± 0.015
quad term 1.676 ± 0.016
cube term -1.8 ± 0.0
0
10
20
30
40
50
60
70
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

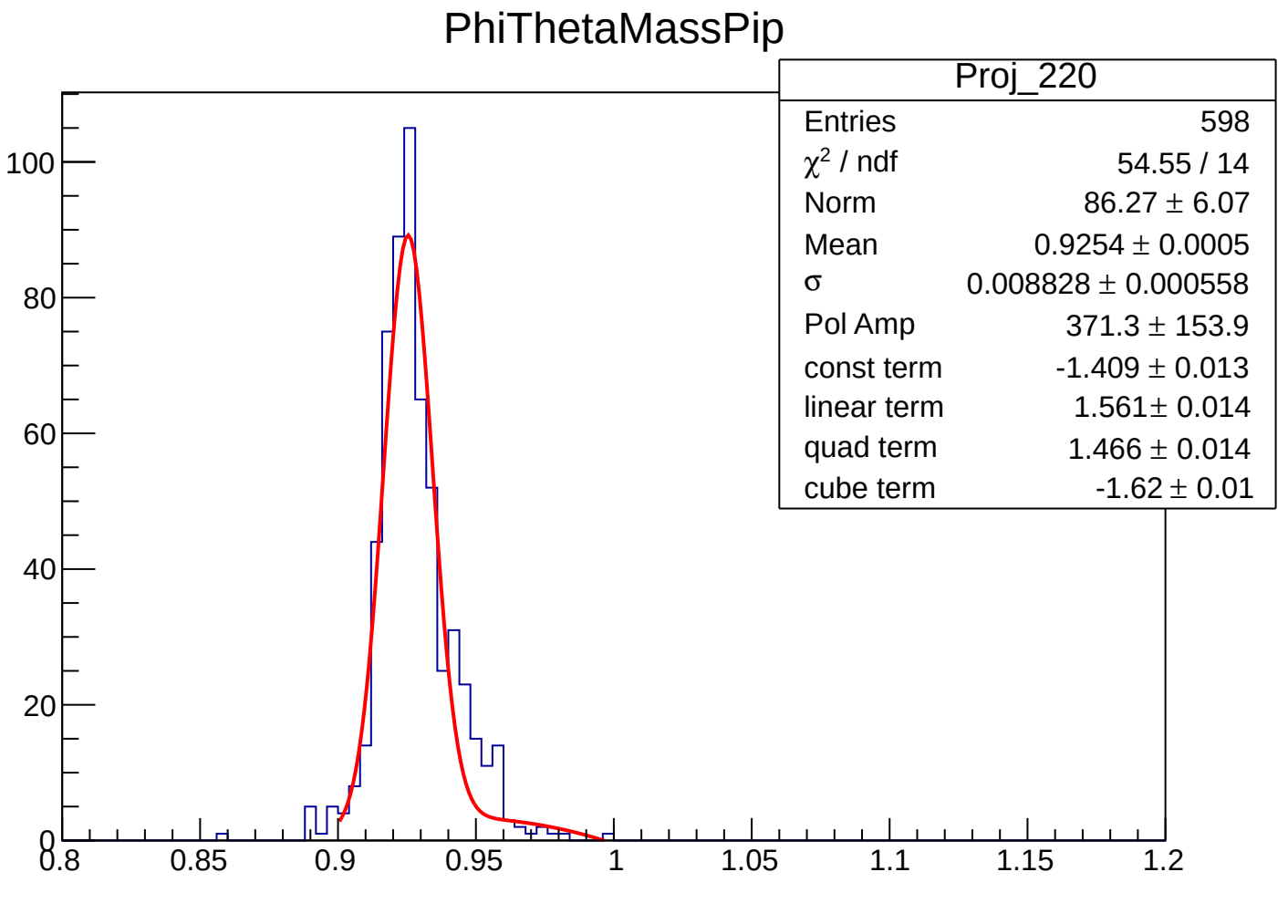

PhiThetaMassPip
Proj_215
Entries 901
χ² / ndf 41.66 / 13
Norm 125.5 ± 6.3
Mean 0.9265 ± 0.0005
σ 0.01033 ± 0.00045
Pol Amp 371.8 ± 90.4
const term -4.084 ± 0.017
linear term 4.398 ± 0.018
quad term 4.254 ± 0.018
cube term -4.574 ± 0.018
0
20
40
60
80
100
120
140
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

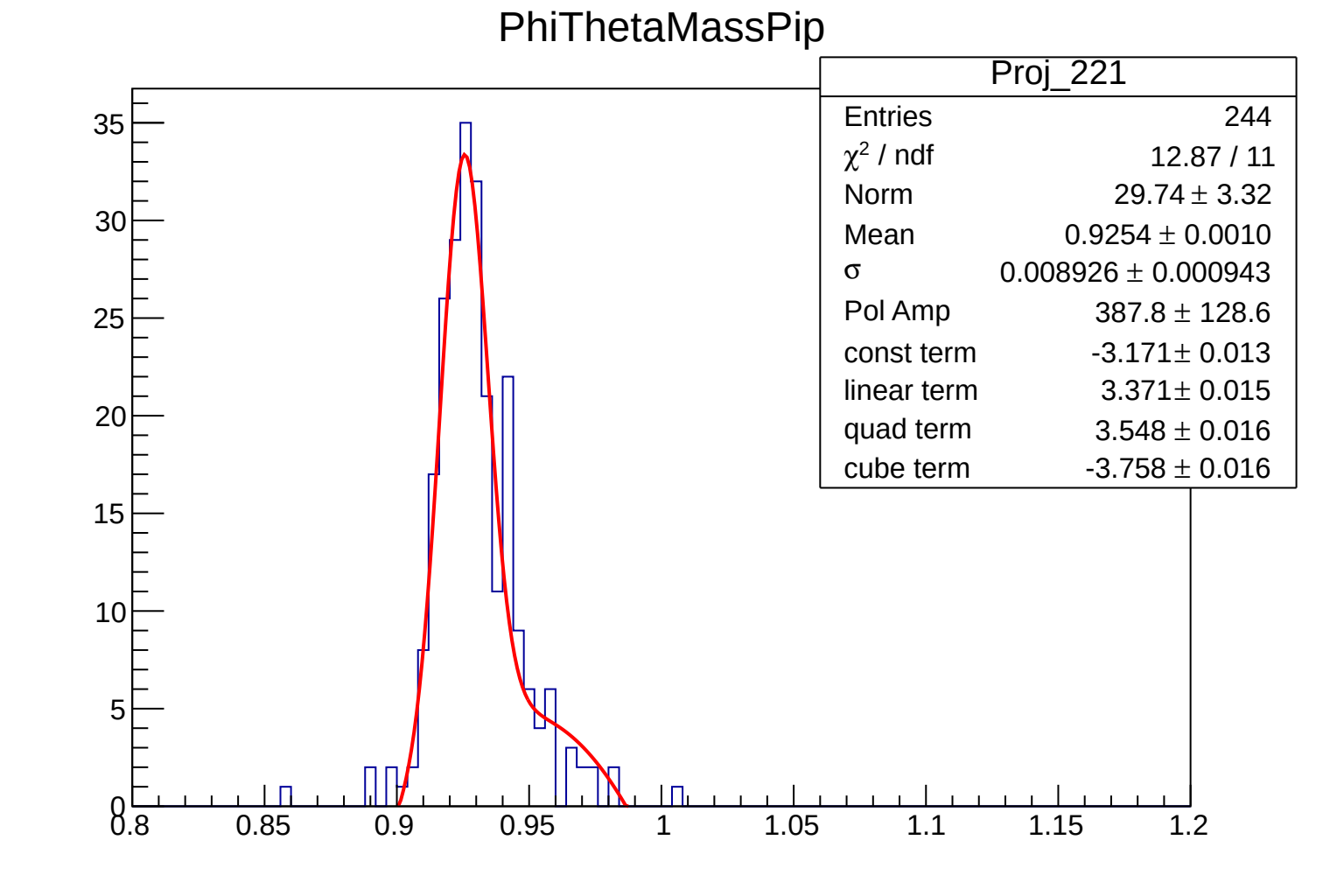

PhiThetaMassPip
Proj_216
Entries 714
χ² / ndf 28.78 / 13
Norm 88.92 ± 4.80
Mean 0.9261 ± 0.0006
σ 0.01149 ± 0.00059
Pol Amp 366.9 ± 123.2
const term -4.146 ± 0.020
linear term 4.427 ± 0.021
quad term 4.377 ± 0.021
cube term -4.663 ± 0.022
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

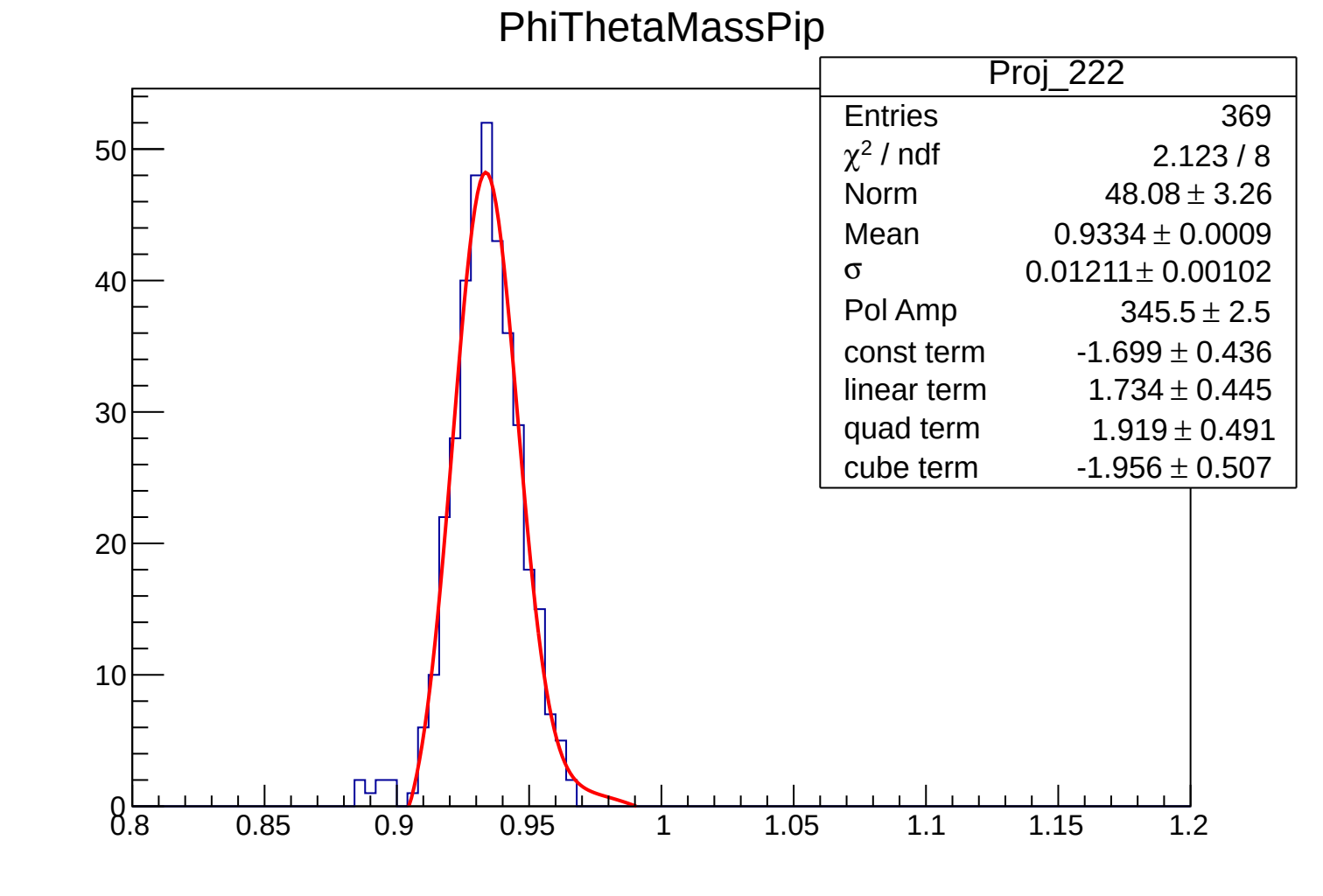

PhiThetaMassPip
Proj_217
Entries 313
χ² / ndf 15.19 / 13
Norm 49.92 ± 4.31
Mean 0.9262 ± 0.0006
σ 0.008072 ± 0.000650
Pol Amp 8.549 ± 33.334
const term -0.03562 ± 0.69450
linear term 1.059 ± 4.387
quad term 0.5847 ± 2.6404
cube term -1.496 ± 6.065
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

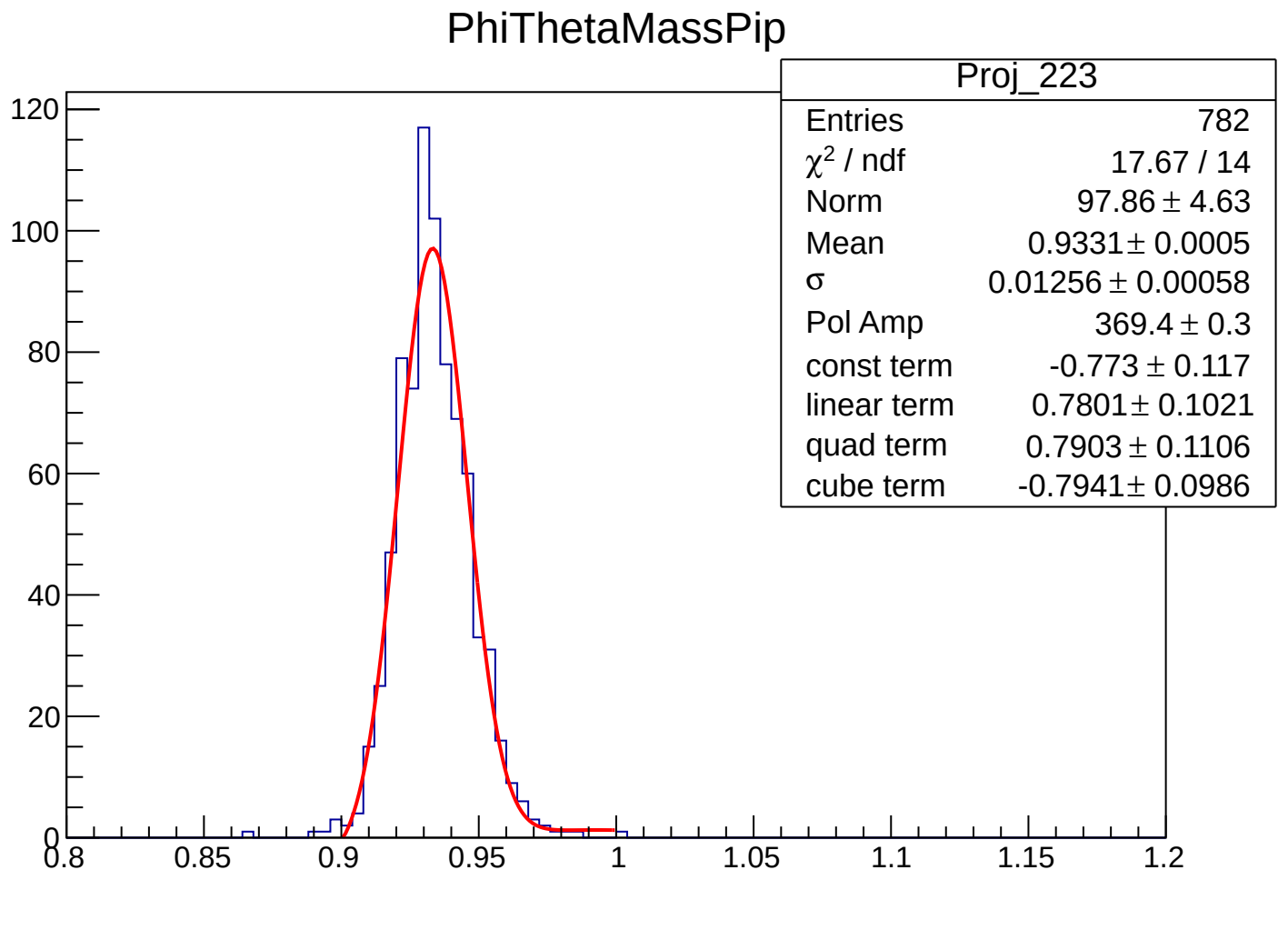

PhiThetaMassPip
Proj_218
Entries 315
χ² / ndf 11.99 / 12
Norm 37.62 ± 3.37
Mean 0.9277 ± 0.0009
σ 0.0102 ± 0.0008
Pol Amp 552.6 ± 235.1
const term -1.697 ± 0.009
linear term 1.855 ± 0.010
quad term 1.812 ± 0.010
cube term -1.975 ± 0.010
0 5 10 15 20 25 30 35 40 45
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

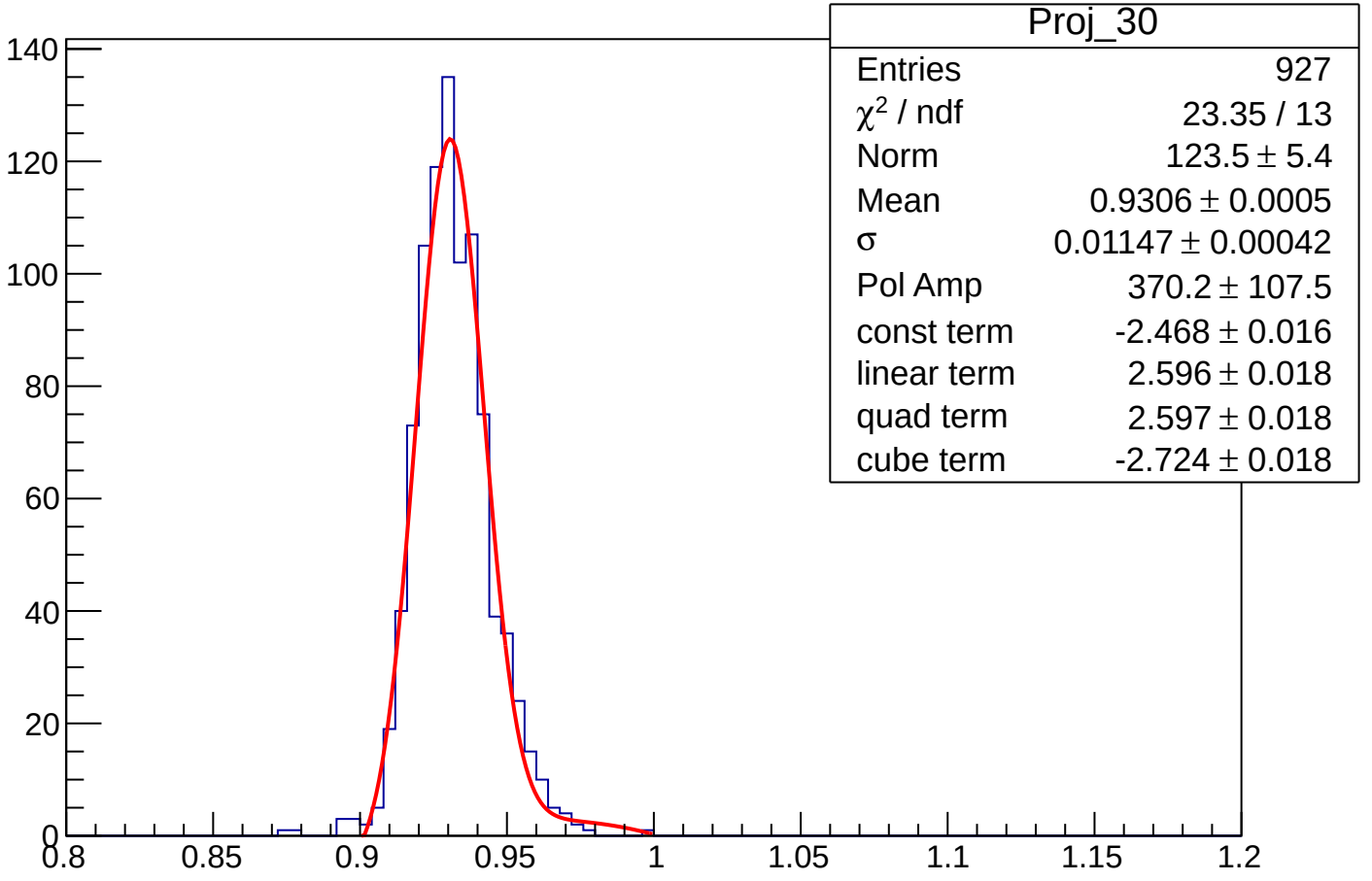

PhiThetaMassPip
Proj_219
Entries 660
χ² / ndf 33.41 / 15
Norm 86.23 ± 4.72
Mean 0.9289 ± 0.0005
σ 0.01139 ± 0.00070
Pol Amp 370.5 ± 0.4
const term -0.5179 ± 0.1325
linear term 0.5303 ± 0.1181
quad term 0.5148 ± 0.1227
cube term -0.5233 ± 0.1113
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

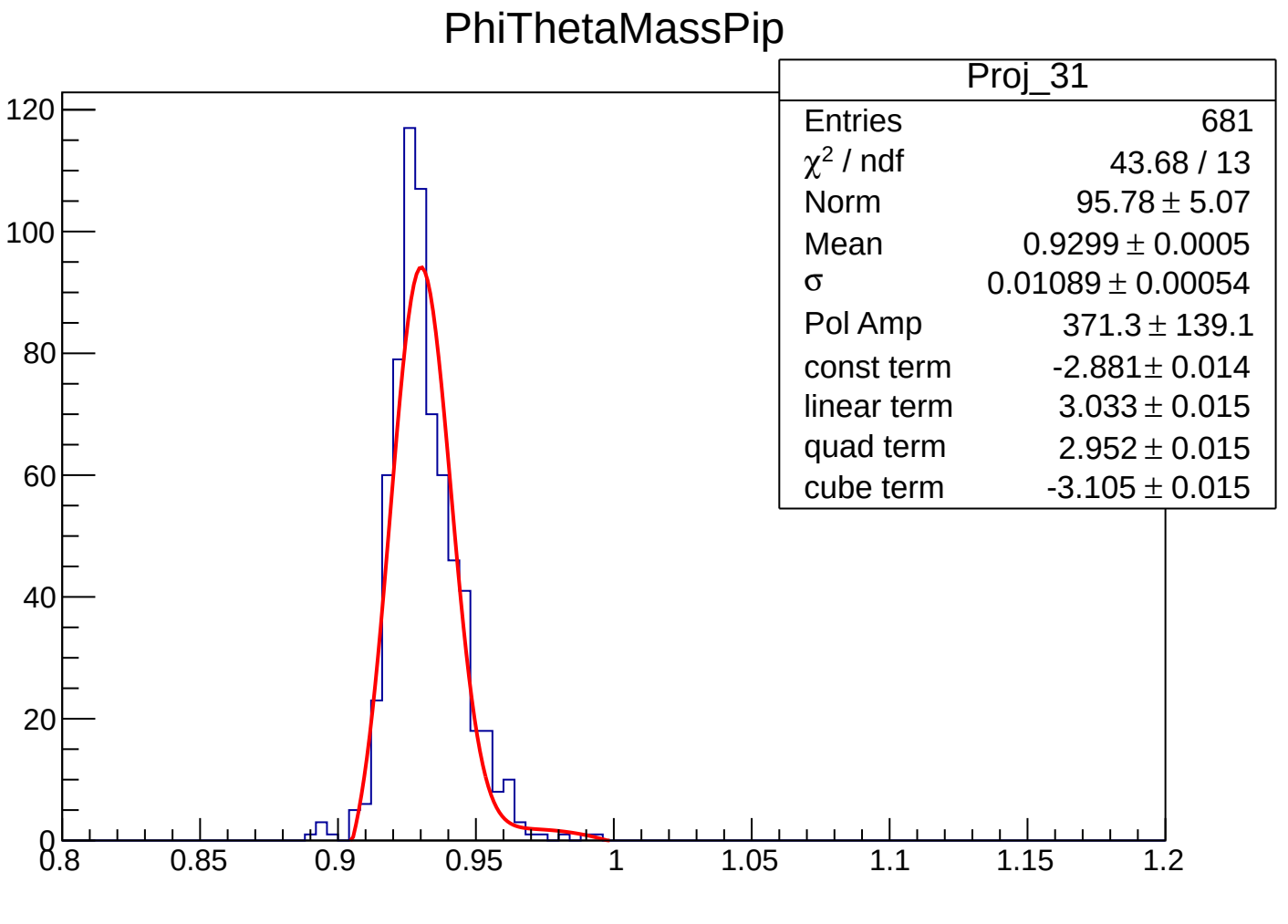

PhiThetaMassPip
Proj_220
Entries 598
χ² / ndf 54.55 / 14
Norm 86.27 ± 6.07
Mean 0.9254 ± 0.0005
σ 0.008828 ± 0.000558
Pol Amp 371.3 ± 153.9
const term -1.409 ± 0.013
linear term 1.561± 0.014
quad term 1.466 ± 0.014
cube term -1.62 ± 0.01
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

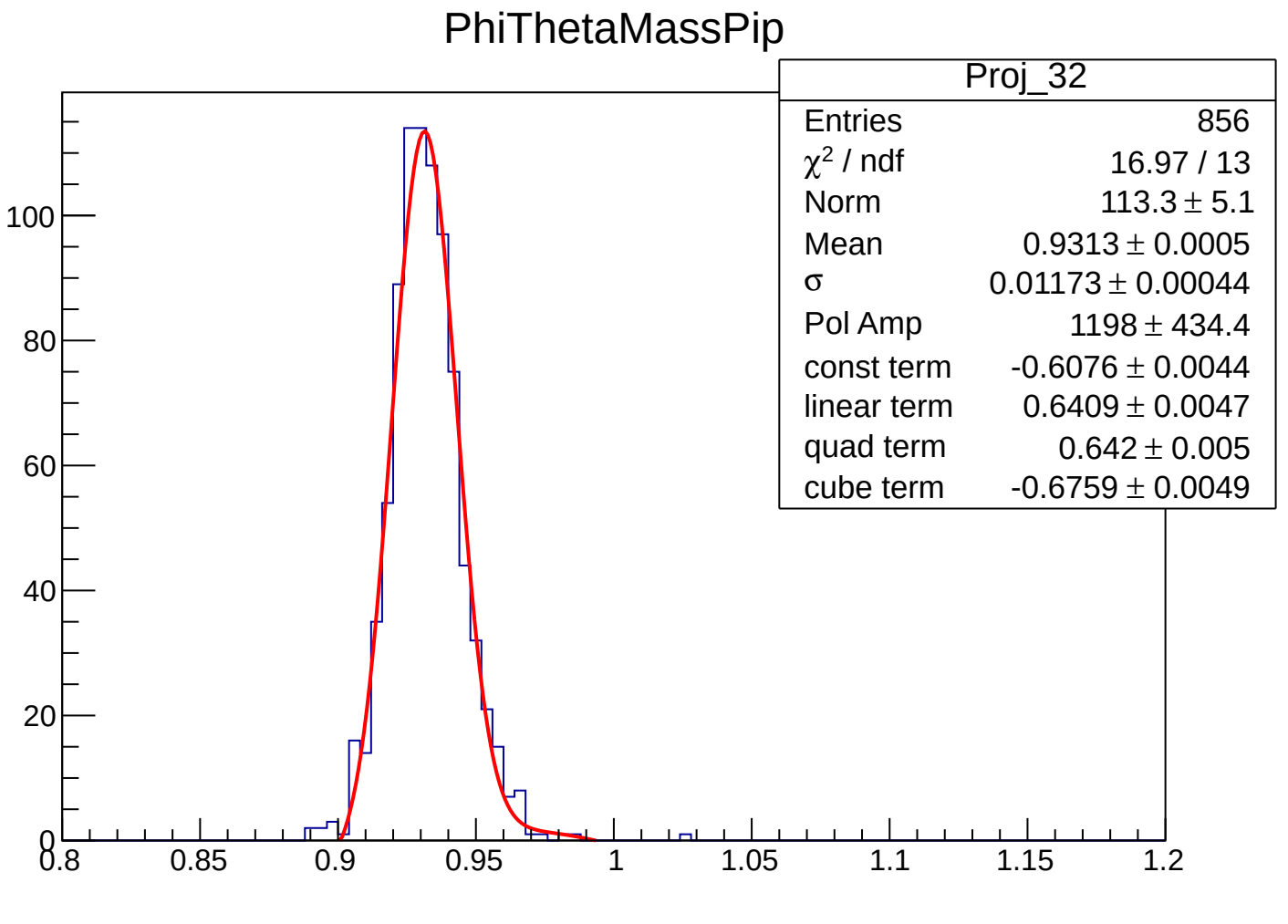

PhiThetaMassPip
Proj_221
Entries 244
χ² / ndf 12.87 / 11
Norm 29.74 ± 3.32
Mean 0.9254 ± 0.0010
σ 0.008926 ± 0.000943
Pol Amp 387.8 ± 128.6
const term -3.171± 0.013
linear term 3.371± 0.015
quad term 3.548 ± 0.016
cube term -3.758 ± 0.016
35
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

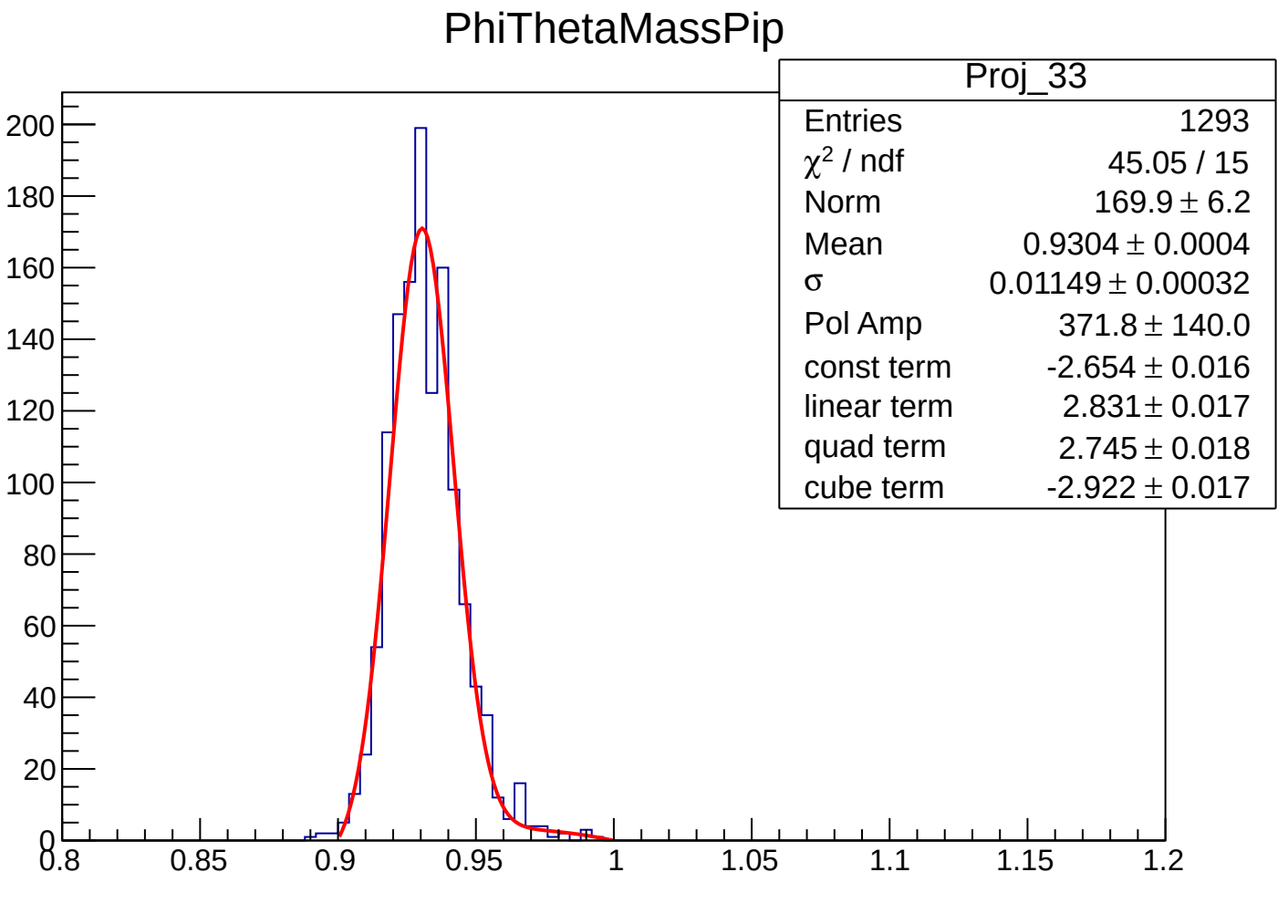

PhiThetaMassPip
Proj_222
Entries 369
χ² / ndf 2.123 / 8
Norm 48.08 ± 3.26
Mean 0.9334 ± 0.0009
σ 0.01211 ± 0.00102
Pol Amp 345.5 ± 2.5
const term -1.699 ± 0.436
linear term 1.734 ± 0.445
quad term 1.919 ± 0.491
cube term -1.956 ± 0.507
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

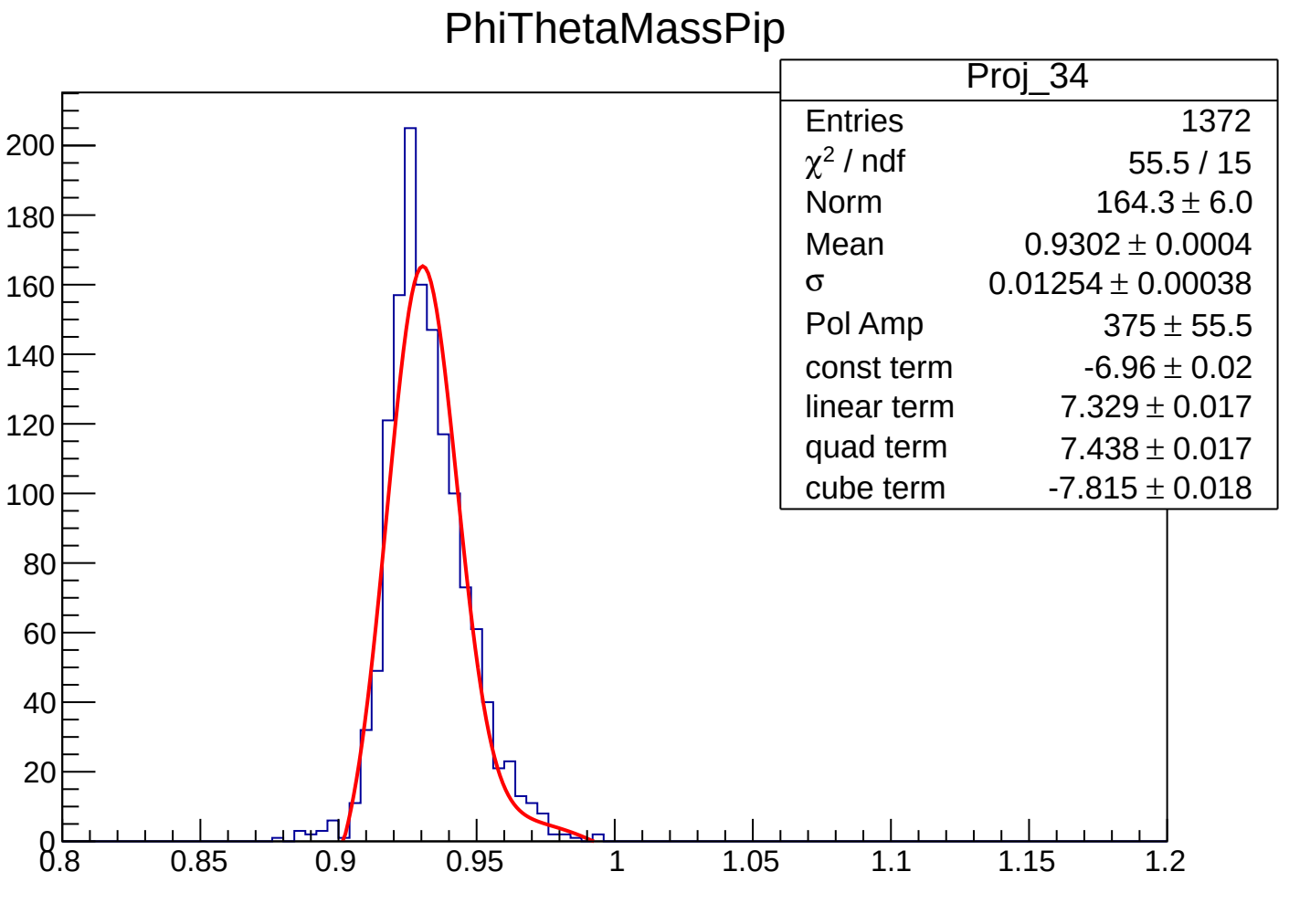

PhiThetaMassPip
Proj_223
Entries 782
χ² / ndf 17.67 / 14
Norm 97.86 ± 4.63
Mean 0.9331 ± 0.0005
σ 0.01256 ± 0.00058
Pol Amp 369.4 ± 0.3
const term -0.773 ± 0.117
linear term 0.7801 ± 0.1021
quad term 0.7903 ± 0.1106
cube term -0.7941 ± 0.0986
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

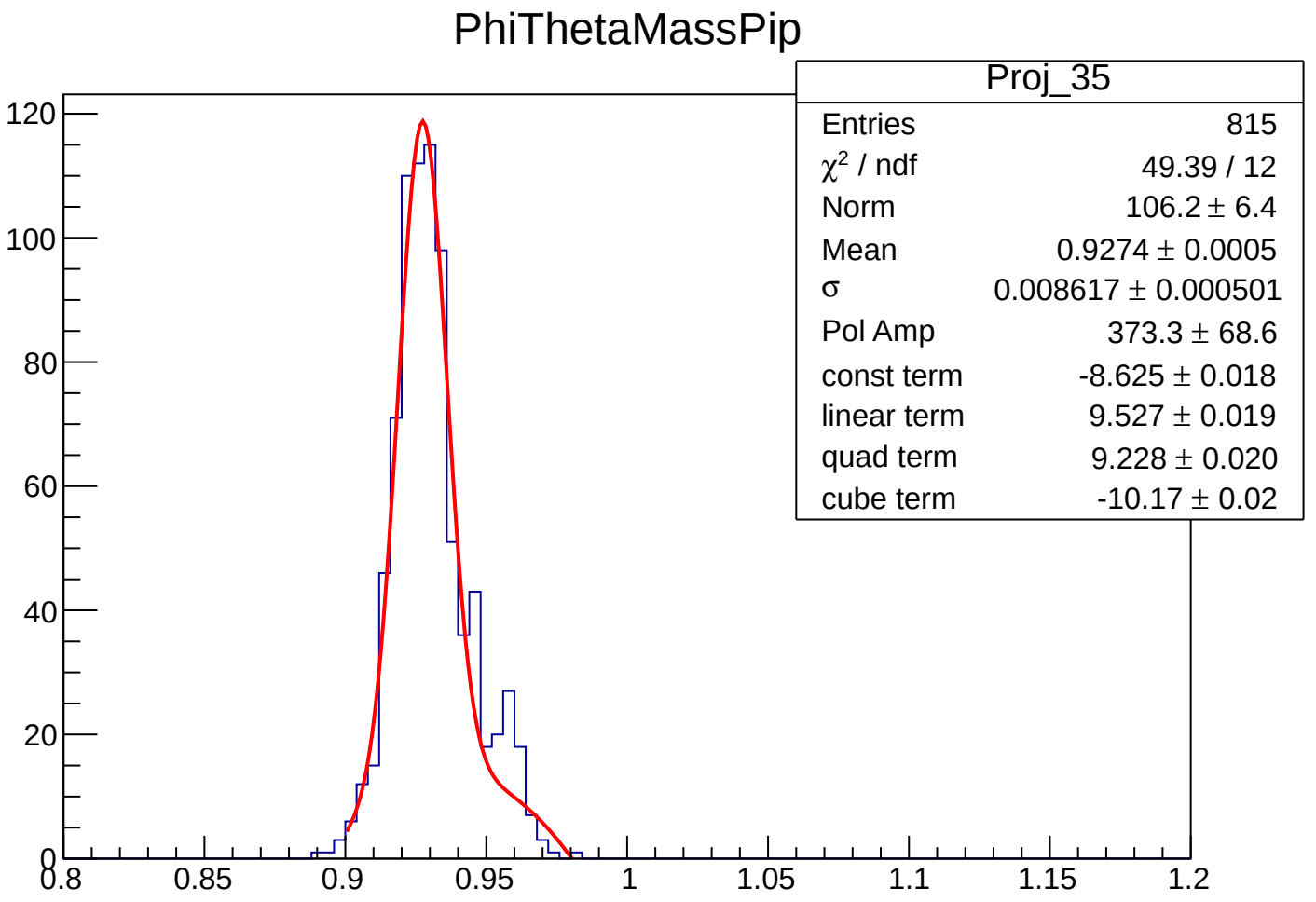

PhiThetaMassPip
Proj_30
Entries 927
χ² / ndf 23.35 / 13
Norm 123.5 ± 5.4
Mean 0.9306 ± 0.0005
σ 0.01147 ± 0.00042
Pol Amp 370.2 ± 107.5
const term -2.468 ± 0.016
linear term 2.596 ± 0.018
quad term 2.597 ± 0.018
cube term -2.724 ± 0.018
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

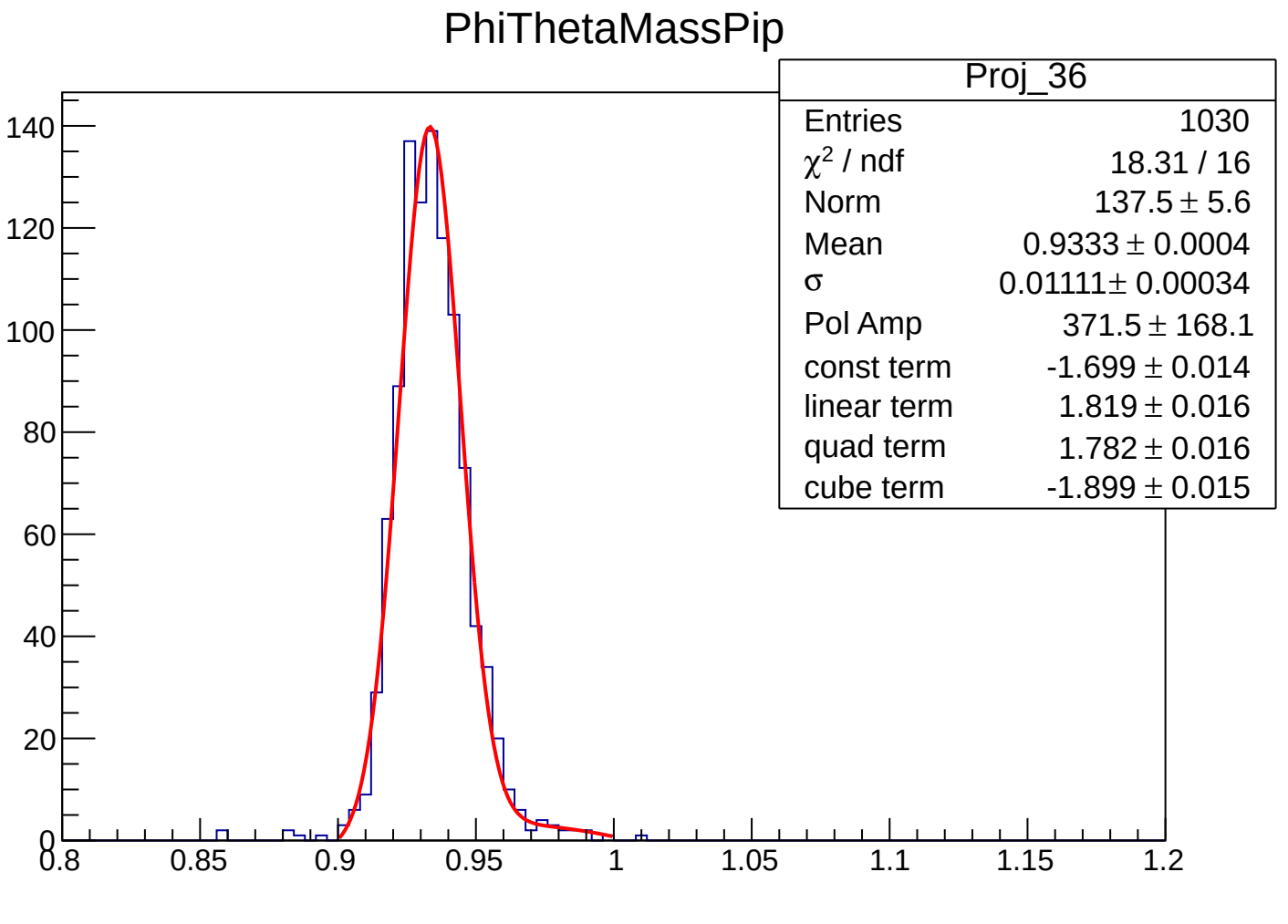

PhiThetaMassPip
Proj_31
Entries 681
χ² / ndf 43.68 / 13
Norm 95.78 ± 5.07
Mean 0.9299 ± 0.0005
σ 0.01089 ± 0.00054
Pol Amp 371.3 ± 139.1
const term -2.881 ± 0.014
linear term 3.033 ± 0.015
quad term 2.952 ± 0.015
cube term -3.105 ± 0.015
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

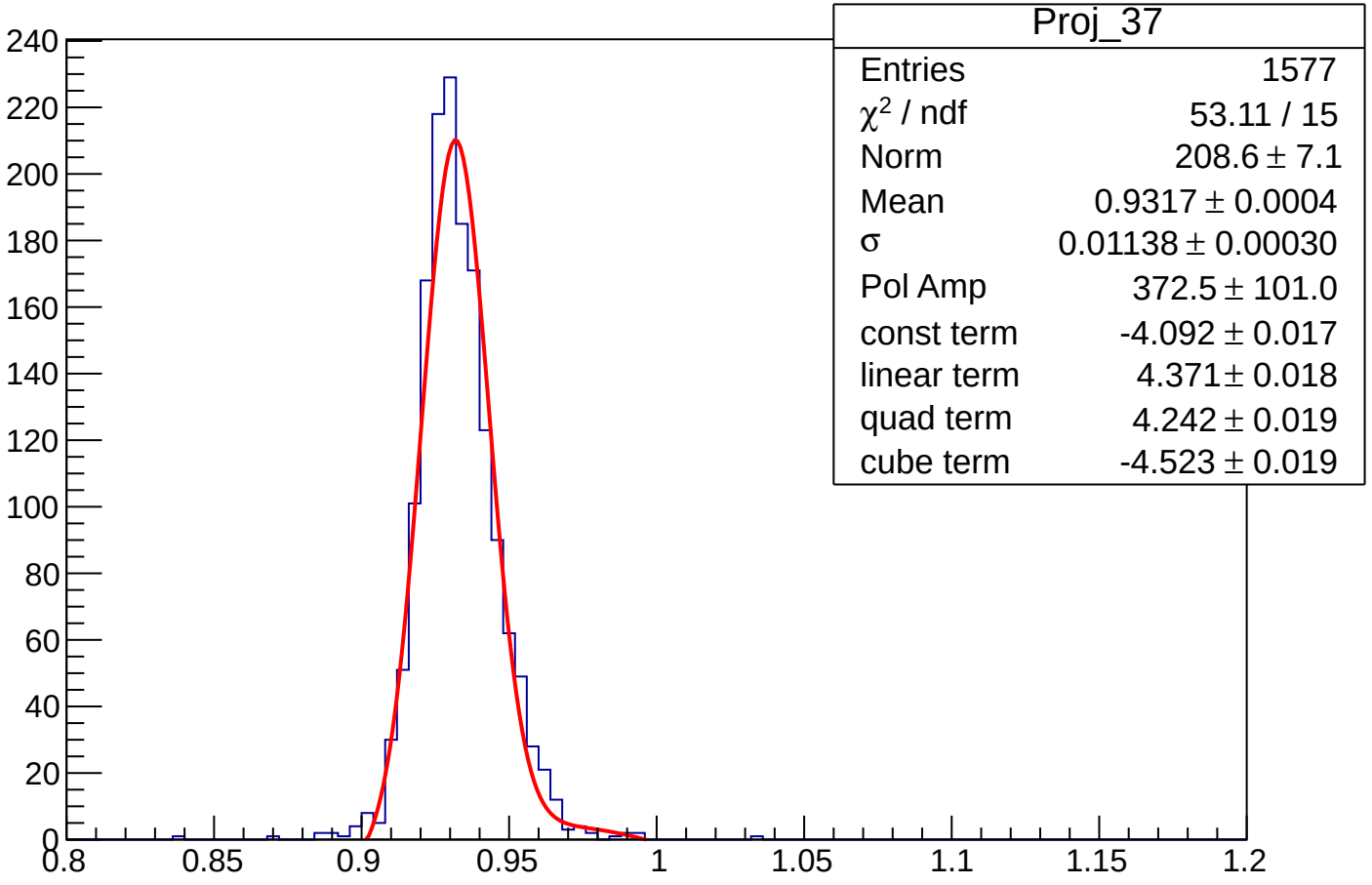

PhiThetaMassPip
Proj_32
Entries 856
χ² / ndf 16.97 / 13
Norm 113.3 ± 5.1
Mean 0.9313 ± 0.0005
σ 0.01173 ± 0.00044
Pol Amp 1198 ± 434.4
const term -0.6076 ± 0.0044
linear term 0.6409 ± 0.0047
quad term 0.642 ± 0.005
cube term -0.6759 ± 0.0049
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

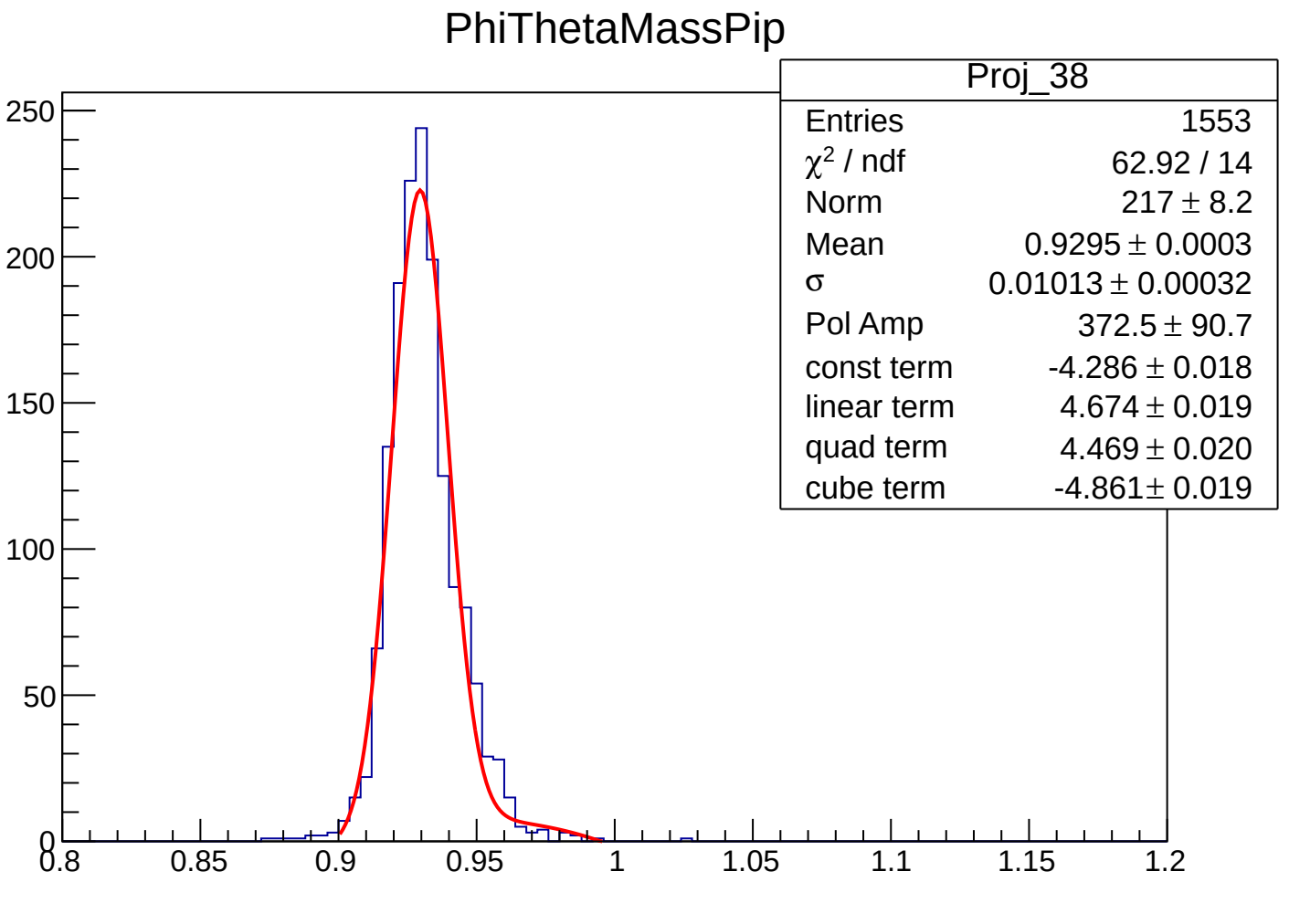

PhiThetaMassPip
Proj_33
Entries 1293
χ² / ndf 45.05 / 15
Norm 169.9 ± 6.2
Mean 0.9304 ± 0.0004
σ 0.01149 ± 0.00032
Pol Amp 371.8 ± 140.0
const term -2.654 ± 0.016
linear term 2.831 ± 0.017
quad term 2.745 ± 0.018
cube term -2.922 ± 0.017
200
180
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

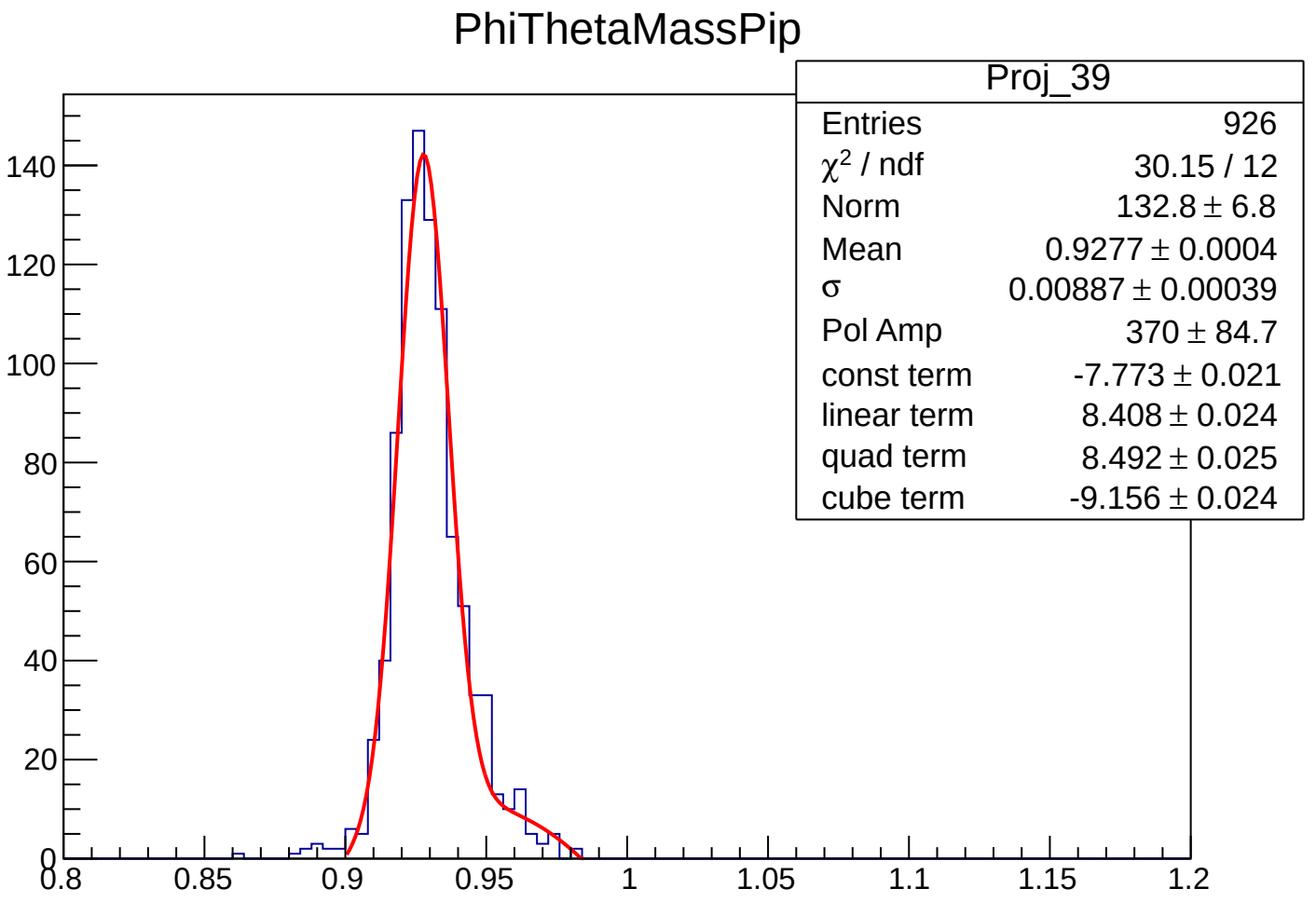

PhiThetaMassPip
Proj_34
Entries 1372
χ² / ndf 55.5 / 15
Norm 164.3 ± 6.0
Mean 0.9302 ± 0.0004
σ 0.01254 ± 0.00038
Pol Amp 375 ± 55.5
const term -6.96 ± 0.02
linear term 7.329 ± 0.017
quad term 7.438 ± 0.017
cube term -7.815 ± 0.018
0
20
40
60
80
100
120
140
160
180
200
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

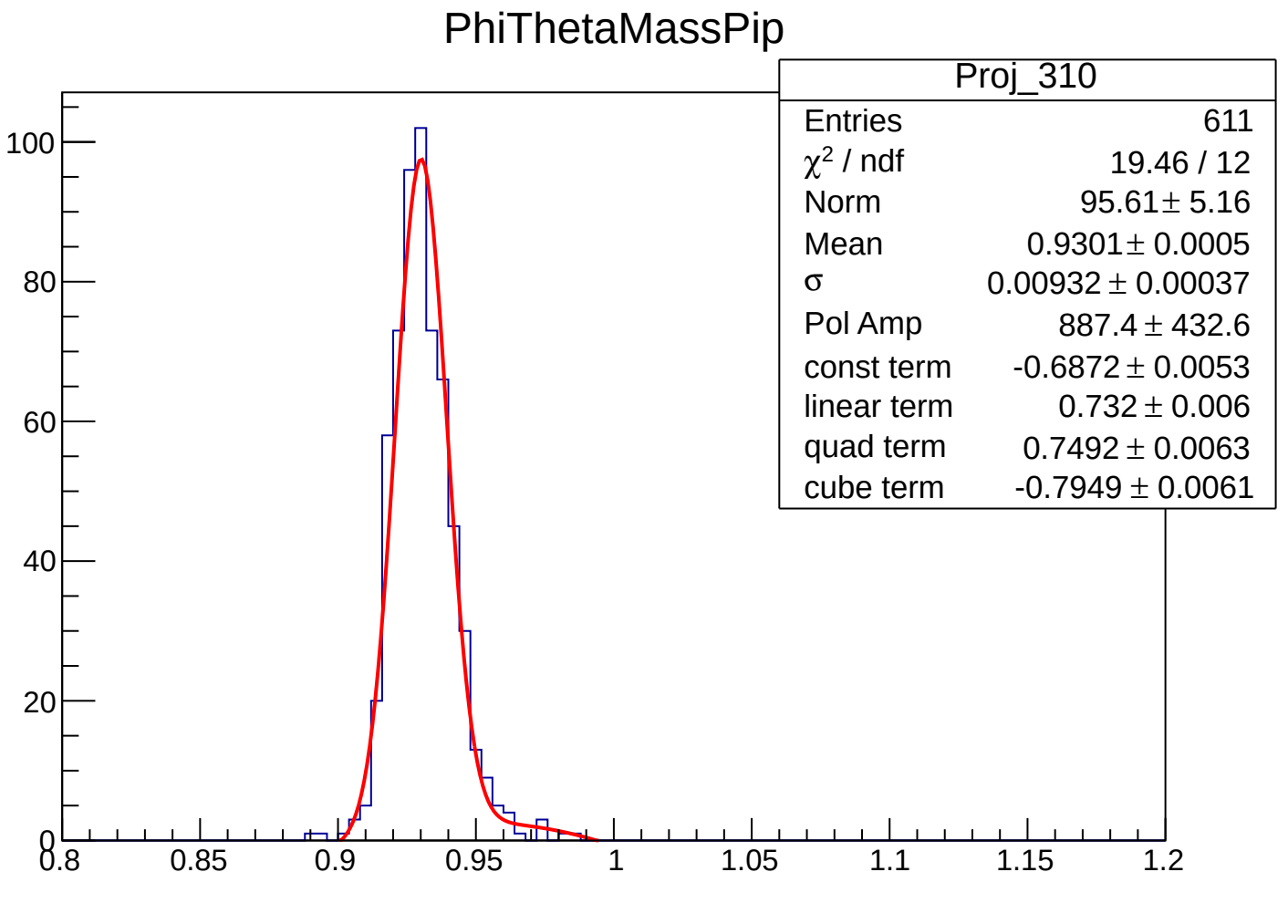

PhiThetaMassPip
Proj_35
Entries 815
χ² / ndf 49.39 / 12
Norm 106.2 ± 6.4
Mean 0.9274 ± 0.0005
σ 0.008617 ± 0.000501
Pol Amp 373.3 ± 68.6
const term -8.625 ± 0.018
linear term 9.527 ± 0.019
quad term 9.228 ± 0.020
cube term -10.17 ± 0.02
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

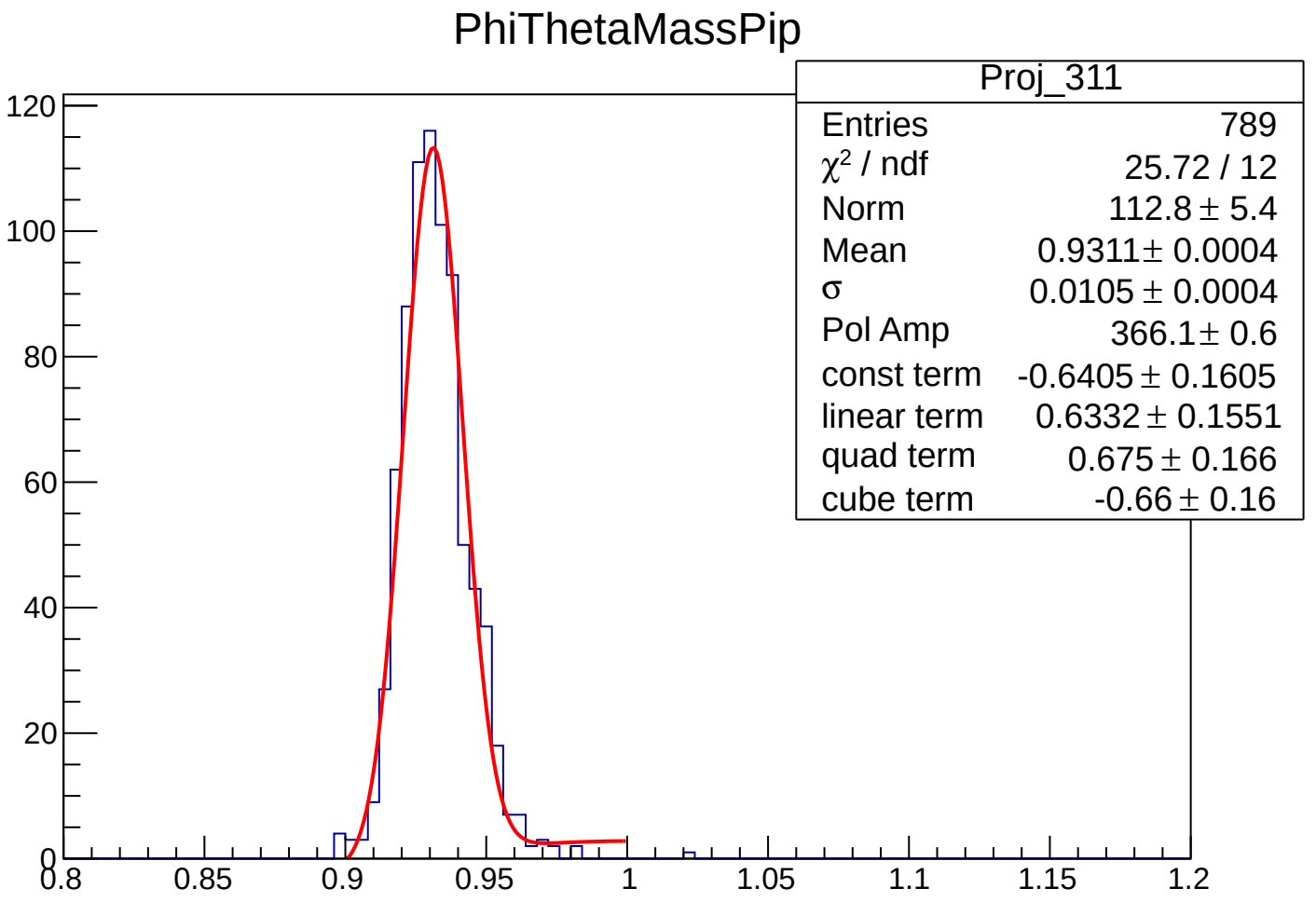

PhiThetaMassPip
Proj_36
Entries 1030
χ² / ndf 18.31 / 16
Norm 137.5 ± 5.6
Mean 0.9333 ± 0.0004
σ 0.01111 ± 0.00034
Pol Amp 371.5 ± 168.1
const term -1.699 ± 0.014
linear term 1.819 ± 0.016
quad term 1.782 ± 0.016
cube term -1.899 ± 0.015
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

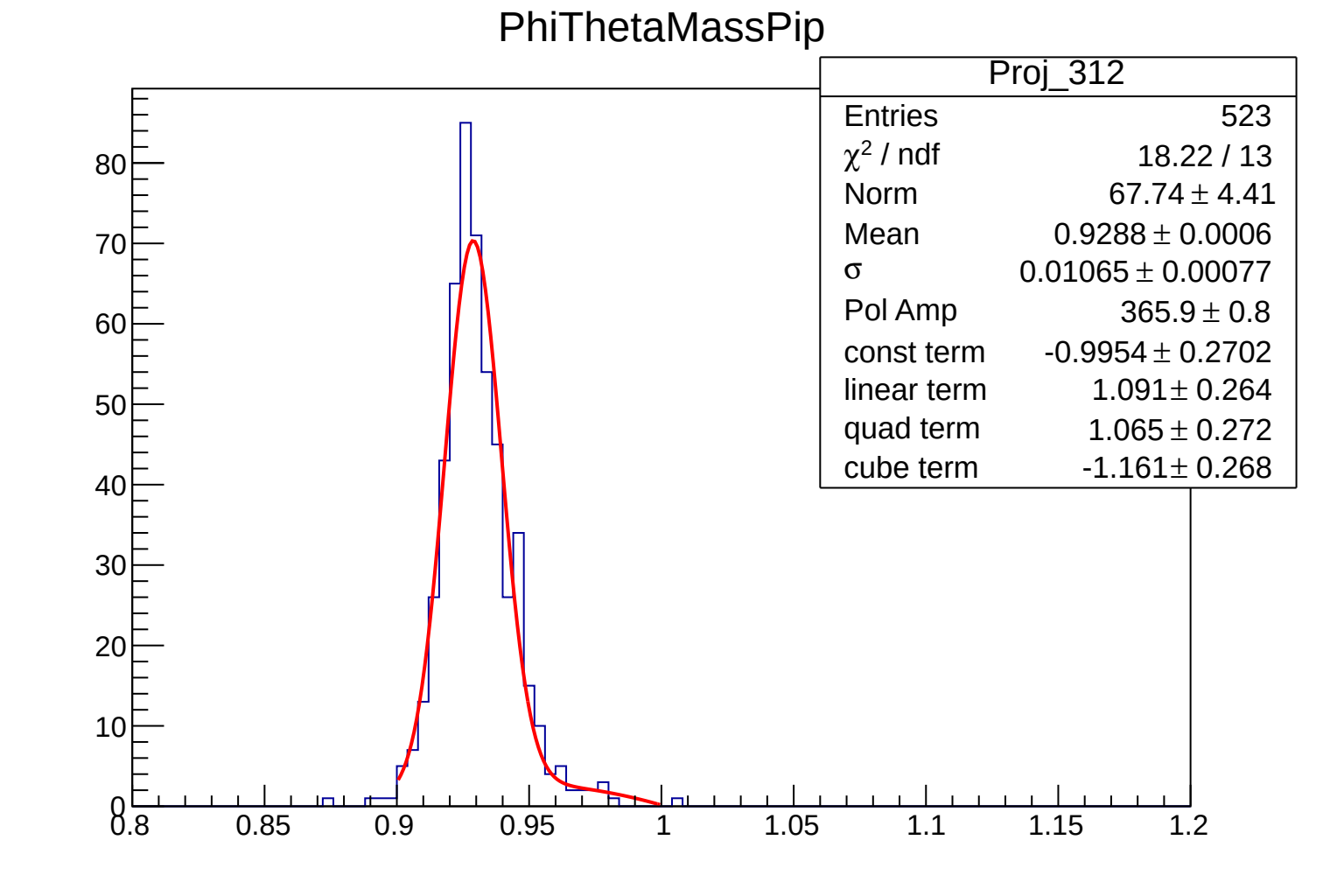

PhiThetaMassPip
Proj_37
Entries 1577
χ² / ndf 53.11 / 15
Norm 208.6 ± 7.1
Mean 0.9317 ± 0.0004
σ 0.01138 ± 0.00030
Pol Amp 372.5 ± 101.0
const term -4.092 ± 0.017
linear term 4.371 ± 0.018
quad term 4.242 ± 0.019
cube term -4.523 ± 0.019
240
220
200
180
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

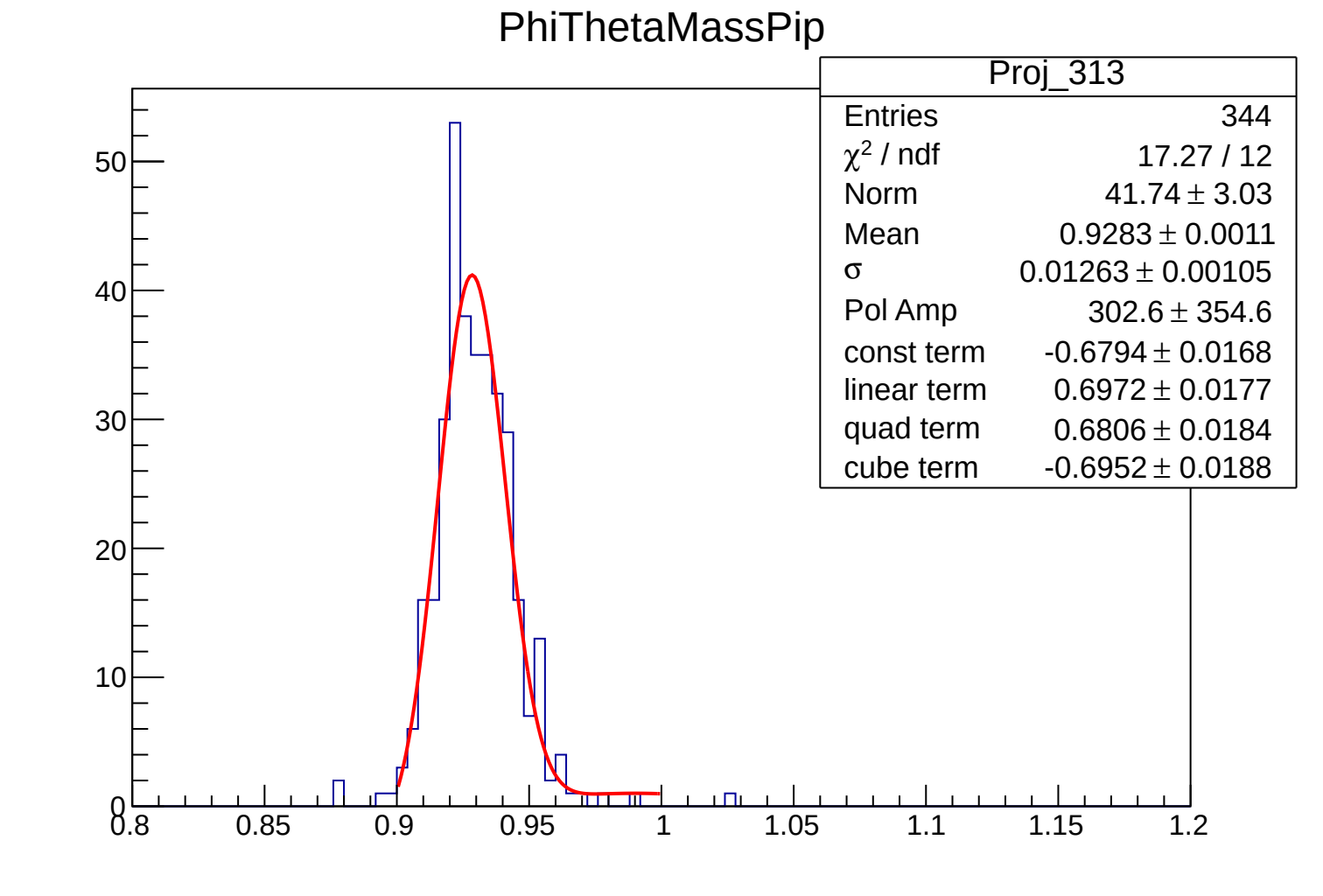

PhiThetaMassPip
Proj_38
Entries 1553
χ² / ndf 62.92 / 14
Norm 217 ± 8.2
Mean 0.9295 ± 0.0003
σ 0.01013 ± 0.00032
Pol Amp 372.5 ± 90.7
const term -4.286 ± 0.018
linear term 4.674 ± 0.019
quad term 4.469 ± 0.020
cube term -4.861 ± 0.019
250
200
150
100
50
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

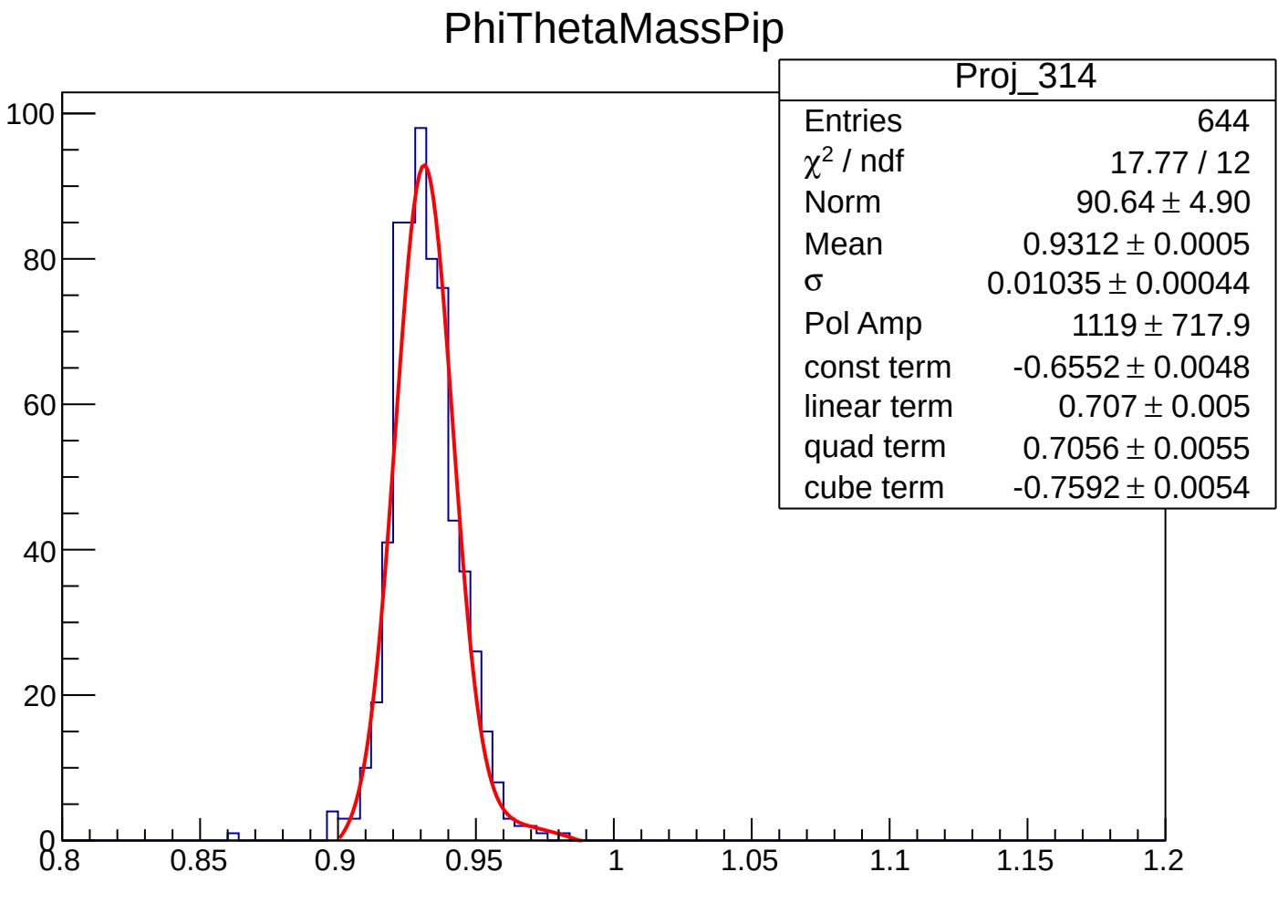

PhiThetaMassPip
Proj_39
Entries 926
χ² / ndf 30.15 / 12
Norm 132.8 ± 6.8
Mean 0.9277 ± 0.0004
σ 0.00887 ± 0.00039
Pol Amp 370 ± 84.7
const term -7.773 ± 0.021
linear term 8.408 ± 0.024
quad term 8.492 ± 0.025
cube term -9.156 ± 0.024
0
20
40
60
80
100
120
140
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

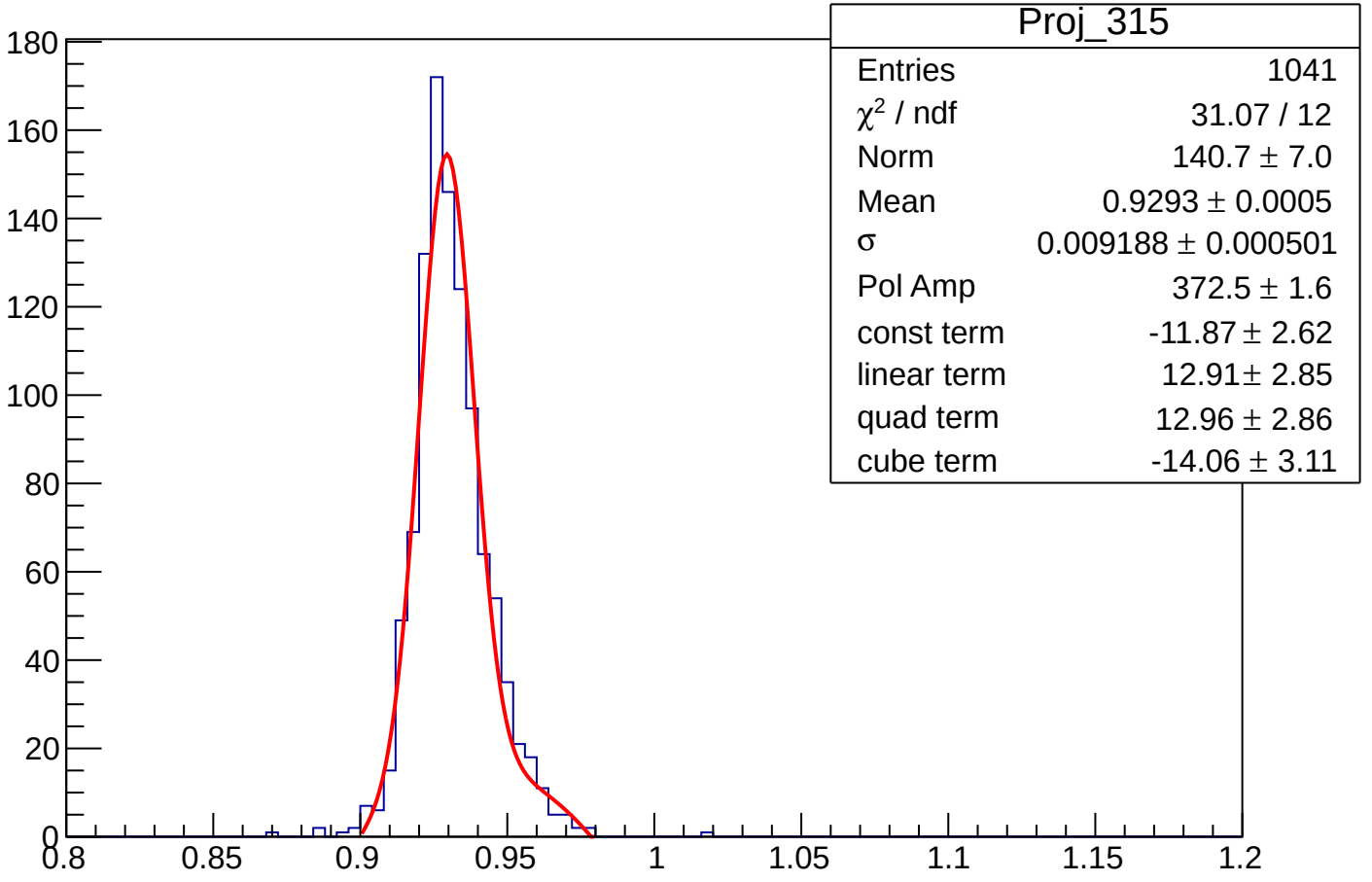

PhiThetaMassPip
Proj_310
Entries 611
χ² / ndf 19.46 / 12
Norm 95.61 ± 5.16
Mean 0.9301 ± 0.0005
σ 0.00932 ± 0.00037
Pol Amp 887.4 ± 432.6
const term -0.6872 ± 0.0053
linear term 0.732 ± 0.006
quad term 0.7492 ± 0.0063
cube term -0.7949 ± 0.0061
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

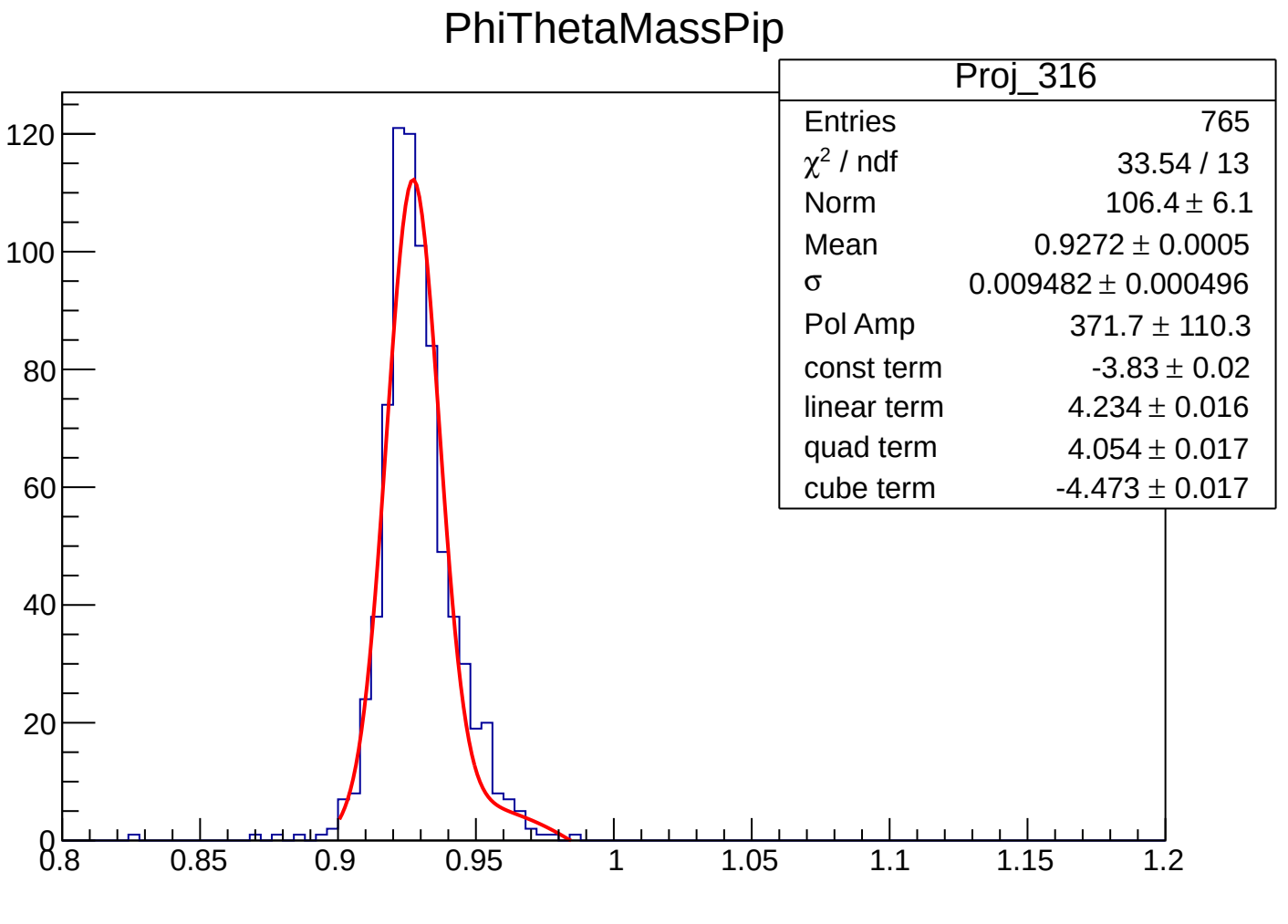

PhiThetaMassPip
Proj_311
Entries 789
χ² / ndf 25.72 / 12
Norm 112.8 ± 5.4
Mean 0.9311 ± 0.0004
σ 0.0105 ± 0.0004
Pol Amp 366.1 ± 0.6
const term -0.6405 ± 0.1605
linear term 0.6332 ± 0.1551
quad term 0.675 ± 0.166
cube term -0.66 ± 0.16
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

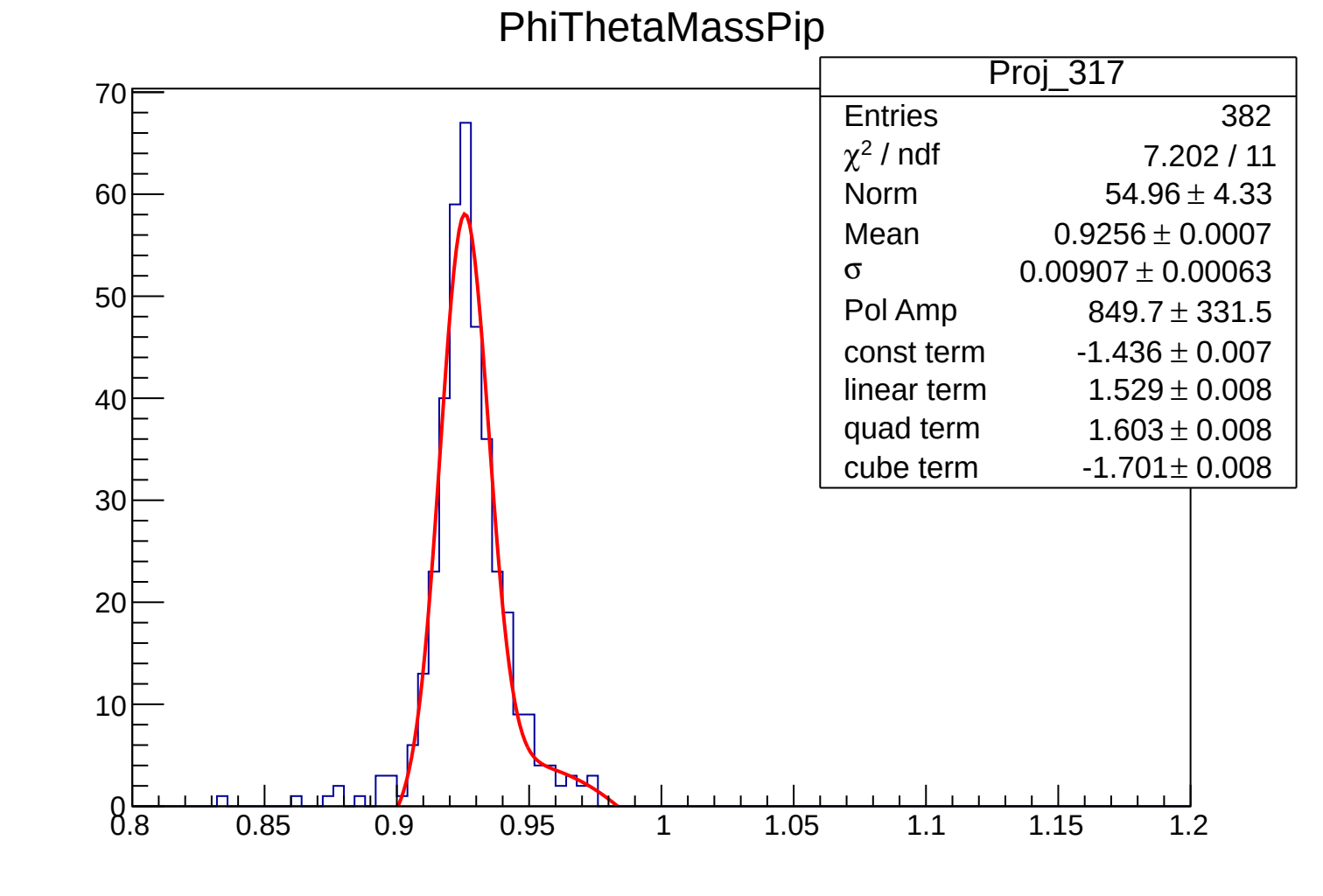

PhiThetaMassPip
Proj_312
Entries 523
χ² / ndf 18.22 / 13
Norm 67.74 ± 4.41
Mean 0.9288 ± 0.0006
σ 0.01065 ± 0.00077
Pol Amp 365.9 ± 0.8
const term -0.9954 ± 0.2702
linear term 1.091 ± 0.264
quad term 1.065 ± 0.272
cube term -1.161 ± 0.268
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

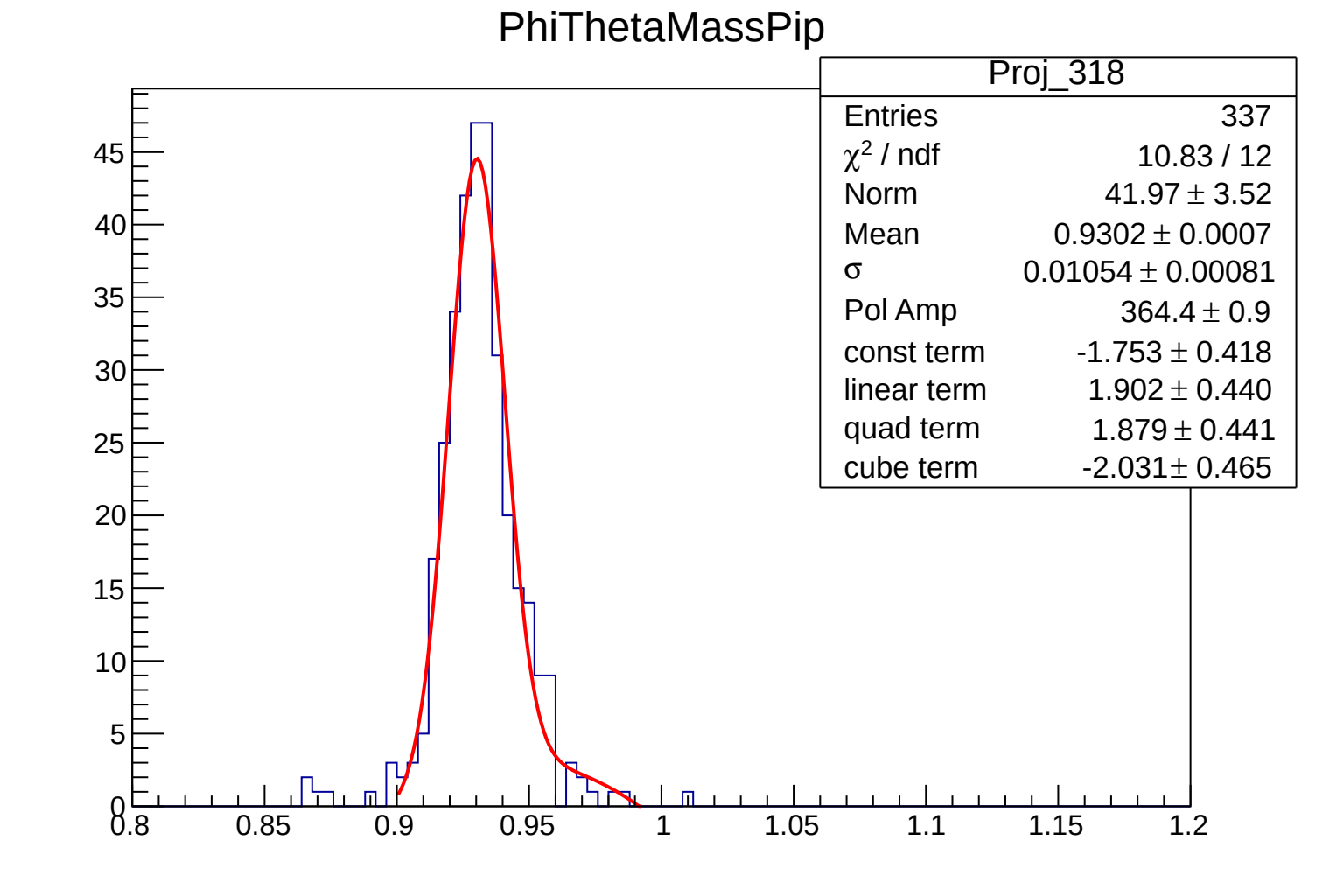

PhiThetaMassPip
Proj_313
Entries 344
χ² / ndf 17.27 / 12
Norm 41.74 ± 3.03
Mean 0.9283 ± 0.0011
σ 0.01263 ± 0.00105
Pol Amp 302.6 ± 354.6
const term -0.6794 ± 0.0168
linear term 0.6972 ± 0.0177
quad term 0.6806 ± 0.0184
cube term -0.6952 ± 0.0188
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

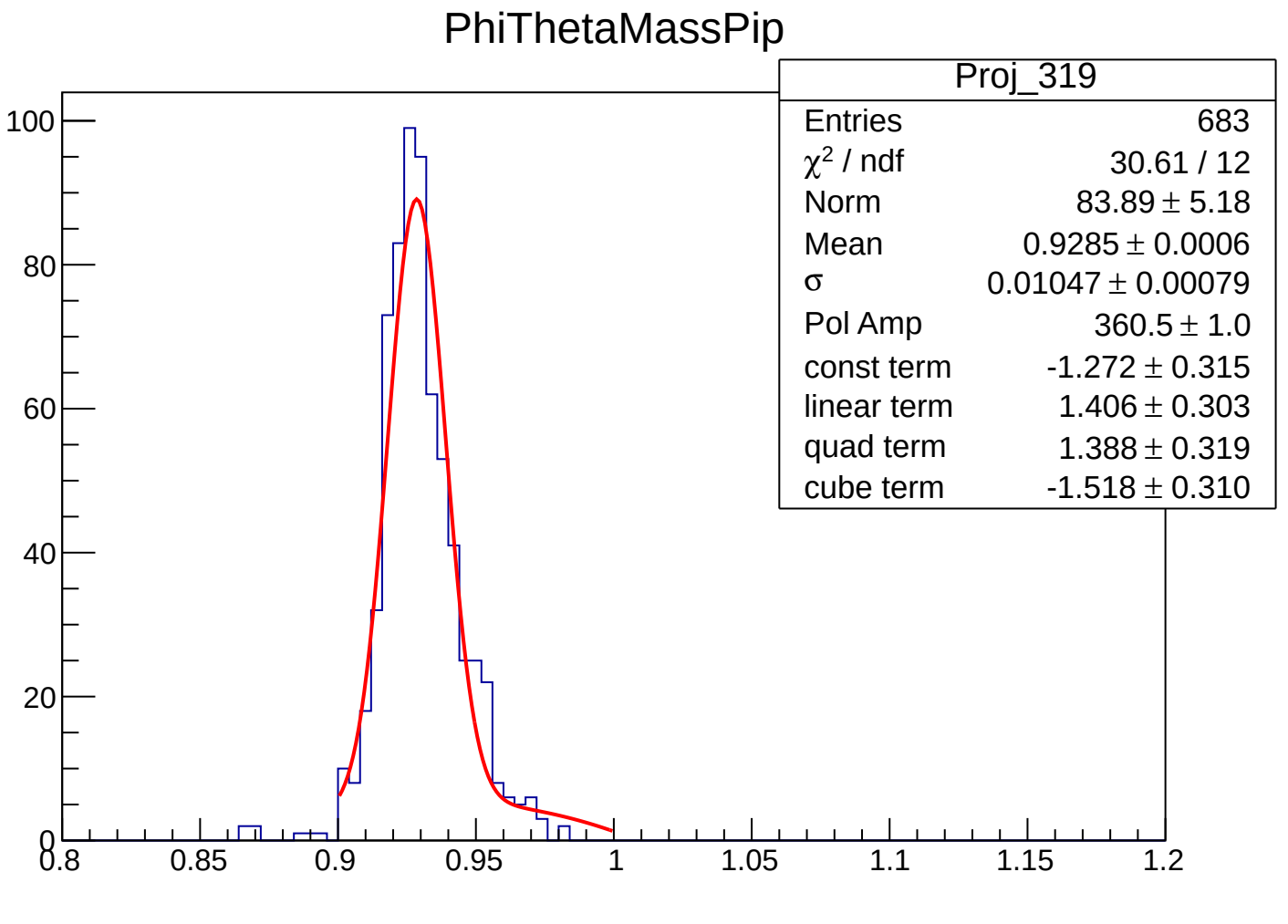

PhiThetaMassPip
Proj_314
Entries 644
χ² / ndf 17.77 / 12
Norm 90.64 ± 4.90
Mean 0.9312 ± 0.0005
σ 0.01035 ± 0.00044
Pol Amp 1119 ± 717.9
const term -0.6552 ± 0.0048
linear term 0.707 ± 0.005
quad term 0.7056 ± 0.0055
cube term -0.7592 ± 0.0054
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

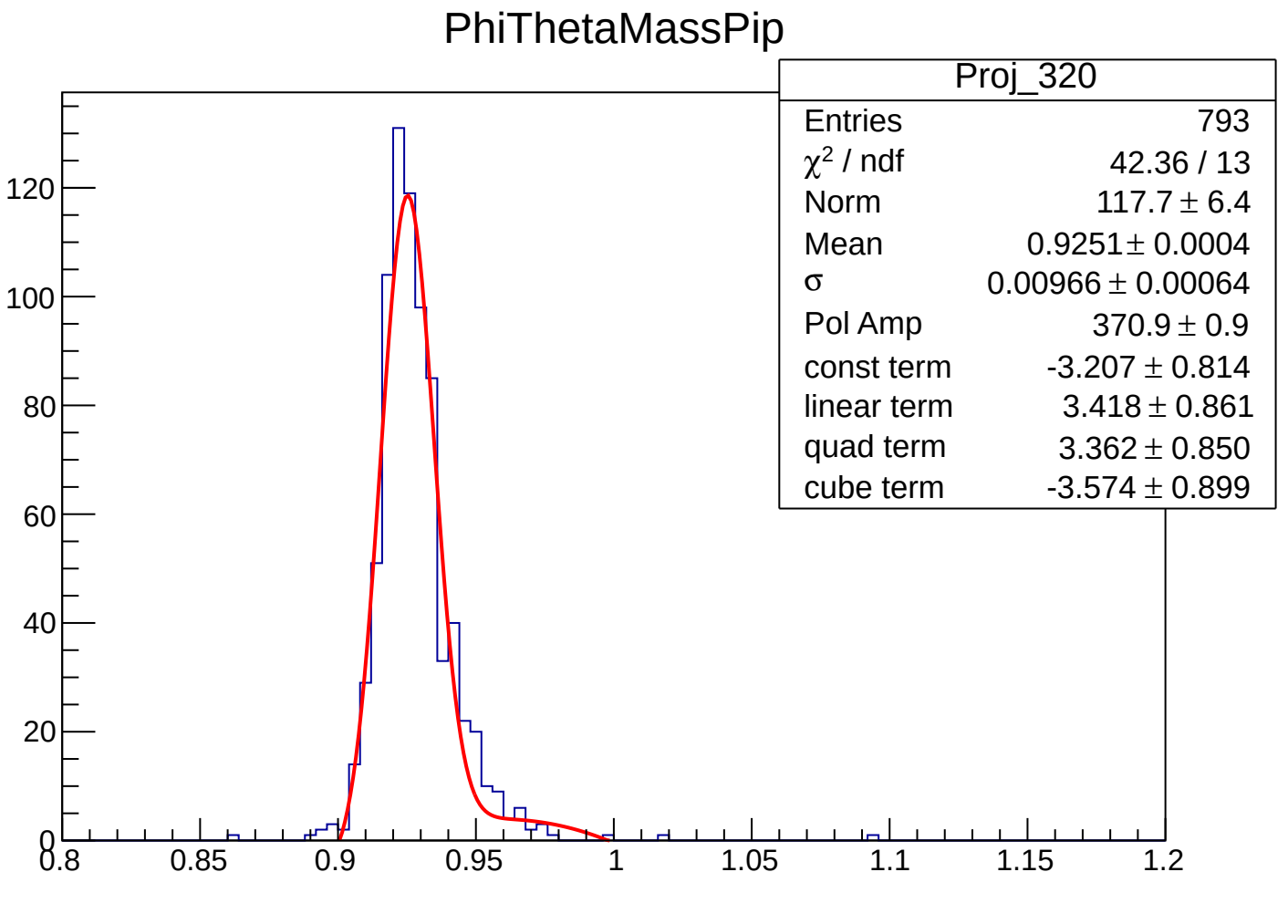

PhiThetaMassPip
Proj_315
Entries 1041
χ² / ndf 31.07 / 12
Norm 140.7 ± 7.0
Mean 0.9293 ± 0.0005
σ 0.009188 ± 0.000501
Pol Amp 372.5 ± 1.6
const term -11.87 ± 2.62
linear term 12.91 ± 2.85
quad term 12.96 ± 2.86
cube term -14.06 ± 3.11
180
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

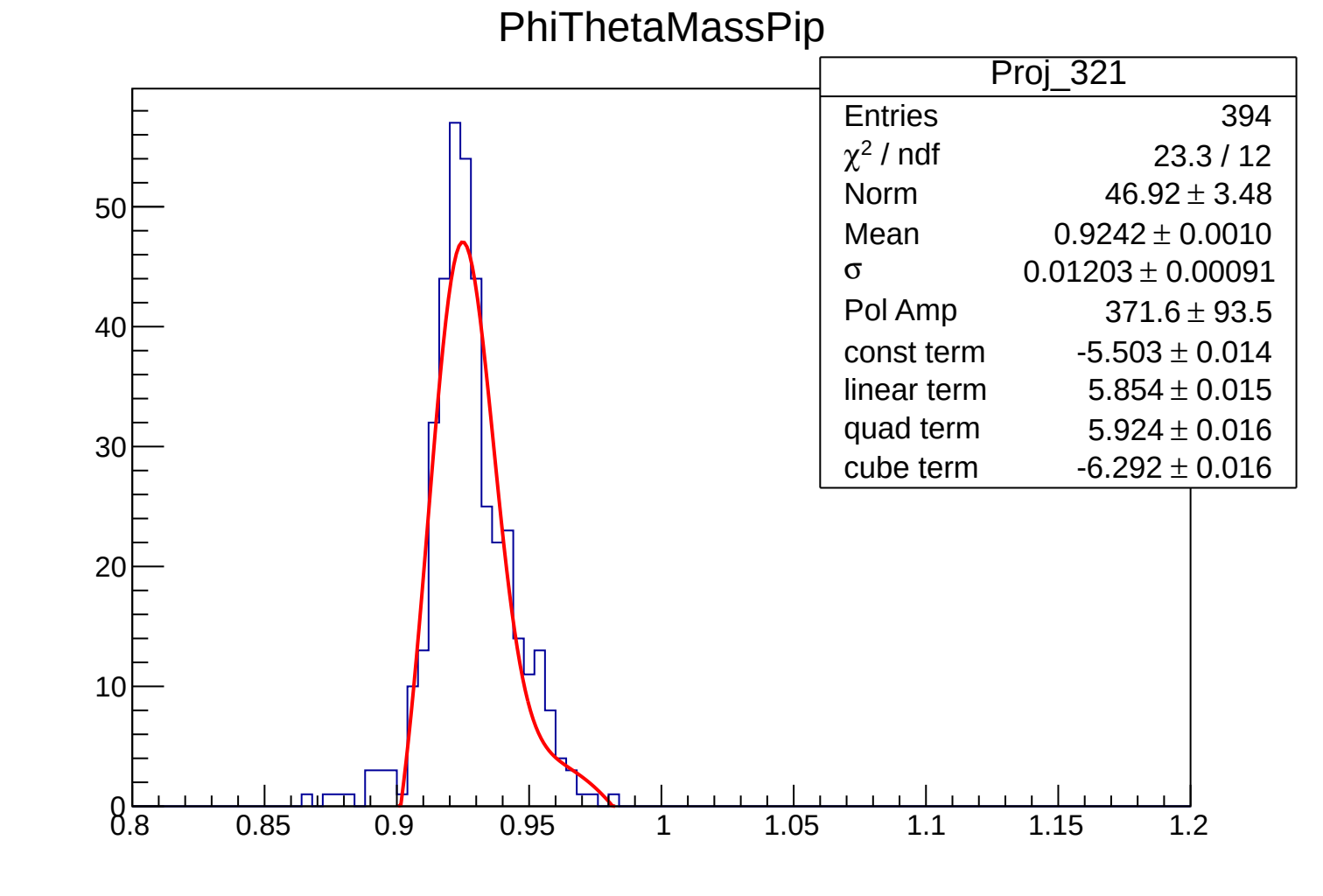

PhiThetaMassPip
Proj_316
Entries 765
χ² / ndf 33.54 / 13
Norm 106.4 ± 6.1
Mean 0.9272 ± 0.0005
σ 0.009482 ± 0.000496
Pol Amp 371.7 ± 110.3
const term -3.83 ± 0.02
linear term 4.234 ± 0.016
quad term 4.054 ± 0.017
cube term -4.473 ± 0.017
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

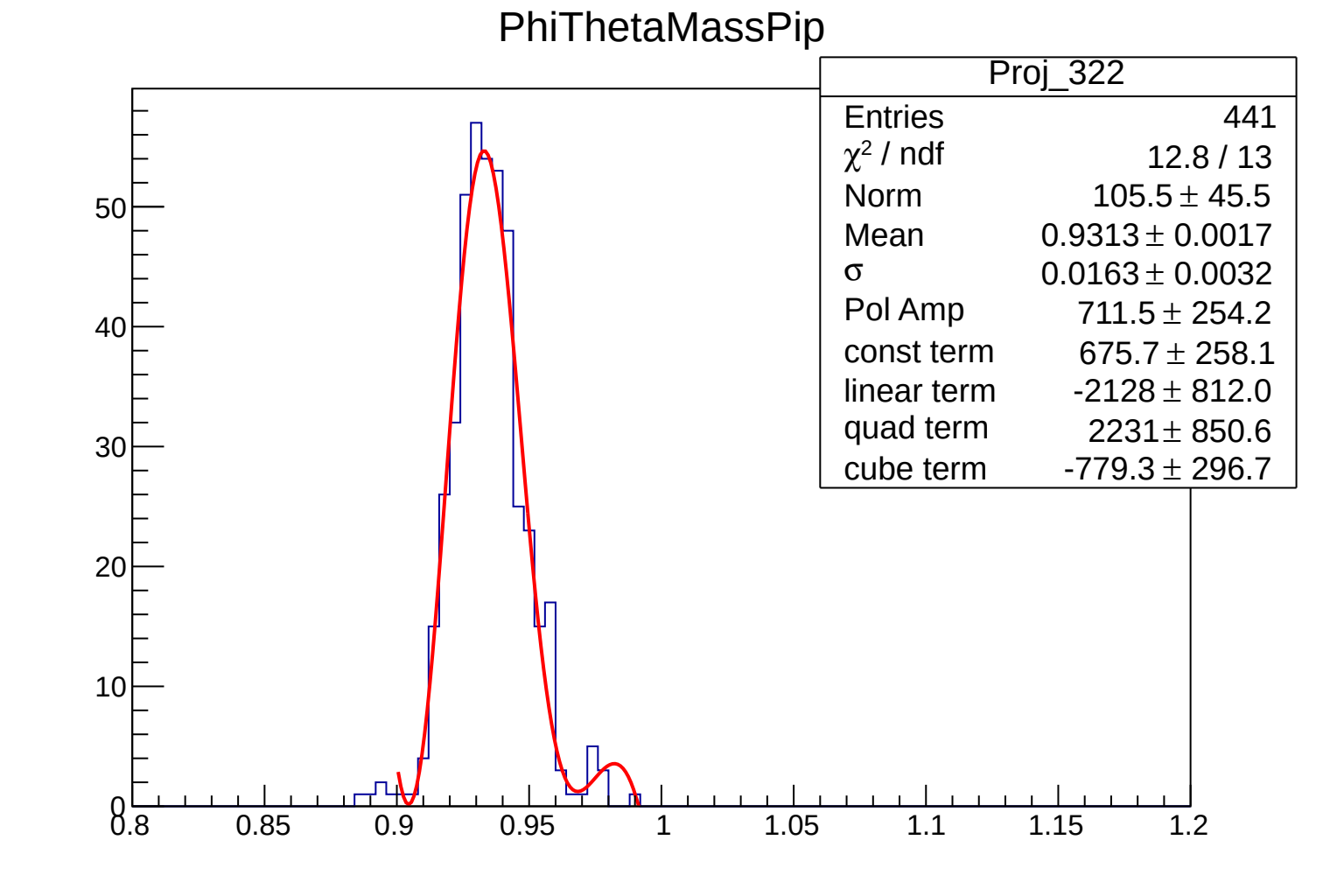

PhiThetaMassPip
Proj_317
Entries 382
χ² / ndf 7.202 / 11
Norm 54.96 ± 4.33
Mean 0.9256 ± 0.0007
σ 0.00907 ± 0.00063
Pol Amp 849.7 ± 331.5
const term -1.436 ± 0.007
linear term 1.529 ± 0.008
quad term 1.603 ± 0.008
cube term -1.701 ± 0.008
70
60
50
40
30
20
10
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

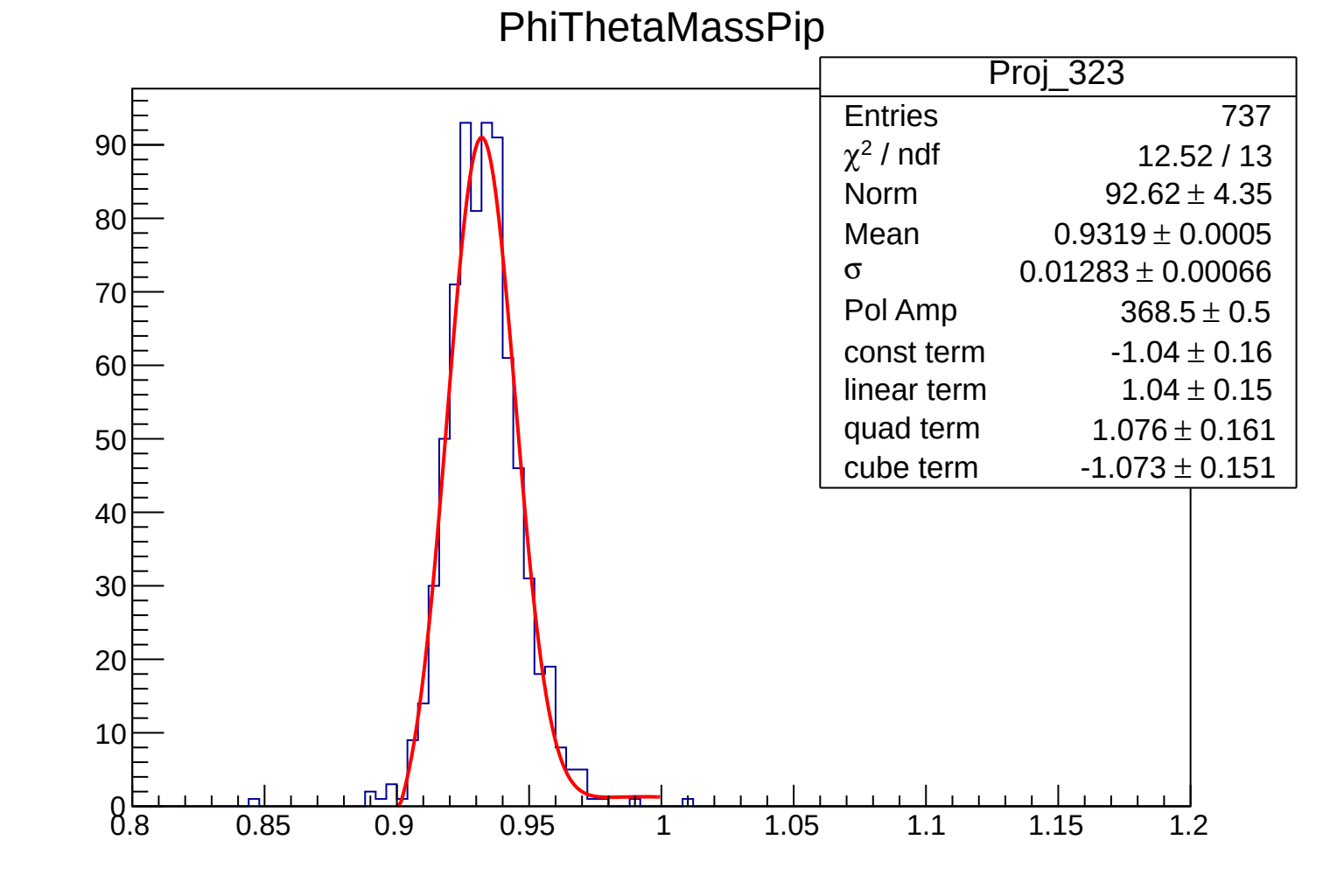

PhiThetaMassPip
Proj_318
Entries 337
χ² / ndf 10.83 / 12
Norm 41.97 ± 3.52
Mean 0.9302 ± 0.0007
σ 0.01054 ± 0.00081
Pol Amp 364.4 ± 0.9
const term -1.753 ± 0.418
linear term 1.902 ± 0.440
quad term 1.879 ± 0.441
cube term -2.031 ± 0.465
0
5
10
15
20
25
30
35
40
45
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

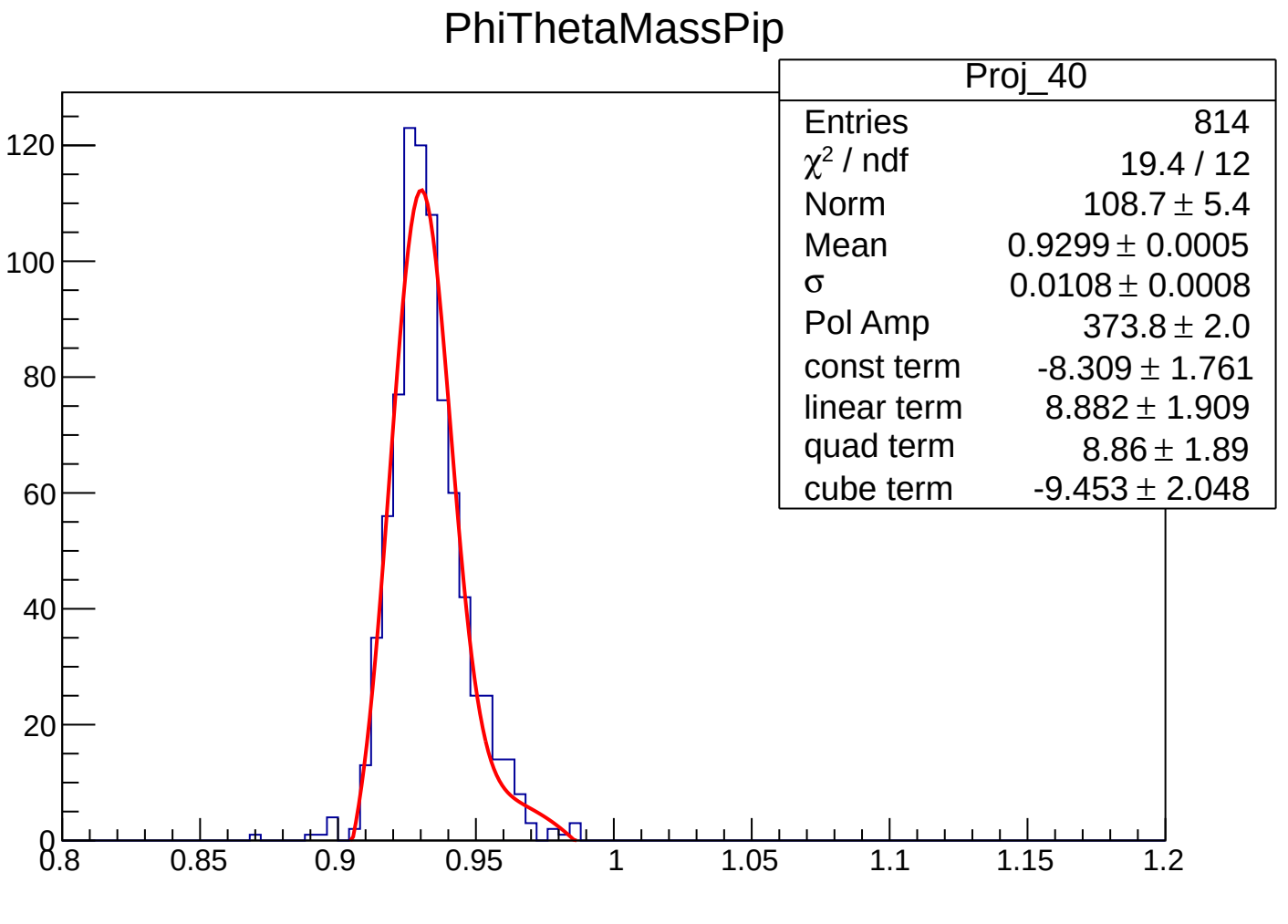

PhiThetaMassPip
Proj_319
Entries 683
χ² / ndf 30.61 / 12
Norm 83.89 ± 5.18
Mean 0.9285 ± 0.0006
σ 0.01047 ± 0.00079
Pol Amp 360.5 ± 1.0
const term -1.272 ± 0.315
linear term 1.406 ± 0.303
quad term 1.388 ± 0.319
cube term -1.518 ± 0.310
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

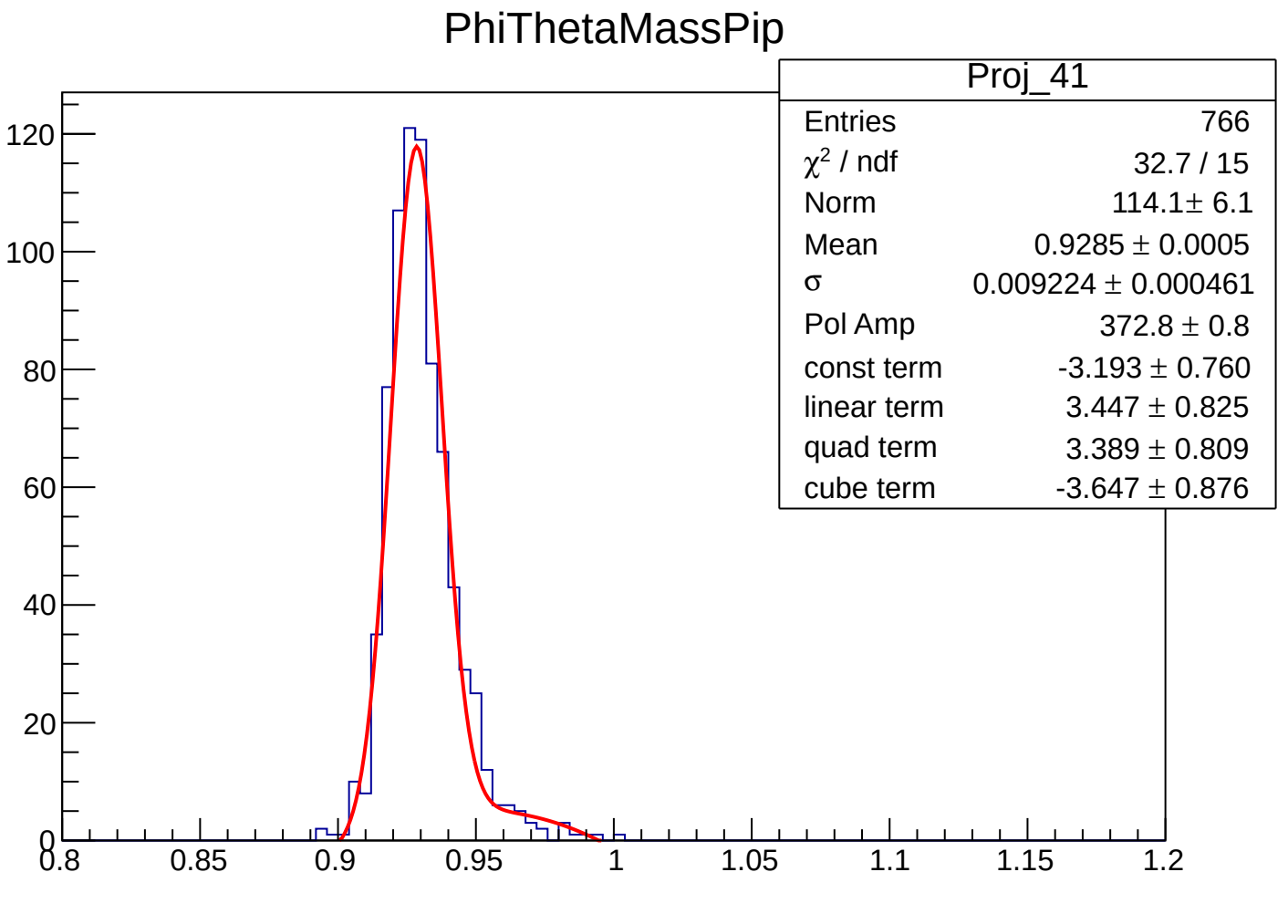

PhiThetaMassPip
Proj_320
Entries 793
χ² / ndf 42.36 / 13
Norm 117.7 ± 6.4
Mean 0.9251 ± 0.0004
σ 0.00966 ± 0.00064
Pol Amp 370.9 ± 0.9
const term -3.207 ± 0.814
linear term 3.418 ± 0.861
quad term 3.362 ± 0.850
cube term -3.574 ± 0.899
0
20
40
60
80
100
120
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

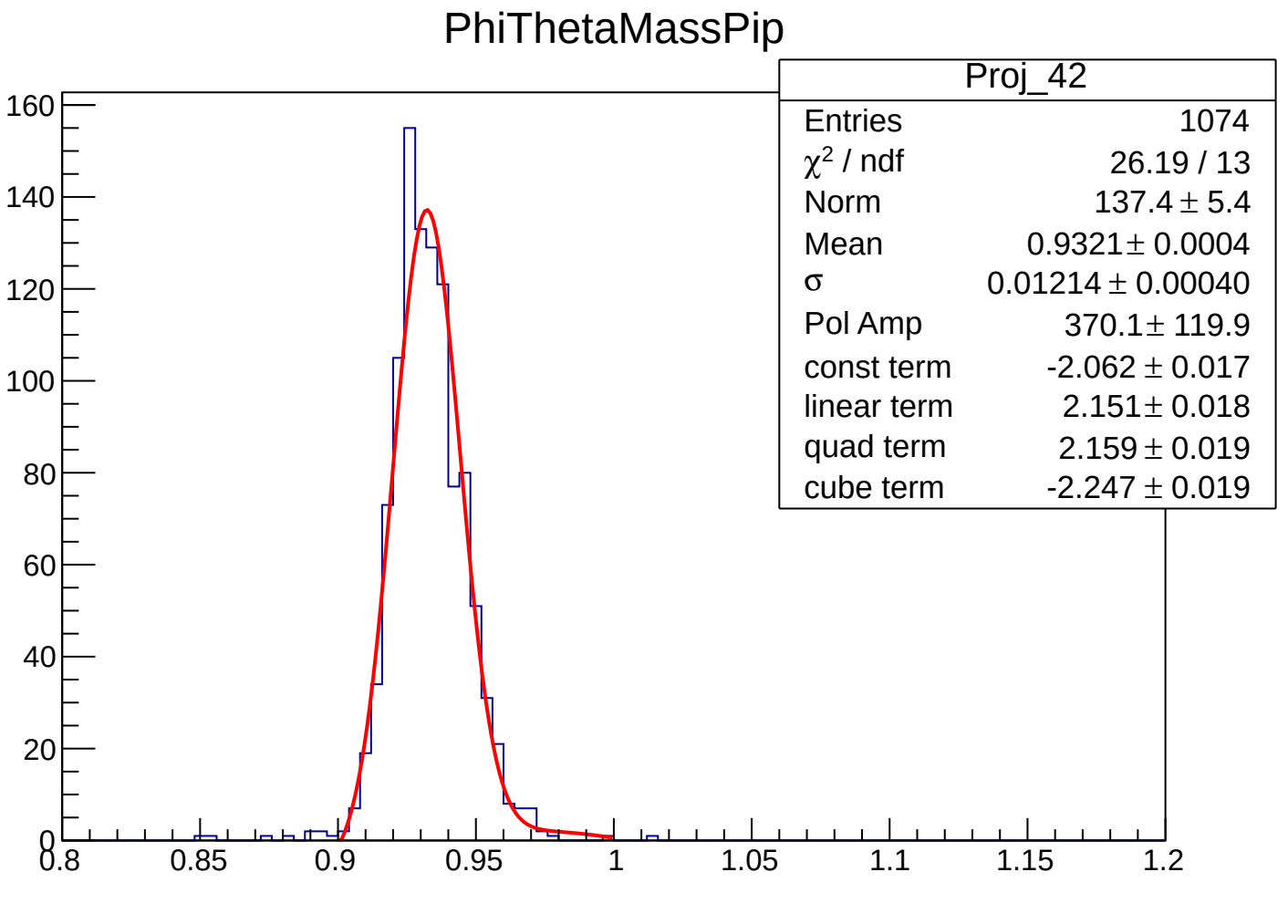

PhiThetaMassPip
Proj_321
Entries 394
χ² / ndf 23.3 / 12
Norm 46.92 ± 3.48
Mean 0.9242 ± 0.0010
σ 0.01203 ± 0.00091
Pol Amp 371.6 ± 93.5
const term -5.503 ± 0.014
linear term 5.854 ± 0.015
quad term 5.924 ± 0.016
cube term -6.292 ± 0.016
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

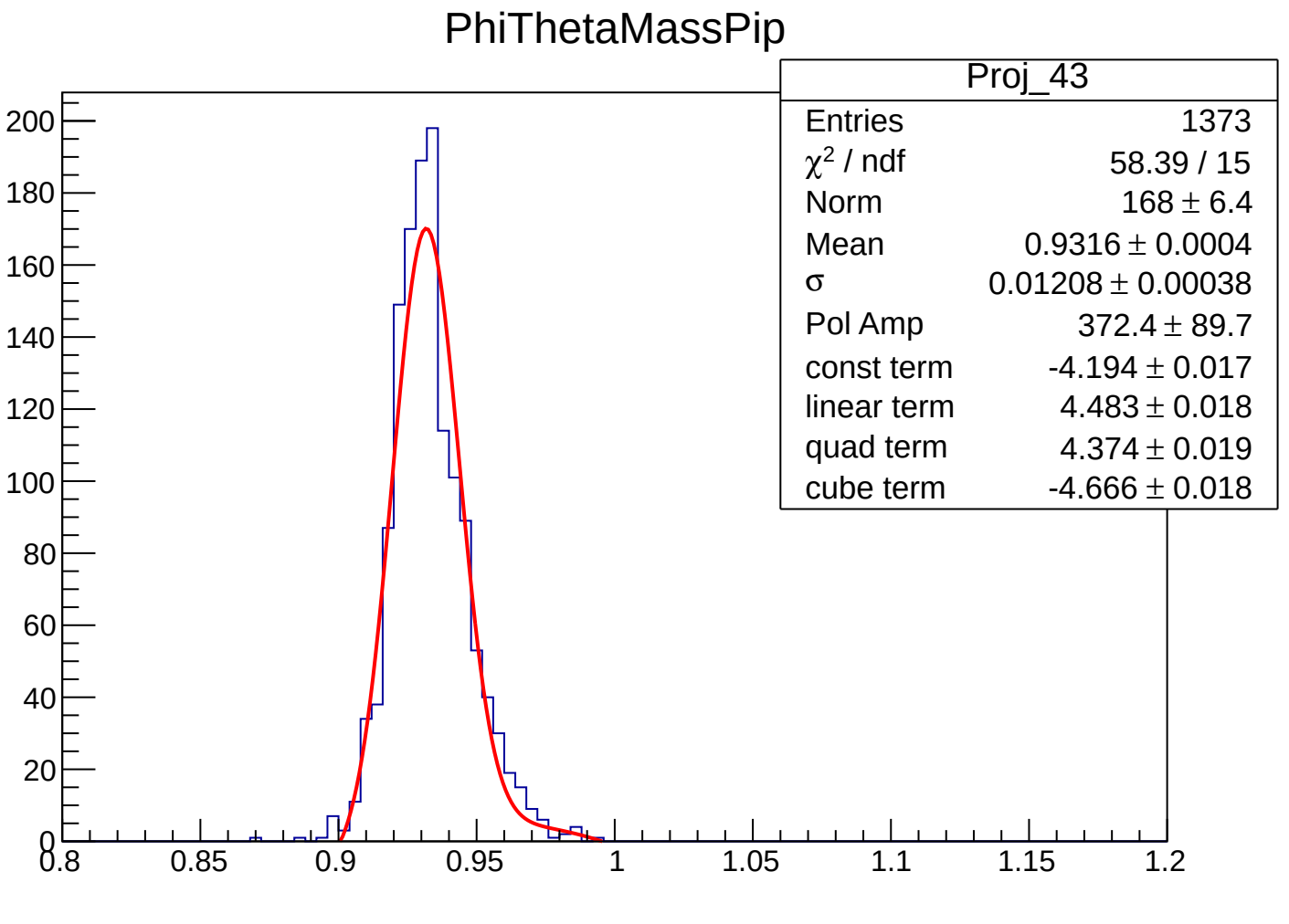

PhiThetaMassPip
Proj_322
Entries 441
χ² / ndf 12.8 / 13
Norm 105.5 ± 45.5
Mean 0.9313 ± 0.0017
σ 0.0163 ± 0.0032
Pol Amp 711.5 ± 254.2
const term 675.7 ± 258.1
linear term -2128 ± 812.0
quad term 2231 ± 850.6
cube term -779.3 ± 296.7
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

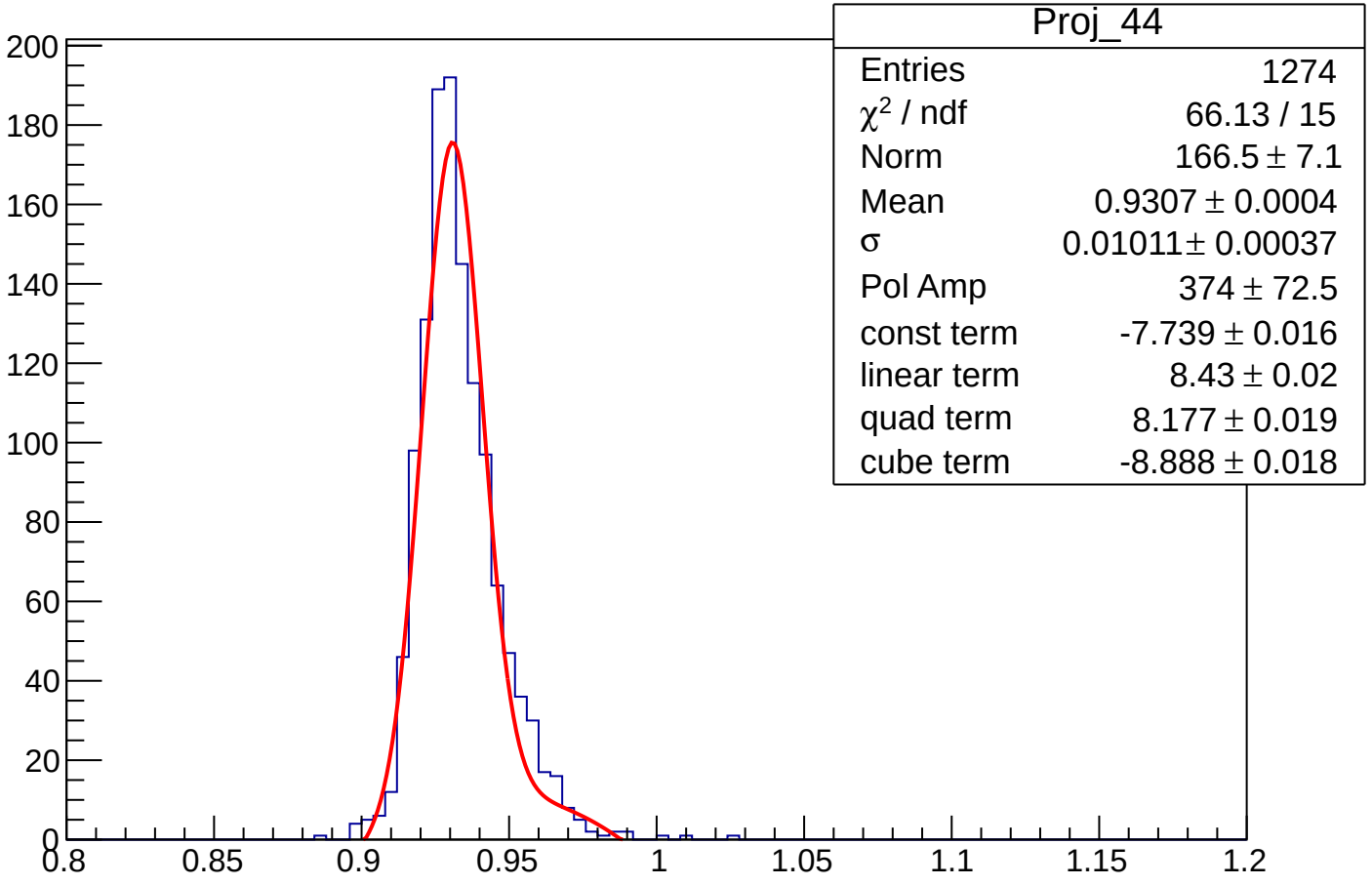

PhiThetaMassPip
Proj_323
Entries 737
χ² / ndf 12.52 / 13
Norm 92.62 ± 4.35
Mean 0.9319 ± 0.0005
σ 0.01283 ± 0.00066
Pol Amp 368.5 ± 0.5
const term -1.04 ± 0.16
linear term 1.04 ± 0.15
quad term 1.076 ± 0.161
cube term -1.073 ± 0.151
0 10 20 30 40 50 60 70 80 90
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

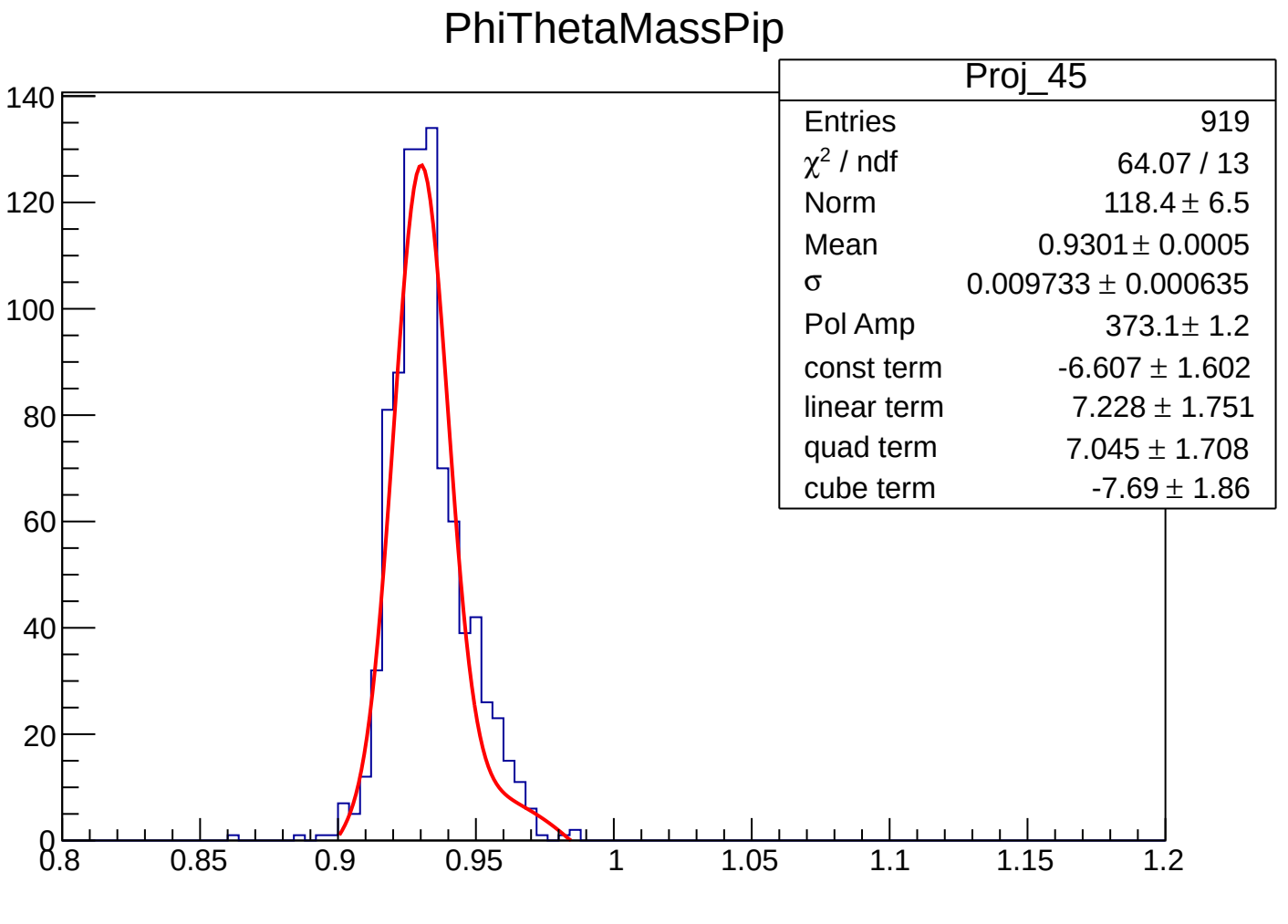

PhiThetaMassPip
Proj_40
Entries 814
χ² / ndf 19.4 / 12
Norm 108.7 ± 5.4
Mean 0.9299 ± 0.0005
σ 0.0108 ± 0.0008
Pol Amp 373.8 ± 2.0
const term -8.309 ± 1.761
linear term 8.882 ± 1.909
quad term 8.86 ± 1.89
cube term -9.453 ± 2.048
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

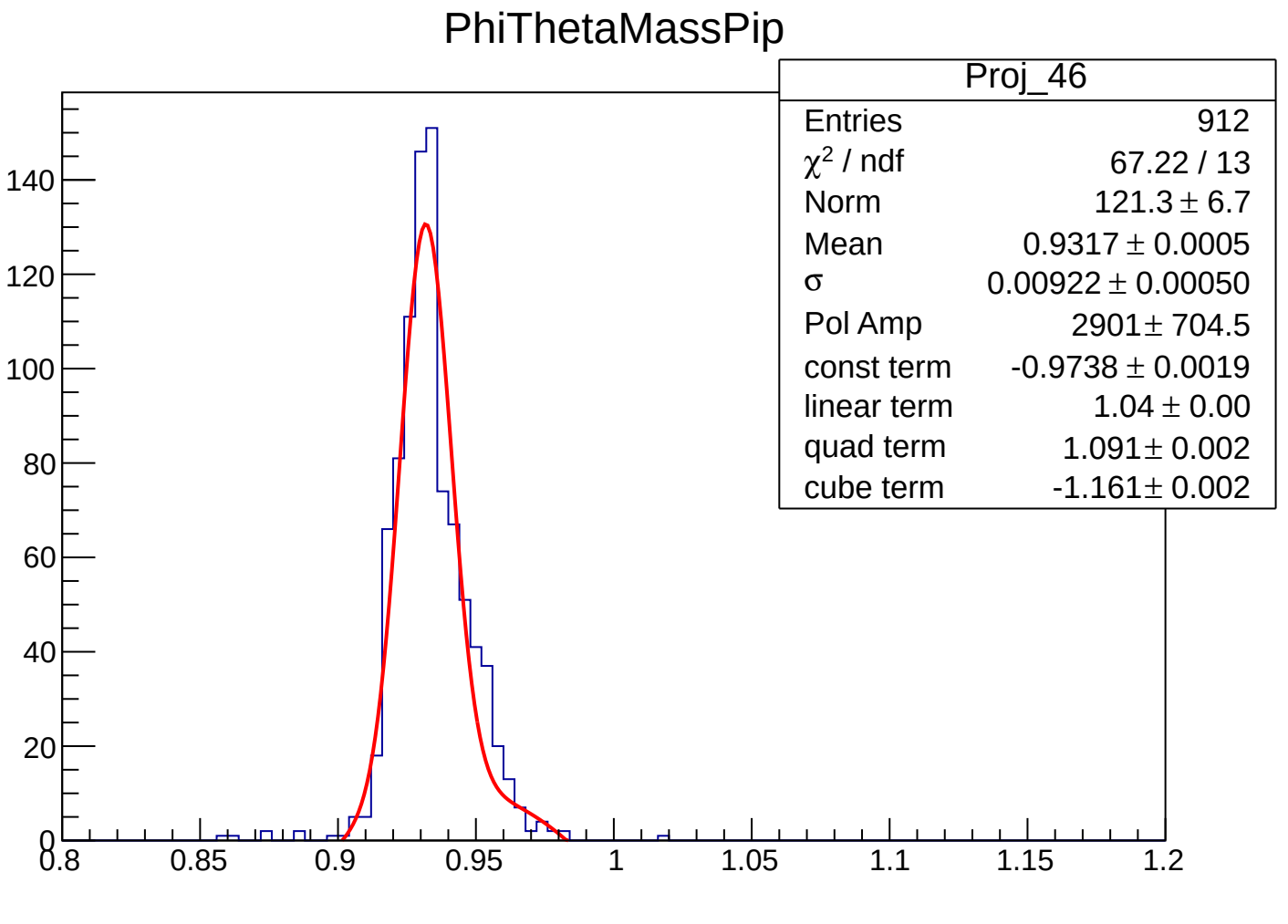

PhiThetaMassPip
Proj_41
Entries 766
χ² / ndf 32.7 / 15
Norm 114.1± 6.1
Mean 0.9285 ± 0.0005
σ 0.009224 ± 0.000461
Pol Amp 372.8 ± 0.8
const term -3.193 ± 0.760
linear term 3.447 ± 0.825
quad term 3.389 ± 0.809
cube term -3.647 ± 0.876
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

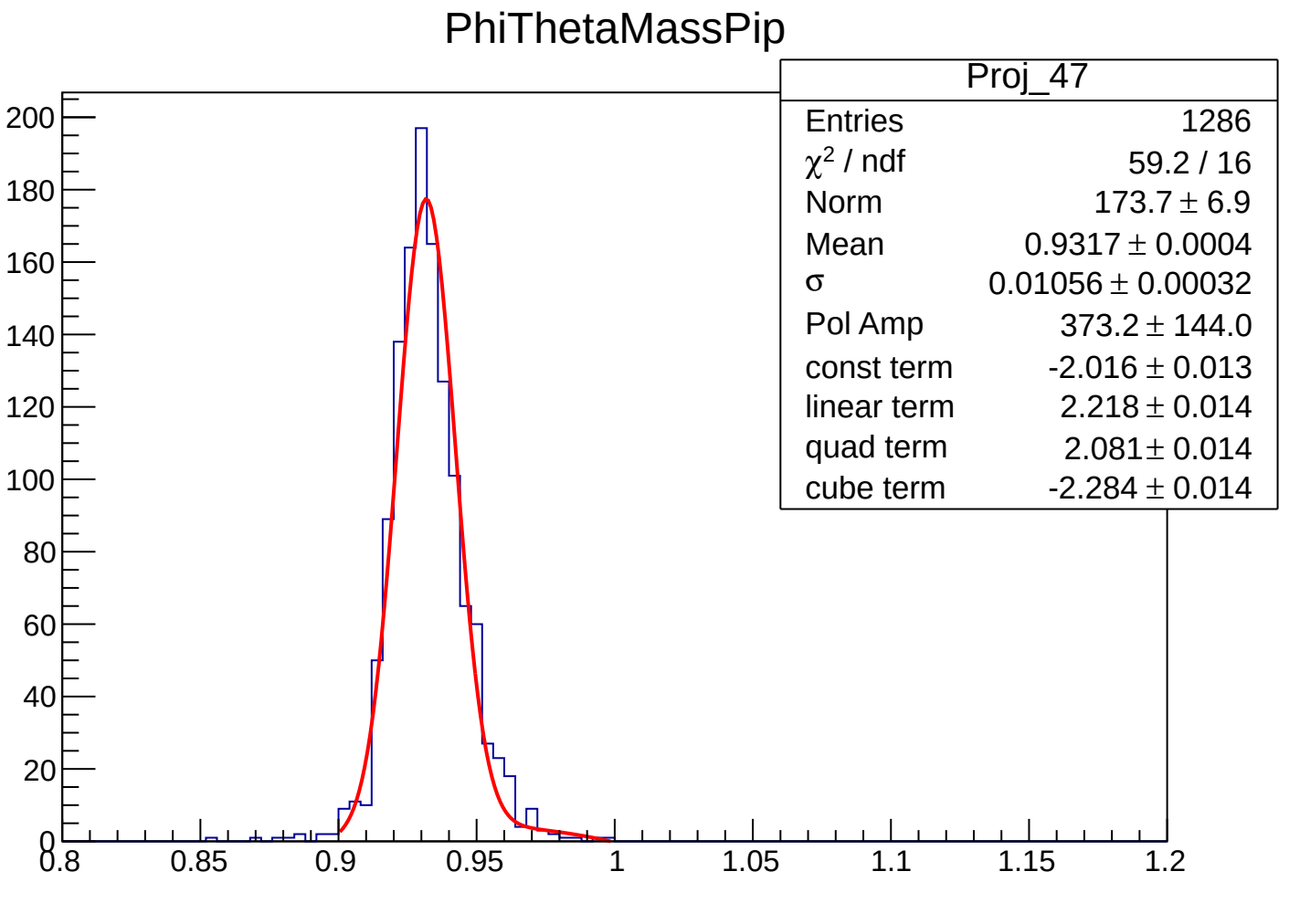

PhiThetaMassPip
Proj_42
Entries 1074
χ² / ndf 26.19 / 13
Norm 137.4 ± 5.4
Mean 0.9321 ± 0.0004
σ 0.01214 ± 0.00040
Pol Amp 370.1 ± 119.9
const term -2.062 ± 0.017
linear term 2.151 ± 0.018
quad term 2.159 ± 0.019
cube term -2.247 ± 0.019
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

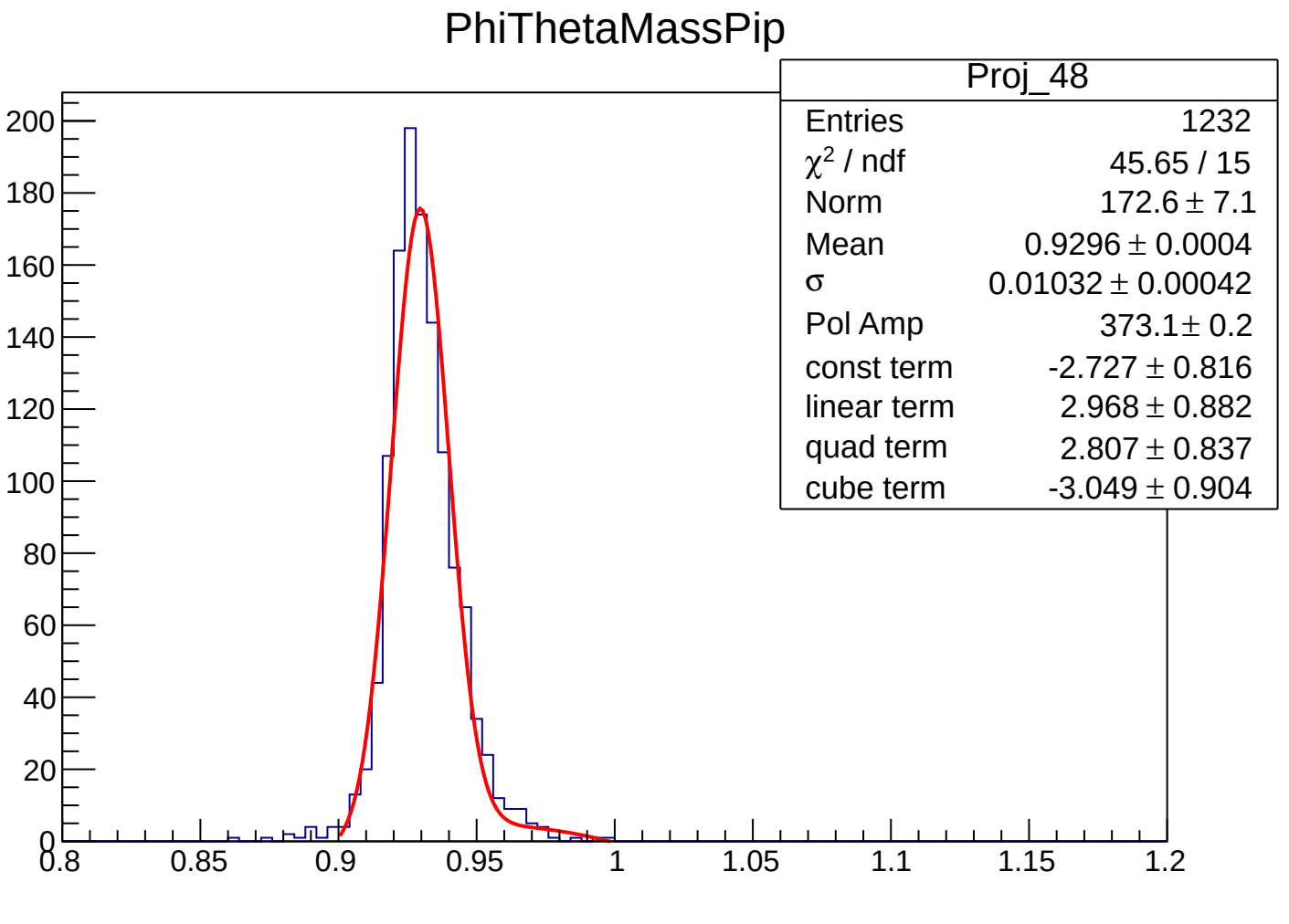

PhiThetaMassPip
Proj_43
Entries 1373
χ² / ndf 58.39 / 15
Norm 168 ± 6.4
Mean 0.9316 ± 0.0004
σ 0.01208 ± 0.00038
Pol Amp 372.4 ± 89.7
const term -4.194 ± 0.017
linear term 4.483 ± 0.018
quad term 4.374 ± 0.019
cube term -4.666 ± 0.018
200
180
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

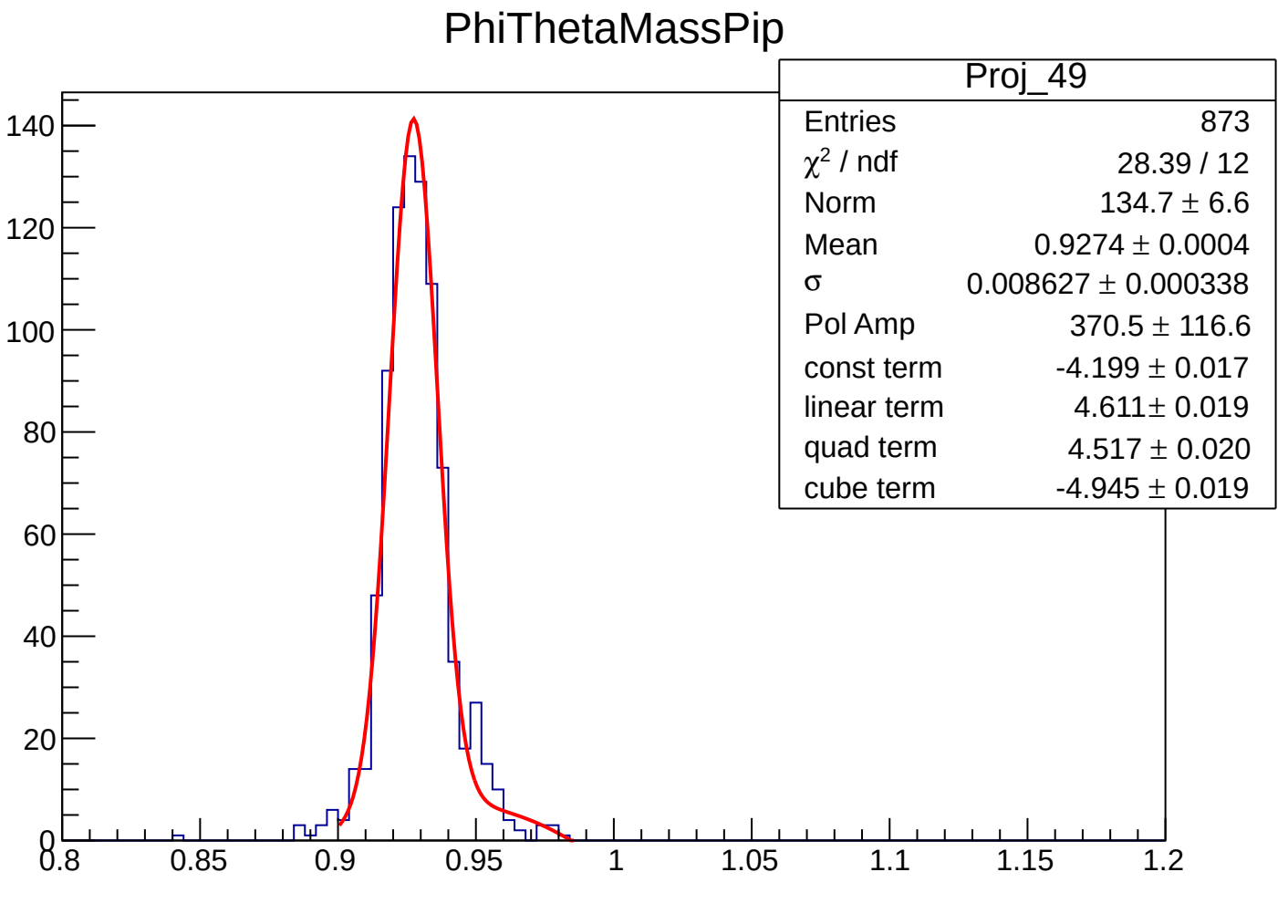

PhiThetaMassPip
Proj_44
Entries 1274
χ² / ndf 66.13 / 15
Norm 166.5 ± 7.1
Mean 0.9307 ± 0.0004
σ 0.01011 ± 0.00037
Pol Amp 374 ± 72.5
const term -7.739 ± 0.016
linear term 8.43 ± 0.02
quad term 8.177 ± 0.019
cube term -8.888 ± 0.018
200
180
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

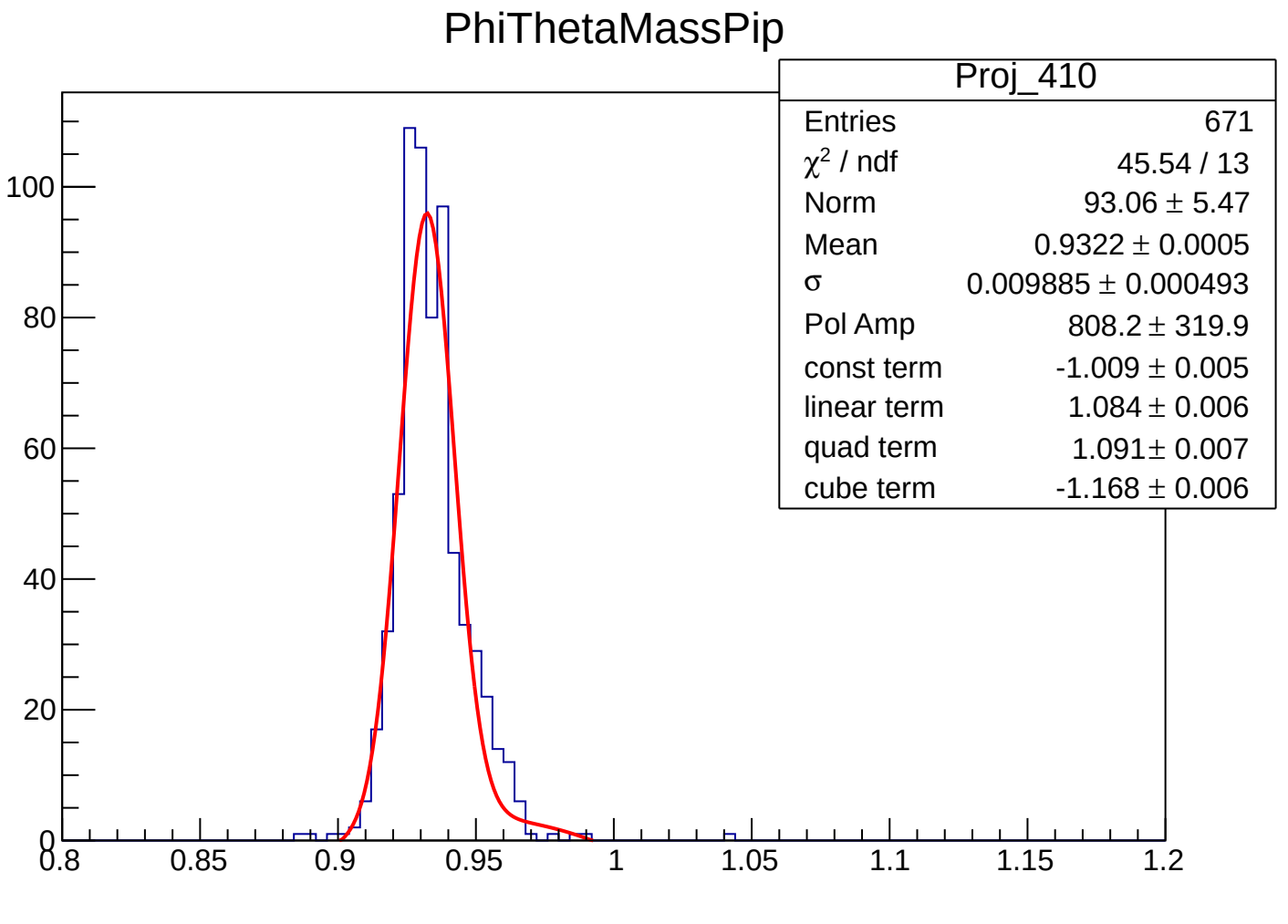

PhiThetaMassPip
Proj_45
Entries 919
χ² / ndf 64.07 / 13
Norm 118.4 ± 6.5
Mean 0.9301 ± 0.0005
σ 0.009733 ± 0.000635
Pol Amp 373.1 ± 1.2
const term -6.607 ± 1.602
linear term 7.228 ± 1.751
quad term 7.045 ± 1.708
cube term -7.69 ± 1.86
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

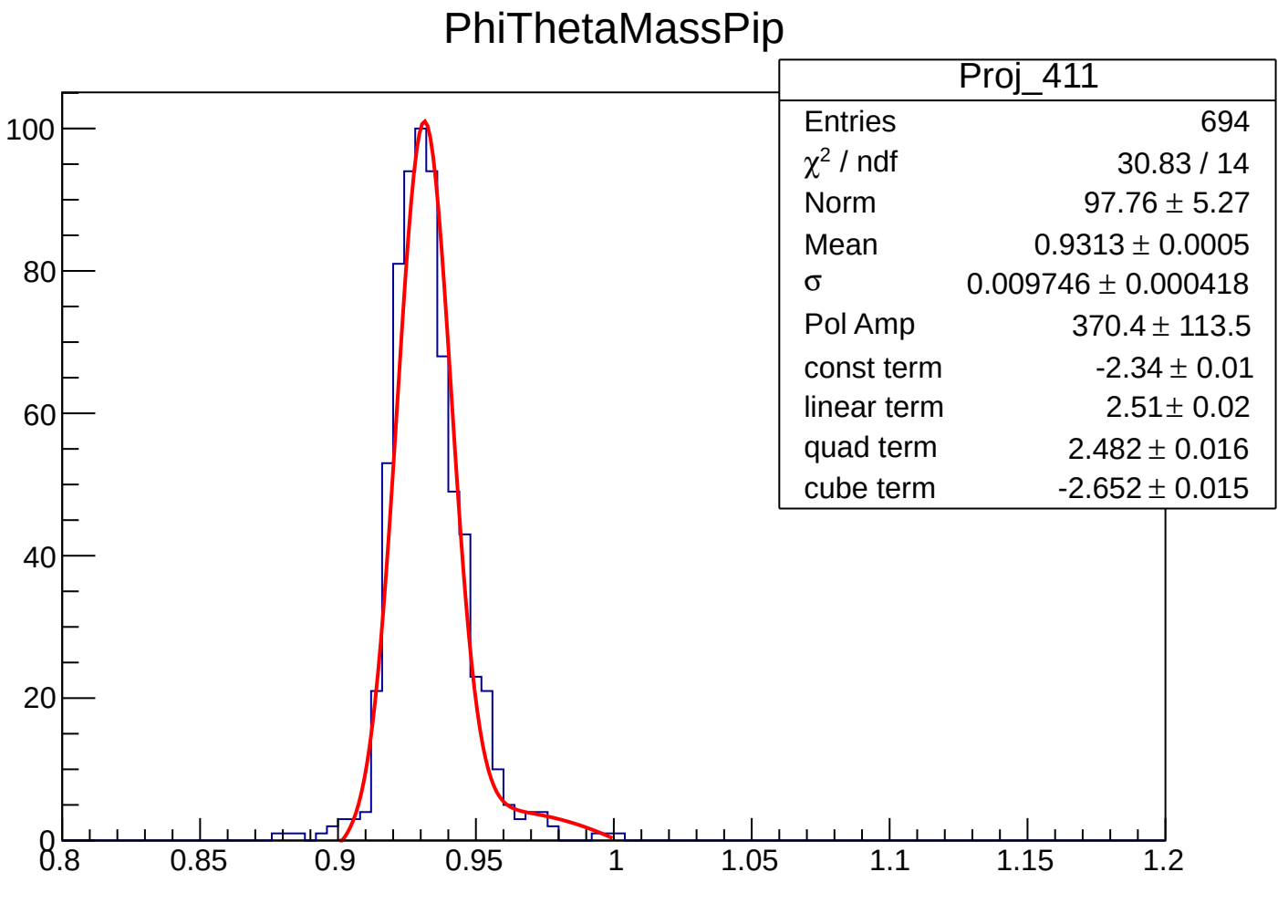

PhiThetaMassPip
Proj_46
Entries 912
χ² / ndf 67.22 / 13
Norm 121.3 ± 6.7
Mean 0.9317 ± 0.0005
σ 0.00922 ± 0.00050
Pol Amp 2901 ± 704.5
const term -0.9738 ± 0.0019
linear term 1.04 ± 0.00
quad term 1.091 ± 0.002
cube term -1.161 ± 0.002
0
20
40
60
80
100
120
140
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

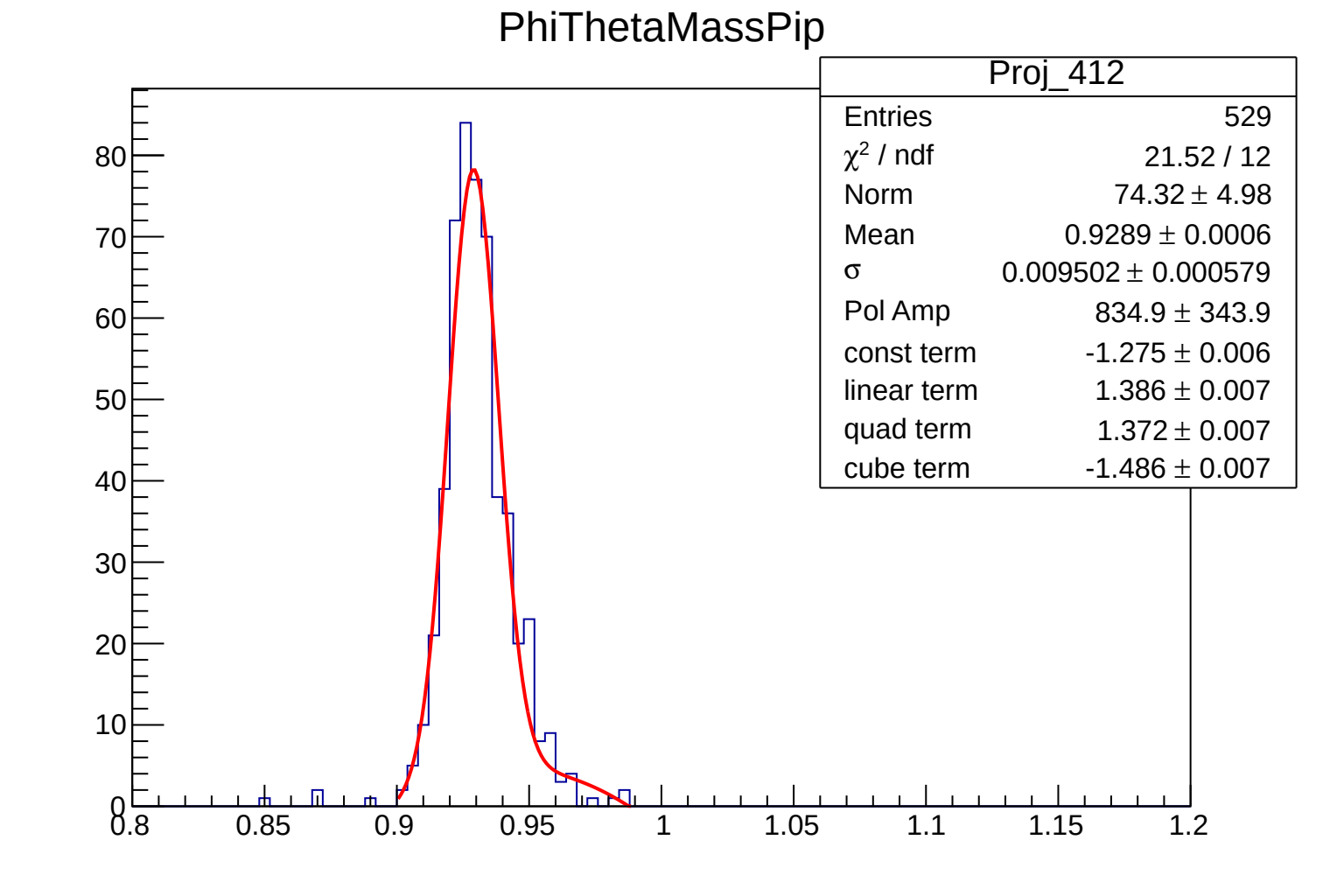

PhiThetaMassPip
Proj_47
Entries 1286
χ² / ndf 59.2 / 16
Norm 173.7 ± 6.9
Mean 0.9317 ± 0.0004
σ 0.01056 ± 0.00032
Pol Amp 373.2 ± 144.0
const term -2.016 ± 0.013
linear term 2.218 ± 0.014
quad term 2.081 ± 0.014
cube term -2.284 ± 0.014
0
20
40
60
80
100
120
140
160
180
200
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

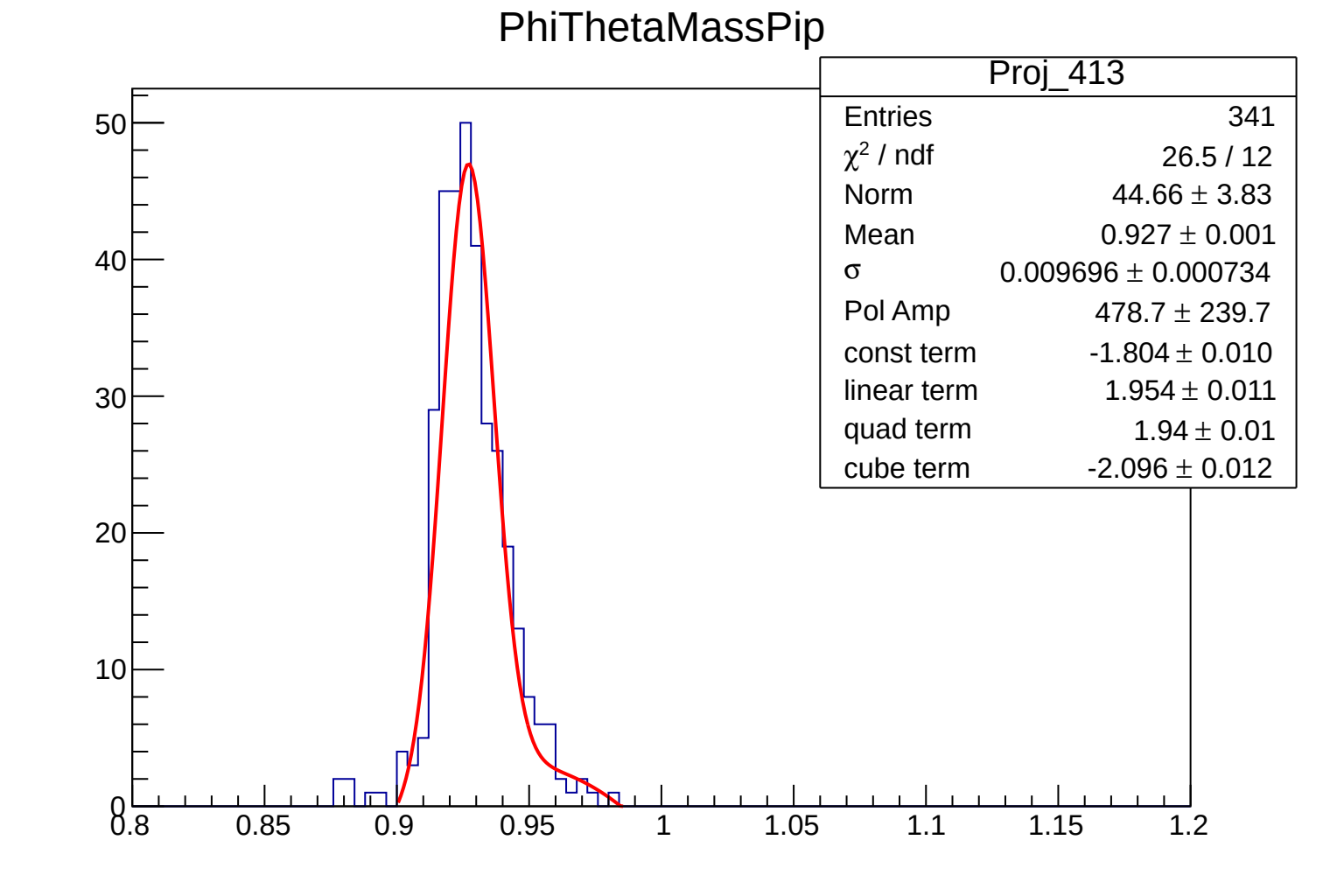

PhiThetaMassPip
Proj_48
Entries 1232
χ² / ndf 45.65 / 15
Norm 172.6 ± 7.1
Mean 0.9296 ± 0.0004
σ 0.01032 ± 0.00042
Pol Amp 373.1 ± 0.2
const term -2.727 ± 0.816
linear term 2.968 ± 0.882
quad term 2.807 ± 0.837
cube term -3.049 ± 0.904
200
180
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

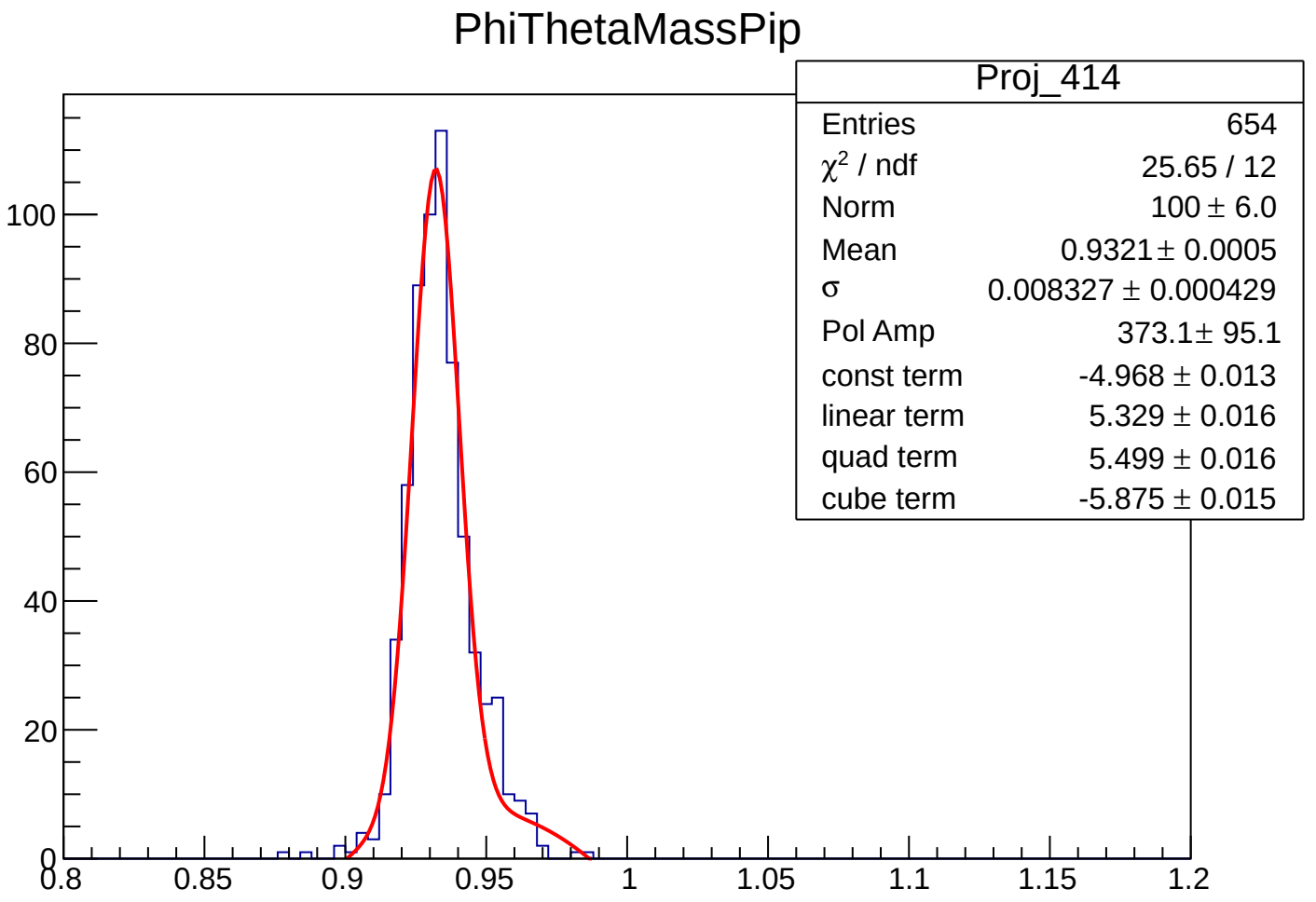

PhiThetaMassPip
Proj_49
Entries 873
χ² / ndf 28.39 / 12
Norm 134.7 ± 6.6
Mean 0.9274 ± 0.0004
σ 0.008627 ± 0.000338
Pol Amp 370.5 ± 116.6
const term -4.199 ± 0.017
linear term 4.611± 0.019
quad term 4.517 ± 0.020
cube term -4.945 ± 0.019
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

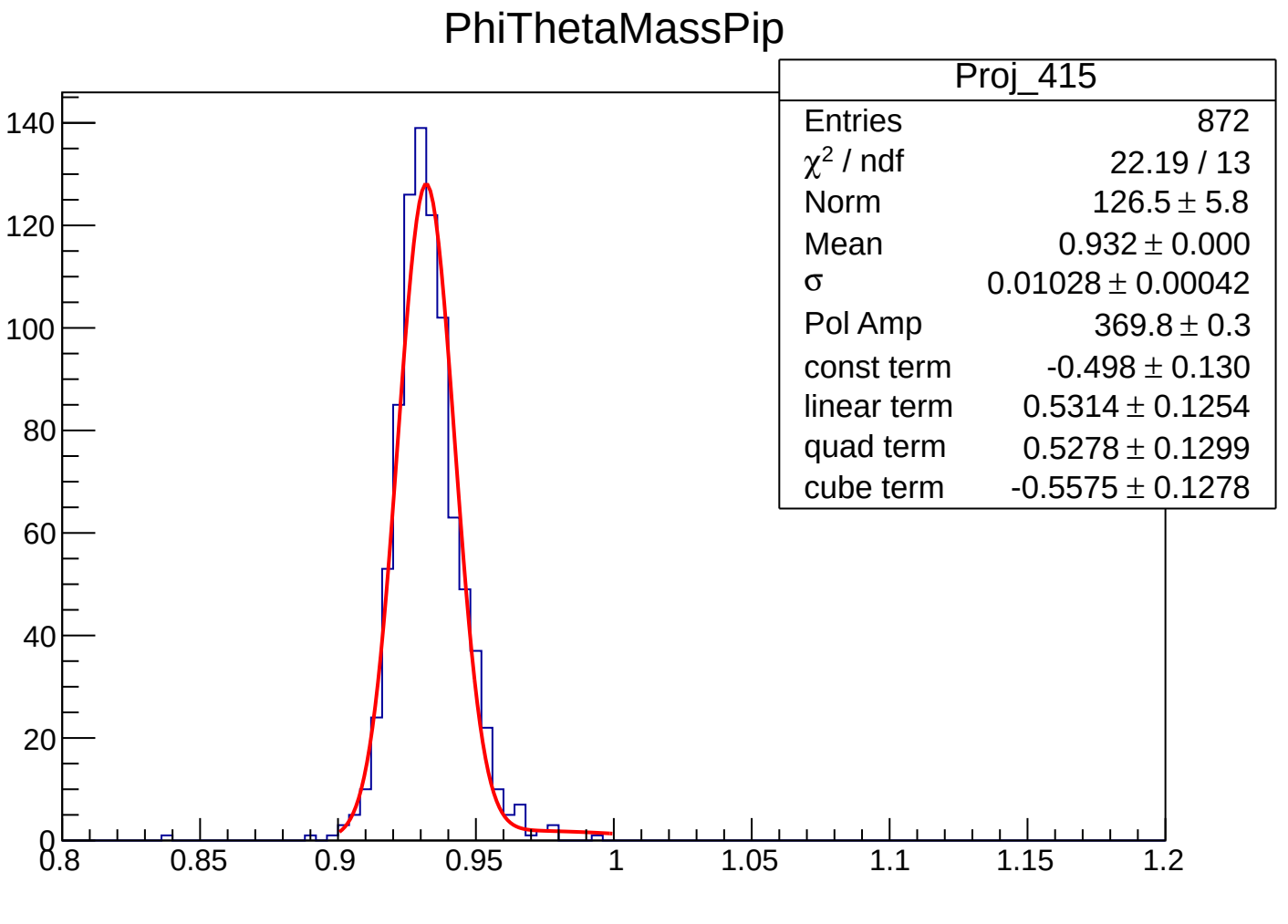

PhiThetaMassPip
Proj_410
Entries 671
χ² / ndf 45.54 / 13
Norm 93.06 ± 5.47
Mean 0.9322 ± 0.0005
σ 0.009885 ± 0.000493
Pol Amp 808.2 ± 319.9
const term -1.009 ± 0.005
linear term 1.084 ± 0.006
quad term 1.091 ± 0.007
cube term -1.168 ± 0.006
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

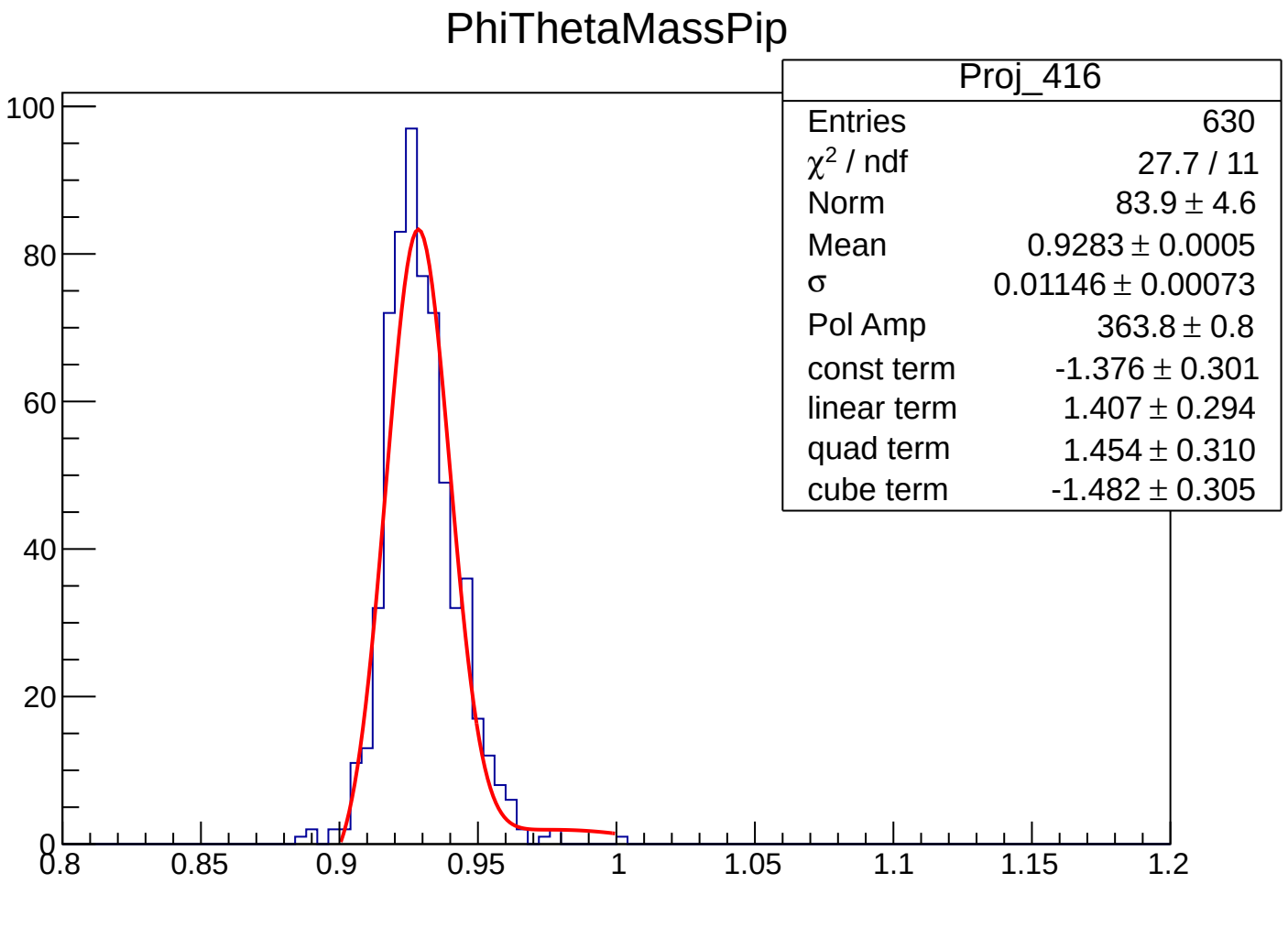

PhiThetaMassPip
Proj_411
Entries 694
χ² / ndf 30.83 / 14
Norm 97.76 ± 5.27
Mean 0.9313 ± 0.0005
σ 0.009746 ± 0.000418
Pol Amp 370.4 ± 113.5
const term -2.34 ± 0.01
linear term 2.51 ± 0.02
quad term 2.482 ± 0.016
cube term -2.652 ± 0.015
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

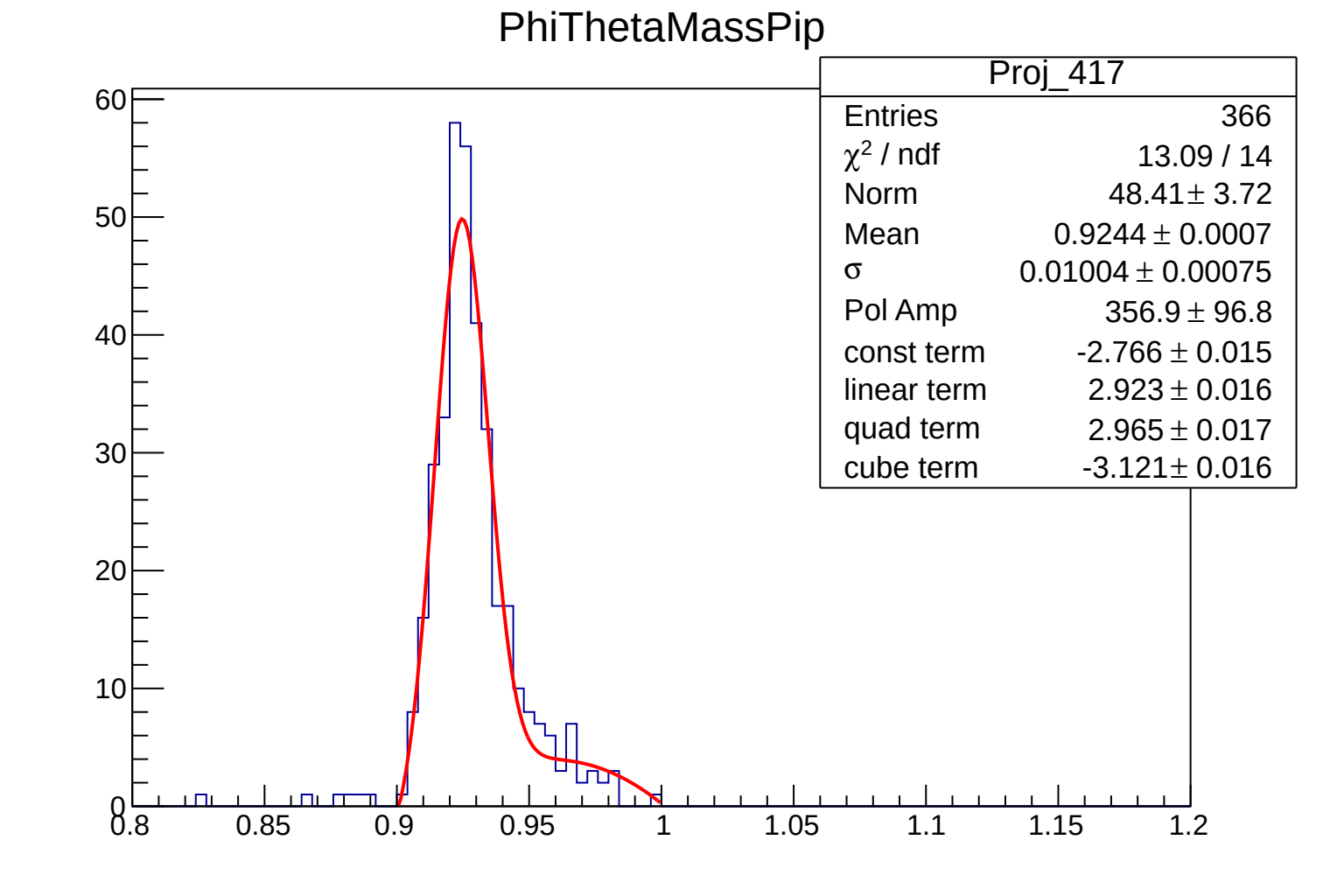

PhiThetaMassPip
Proj_412
Entries 529
χ² / ndf 21.52 / 12
Norm 74.32 ± 4.98
Mean 0.9289 ± 0.0006
σ 0.009502 ± 0.000579
Pol Amp 834.9 ± 343.9
const term -1.275 ± 0.006
linear term 1.386 ± 0.007
quad term 1.372 ± 0.007
cube term -1.486 ± 0.007
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

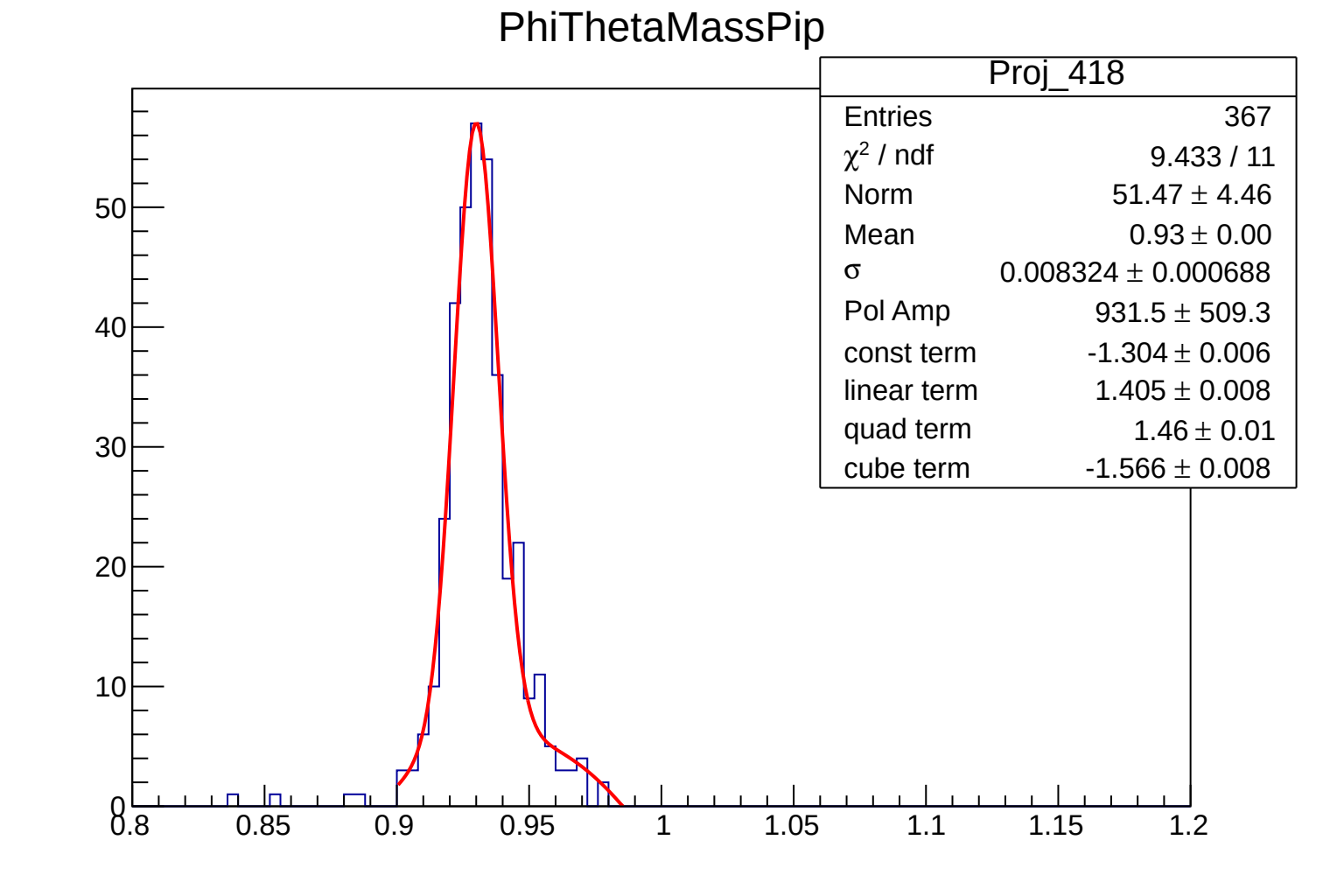

PhiThetaMassPip
Proj_413
Entries 341
χ² / ndf 26.5 / 12
Norm 44.66 ± 3.83
Mean 0.927 ± 0.001
σ 0.009696 ± 0.000734
Pol Amp 478.7 ± 239.7
const term -1.804 ± 0.010
linear term 1.954 ± 0.011
quad term 1.94 ± 0.01
cube term -2.096 ± 0.012
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

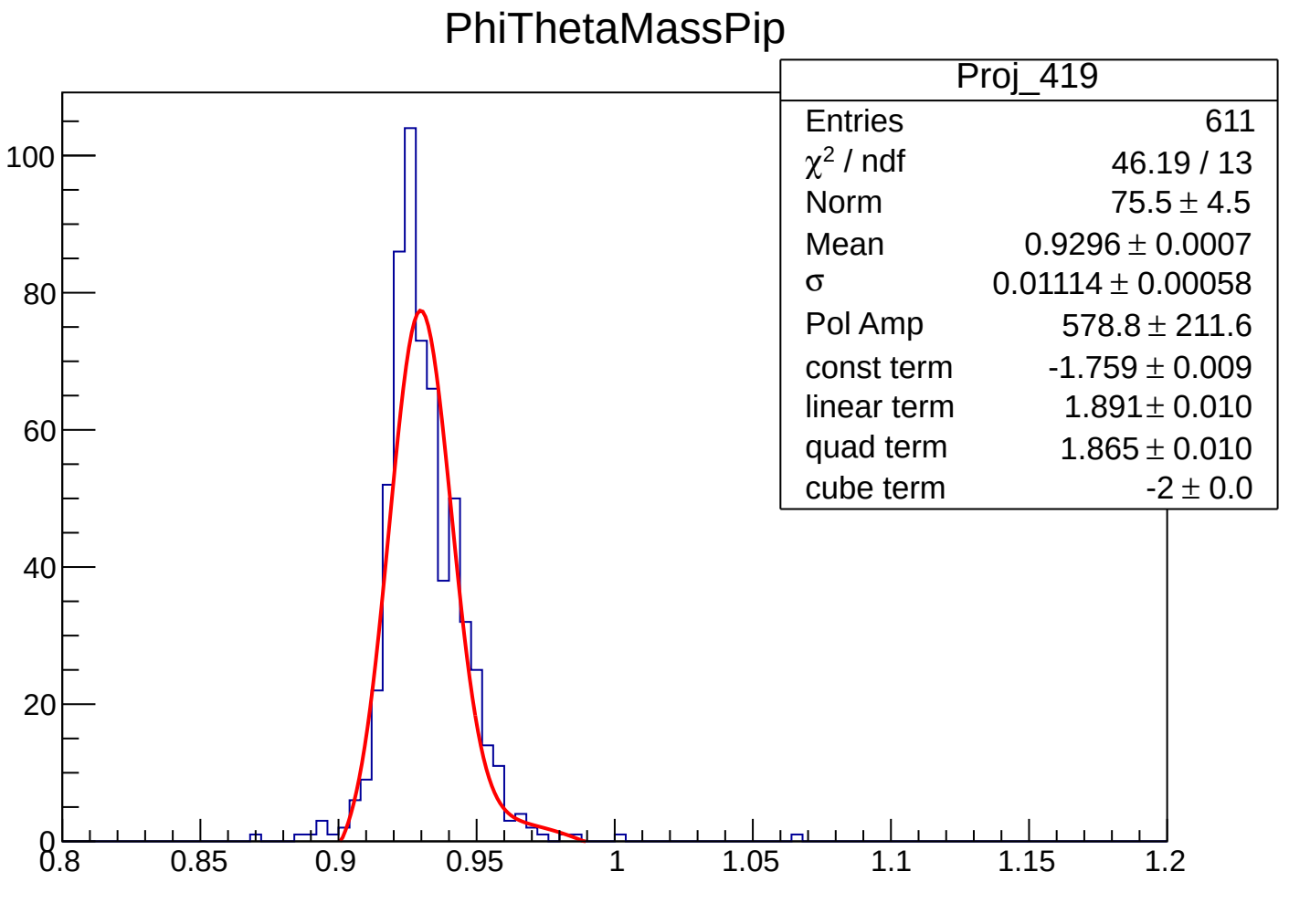

PhiThetaMassPip
Proj_414
Entries 654
χ² / ndf 25.65 / 12
Norm 100 ± 6.0
Mean 0.9321 ± 0.0005
σ 0.008327 ± 0.000429
Pol Amp 373.1 ± 95.1
const term -4.968 ± 0.013
linear term 5.329 ± 0.016
quad term 5.499 ± 0.016
cube term -5.875 ± 0.015
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

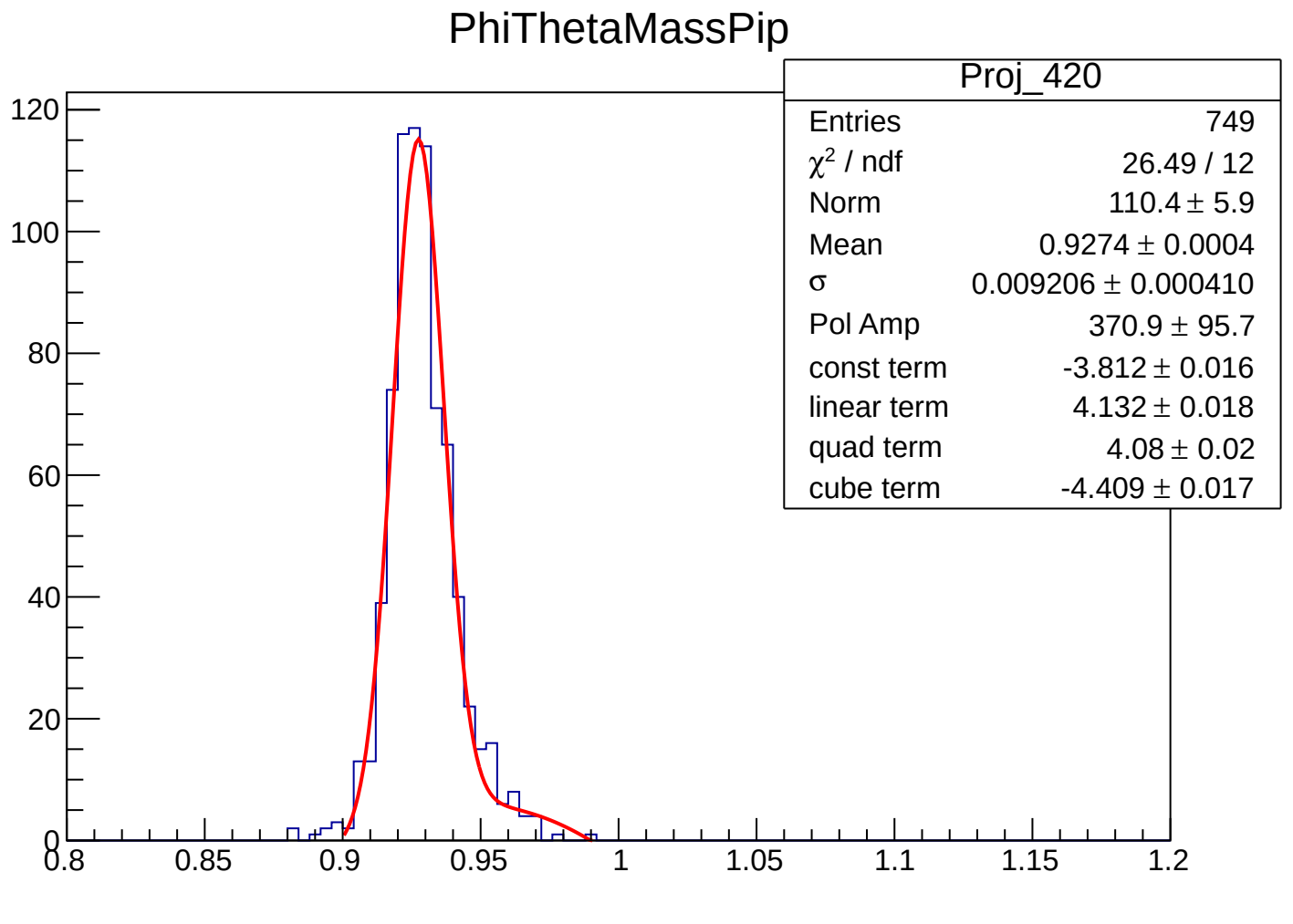

PhiThetaMassPip
Proj_415
Entries 872
χ² / ndf 22.19 / 13
Norm 126.5 ± 5.8
Mean 0.932 ± 0.000
σ 0.01028 ± 0.00042
Pol Amp 369.8 ± 0.3
const term -0.498 ± 0.130
linear term 0.5314 ± 0.1254
quad term 0.5278 ± 0.1299
cube term -0.5575 ± 0.1278
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

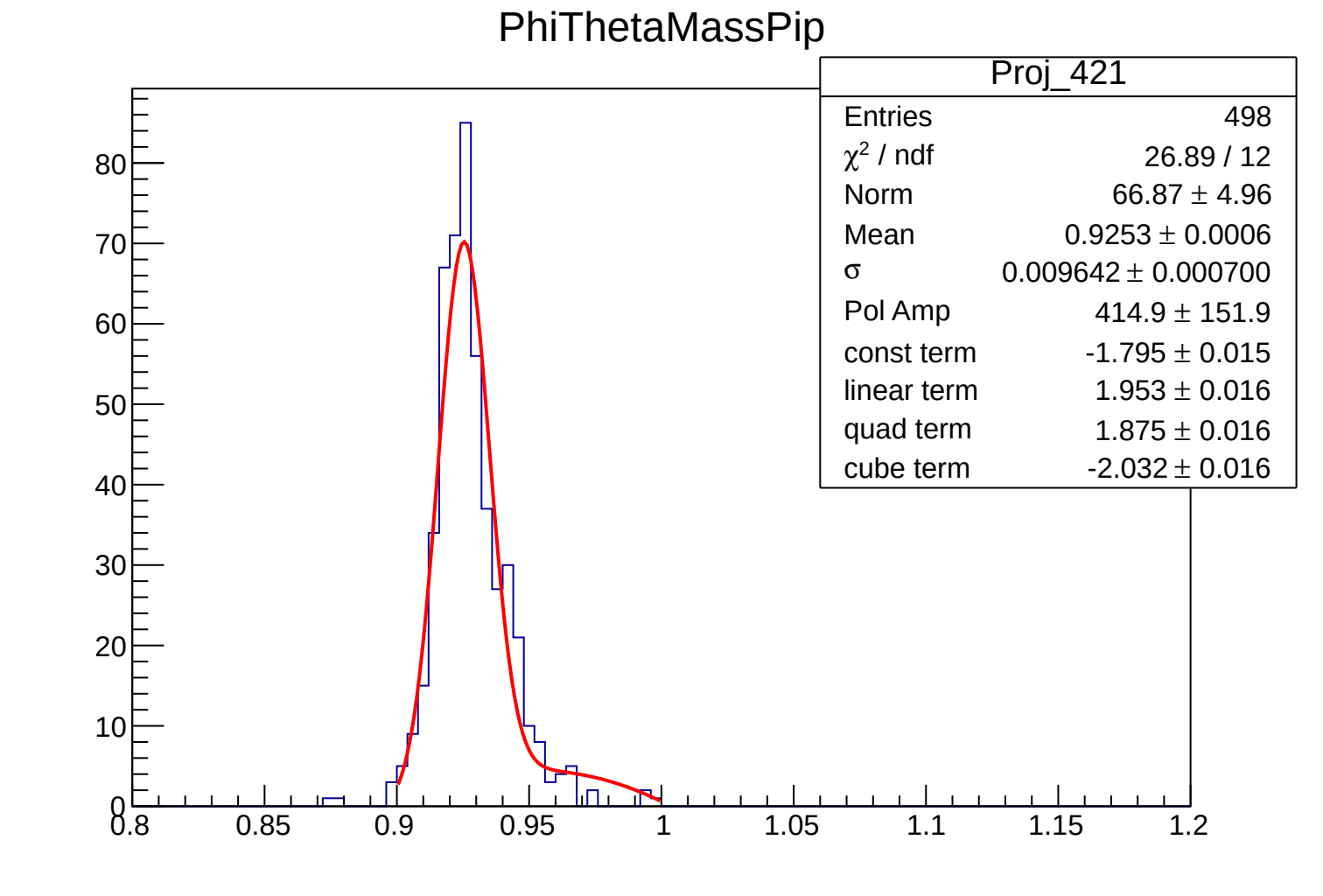

PhiThetaMassPip
Proj_416
Entries 630
χ² / ndf 27.7 / 11
Norm 83.9 ± 4.6
Mean 0.9283 ± 0.0005
σ 0.01146 ± 0.00073
Pol Amp 363.8 ± 0.8
const term -1.376 ± 0.301
linear term 1.407 ± 0.294
quad term 1.454 ± 0.310
cube term -1.482 ± 0.305
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

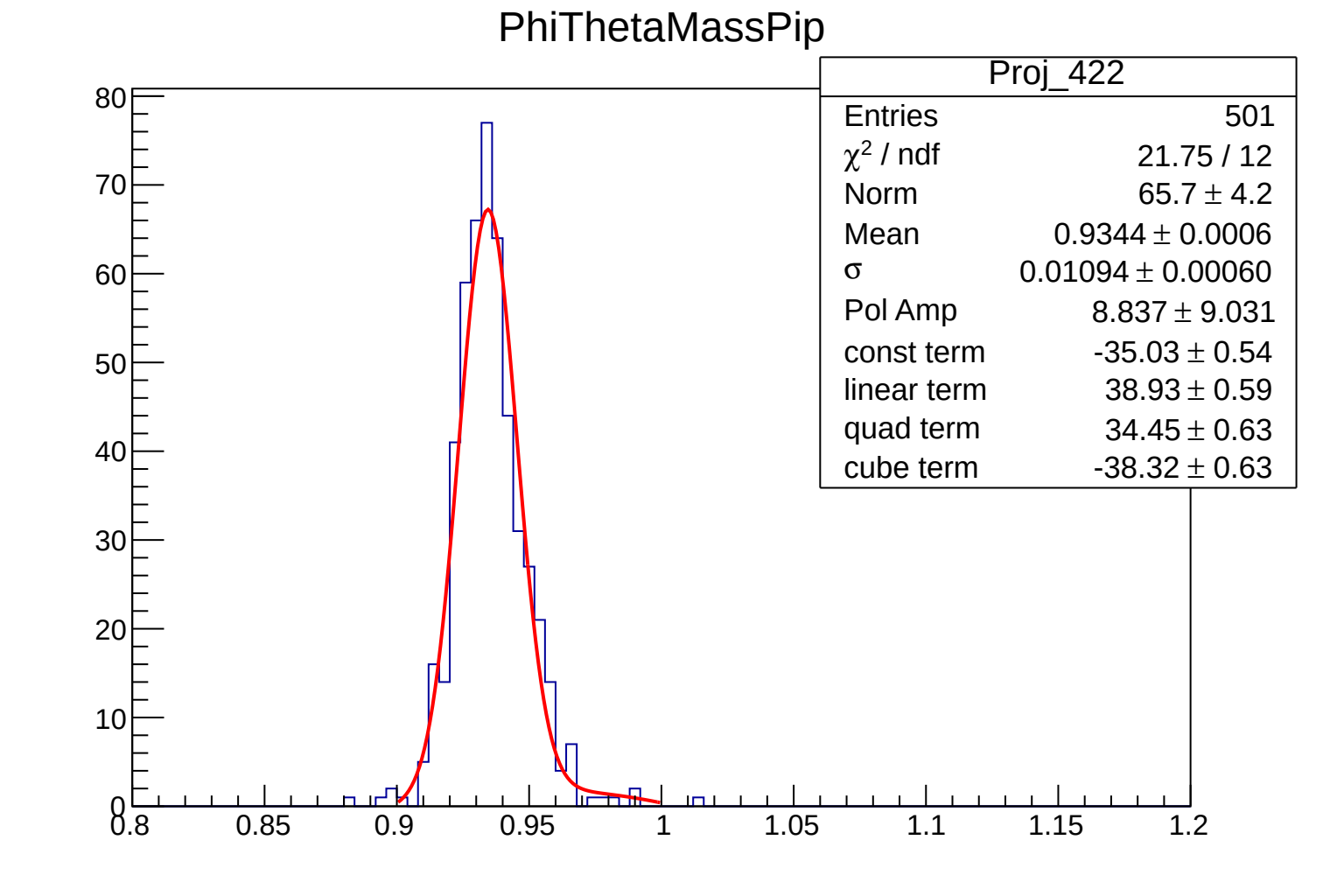

PhiThetaMassPip
Proj_417
Entries 366
χ² / ndf 13.09 / 14
Norm 48.41 ± 3.72
Mean 0.9244 ± 0.0007
σ 0.01004 ± 0.00075
Pol Amp 356.9 ± 96.8
const term -2.766 ± 0.015
linear term 2.923 ± 0.016
quad term 2.965 ± 0.017
cube term -3.121 ± 0.016
60
50
40
30
20
10
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

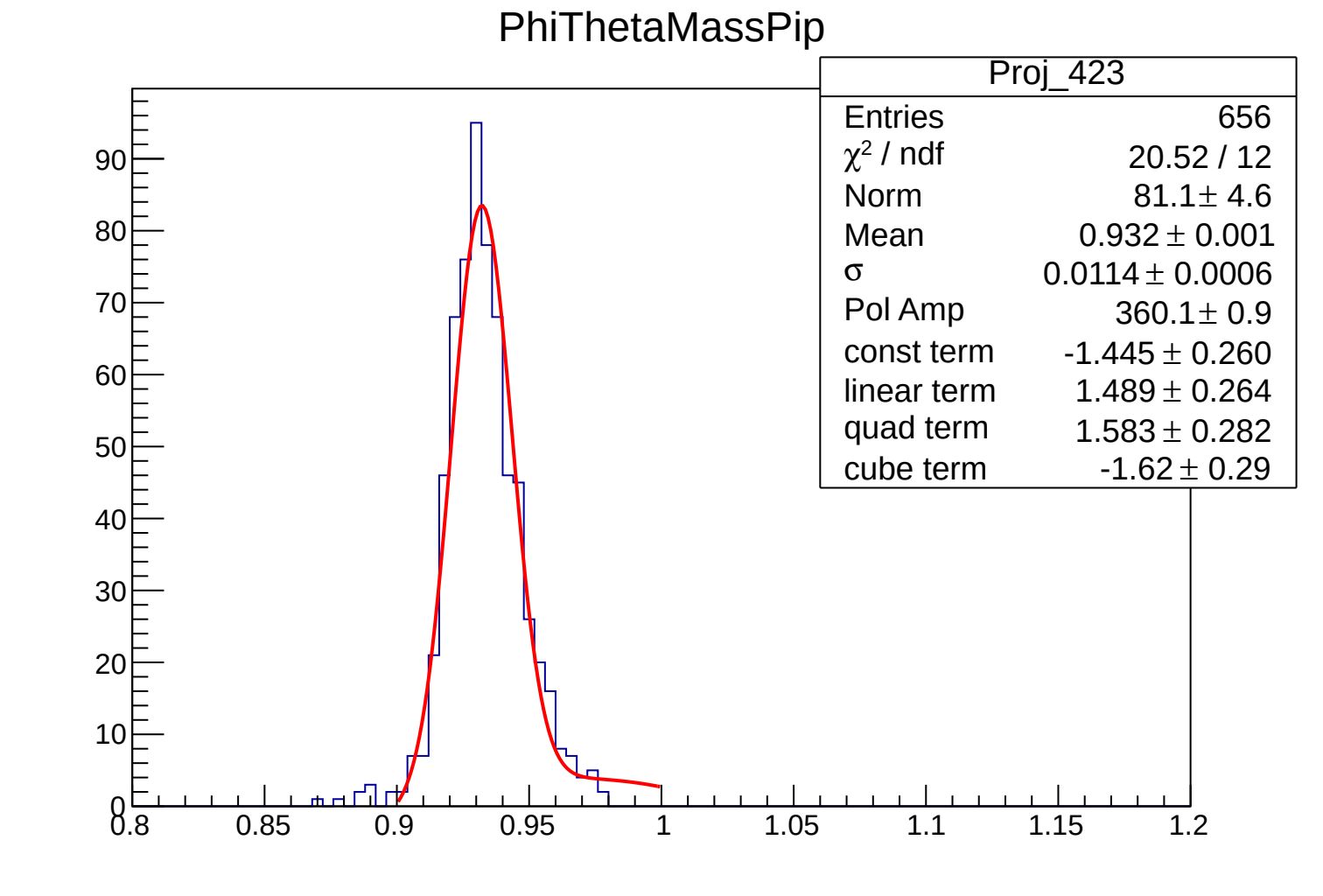

PhiThetaMassPip
Proj_418
Entries 367
χ² / ndf 9.433 / 11
Norm 51.47 ± 4.46
Mean 0.93 ± 0.00
σ 0.008324 ± 0.000688
Pol Amp 931.5 ± 509.3
const term -1.304 ± 0.006
linear term 1.405 ± 0.008
quad term 1.46 ± 0.01
cube term -1.566 ± 0.008
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

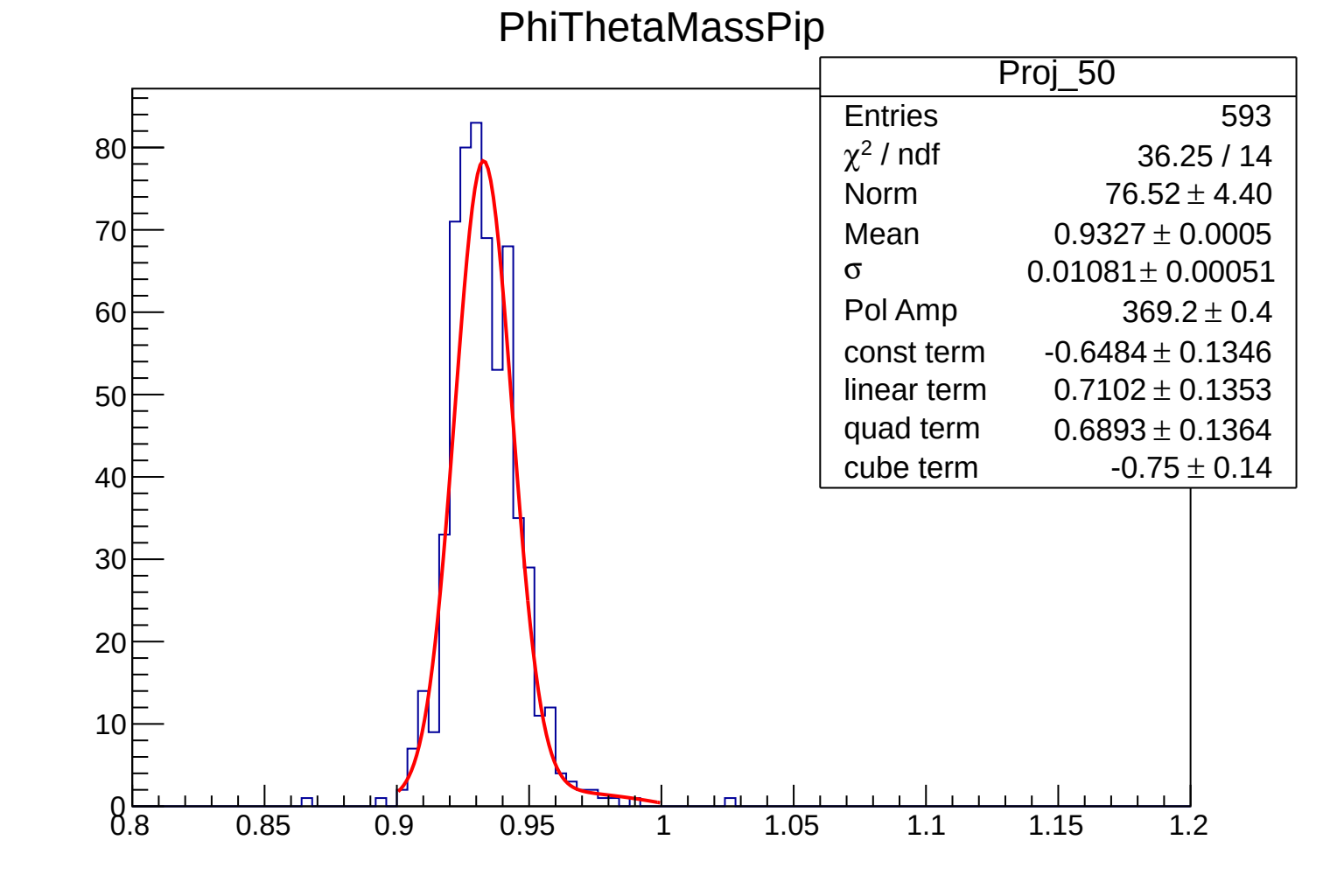

PhiThetaMassPip
Proj_419
Entries 611
χ² / ndf 46.19 / 13
Norm 75.5 ± 4.5
Mean 0.9296 ± 0.0007
σ 0.01114 ± 0.00058
Pol Amp 578.8 ± 211.6
const term -1.759 ± 0.009
linear term 1.891 ± 0.010
quad term 1.865 ± 0.010
cube term -2 ± 0.0
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

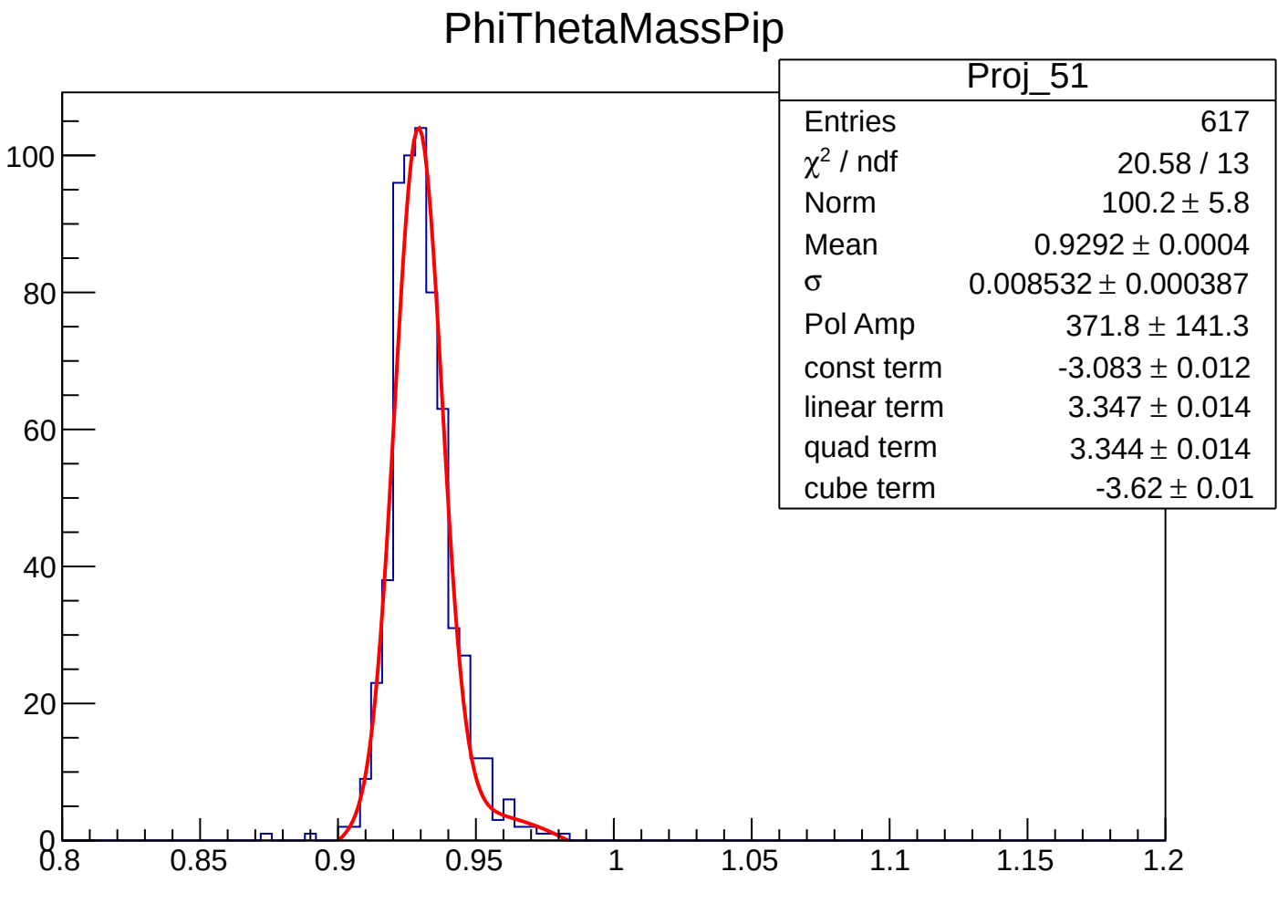

PhiThetaMassPip
Proj_420
Entries 749
χ² / ndf 26.49 / 12
Norm 110.4 ± 5.9
Mean 0.9274 ± 0.0004
σ 0.009206 ± 0.000410
Pol Amp 370.9 ± 95.7
const term -3.812 ± 0.016
linear term 4.132 ± 0.018
quad term 4.08 ± 0.02
cube term -4.409 ± 0.017
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

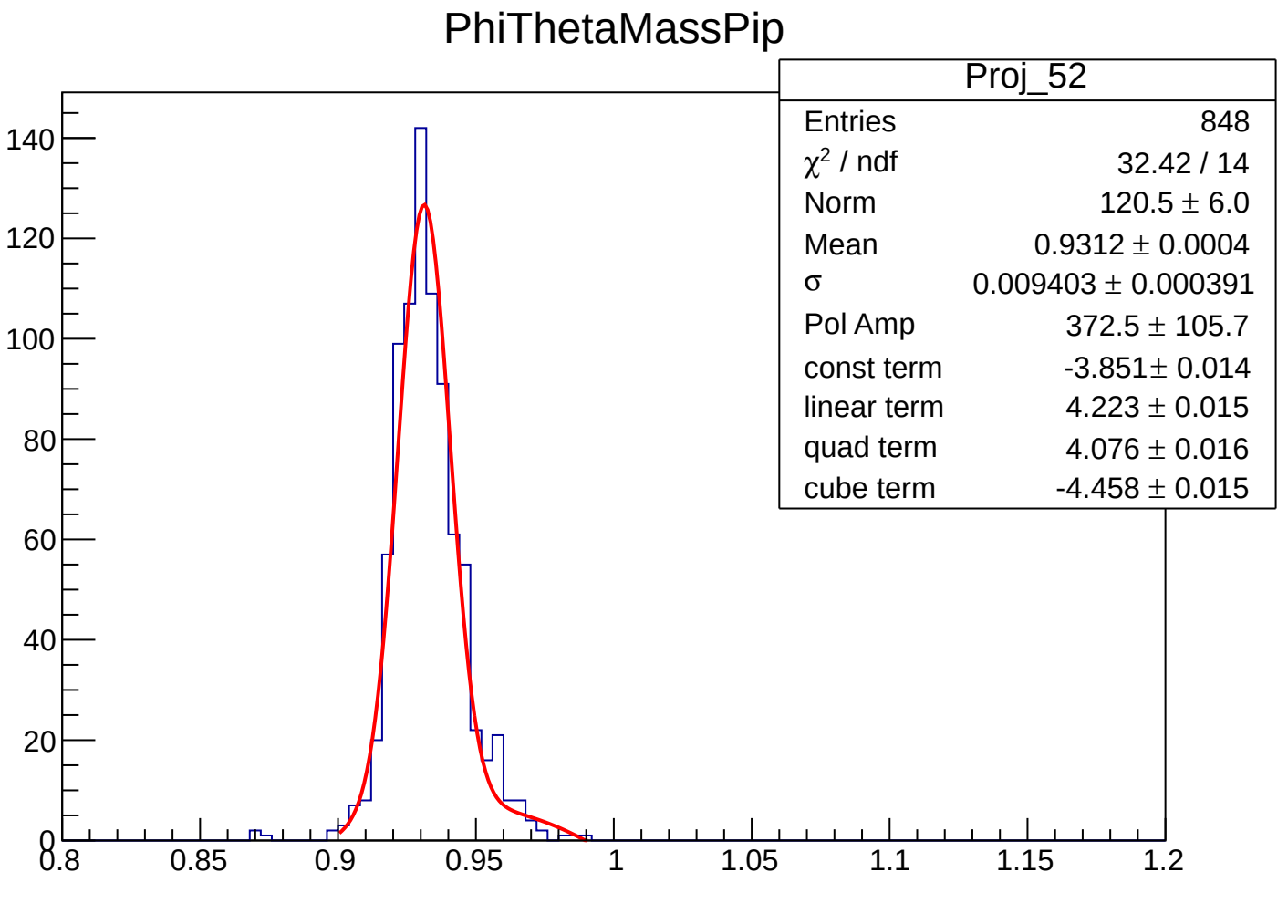

PhiThetaMassPip
Proj_421
Entries 498
χ² / ndf 26.89 / 12
Norm 66.87 ± 4.96
Mean 0.9253 ± 0.0006
σ 0.009642 ± 0.000700
Pol Amp 414.9 ± 151.9
const term -1.795 ± 0.015
linear term 1.953 ± 0.016
quad term 1.875 ± 0.016
cube term -2.032 ± 0.016
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

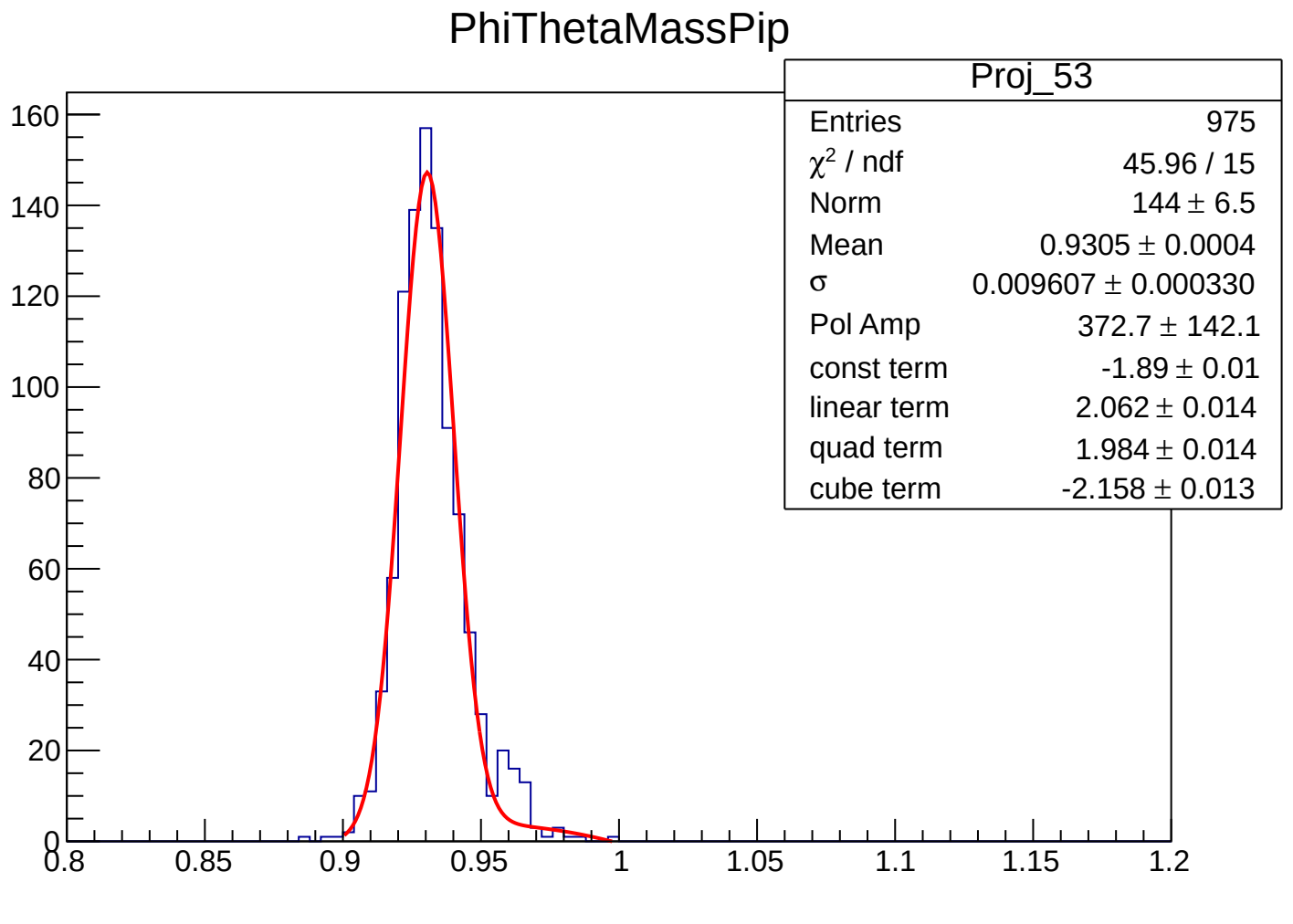

PhiThetaMassPip
Proj_422
Entries 501
χ² / ndf 21.75 / 12
Norm 65.7 ± 4.2
Mean 0.9344 ± 0.0006
σ 0.01094 ± 0.00060
Pol Amp 8.837 ± 9.031
const term -35.03 ± 0.54
linear term 38.93 ± 0.59
quad term 34.45 ± 0.63
cube term -38.32 ± 0.63
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

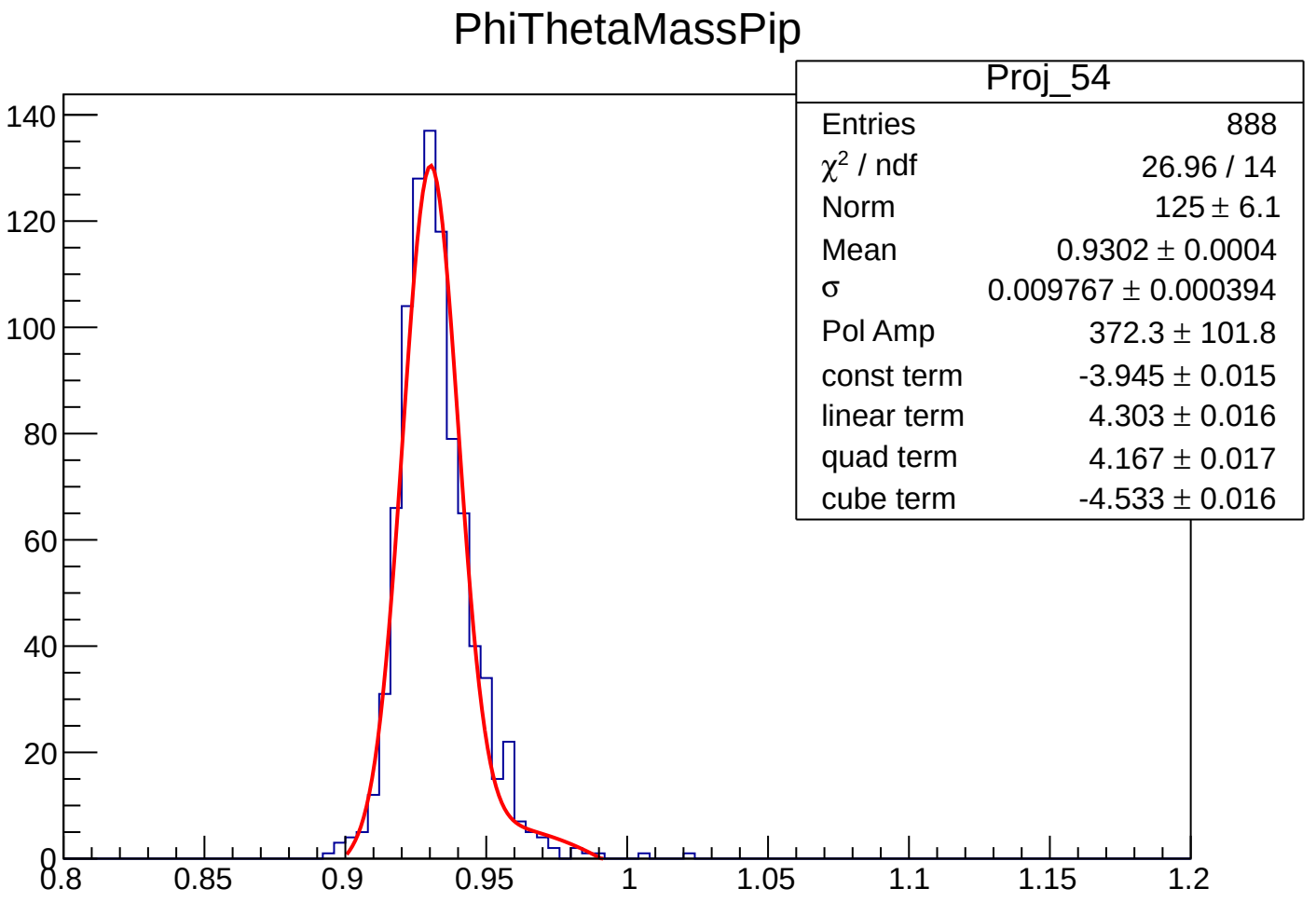

PhiThetaMassPip
Proj_423
Entries 656
χ² / ndf 20.52 / 12
Norm 81.1 ± 4.6
Mean 0.932 ± 0.001
σ 0.0114 ± 0.0006
Pol Amp 360.1 ± 0.9
const term -1.445 ± 0.260
linear term 1.489 ± 0.264
quad term 1.583 ± 0.282
cube term -1.62 ± 0.29
0
10
20
30
40
50
60
70
80
90
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

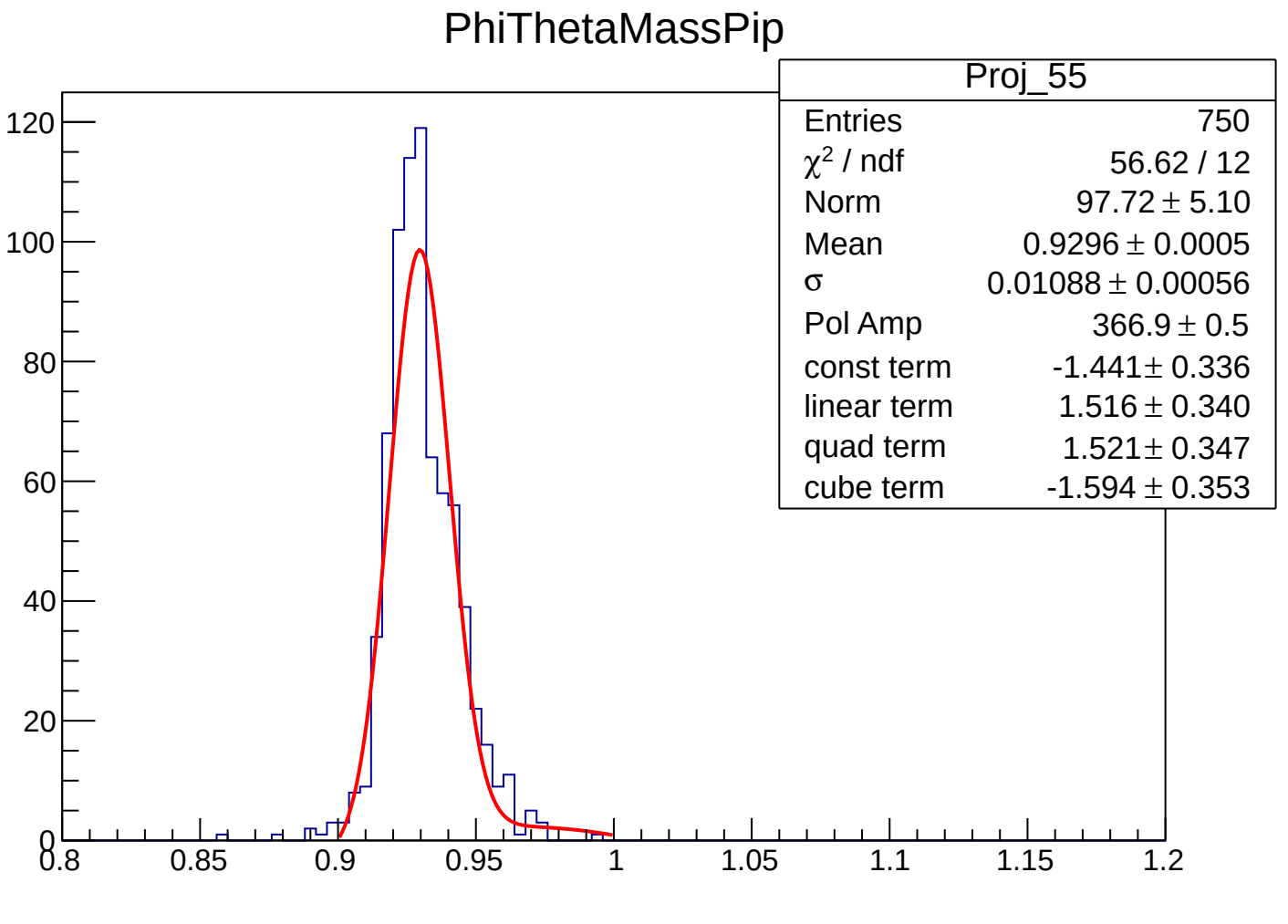

PhiThetaMassPip
Proj_50
Entries 593
χ² / ndf 36.25 / 14
Norm 76.52 ± 4.40
Mean 0.9327 ± 0.0005
σ 0.01081 ± 0.00051
Pol Amp 369.2 ± 0.4
const term -0.6484 ± 0.1346
linear term 0.7102 ± 0.1353
quad term 0.6893 ± 0.1364
cube term -0.75 ± 0.14
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

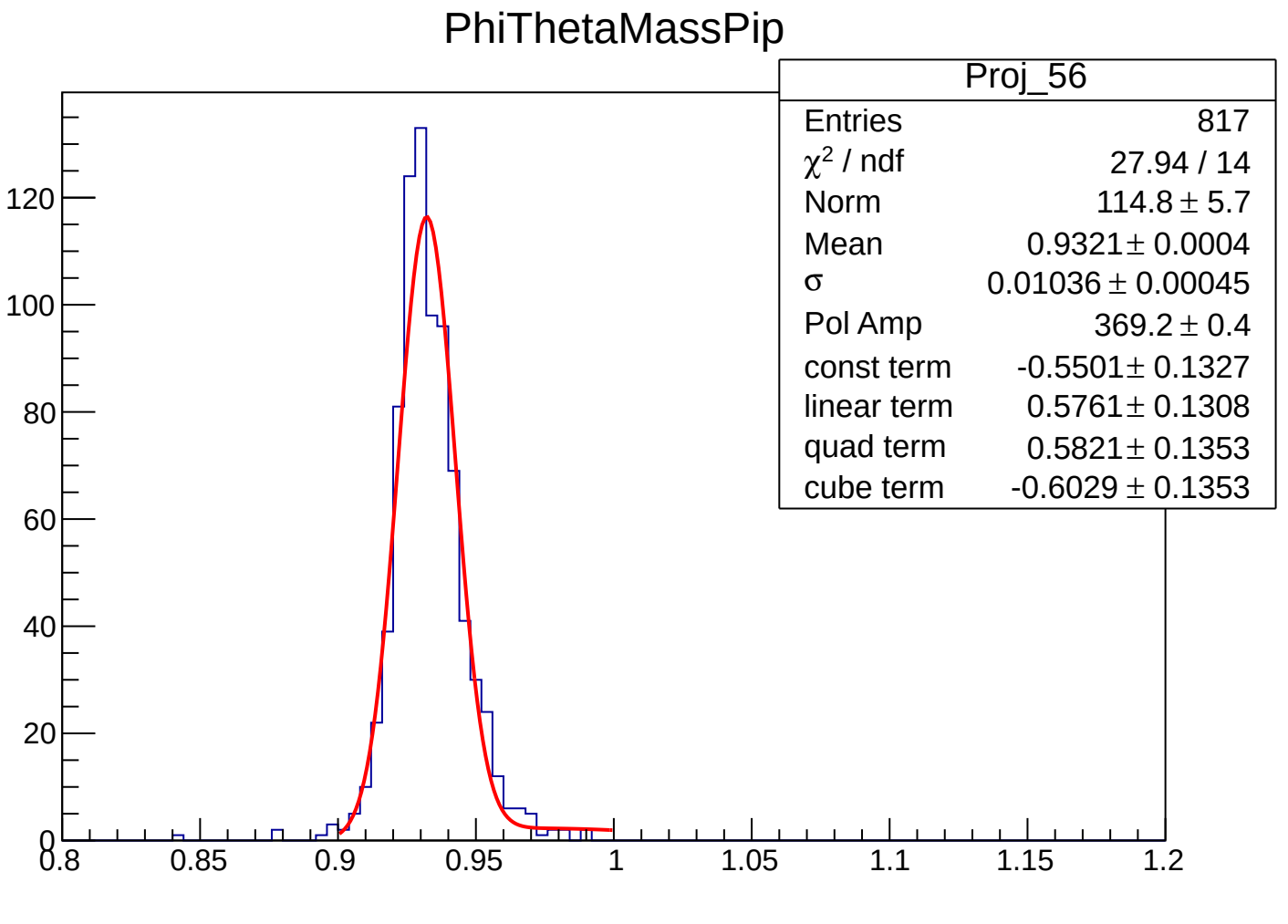

PhiThetaMassPip
Proj_51
Entries 617
χ² / ndf 20.58 / 13
Norm 100.2 ± 5.8
Mean 0.9292 ± 0.0004
σ 0.008532 ± 0.000387
Pol Amp 371.8 ± 141.3
const term -3.083 ± 0.012
linear term 3.347 ± 0.014
quad term 3.344 ± 0.014
cube term -3.62 ± 0.01
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

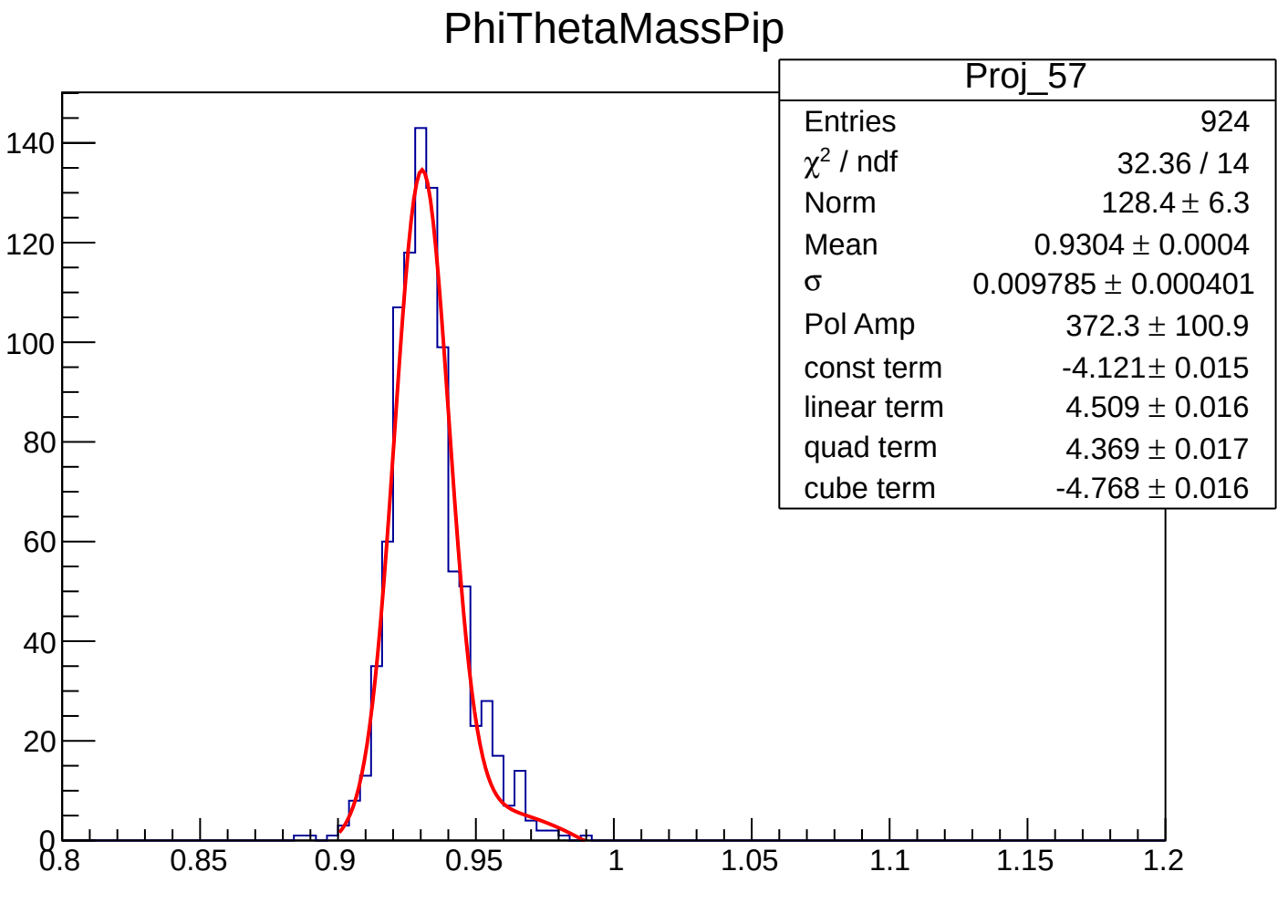

PhiThetaMassPip
Proj_52
Entries 848
χ² / ndf 32.42 / 14
Norm 120.5 ± 6.0
Mean 0.9312 ± 0.0004
σ 0.009403 ± 0.000391
Pol Amp 372.5 ± 105.7
const term -3.851± 0.014
linear term 4.223 ± 0.015
quad term 4.076 ± 0.016
cube term -4.458 ± 0.015
0
20
40
60
80
100
120
140
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

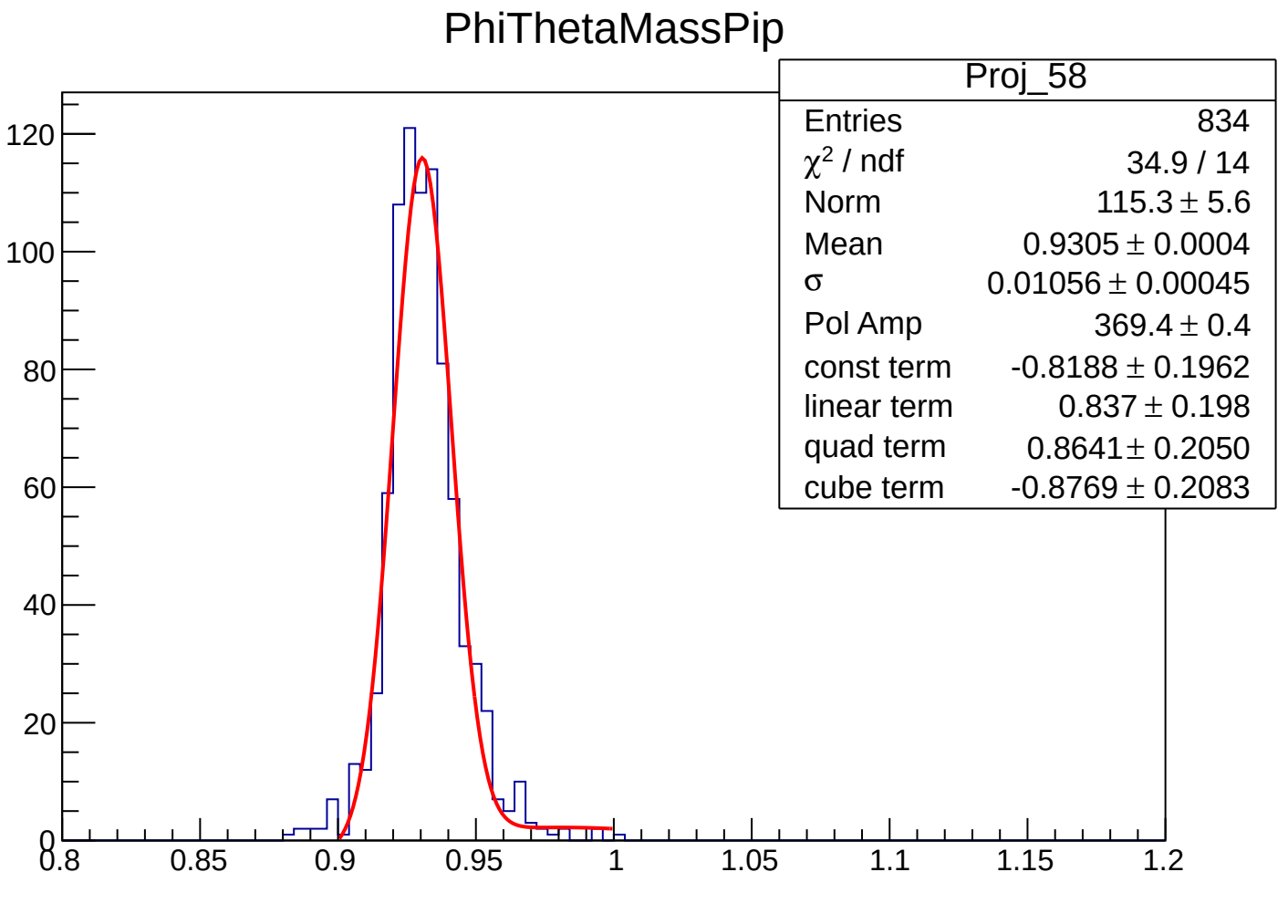

PhiThetaMassPip
Proj_53
Entries 975
χ² / ndf 45.96 / 15
Norm 144 ± 6.5
Mean 0.9305 ± 0.0004
σ 0.009607 ± 0.000330
Pol Amp 372.7 ± 142.1
const term -1.89 ± 0.01
linear term 2.062 ± 0.014
quad term 1.984 ± 0.014
cube term -2.158 ± 0.013
160
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

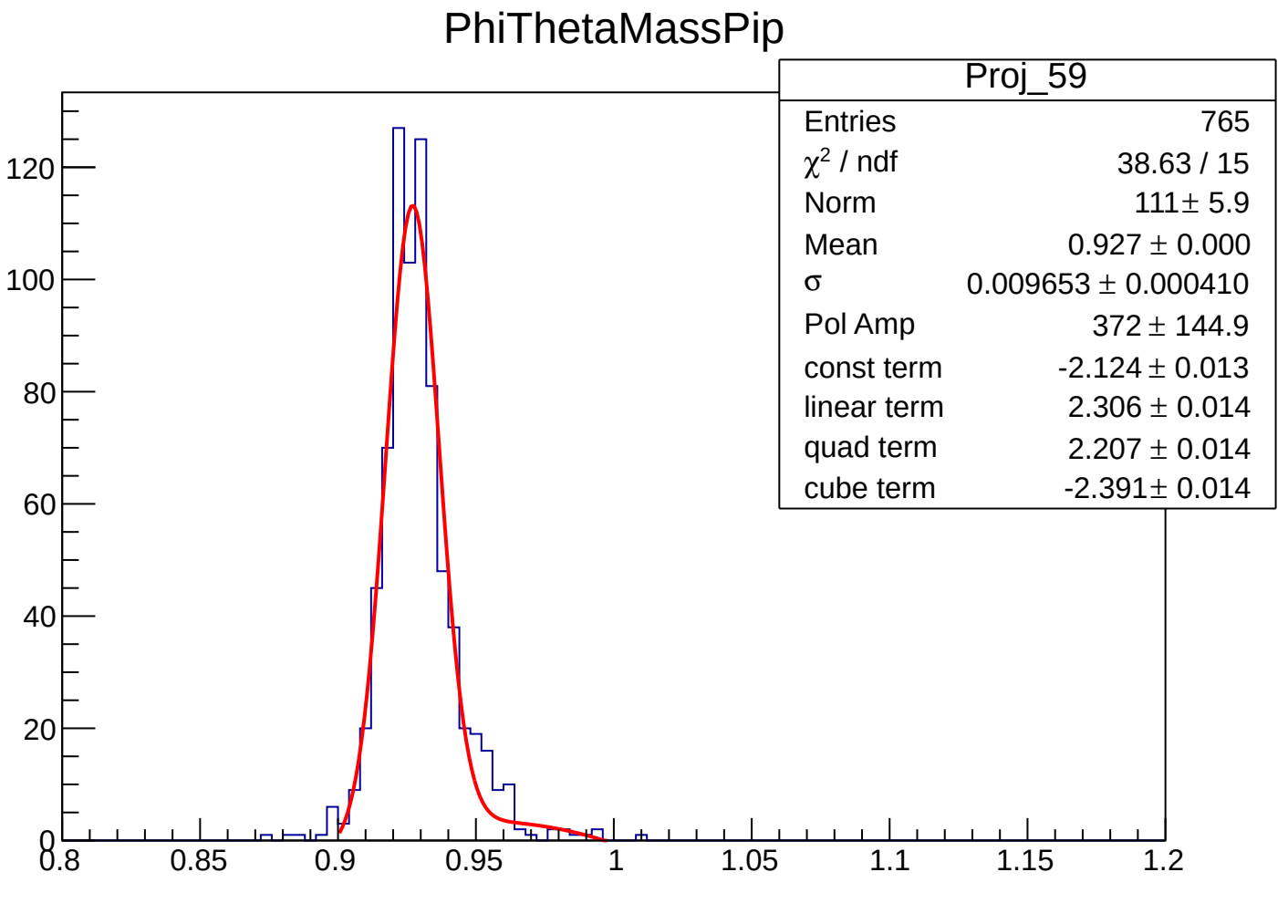

PhiThetaMassPip
Proj_54
Entries 888
χ² / ndf 26.96 / 14
Norm 125 ± 6.1
Mean 0.9302 ± 0.0004
σ 0.009767 ± 0.000394
Pol Amp 372.3 ± 101.8
const term -3.945 ± 0.015
linear term 4.303 ± 0.016
quad term 4.167 ± 0.017
cube term -4.533 ± 0.016
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

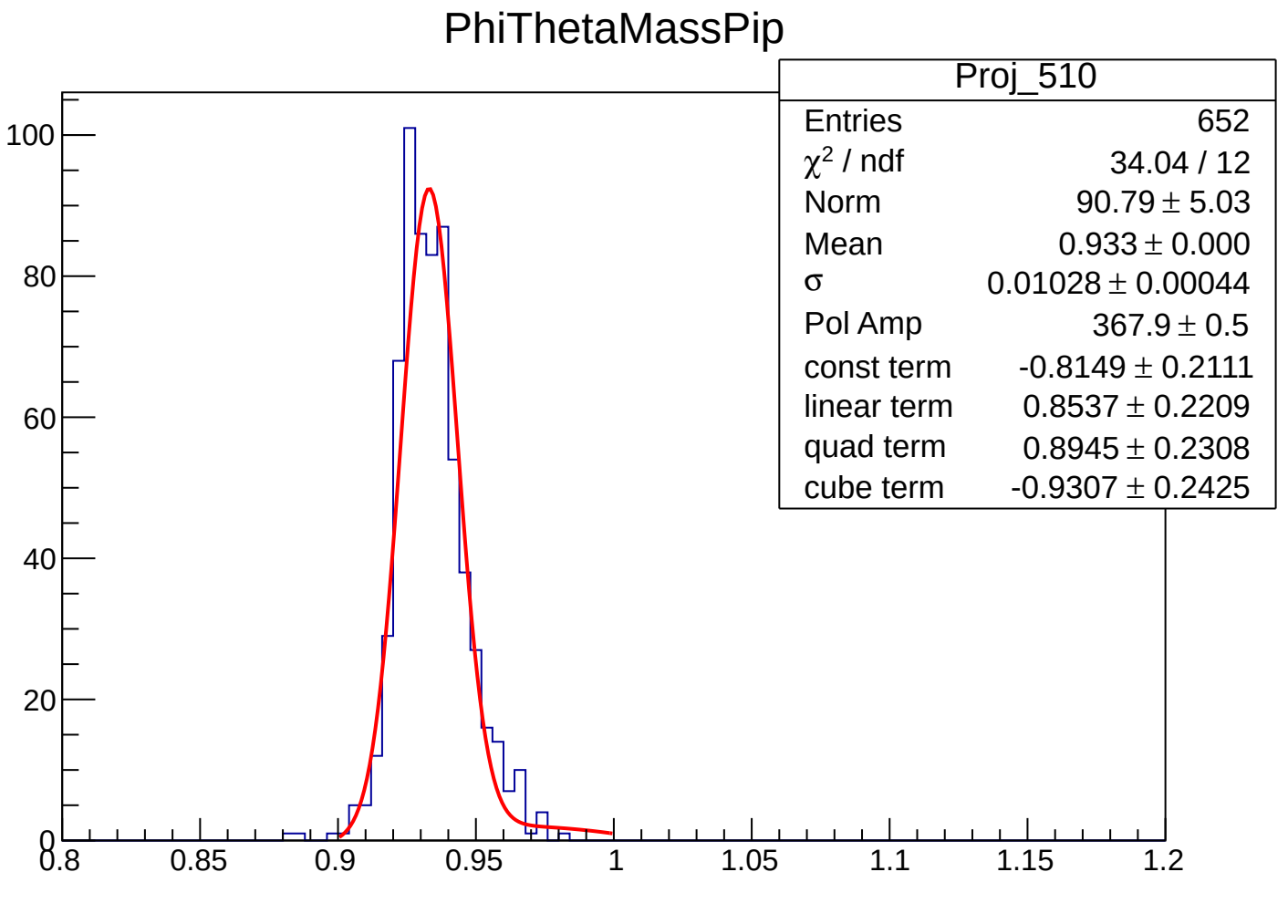

PhiThetaMassPip
Proj_55
Entries 750
χ² / ndf 56.62 / 12
Norm 97.72 ± 5.10
Mean 0.9296 ± 0.0005
σ 0.01088 ± 0.00056
Pol Amp 366.9 ± 0.5
const term -1.441 ± 0.336
linear term 1.516 ± 0.340
quad term 1.521 ± 0.347
cube term -1.594 ± 0.353
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

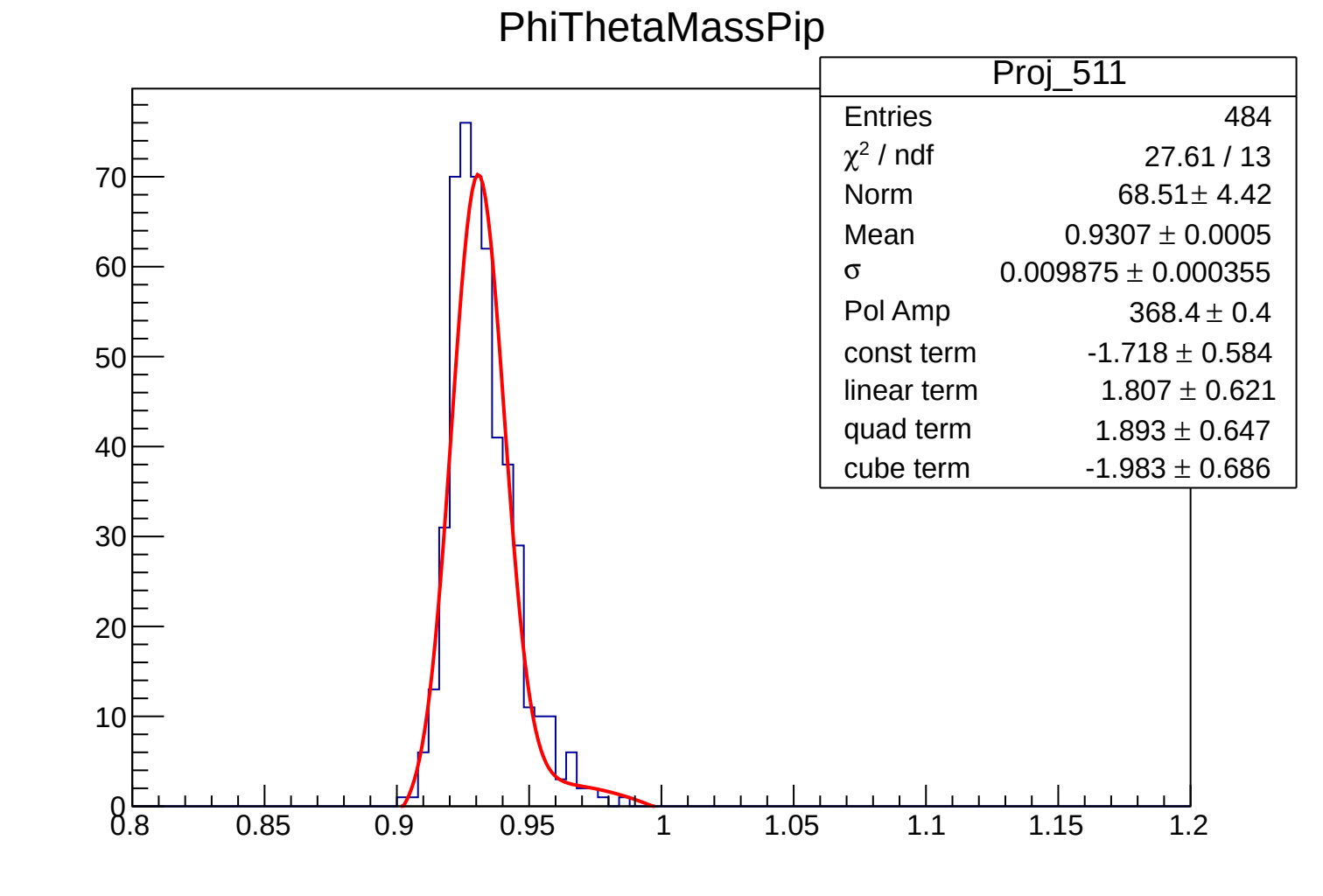

PhiThetaMassPip
Proj_56
Entries 817
χ² / ndf 27.94 / 14
Norm 114.8 ± 5.7
Mean 0.9321 ± 0.0004
σ 0.01036 ± 0.00045
Pol Amp 369.2 ± 0.4
const term -0.5501 ± 0.1327
linear term 0.5761 ± 0.1308
quad term 0.5821 ± 0.1353
cube term -0.6029 ± 0.1353
0
20
40
60
80
100
120
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

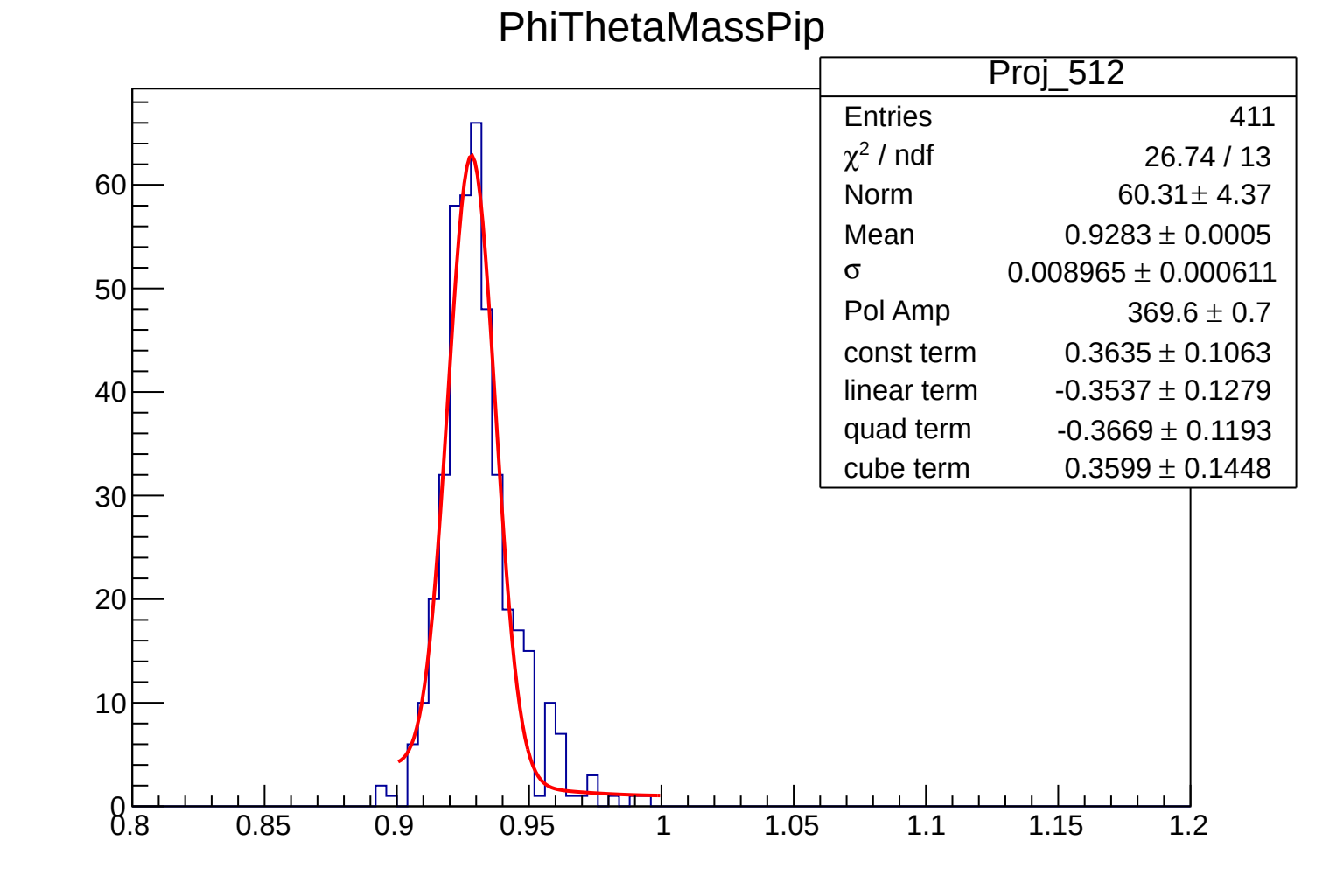

PhiThetaMassPip
Proj_57
Entries 924
χ² / ndf 32.36 / 14
Norm 128.4 ± 6.3
Mean 0.9304 ± 0.0004
σ 0.009785 ± 0.000401
Pol Amp 372.3 ± 100.9
const term -4.121± 0.015
linear term 4.509 ± 0.016
quad term 4.369 ± 0.017
cube term -4.768 ± 0.016
0
20
40
60
80
100
120
140
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

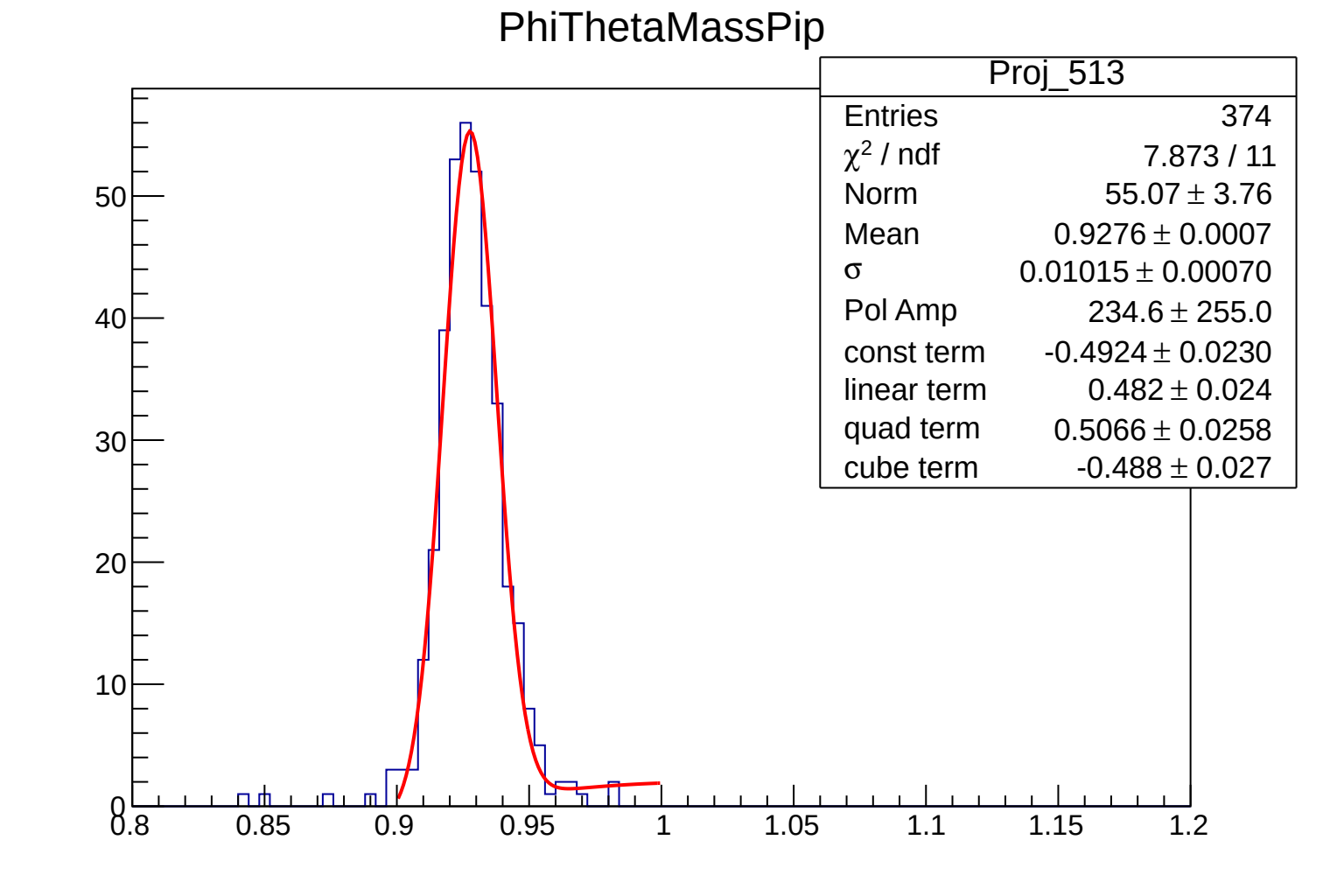

PhiThetaMassPip
Proj_58
Entries 834
χ² / ndf 34.9 / 14
Norm 115.3 ± 5.6
Mean 0.9305 ± 0.0004
σ 0.01056 ± 0.00045
Pol Amp 369.4 ± 0.4
const term -0.8188 ± 0.1962
linear term 0.837 ± 0.198
quad term 0.8641 ± 0.2050
cube term -0.8769 ± 0.2083
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

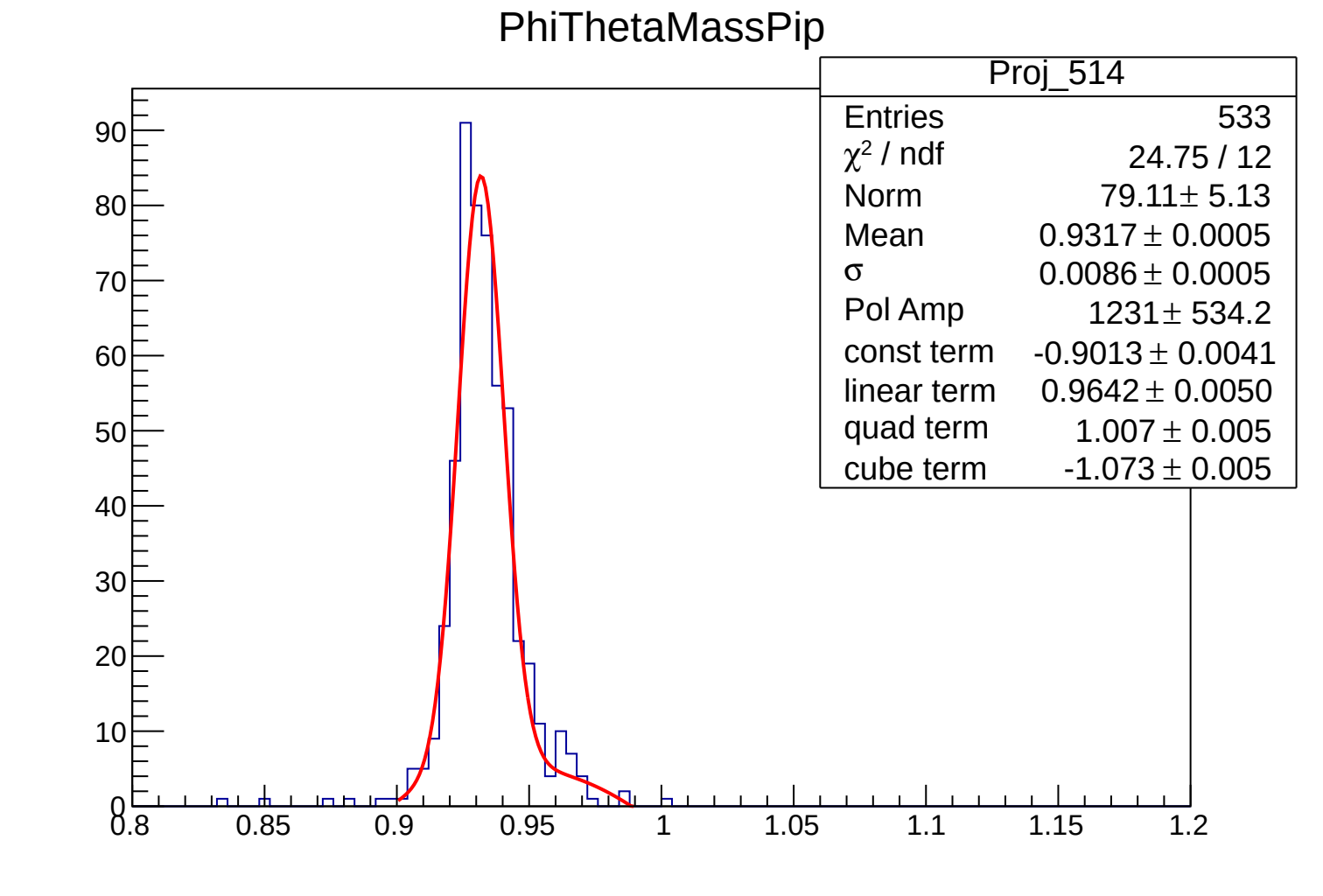

PhiThetaMassPip
Proj_59
Entries 765
χ² / ndf 38.63 / 15
Norm 111 ± 5.9
Mean 0.927 ± 0.000
σ 0.009653 ± 0.000410
Pol Amp 372 ± 144.9
const term -2.124 ± 0.013
linear term 2.306 ± 0.014
quad term 2.207 ± 0.014
cube term -2.391 ± 0.014
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

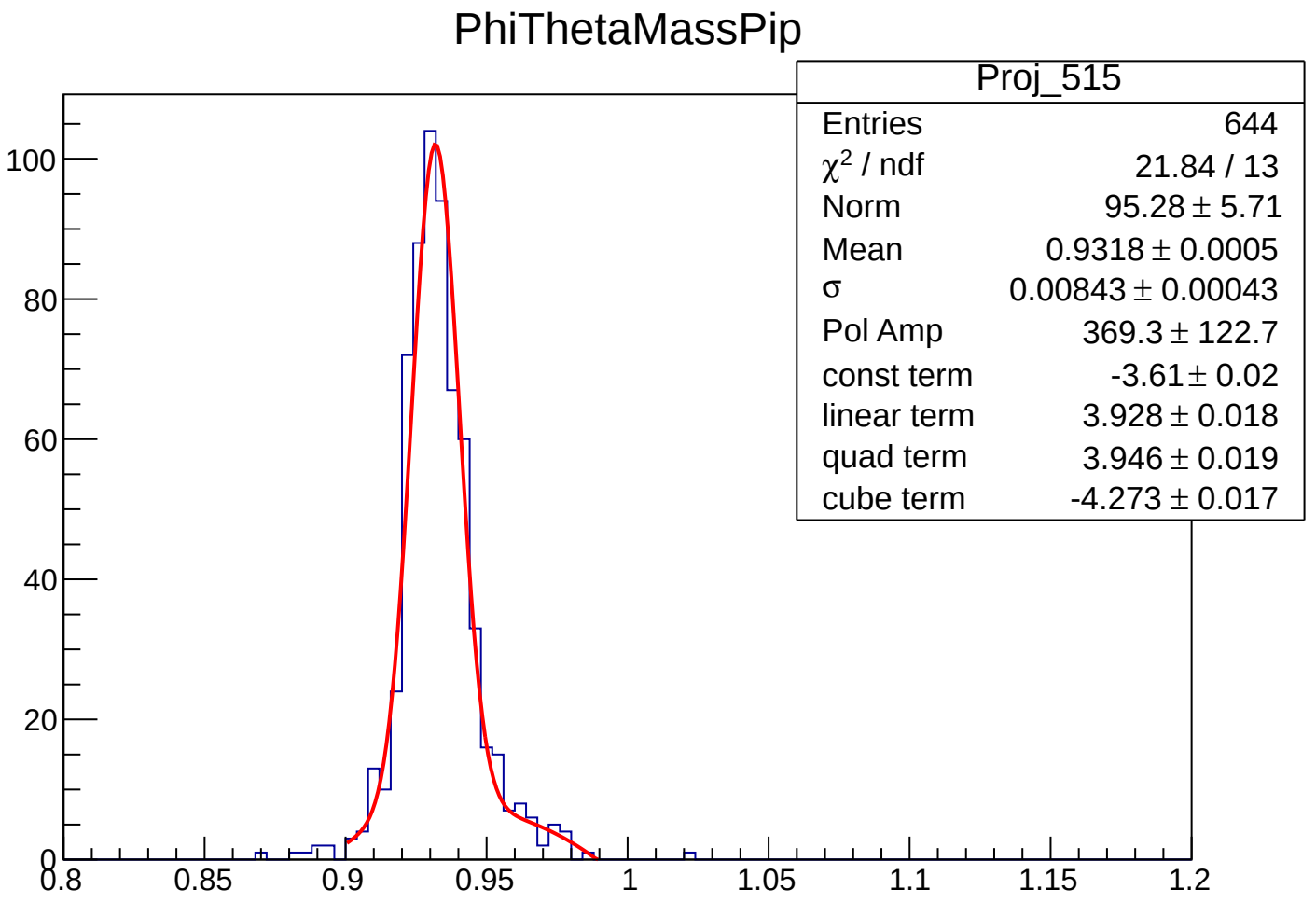

PhiThetaMassPip
Proj_510
Entries 652
χ² / ndf 34.04 / 12
Norm 90.79 ± 5.03
Mean 0.933 ± 0.000
σ 0.01028 ± 0.00044
Pol Amp 367.9 ± 0.5
const term -0.8149 ± 0.2111
linear term 0.8537 ± 0.2209
quad term 0.8945 ± 0.2308
cube term -0.9307 ± 0.2425
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

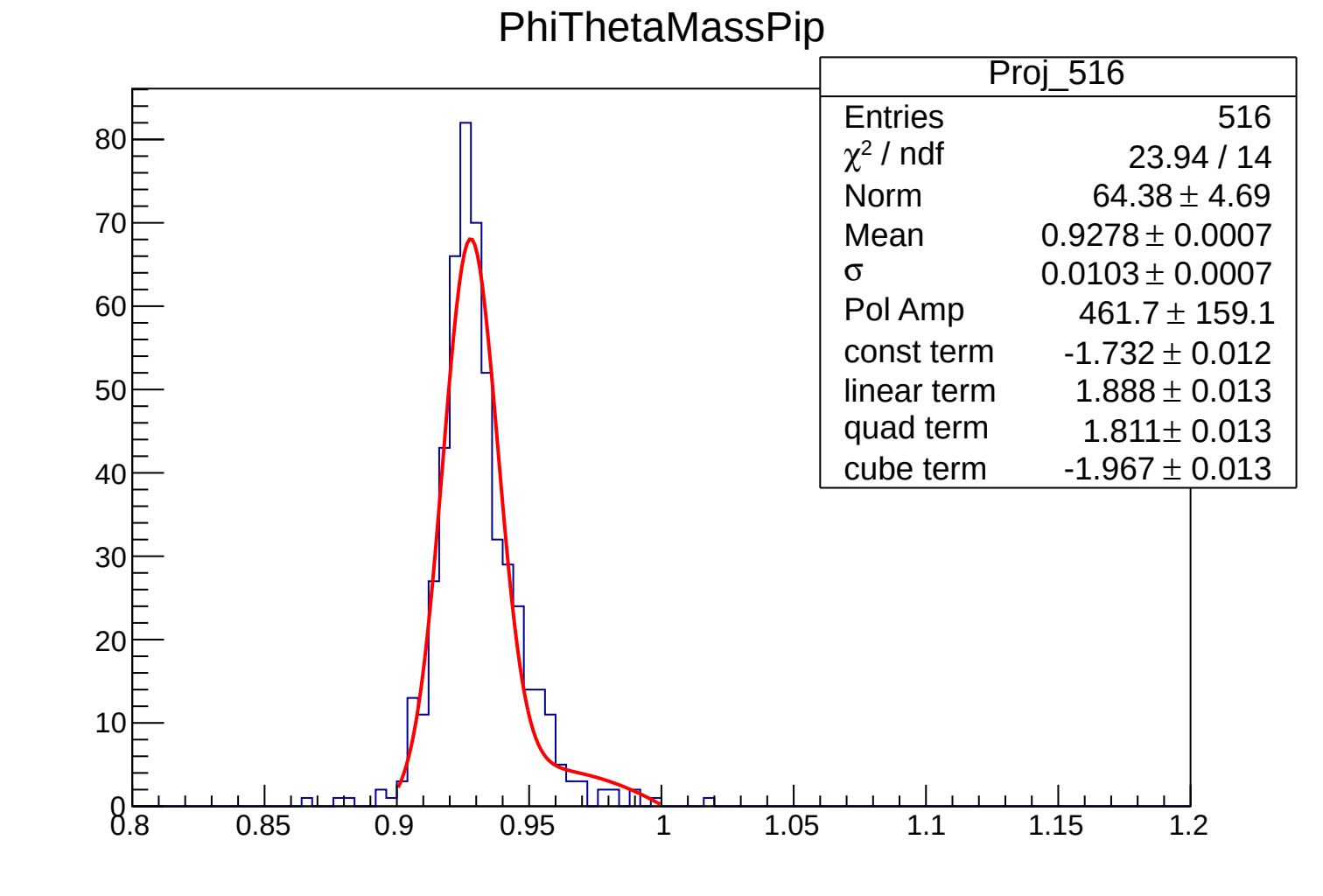

PhiThetaMassPip
Proj_511
Entries 484
χ² / ndf 27.61 / 13
Norm 68.51 ± 4.42
Mean 0.9307 ± 0.0005
σ 0.009875 ± 0.000355
Pol Amp 368.4 ± 0.4
const term -1.718 ± 0.584
linear term 1.807 ± 0.621
quad term 1.893 ± 0.647
cube term -1.983 ± 0.686
0
10
20
30
40
50
60
70
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

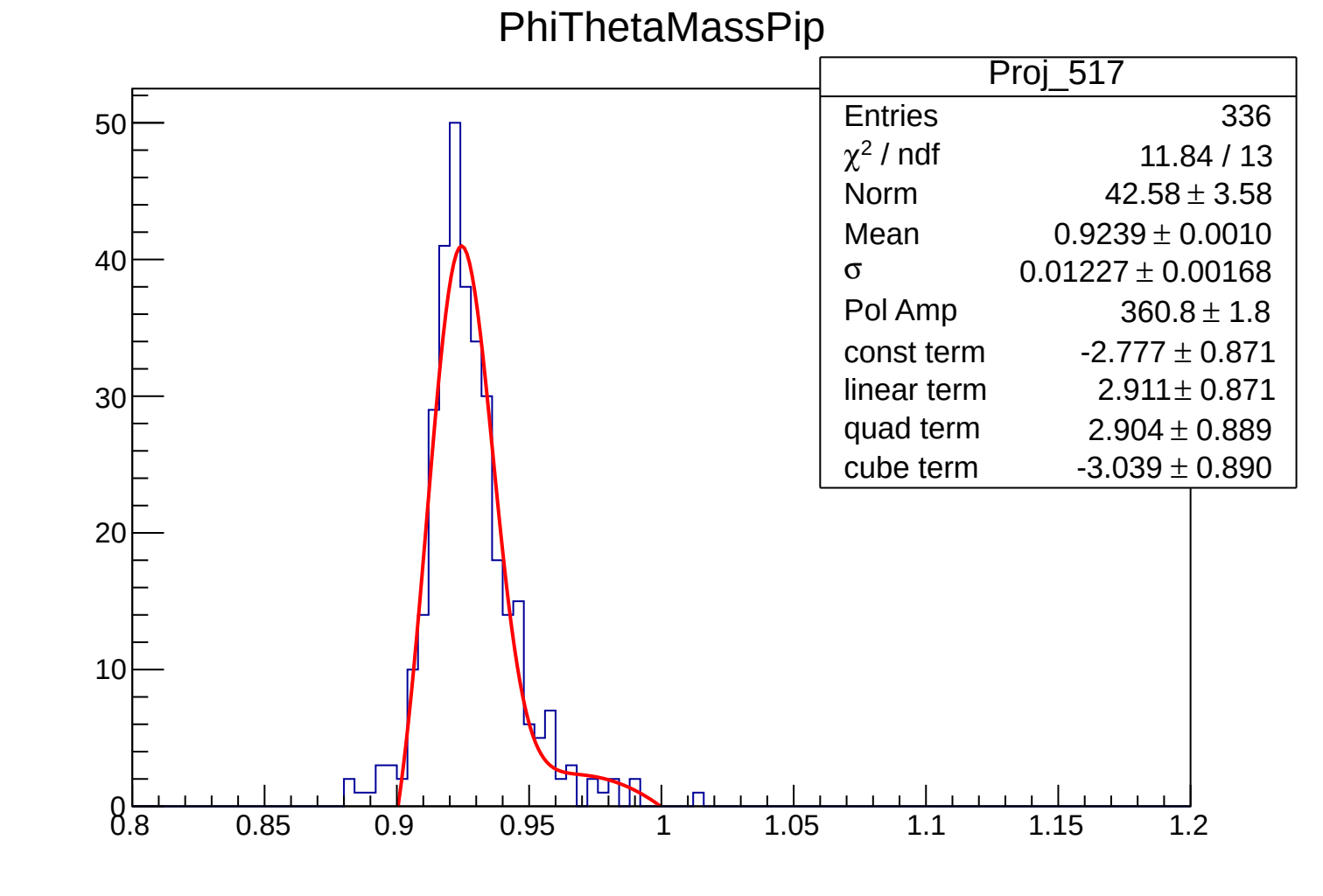

PhiThetaMassPip
Proj_512
Entries 411
χ² / ndf 26.74 / 13
Norm 60.31 ± 4.37
Mean 0.9283 ± 0.0005
σ 0.008965 ± 0.000611
Pol Amp 369.6 ± 0.7
const term 0.3635 ± 0.1063
linear term -0.3537 ± 0.1279
quad term -0.3669 ± 0.1193
cube term 0.3599 ± 0.1448
0
10
20
30
40
50
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_513
Entries 374
χ² / ndf 7.873 / 11
Norm 55.07 ± 3.76
Mean 0.9276 ± 0.0007
σ 0.01015 ± 0.00070
Pol Amp 234.6 ± 255.0
const term -0.4924 ± 0.0230
linear term 0.482 ± 0.024
quad term 0.5066 ± 0.0258
cube term -0.488 ± 0.027
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_514
Entries 533
χ² / ndf 24.75 / 12
Norm 79.11 ± 5.13
Mean 0.9317 ± 0.0005
σ 0.0086 ± 0.0005
Pol Amp 1231 ± 534.2
const term -0.9013 ± 0.0041
linear term 0.9642 ± 0.0050
quad term 1.007 ± 0.005
cube term -1.073 ± 0.005
0
10
20
30
40
50
60
70
80
90
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_515
Entries 644
χ² / ndf 21.84 / 13
Norm 95.28 ± 5.71
Mean 0.9318 ± 0.0005
σ 0.00843 ± 0.00043
Pol Amp 369.3 ± 122.7
const term -3.61 ± 0.02
linear term 3.928 ± 0.018
quad term 3.946 ± 0.019
cube term -4.273 ± 0.017
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_516
Entries 516
χ² / ndf 23.94 / 14
Norm 64.38 ± 4.69
Mean 0.9278 ± 0.0007
σ 0.0103 ± 0.0007
Pol Amp 461.7 ± 159.1
const term -1.732 ± 0.012
linear term 1.888 ± 0.013
quad term 1.811 ± 0.013
cube term -1.967 ± 0.013
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_517
Entries 336
χ² / ndf 11.84 / 13
Norm 42.58 ± 3.58
Mean 0.9239 ± 0.0010
σ 0.01227 ± 0.00168
Pol Amp 360.8 ± 1.8
const term -2.777 ± 0.871
linear term 2.911 ± 0.871
quad term 2.904 ± 0.889
cube term -3.039 ± 0.890
50
40
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10
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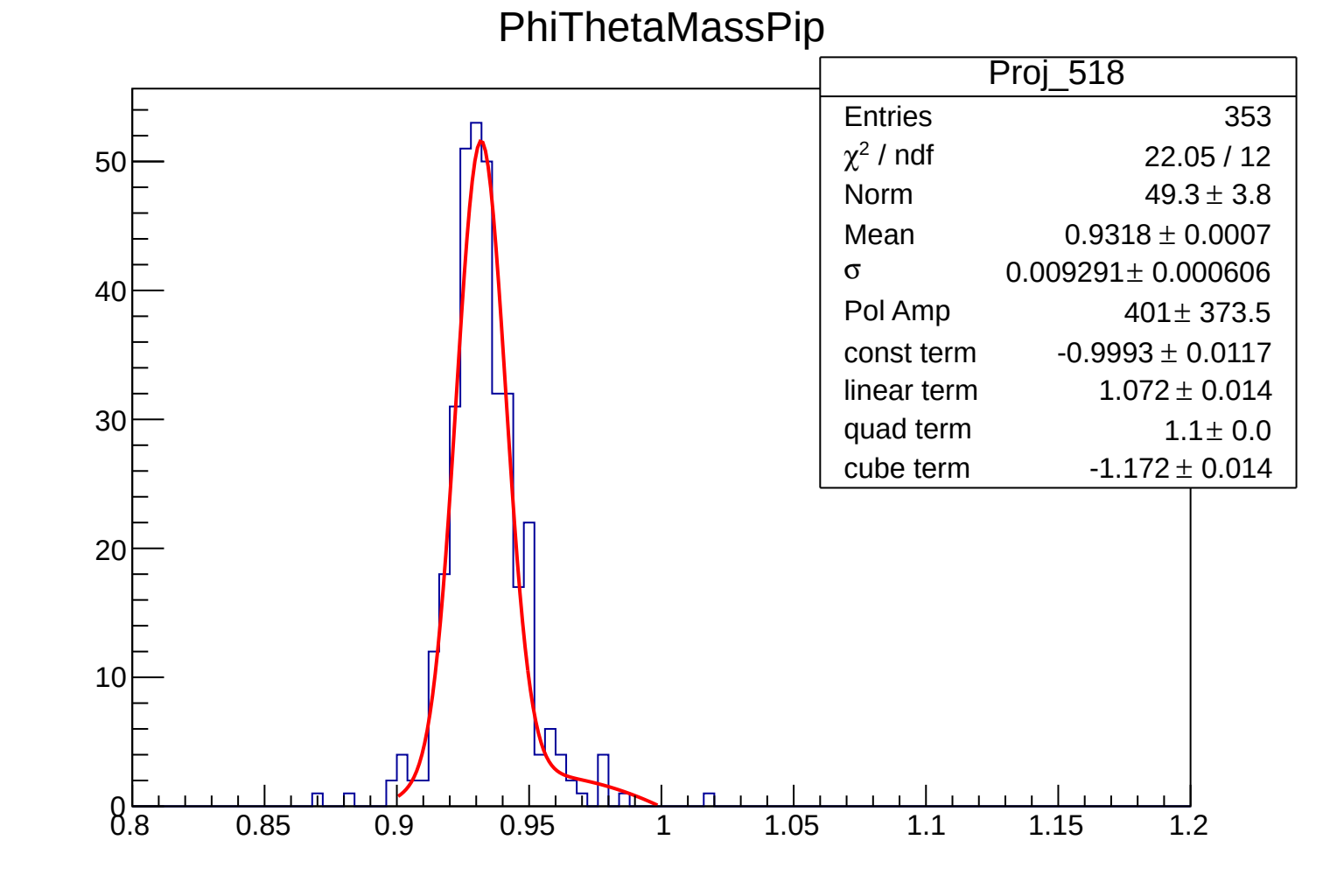
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_518
Entries 353
χ² / ndf 22.05 / 12
Norm 49.3 ± 3.8
Mean 0.9318 ± 0.0007
σ 0.009291 ± 0.000606
Pol Amp 401 ± 373.5
const term -0.9993 ± 0.0117
linear term 1.072 ± 0.014
quad term 1.1 ± 0.0
cube term -1.172 ± 0.014
0
10
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40
50
0.8
0.85
0.9
0.95
1
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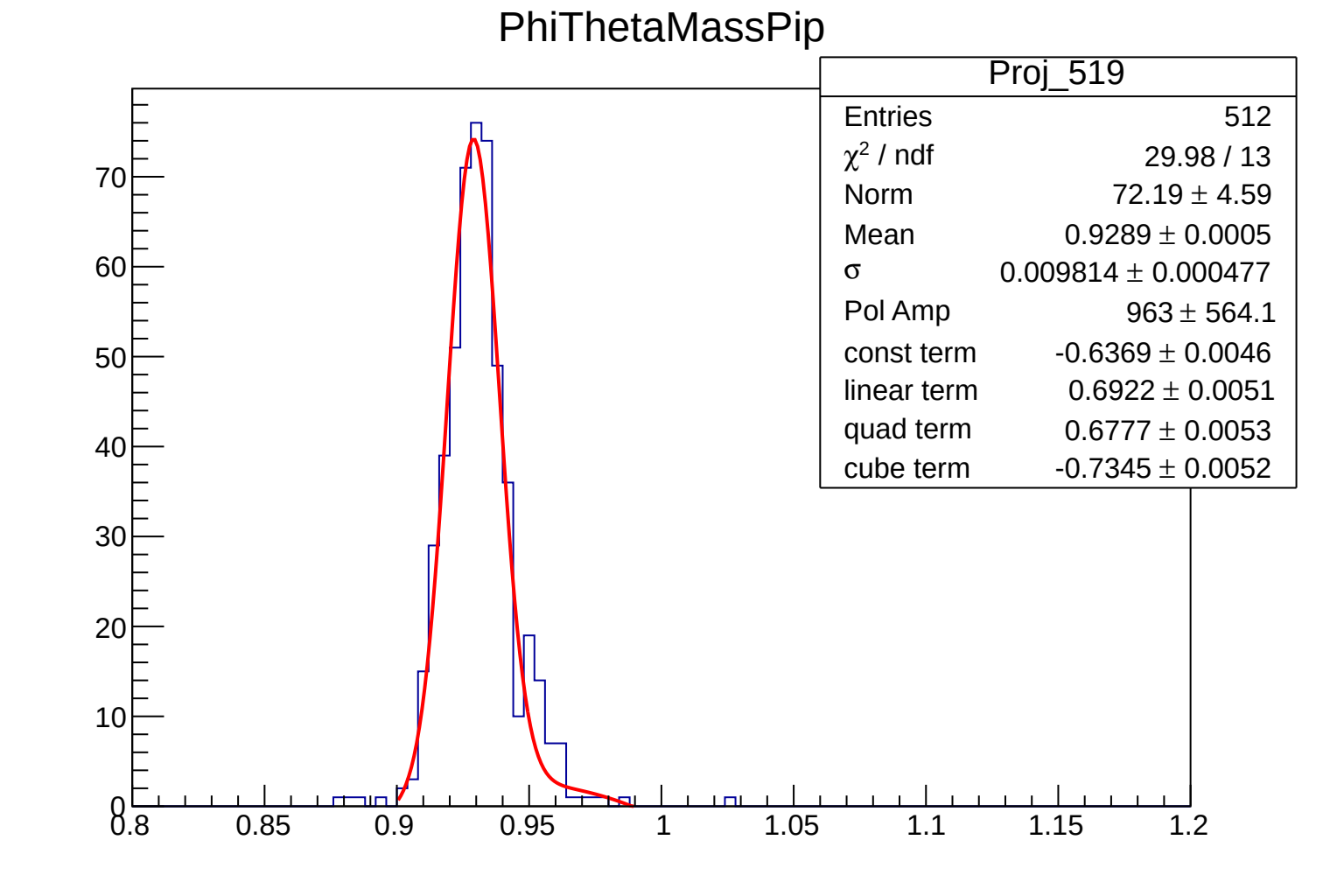
1.15
1.2


PhiThetaMassPip
Proj_519
Entries 512
χ² / ndf 29.98 / 13
Norm 72.19 ± 4.59
Mean 0.9289 ± 0.0005
σ 0.009814 ± 0.000477
Pol Amp 963 ± 564.1
const term -0.6369 ± 0.0046
linear term 0.6922 ± 0.0051
quad term 0.6777 ± 0.0053
cube term -0.7345 ± 0.0052
0
10
20
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40
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60
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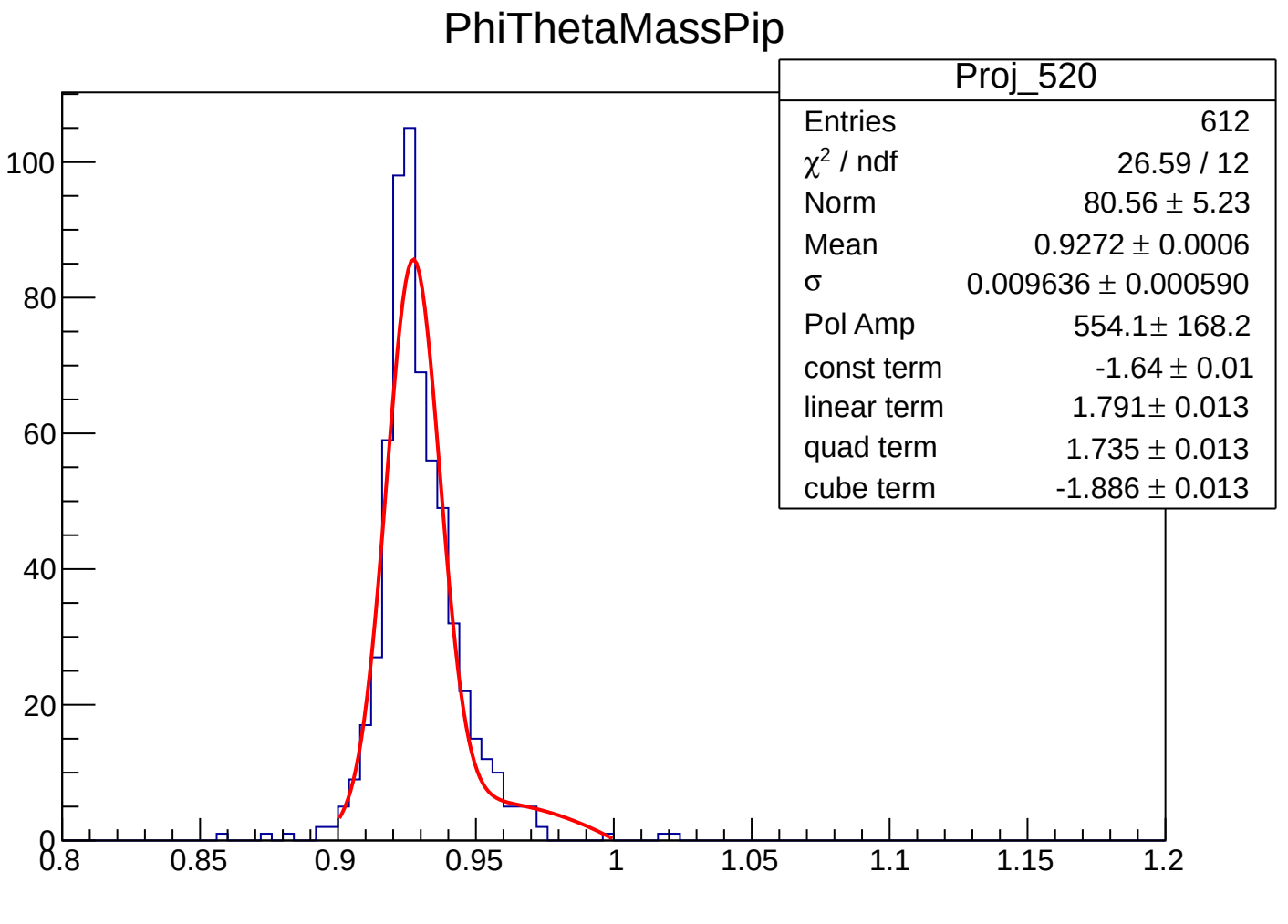
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_520
Entries 612
χ² / ndf 26.59 / 12
Norm 80.56 ± 5.23
Mean 0.9272 ± 0.0006
σ 0.009636 ± 0.000590
Pol Amp 554.1± 168.2
const term -1.64 ± 0.01
linear term 1.791± 0.013
quad term 1.735 ± 0.013
cube term -1.886 ± 0.013
0
20
40
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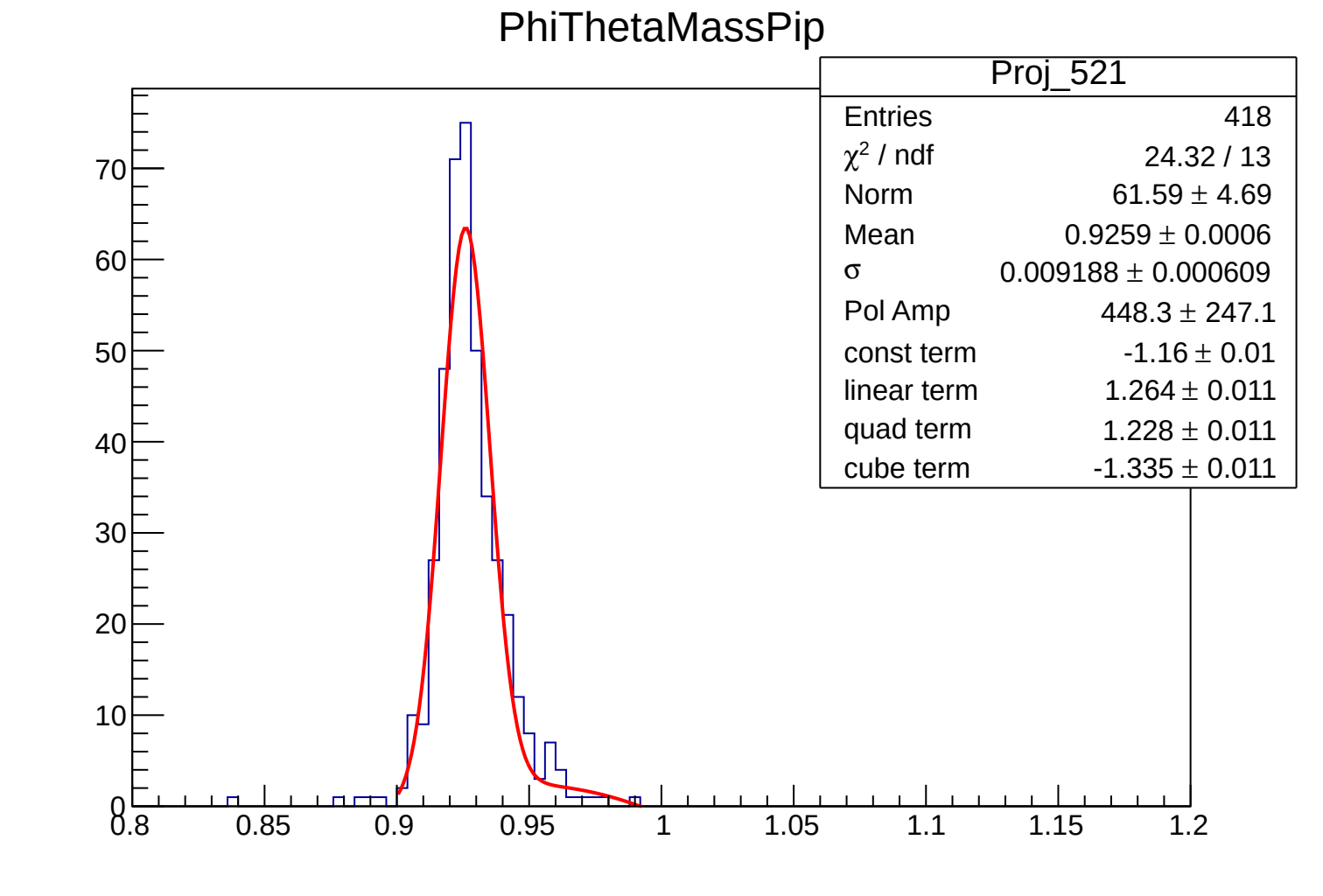
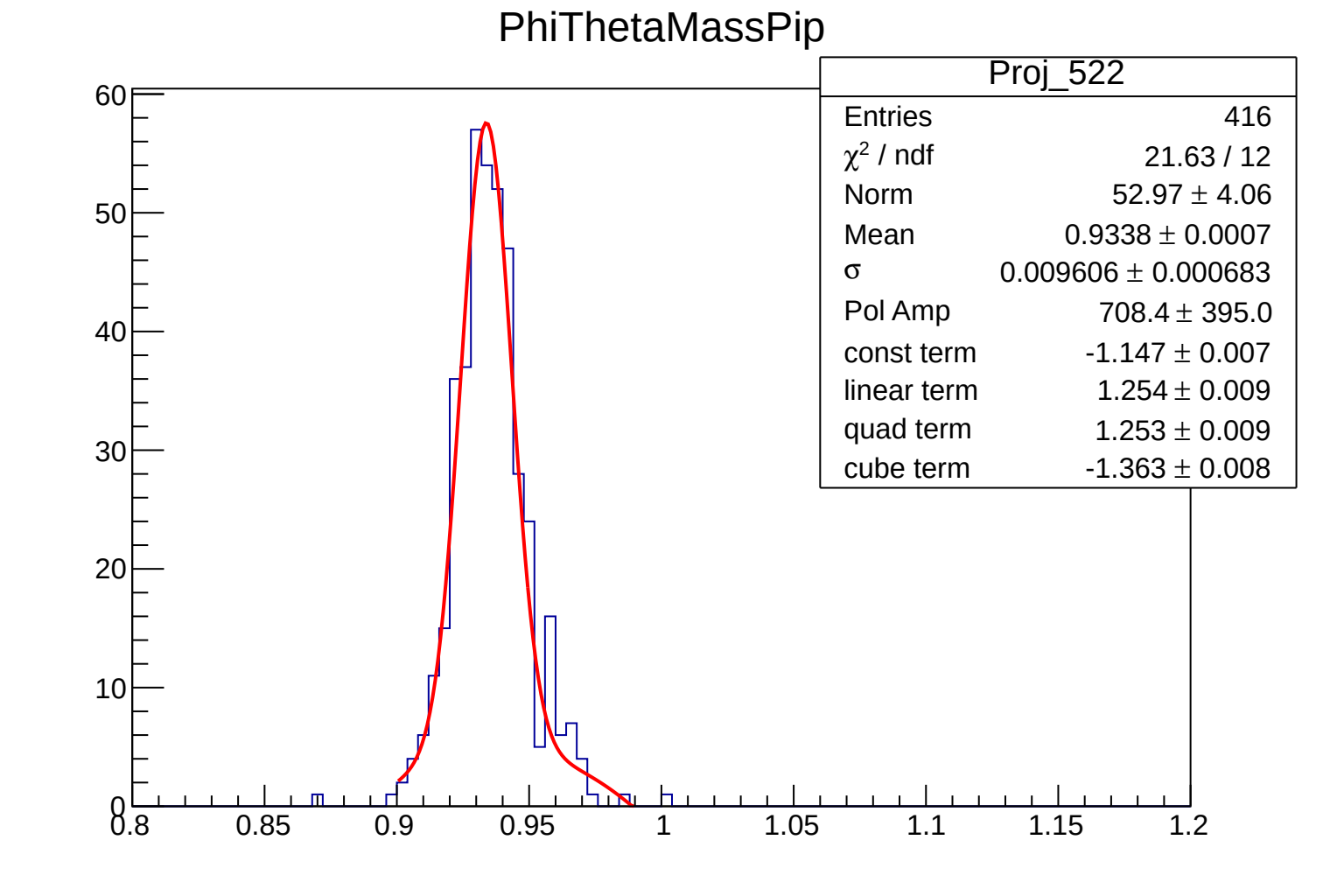
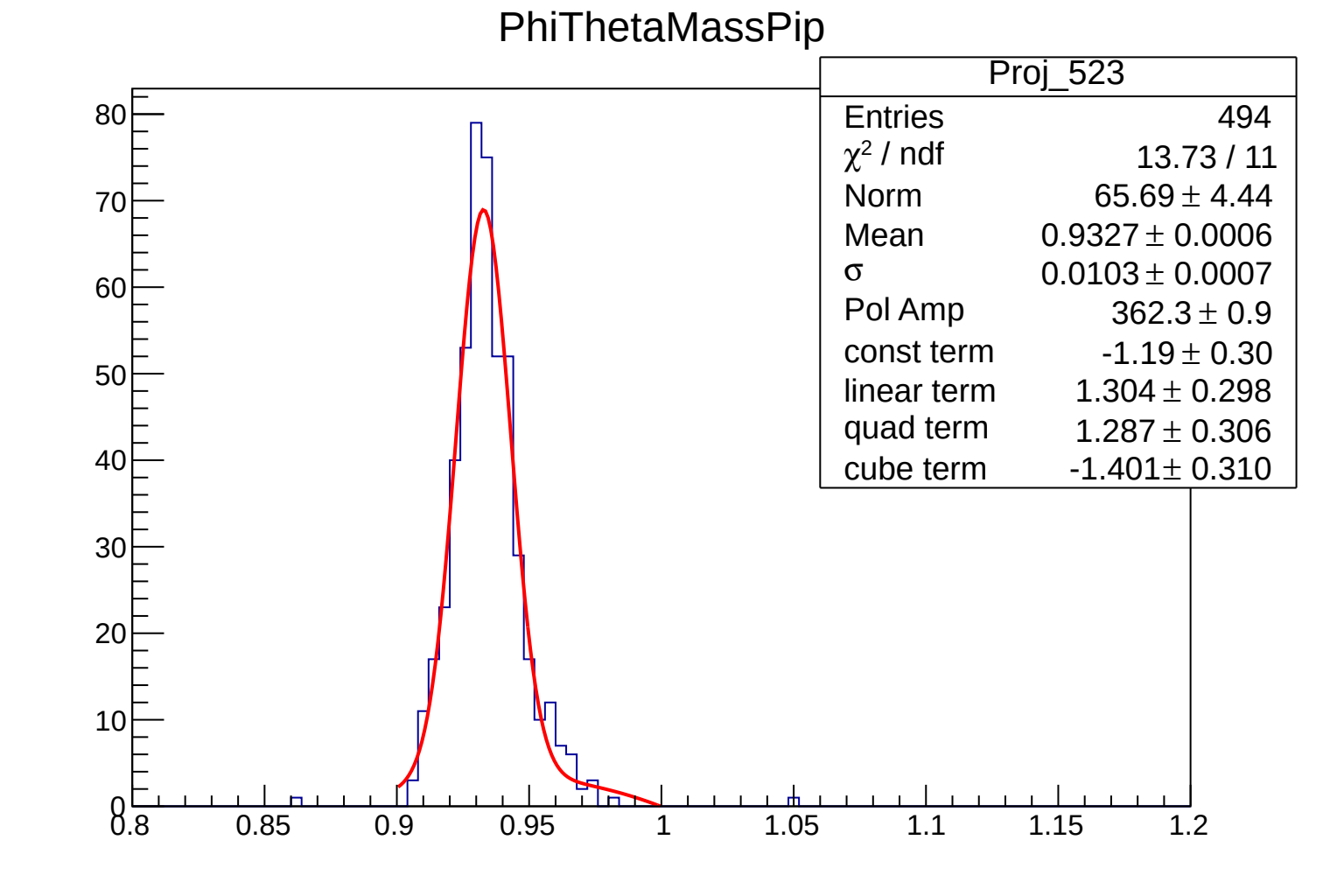
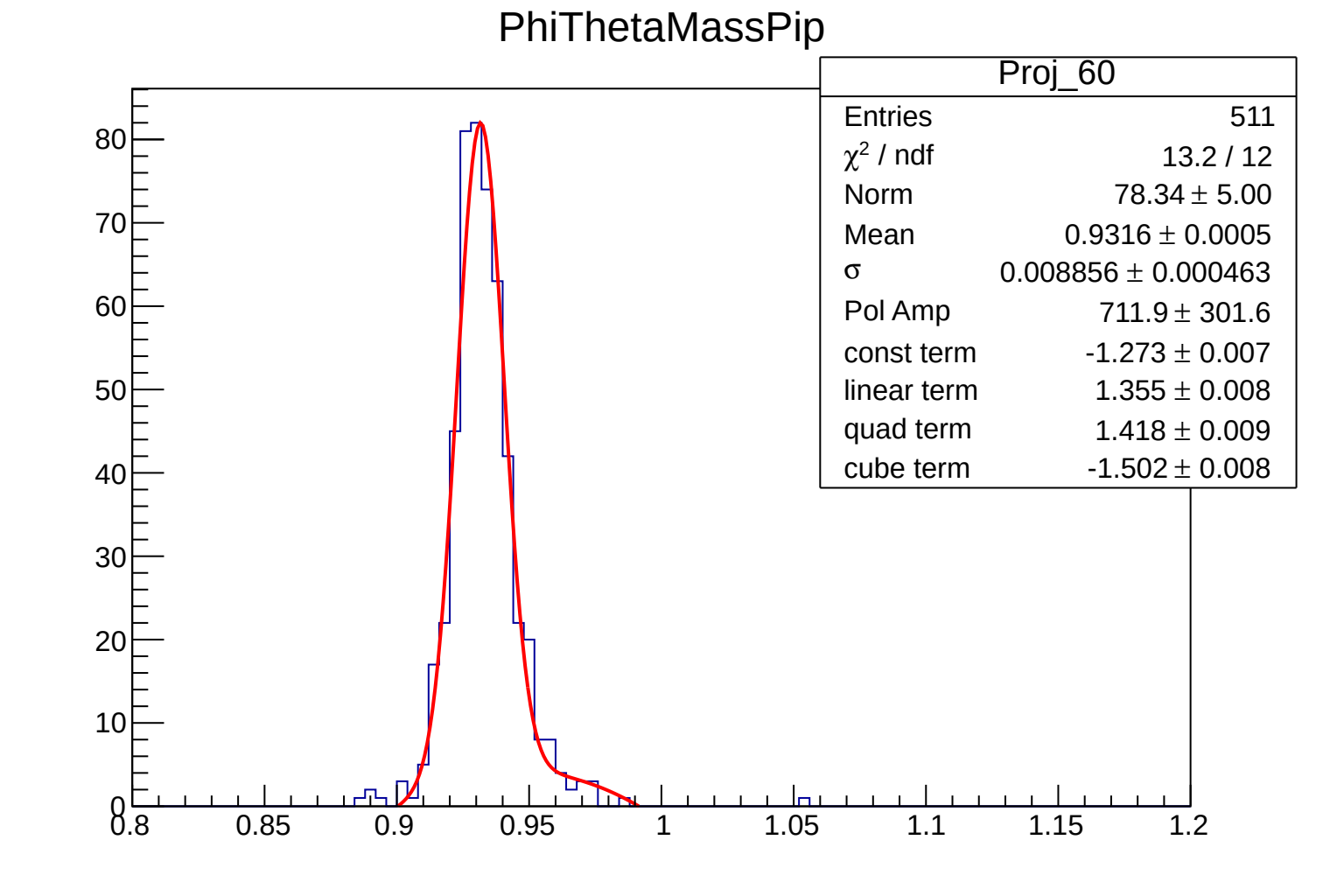
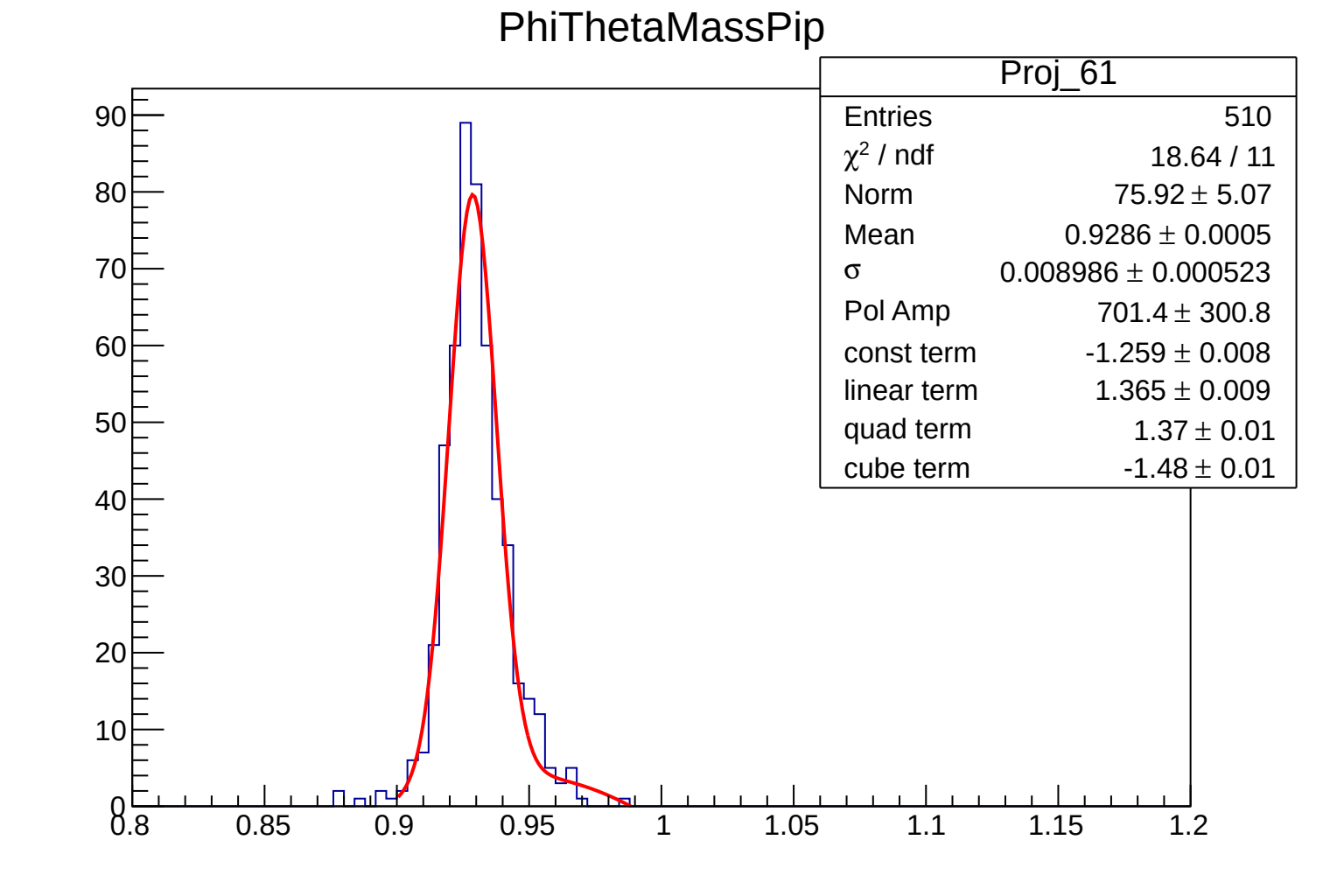
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

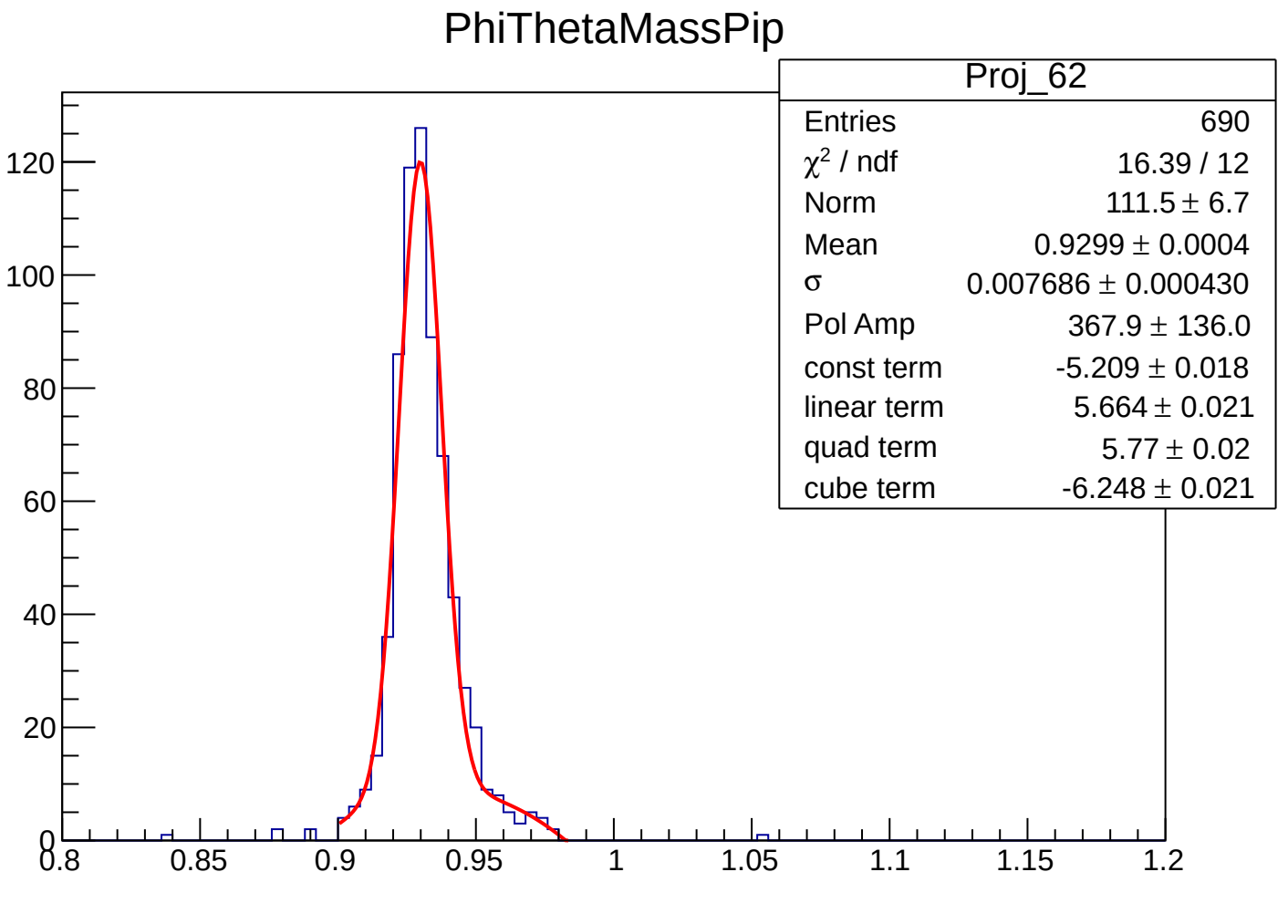

PhiThetaMassPip
Proj_521
Entries 418
χ² / ndf 24.32 / 13
Norm 61.59 ± 4.69
Mean 0.9259 ± 0.0006
σ 0.009188 ± 0.000609
Pol Amp 448.3 ± 247.1
const term -1.16 ± 0.01
linear term 1.264 ± 0.011
quad term 1.228 ± 0.011
cube term -1.335 ± 0.011
0
10
20
30
40
50
60
70
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

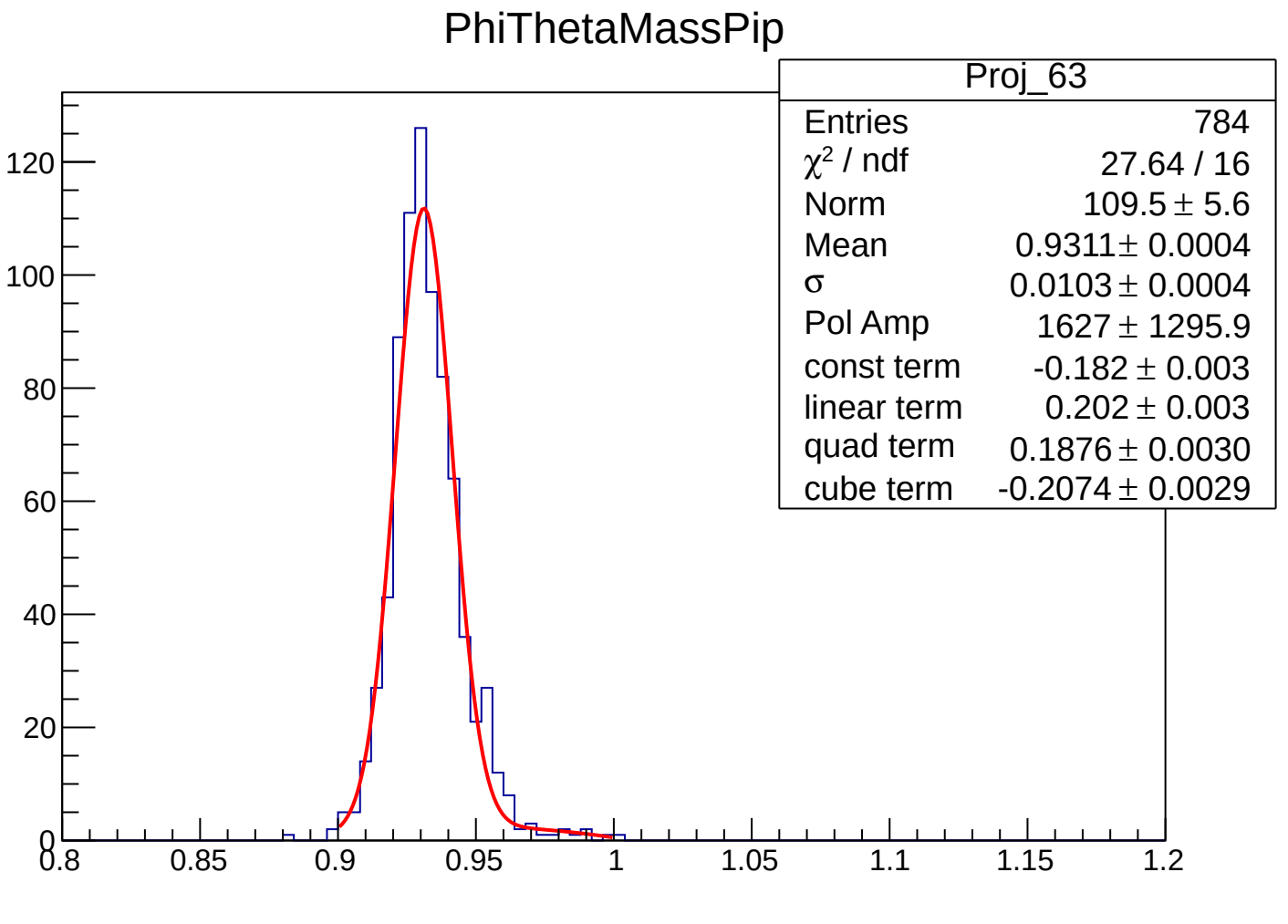

PhiThetaMassPip
Proj_522
Entries 416
χ² / ndf 21.63 / 12
Norm 52.97 ± 4.06
Mean 0.9338 ± 0.0007
σ 0.009606 ± 0.000683
Pol Amp 708.4 ± 395.0
const term -1.147 ± 0.007
linear term 1.254 ± 0.009
quad term 1.253 ± 0.009
cube term -1.363 ± 0.008
60
50
40
30
20
10
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

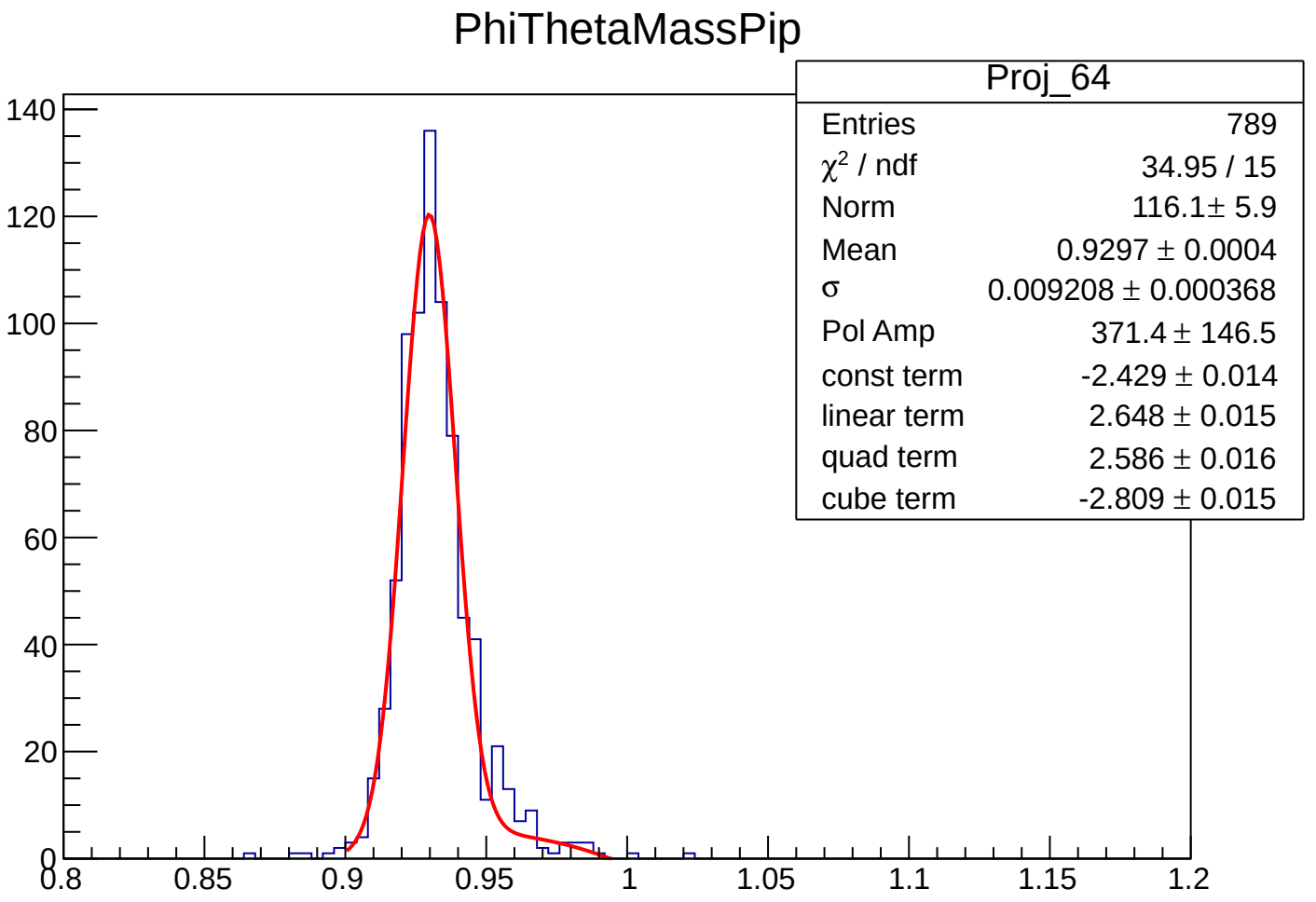

PhiThetaMassPip
Proj_523
Entries 494
χ² / ndf 13.73 / 11
Norm 65.69 ± 4.44
Mean 0.9327 ± 0.0006
σ 0.0103 ± 0.0007
Pol Amp 362.3 ± 0.9
const term -1.19 ± 0.30
linear term 1.304 ± 0.298
quad term 1.287 ± 0.306
cube term -1.401 ± 0.310
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

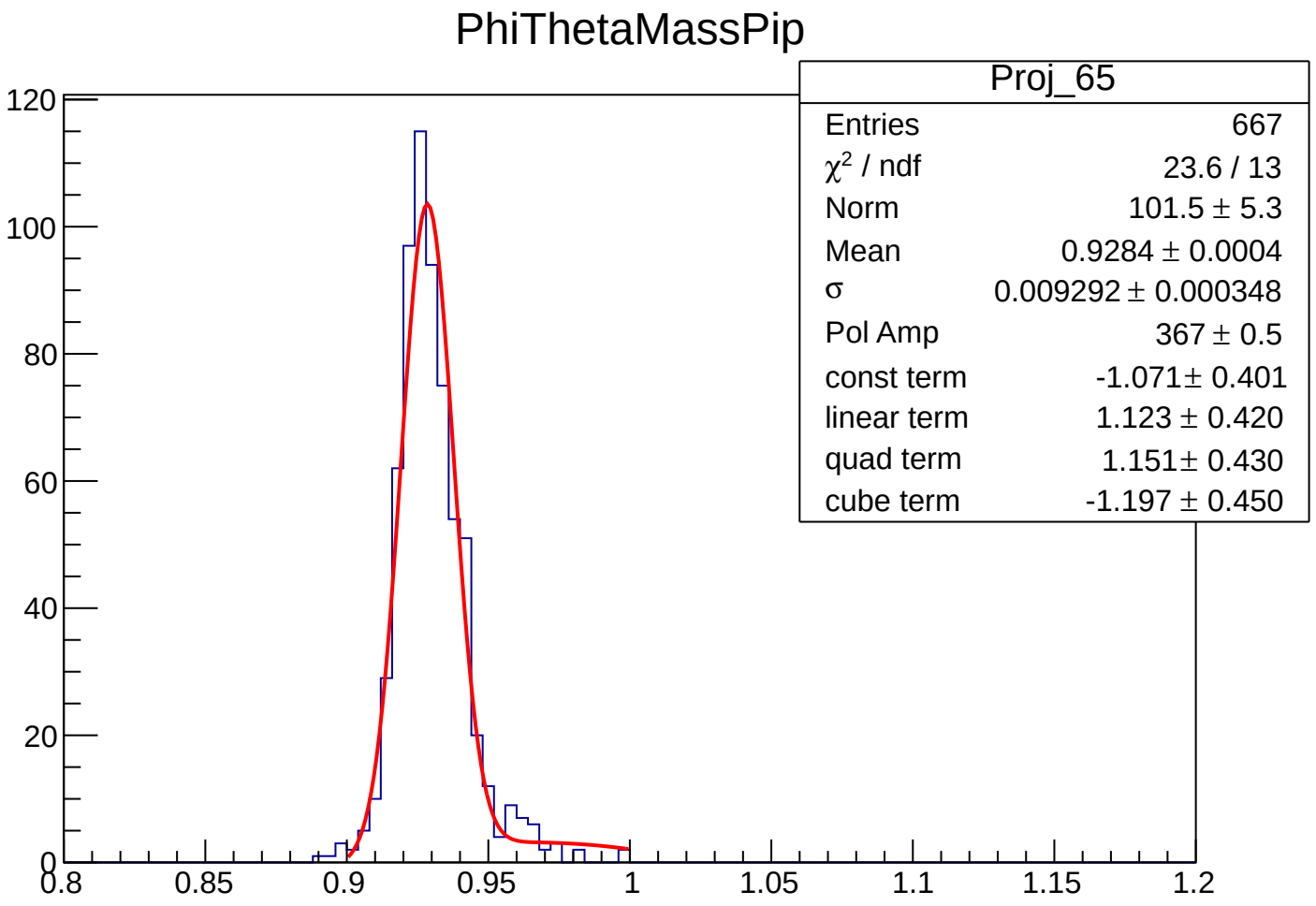

PhiThetaMassPip
Proj_60
Entries 511
χ² / ndf 13.2 / 12
Norm 78.34 ± 5.00
Mean 0.9316 ± 0.0005
σ 0.008856 ± 0.000463
Pol Amp 711.9 ± 301.6
const term -1.273 ± 0.007
linear term 1.355 ± 0.008
quad term 1.418 ± 0.009
cube term -1.502 ± 0.008
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

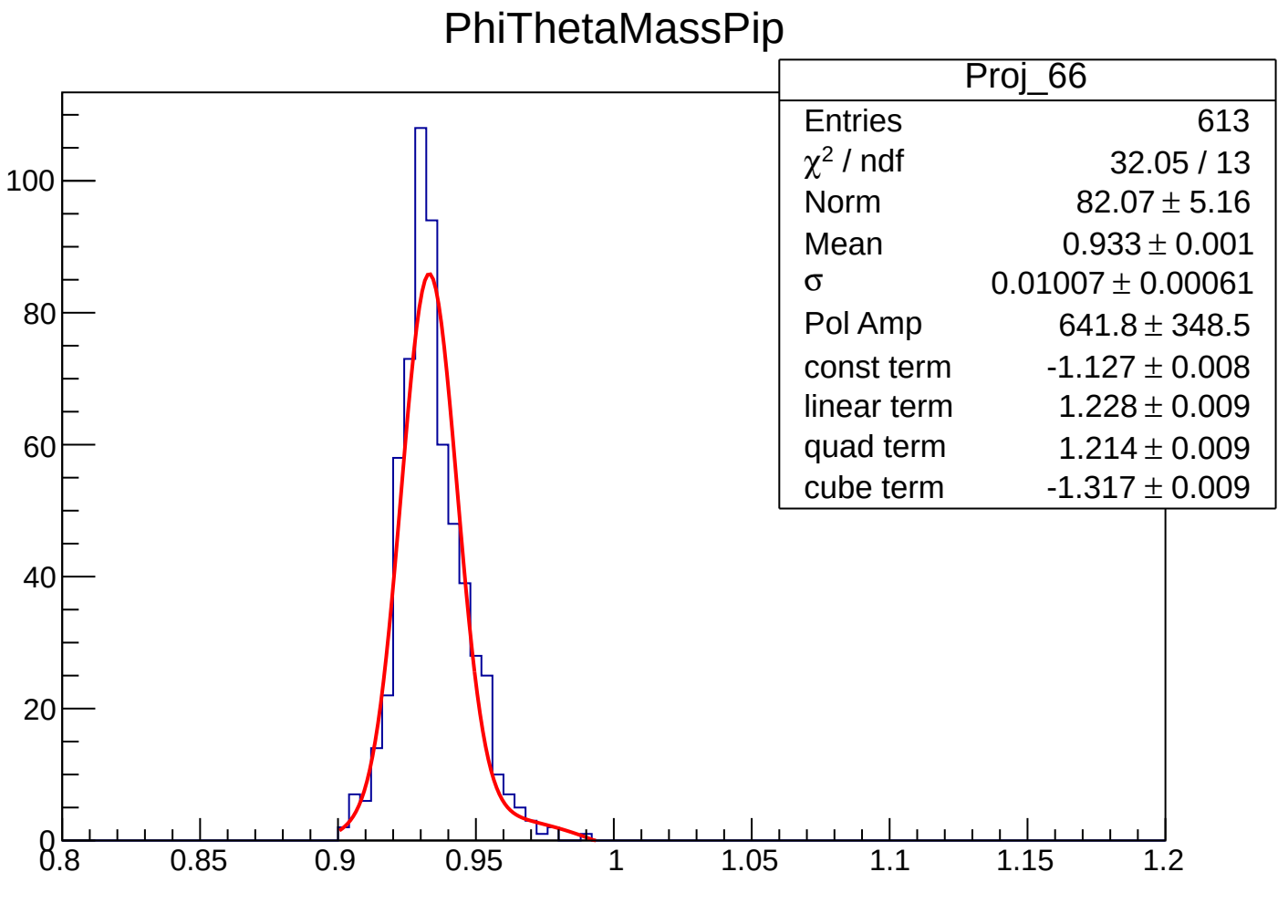

PhiThetaMassPip
Proj_61
Entries 510
χ² / ndf 18.64 / 11
Norm 75.92 ± 5.07
Mean 0.9286 ± 0.0005
σ 0.008986 ± 0.000523
Pol Amp 701.4 ± 300.8
const term -1.259 ± 0.008
linear term 1.365 ± 0.009
quad term 1.37 ± 0.01
cube term -1.48 ± 0.01
0 10 20 30 40 50 60 70 80 90
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

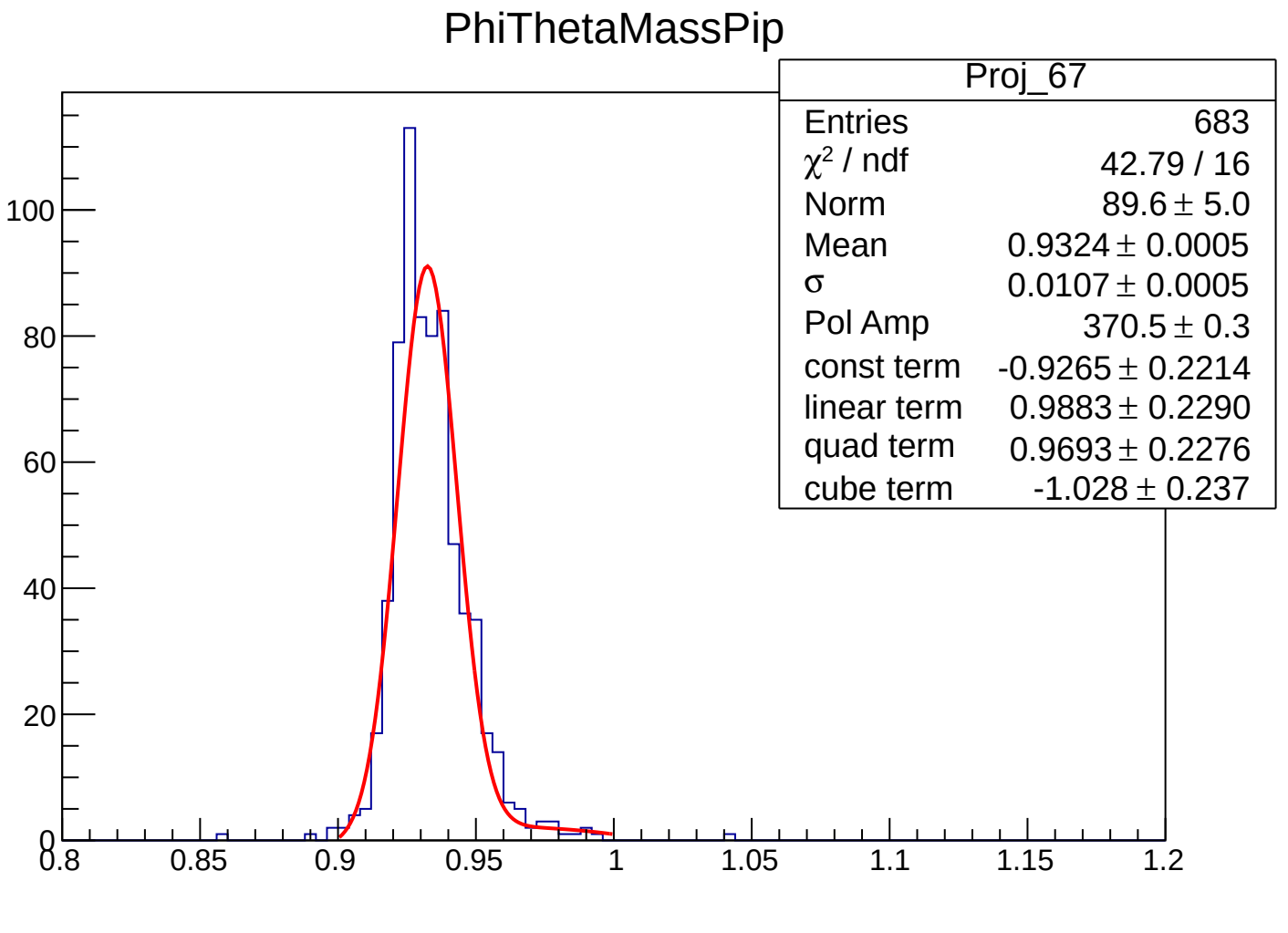

PhiThetaMassPip
Proj_62
Entries 690
χ² / ndf 16.39 / 12
Norm 111.5 ± 6.7
Mean 0.9299 ± 0.0004
σ 0.007686 ± 0.000430
Pol Amp 367.9 ± 136.0
const term -5.209 ± 0.018
linear term 5.664 ± 0.021
quad term 5.77 ± 0.02
cube term -6.248 ± 0.021
0
20
40
60
80
100
120
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

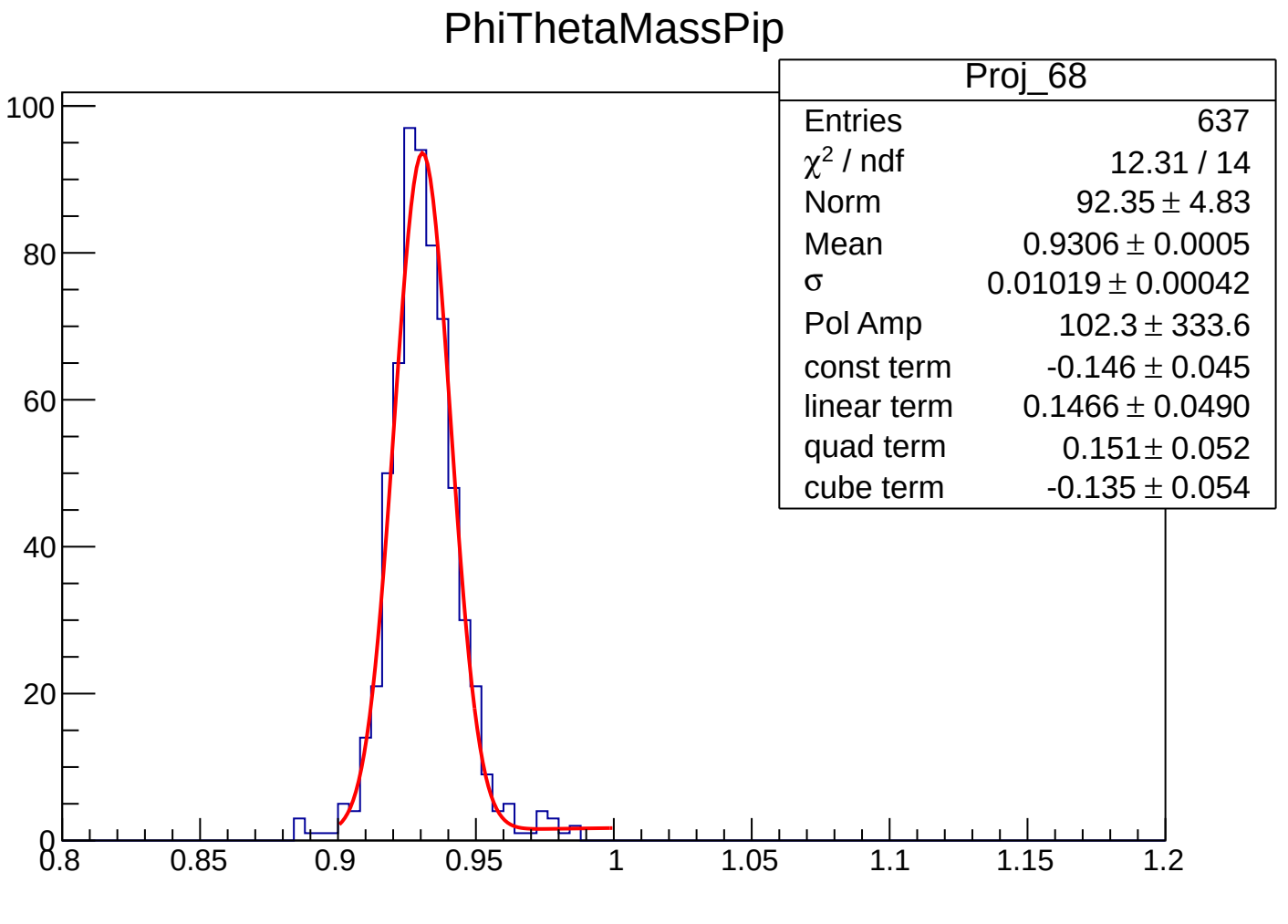

PhiThetaMassPip
Proj_63
Entries 784
χ² / ndf 27.64 / 16
Norm 109.5 ± 5.6
Mean 0.9311 ± 0.0004
σ 0.0103 ± 0.0004
Pol Amp 1627 ± 1295.9
const term -0.182 ± 0.003
linear term 0.202 ± 0.003
quad term 0.1876 ± 0.0030
cube term -0.2074 ± 0.0029
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

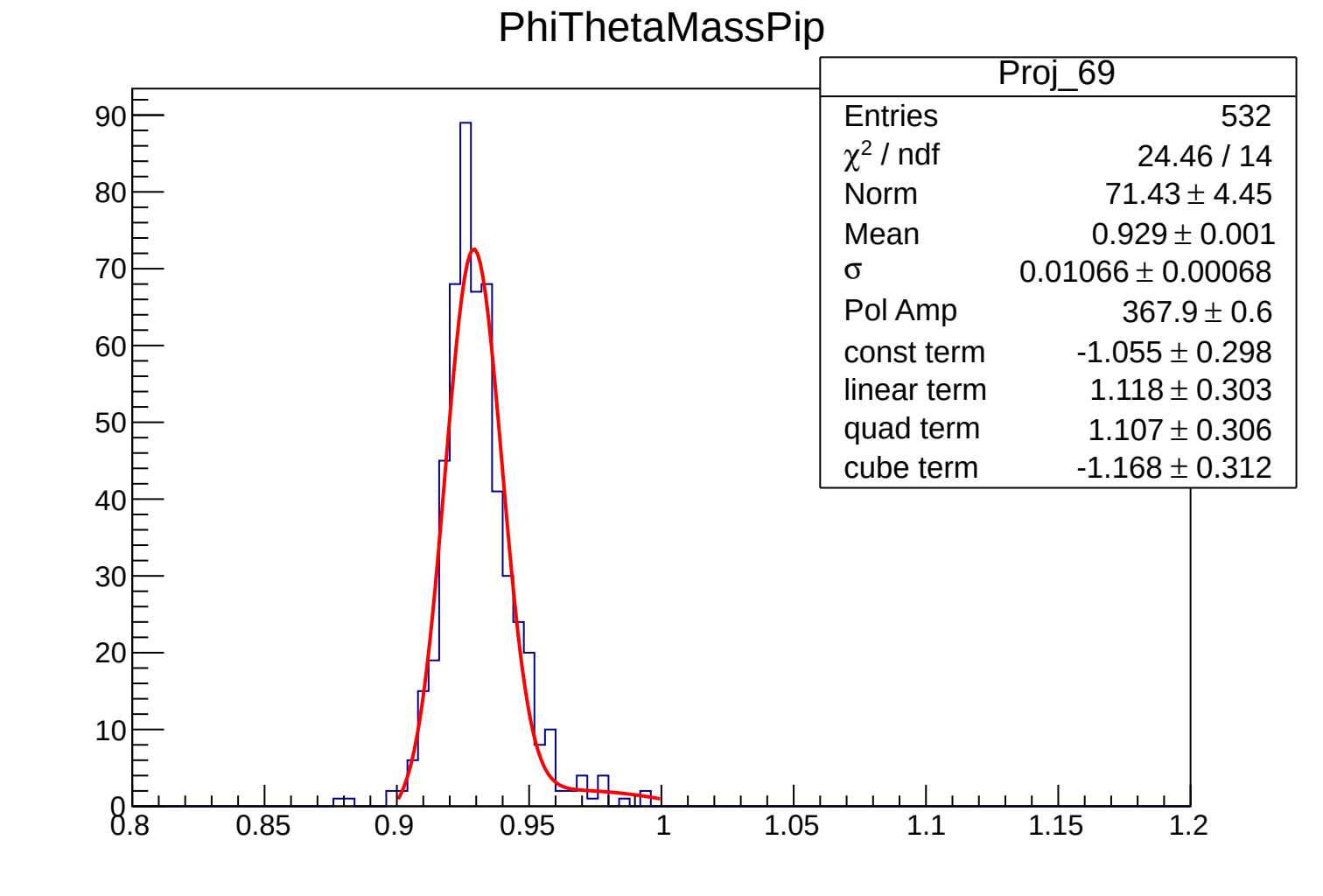

PhiThetaMassPip
Proj_64
Entries 789
χ² / ndf 34.95 / 15
Norm 116.1± 5.9
Mean 0.9297 ± 0.0004
σ 0.009208 ± 0.000368
Pol Amp 371.4 ± 146.5
const term -2.429 ± 0.014
linear term 2.648 ± 0.015
quad term 2.586 ± 0.016
cube term -2.809 ± 0.015
140
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

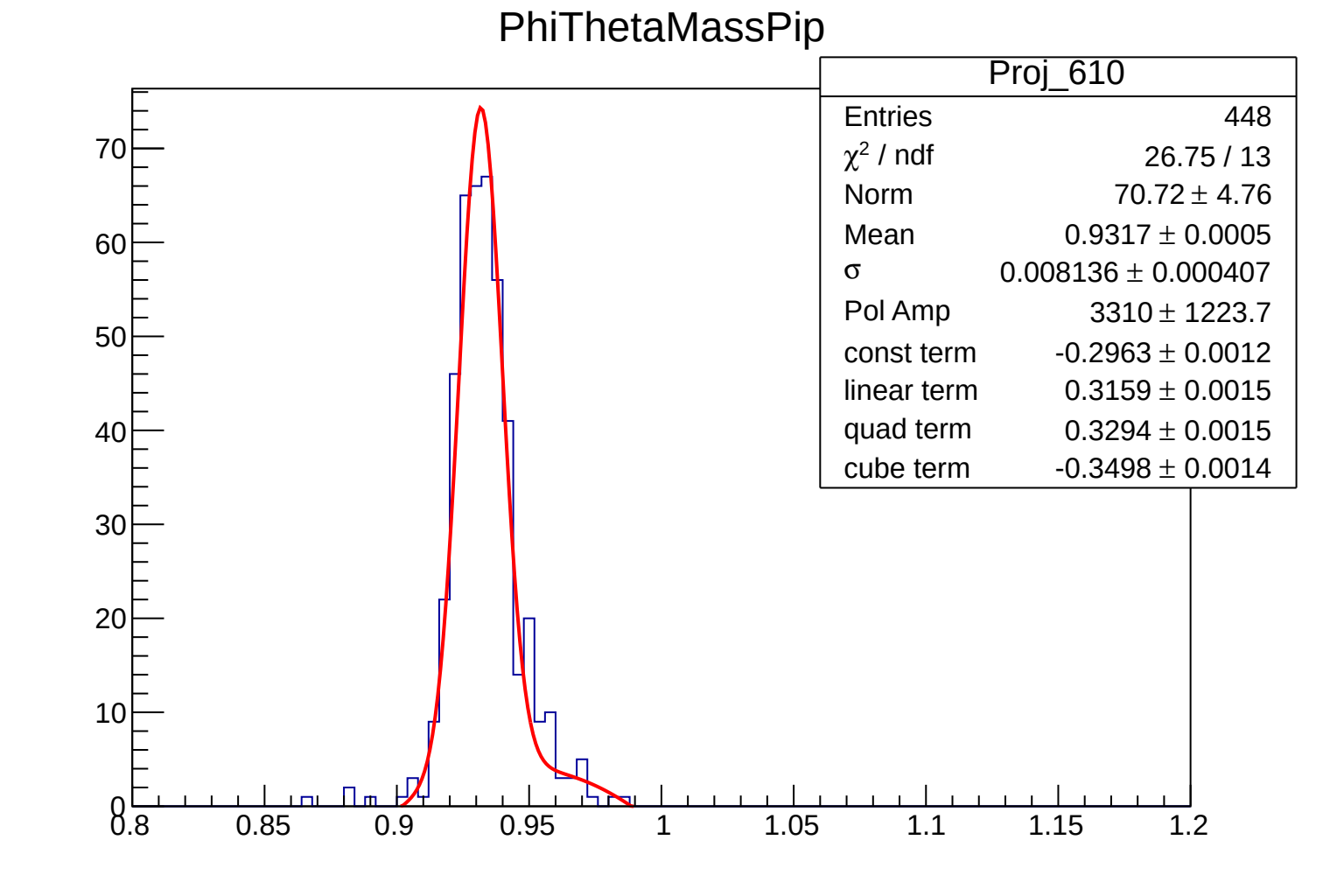

PhiThetaMassPip
Proj_65
Entries 667
χ² / ndf 23.6 / 13
Norm 101.5 ± 5.3
Mean 0.9284 ± 0.0004
σ 0.009292 ± 0.000348
Pol Amp 367 ± 0.5
const term -1.071± 0.401
linear term 1.123 ± 0.420
quad term 1.151± 0.430
cube term -1.197 ± 0.450
120
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

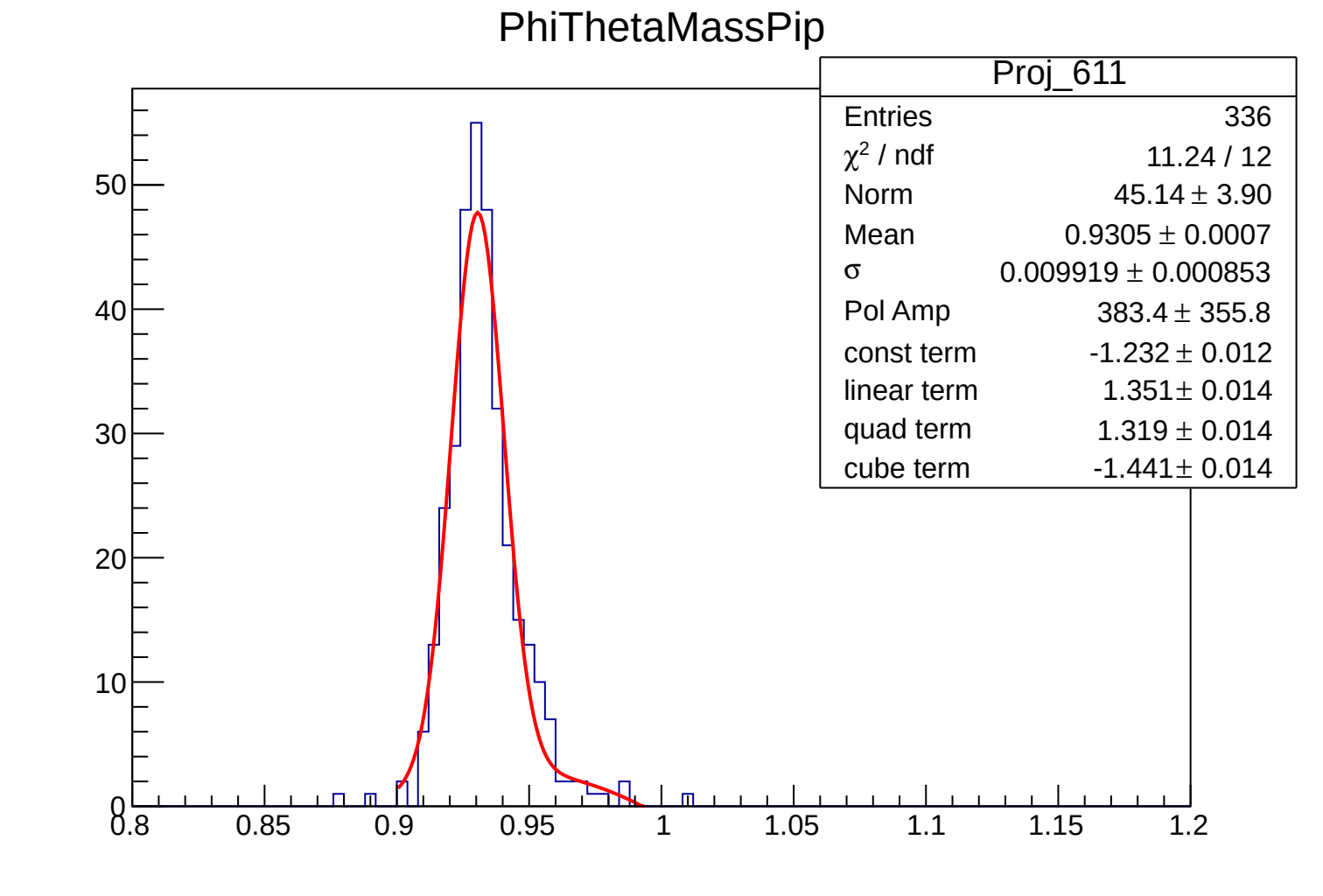

PhiThetaMassPip
Proj_66
Entries 613
χ² / ndf 32.05 / 13
Norm 82.07 ± 5.16
Mean 0.933 ± 0.001
σ 0.01007 ± 0.00061
Pol Amp 641.8 ± 348.5
const term -1.127 ± 0.008
linear term 1.228 ± 0.009
quad term 1.214 ± 0.009
cube term -1.317 ± 0.009
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

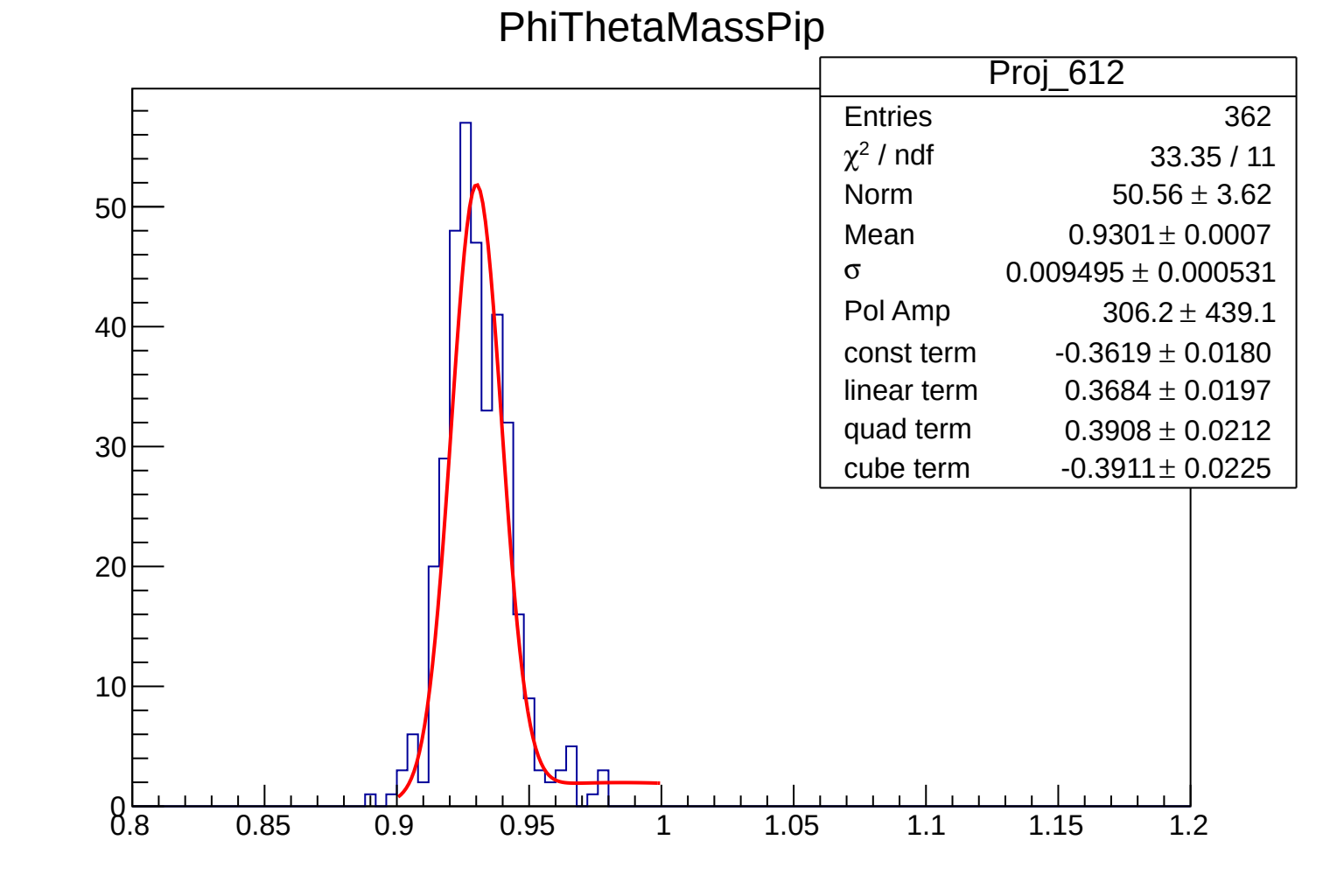

PhiThetaMassPip
Proj_67
Entries 683
χ² / ndf 42.79 / 16
Norm 89.6 ± 5.0
Mean 0.9324 ± 0.0005
σ 0.0107 ± 0.0005
Pol Amp 370.5 ± 0.3
const term -0.9265 ± 0.2214
linear term 0.9883 ± 0.2290
quad term 0.9693 ± 0.2276
cube term -1.028 ± 0.237
0
20
40
60
80
100
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

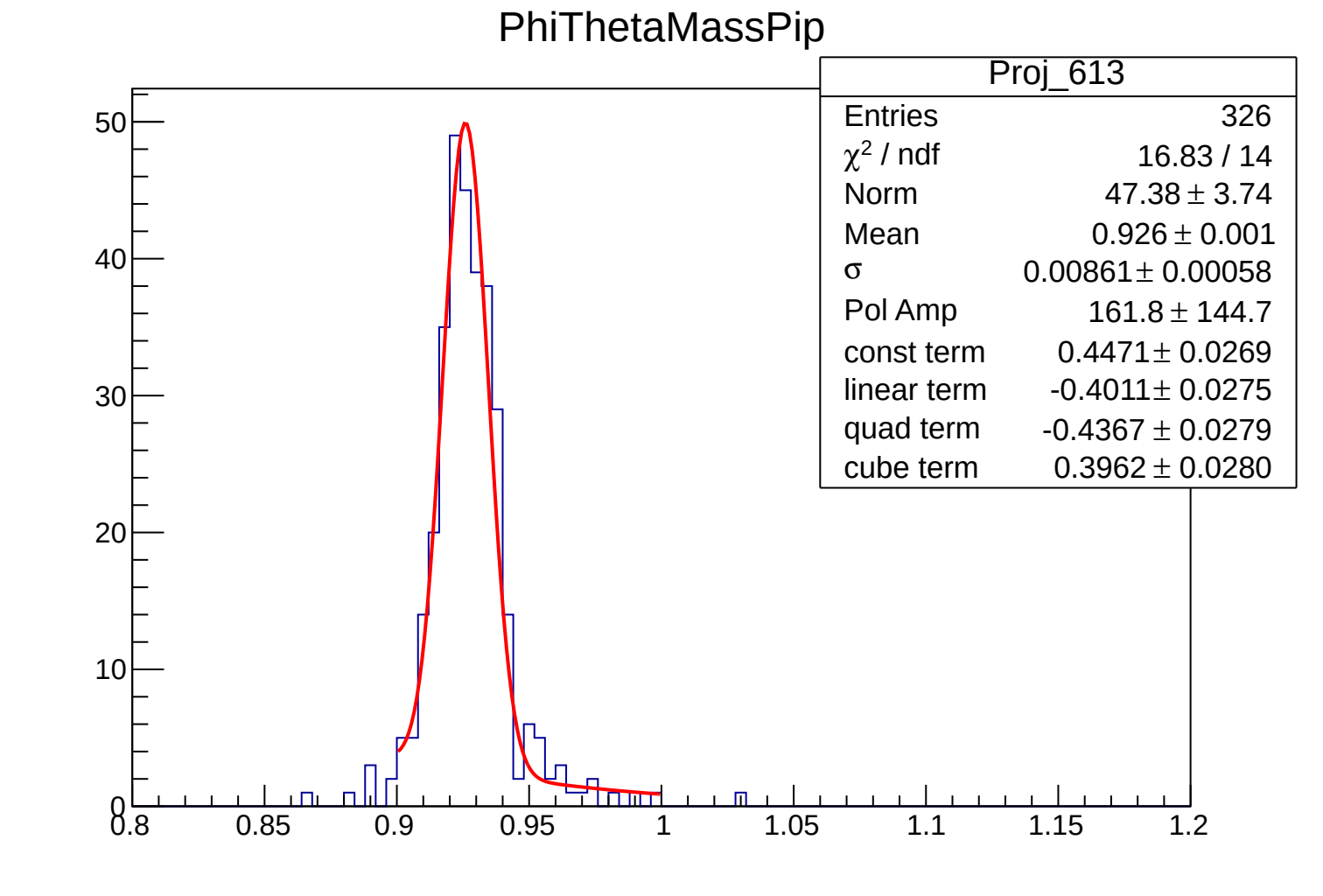

PhiThetaMassPip
Proj_68
Entries 637
χ² / ndf 12.31 / 14
Norm 92.35 ± 4.83
Mean 0.9306 ± 0.0005
σ 0.01019 ± 0.00042
Pol Amp 102.3 ± 333.6
const term -0.146 ± 0.045
linear term 0.1466 ± 0.0490
quad term 0.151 ± 0.052
cube term -0.135 ± 0.054
100
80
60
40
20
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

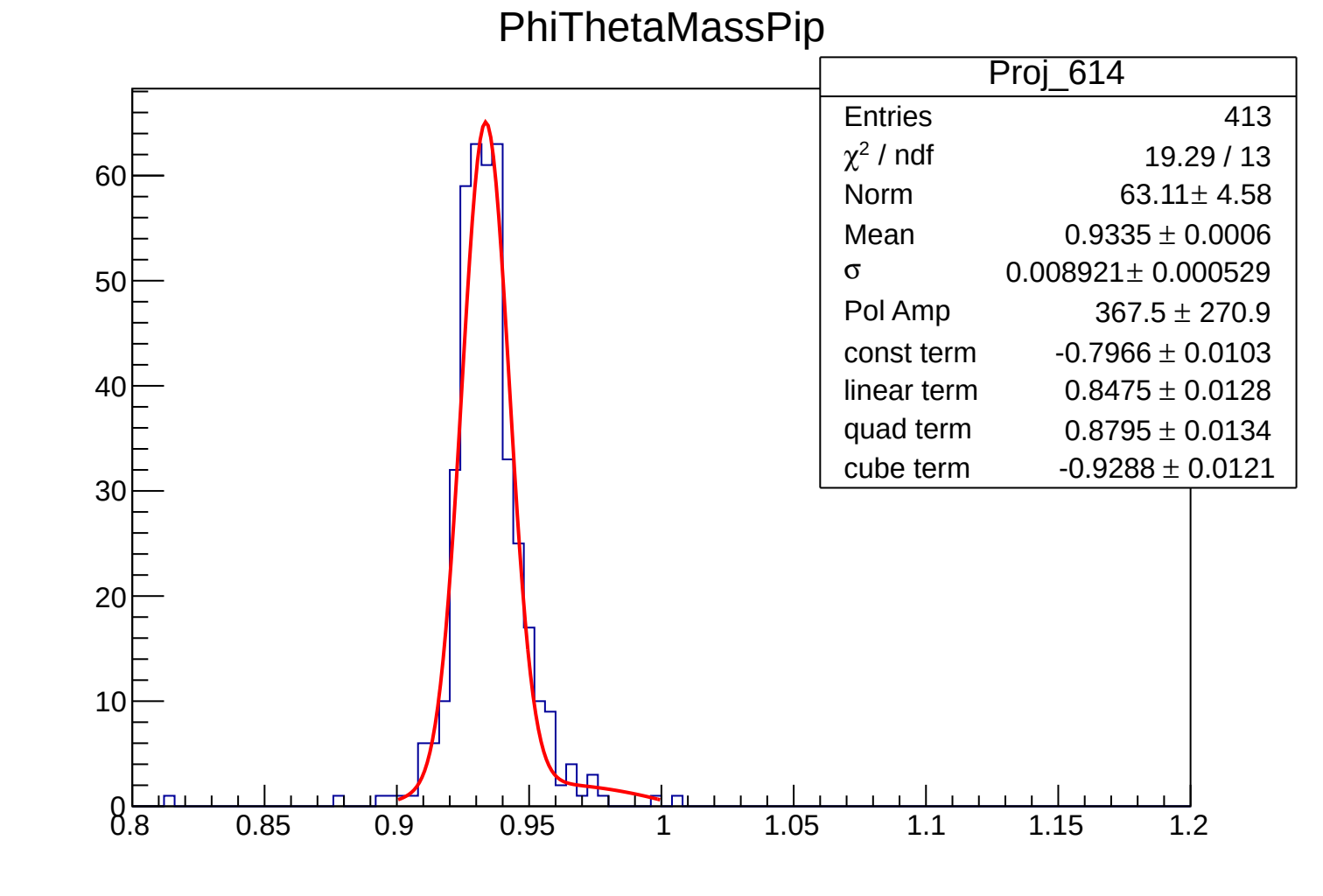

PhiThetaMassPip
Proj_69
Entries 532
χ² / ndf 24.46 / 14
Norm 71.43 ± 4.45
Mean 0.929 ± 0.001
σ 0.01066 ± 0.00068
Pol Amp 367.9 ± 0.6
const term -1.055 ± 0.298
linear term 1.118 ± 0.303
quad term 1.107 ± 0.306
cube term -1.168 ± 0.312
0
10
20
30
40
50
60
70
80
90
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

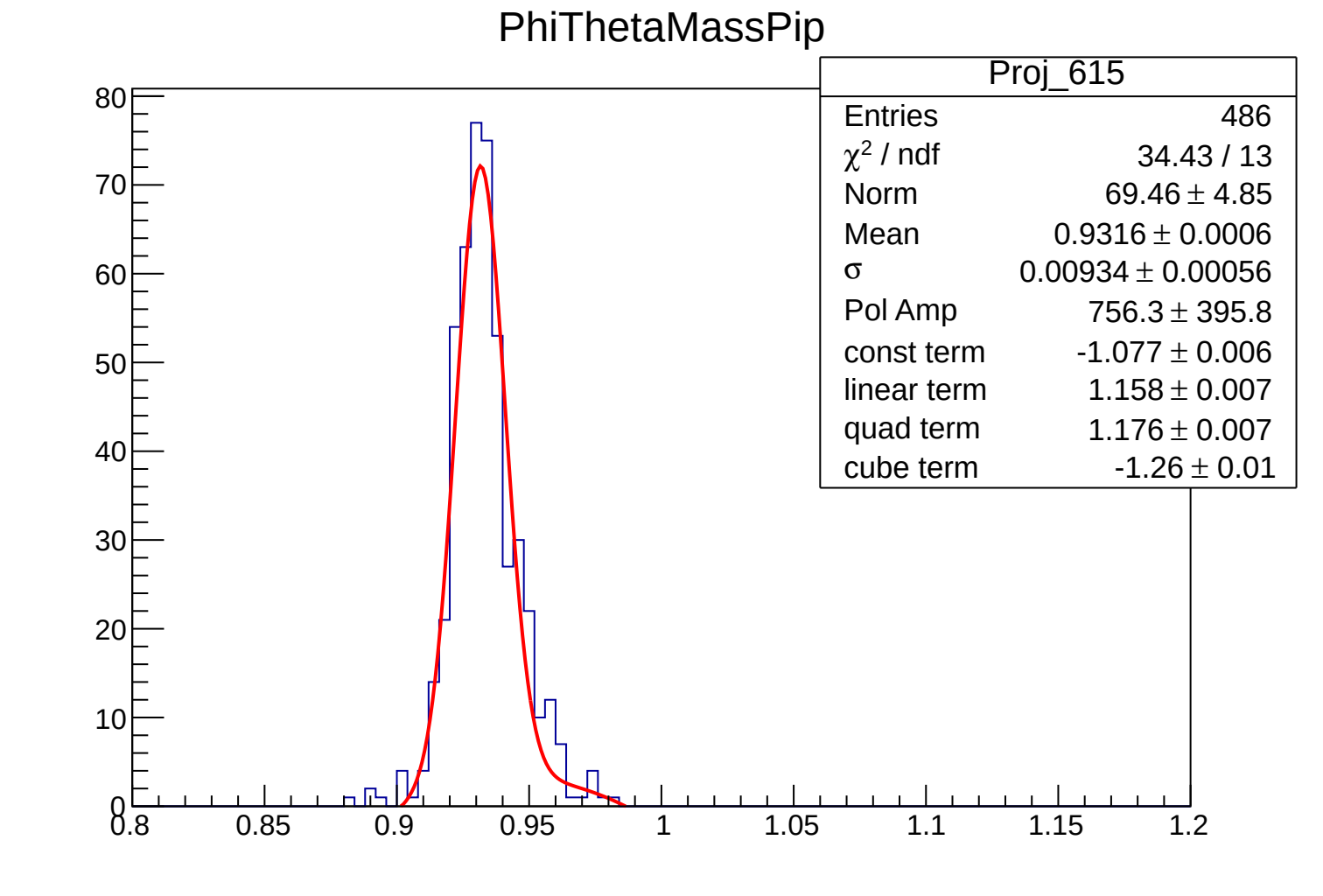

PhiThetaMassPip
Proj_610
Entries 448
χ² / ndf 26.75 / 13
Norm 70.72 ± 4.76
Mean 0.9317 ± 0.0005
σ 0.008136 ± 0.000407
Pol Amp 3310 ± 1223.7
const term -0.2963 ± 0.0012
linear term 0.3159 ± 0.0015
quad term 0.3294 ± 0.0015
cube term -0.3498 ± 0.0014
0
10
20
30
40
50
60
70
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

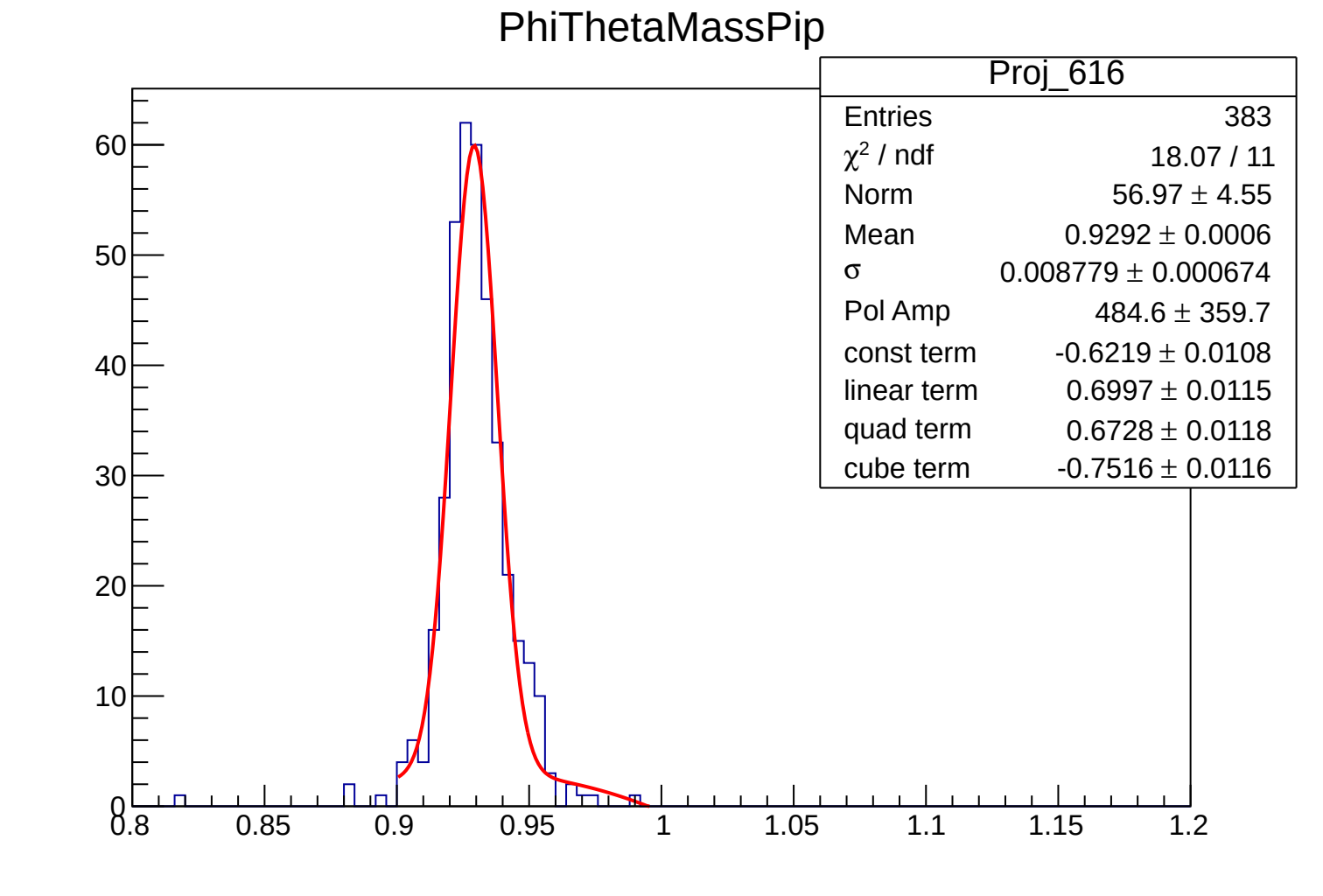

PhiThetaMassPip
Proj_611
Entries 336
χ² / ndf 11.24 / 12
Norm 45.14 ± 3.90
Mean 0.9305 ± 0.0007
σ 0.009919 ± 0.000853
Pol Amp 383.4 ± 355.8
const term -1.232 ± 0.012
linear term 1.351 ± 0.014
quad term 1.319 ± 0.014
cube term -1.441 ± 0.014
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_612
Entries 362
χ² / ndf 33.35 / 11
Norm 50.56 ± 3.62
Mean 0.9301 ± 0.0007
σ 0.009495 ± 0.000531
Pol Amp 306.2 ± 439.1
const term -0.3619 ± 0.0180
linear term 0.3684 ± 0.0197
quad term 0.3908 ± 0.0212
cube term -0.3911 ± 0.0225
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_613
Entries 326
χ² / ndf 16.83 / 14
Norm 47.38 ± 3.74
Mean 0.926 ± 0.001
σ 0.00861 ± 0.00058
Pol Amp 161.8 ± 144.7
const term 0.4471 ± 0.0269
linear term -0.4011 ± 0.0275
quad term -0.4367 ± 0.0279
cube term 0.3962 ± 0.0280
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_614
Entries 413
χ² / ndf 19.29 / 13
Norm 63.11± 4.58
Mean 0.9335 ± 0.0006
σ 0.008921± 0.000529
Pol Amp 367.5 ± 270.9
const term -0.7966 ± 0.0103
linear term 0.8475 ± 0.0128
quad term 0.8795 ± 0.0134
cube term -0.9288 ± 0.0121
0
10
20
30
40
50
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_615
Entries 486
χ² / ndf 34.43 / 13
Norm 69.46 ± 4.85
Mean 0.9316 ± 0.0006
σ 0.00934 ± 0.00056
Pol Amp 756.3 ± 395.8
const term -1.077 ± 0.006
linear term 1.158 ± 0.007
quad term 1.176 ± 0.007
cube term -1.26 ± 0.01
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_616
Entries 383
χ² / ndf 18.07 / 11
Norm 56.97 ± 4.55
Mean 0.9292 ± 0.0006
σ 0.008779 ± 0.000674
Pol Amp 484.6 ± 359.7
const term -0.6219 ± 0.0108
linear term 0.6997 ± 0.0115
quad term 0.6728 ± 0.0118
cube term -0.7516 ± 0.0116
0
10
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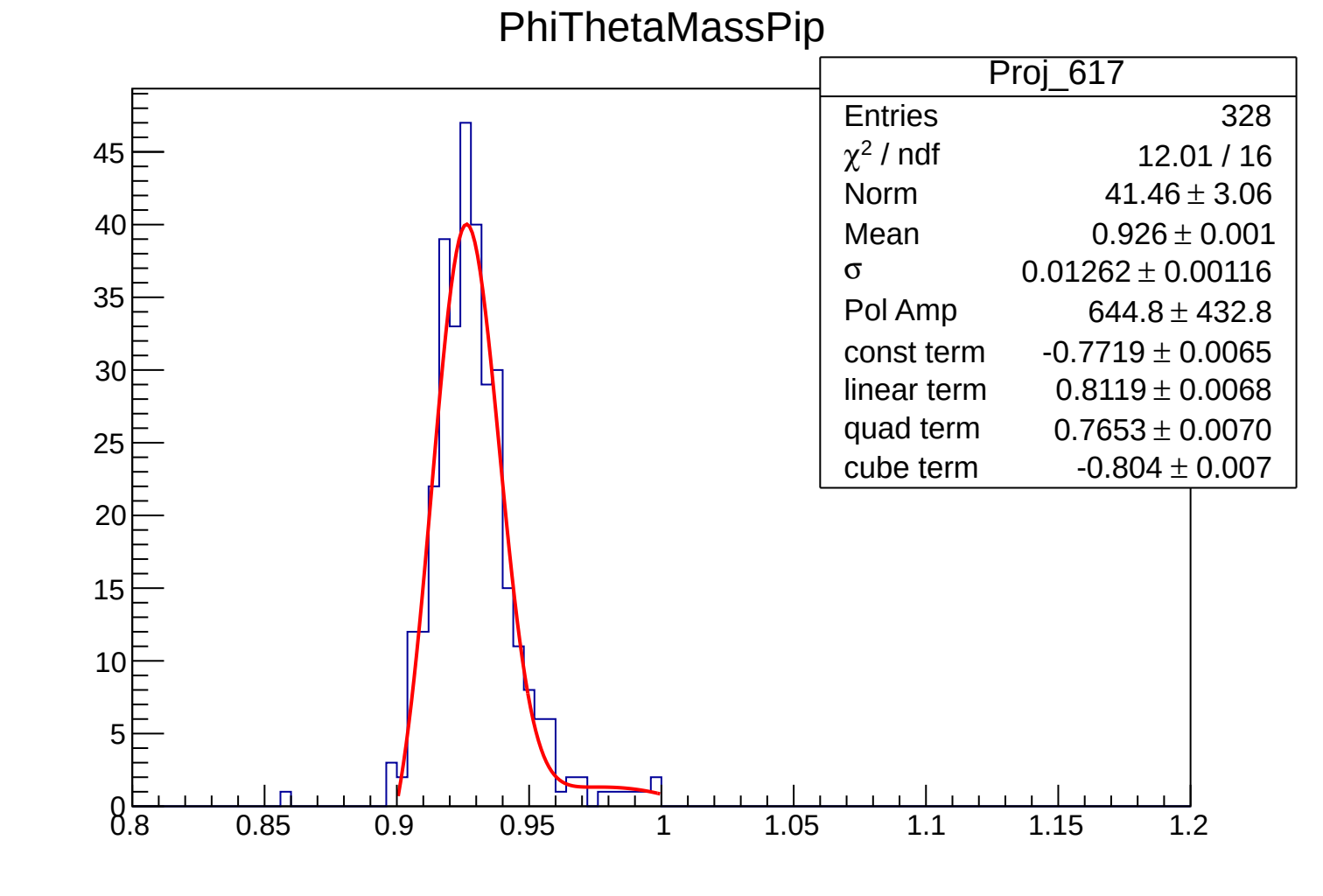
50
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_617
Entries 328
χ² / ndf 12.01 / 16
Norm 41.46 ± 3.06
Mean 0.926 ± 0.001
σ 0.01262 ± 0.00116
Pol Amp 644.8 ± 432.8
const term -0.7719 ± 0.0065
linear term 0.8119 ± 0.0068
quad term 0.7653 ± 0.0070
cube term -0.804 ± 0.007
0
5
10
15
20
25
30
35
40
45
0.8
0.85
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0.95
1
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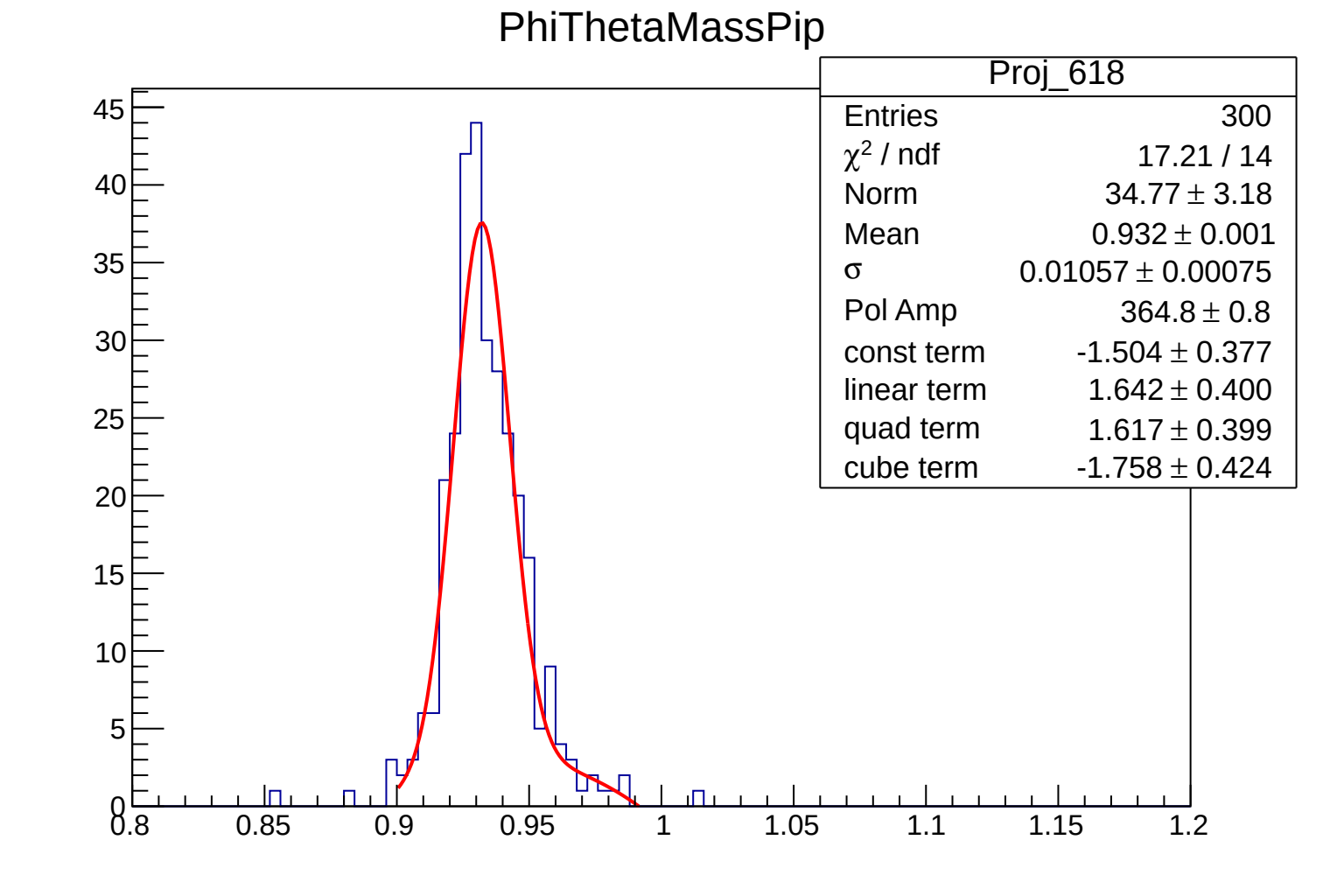
1.2


PhiThetaMassPip
Proj_618
Entries 300
χ² / ndf 17.21 / 14
Norm 34.77 ± 3.18
Mean 0.932 ± 0.001
σ 0.01057 ± 0.00075
Pol Amp 364.8 ± 0.8
const term -1.504 ± 0.377
linear term 1.642 ± 0.400
quad term 1.617 ± 0.399
cube term -1.758 ± 0.424
0
5
10
15
20
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0.8
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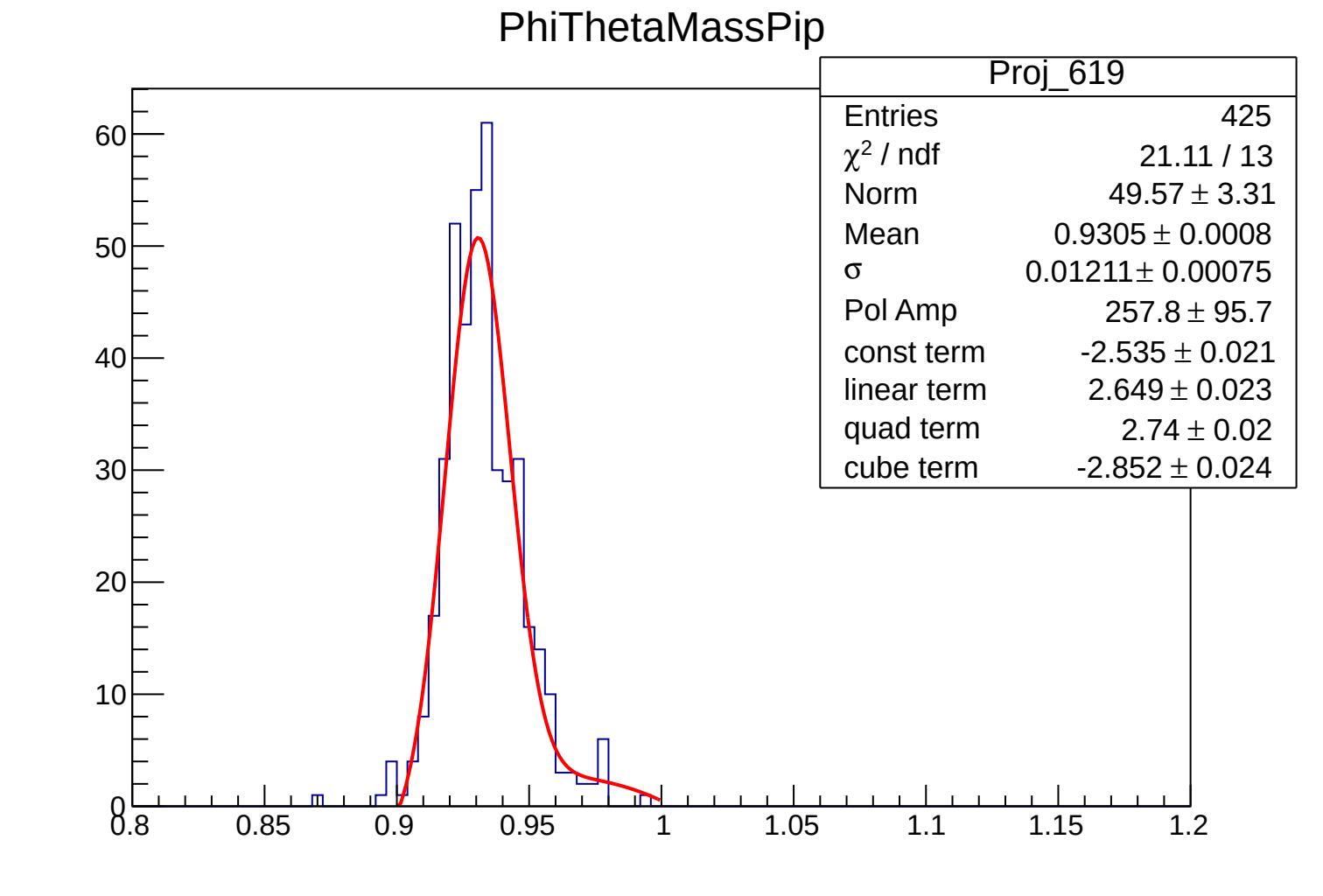
PhiThetaMassPip
Proj_619
Entries 425
χ² / ndf 21.11 / 13
Norm 49.57 ± 3.31
Mean 0.9305 ± 0.0008
σ 0.01211 ± 0.00075
Pol Amp 257.8 ± 95.7
const term -2.535 ± 0.021
linear term 2.649 ± 0.023
quad term 2.74 ± 0.02
cube term -2.852 ± 0.024
0
10
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50
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0.8
0.85
0.9
0.95
1
1.05
1.1
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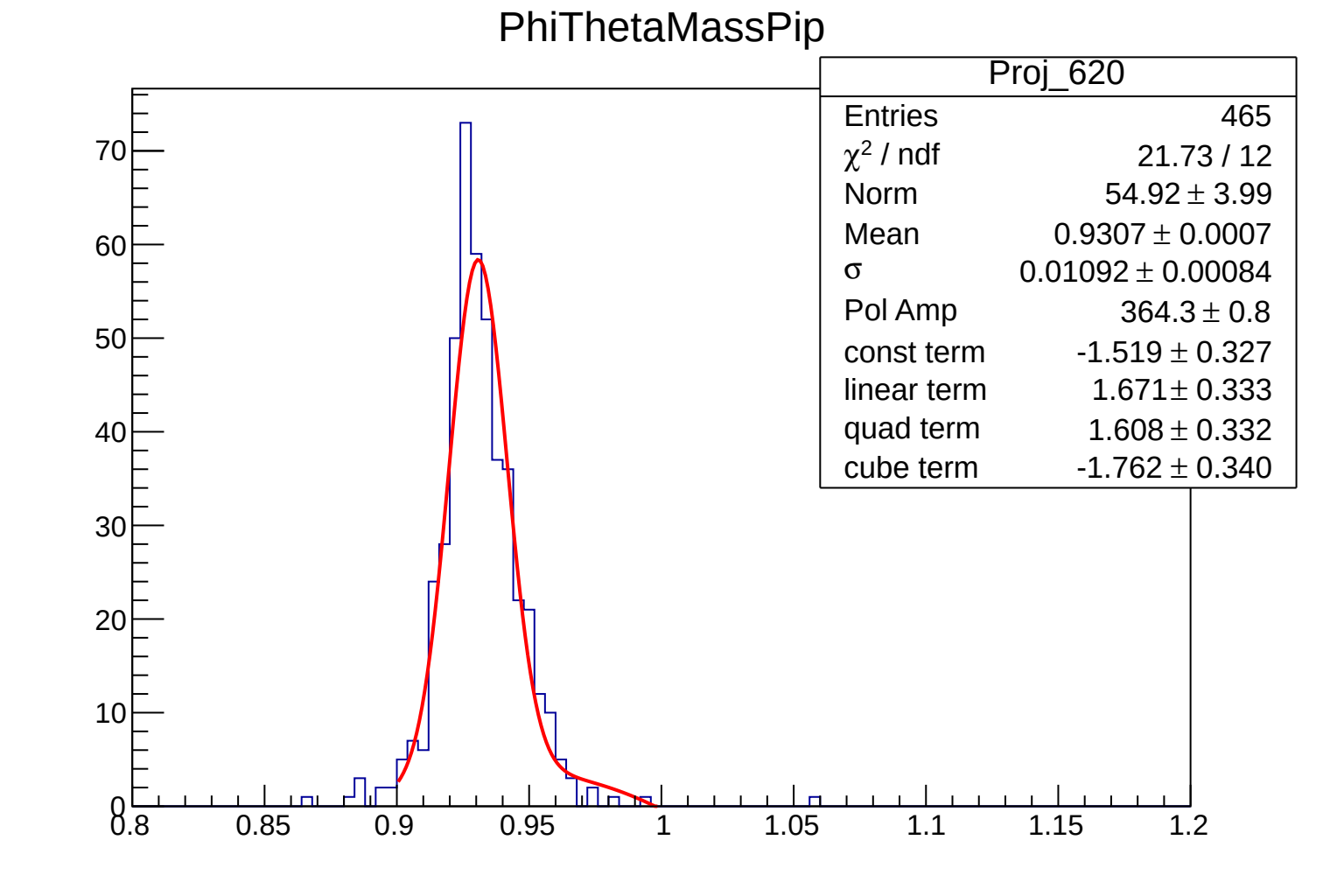
PhiThetaMassPip
Proj_620
Entries 465
χ² / ndf 21.73 / 12
Norm 54.92 ± 3.99
Mean 0.9307 ± 0.0007
σ 0.01092 ± 0.00084
Pol Amp 364.3 ± 0.8
const term -1.519 ± 0.327
linear term 1.671 ± 0.333
quad term 1.608 ± 0.332
cube term -1.762 ± 0.340
0
10
20
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0.8
0.85
0.9
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1
1.05
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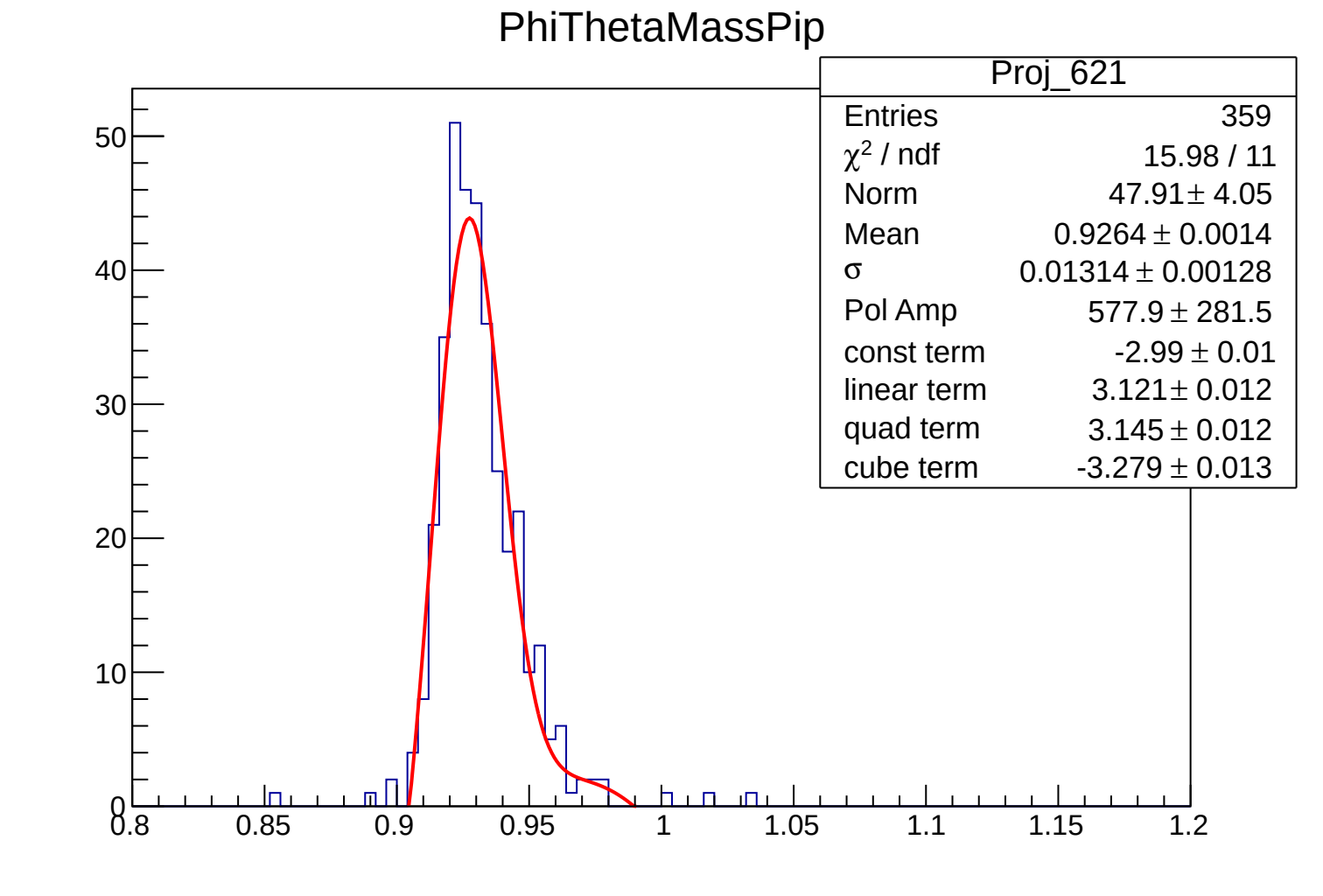
1.2


PhiThetaMassPip
Proj_621
Entries 359
χ² / ndf 15.98 / 11
Norm 47.91 ± 4.05
Mean 0.9264 ± 0.0014
σ 0.01314 ± 0.00128
Pol Amp 577.9 ± 281.5
const term -2.99 ± 0.01
linear term 3.121 ± 0.012
quad term 3.145 ± 0.012
cube term -3.279 ± 0.013
0
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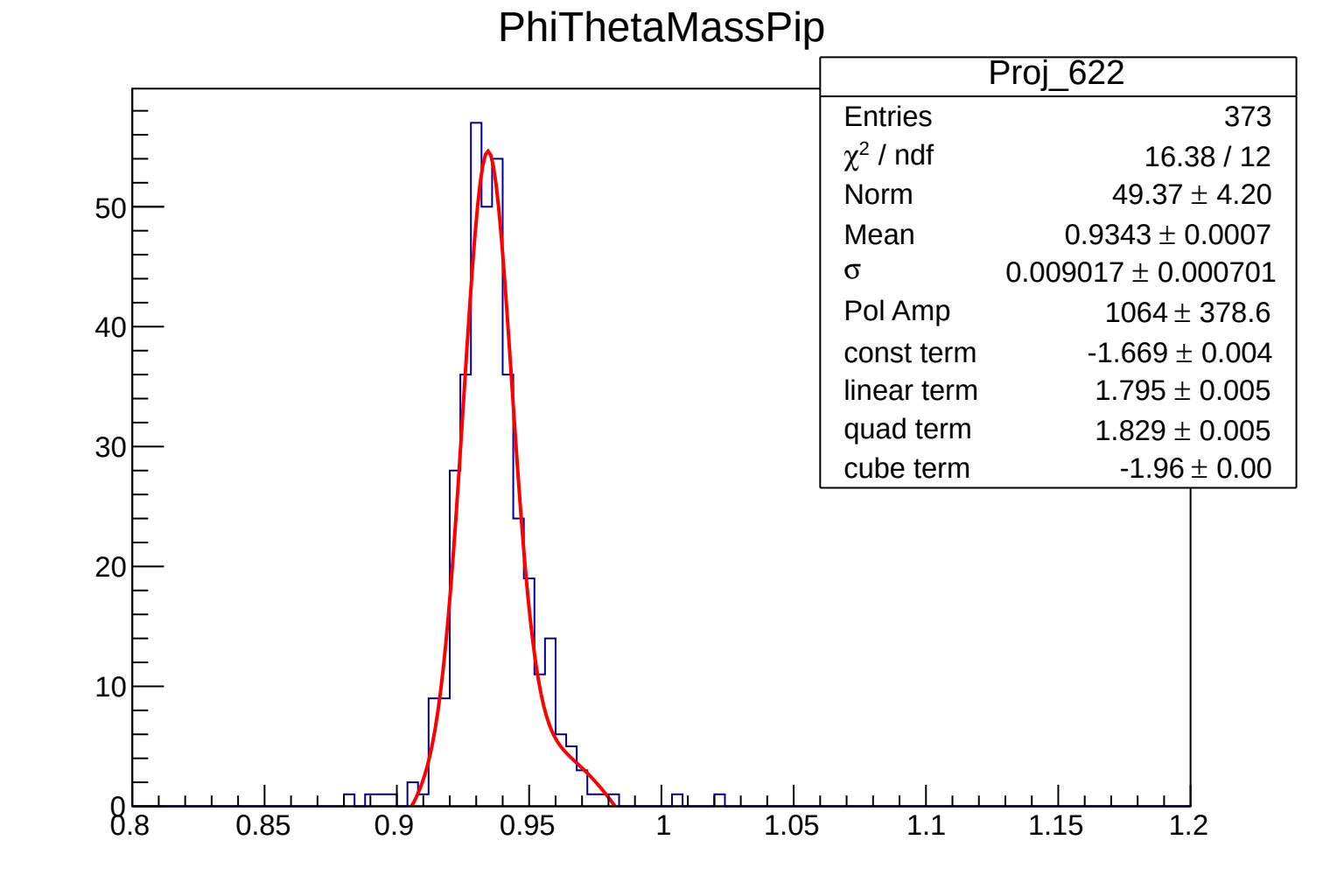
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_622
Entries 373
χ² / ndf 16.38 / 12
Norm 49.37 ± 4.20
Mean 0.9343 ± 0.0007
σ 0.009017 ± 0.000701
Pol Amp 1064 ± 378.6
const term -1.669 ± 0.004
linear term 1.795 ± 0.005
quad term 1.829 ± 0.005
cube term -1.96 ± 0.00
0
10
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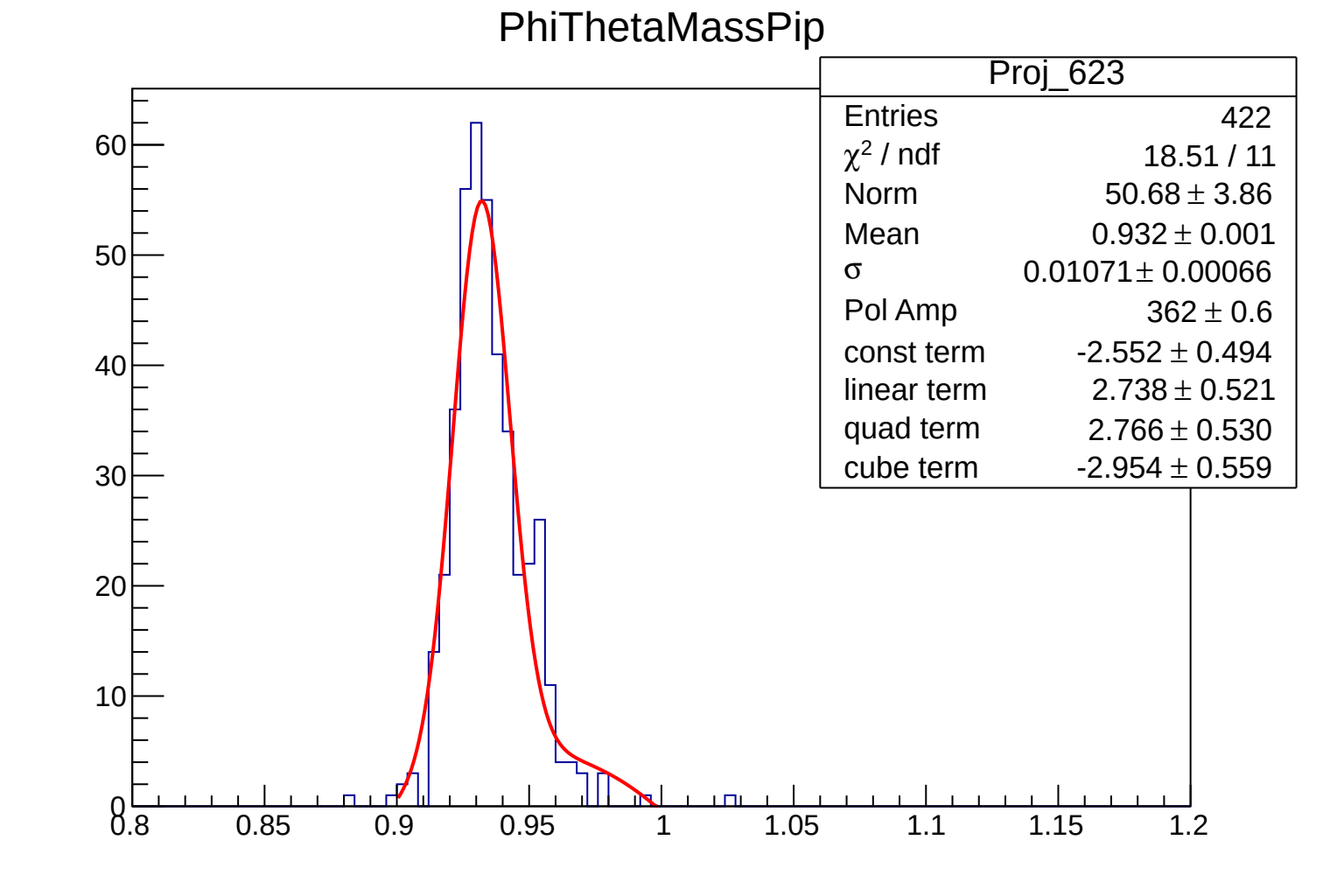
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_623
Entries 422
χ² / ndf 18.51 / 11
Norm 50.68 ± 3.86
Mean 0.932 ± 0.001
σ 0.01071 ± 0.00066
Pol Amp 362 ± 0.6
const term -2.552 ± 0.494
linear term 2.738 ± 0.521
quad term 2.766 ± 0.530
cube term -2.954 ± 0.559
0
10
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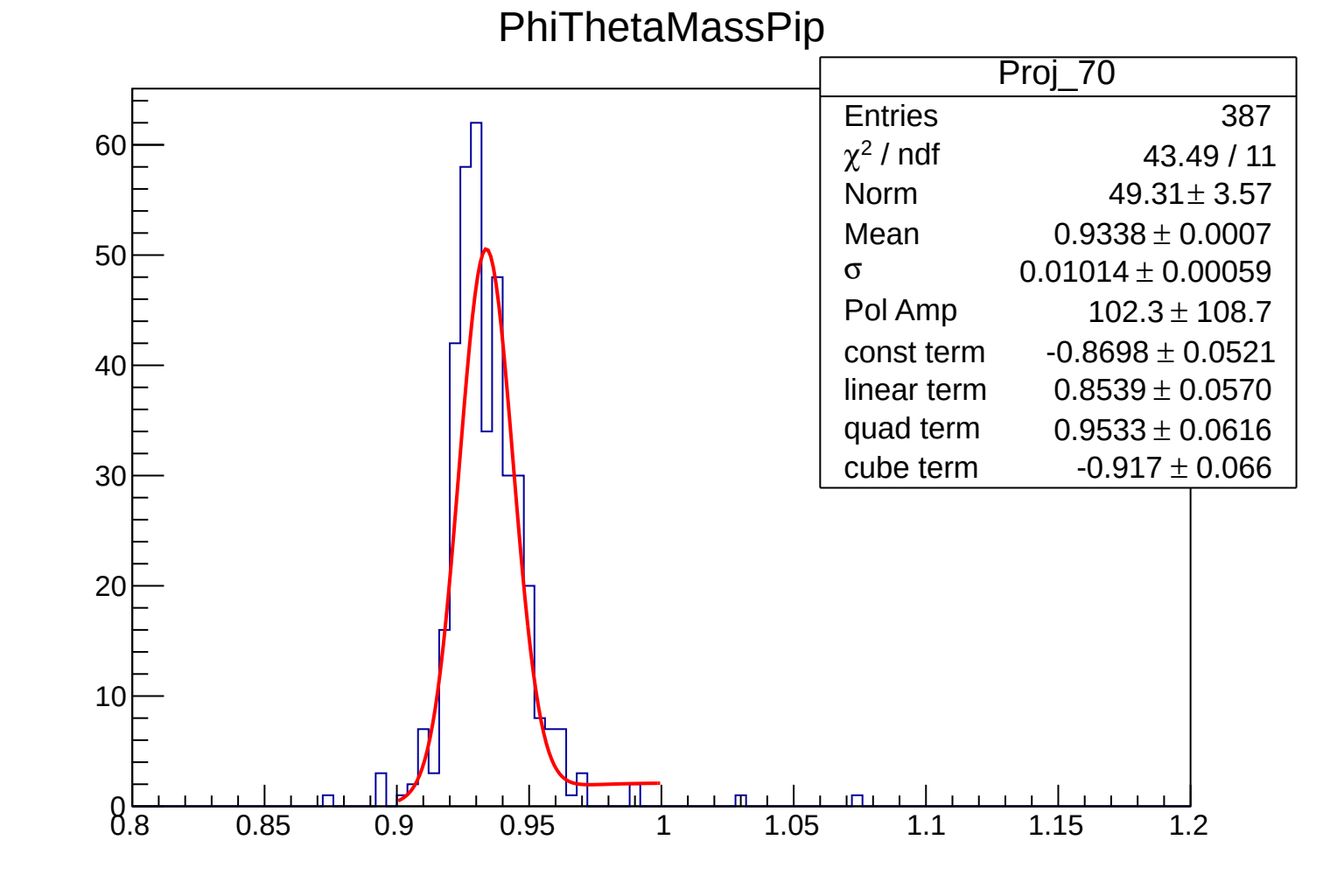
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_70
Entries 387
χ² / ndf 43.49 / 11
Norm 49.31 ± 3.57
Mean 0.9338 ± 0.0007
σ 0.01014 ± 0.00059
Pol Amp 102.3 ± 108.7
const term -0.8698 ± 0.0521
linear term 0.8539 ± 0.0570
quad term 0.9533 ± 0.0616
cube term -0.917 ± 0.066
0
10
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40
50
60
0.8
0.85
0.9
0.95
1
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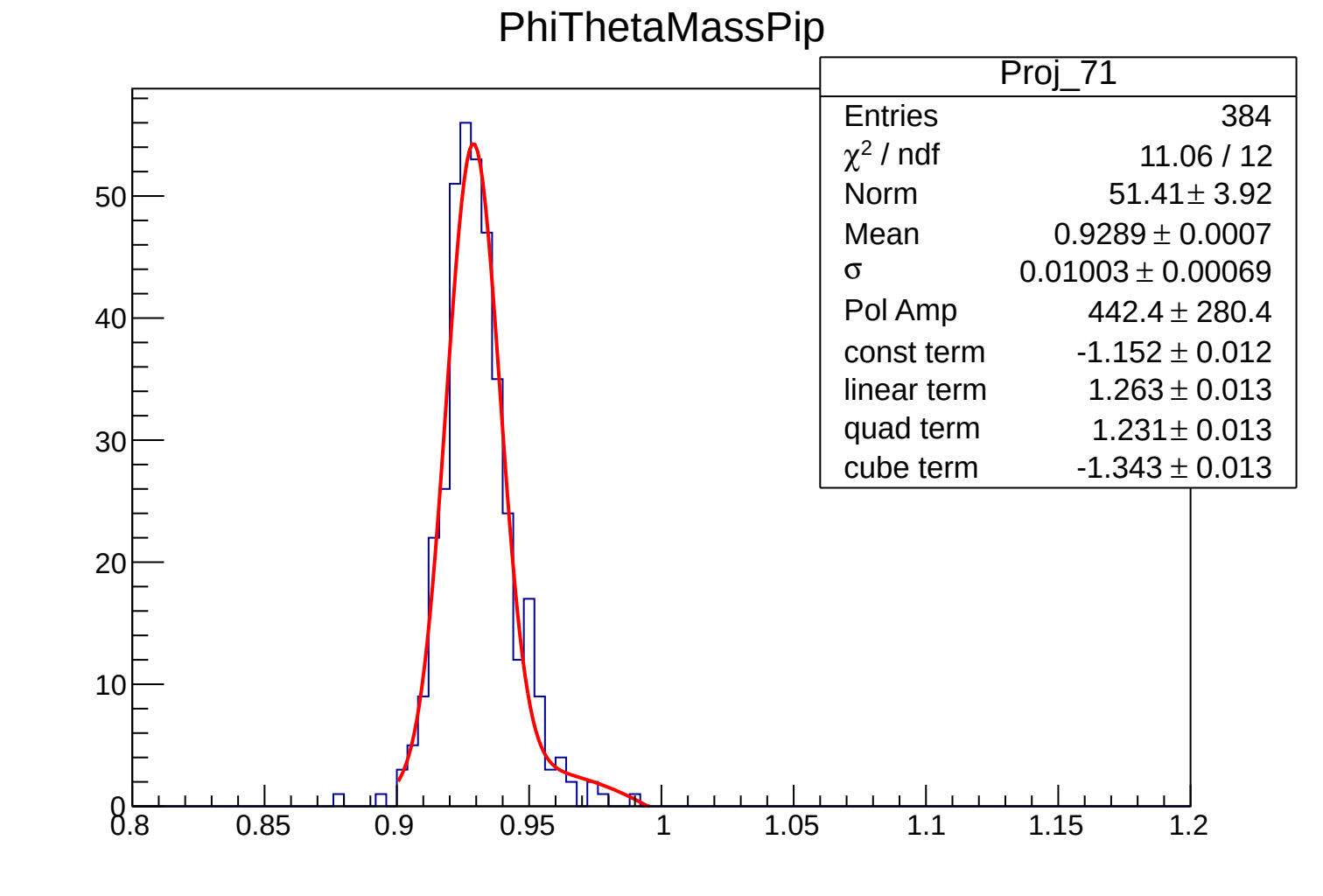
1.15
1.2


PhiThetaMassPip
Proj_71
Entries 384
χ² / ndf 11.06 / 12
Norm 51.41 ± 3.92
Mean 0.9289 ± 0.0007
σ 0.01003 ± 0.00069
Pol Amp 442.4 ± 280.4
const term -1.152 ± 0.012
linear term 1.263 ± 0.013
quad term 1.231 ± 0.013
cube term -1.343 ± 0.013
0
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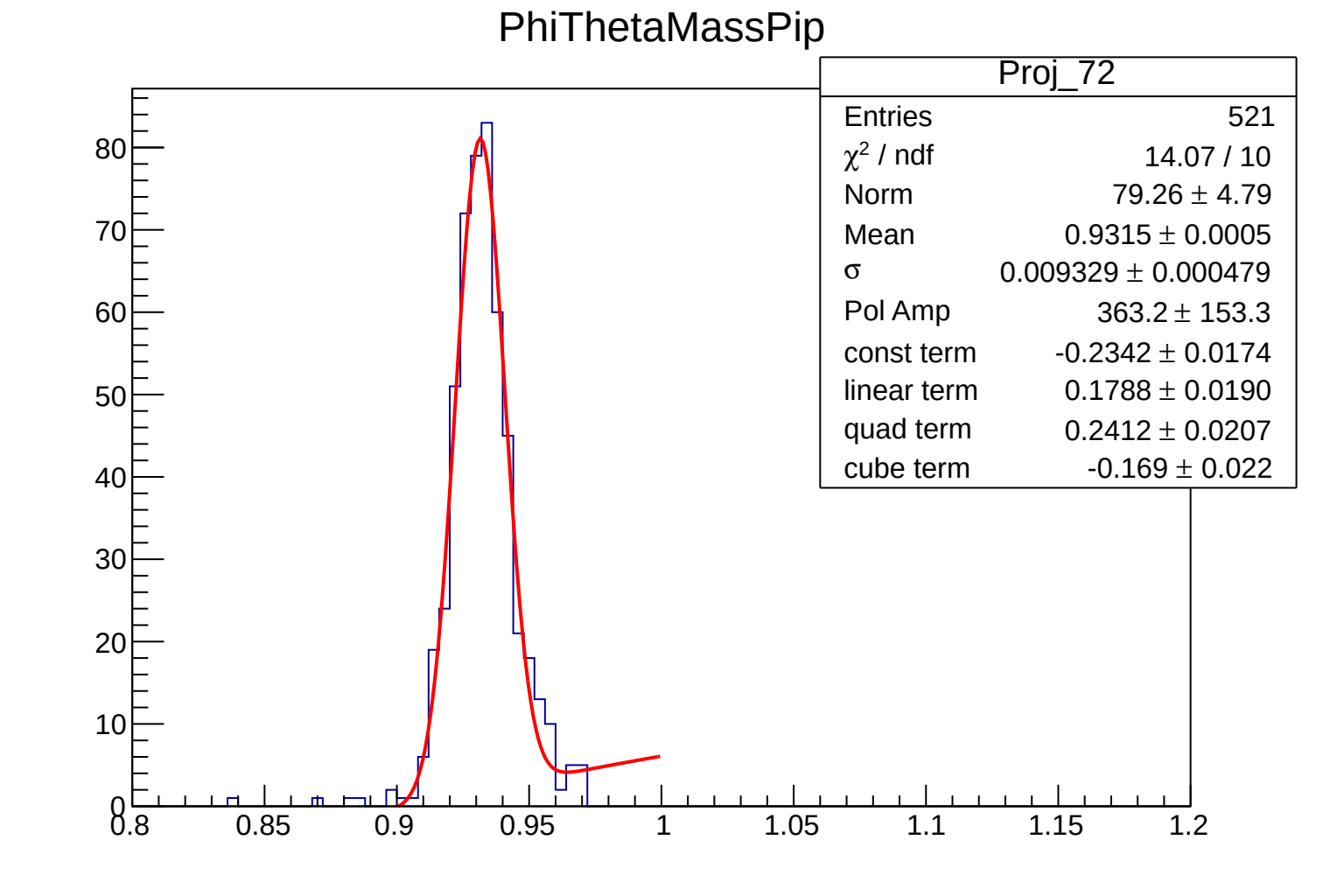
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_72
Entries 521
χ² / ndf 14.07 / 10
Norm 79.26 ± 4.79
Mean 0.9315 ± 0.0005
σ 0.009329 ± 0.000479
Pol Amp 363.2 ± 153.3
const term -0.2342 ± 0.0174
linear term 0.1788 ± 0.0190
quad term 0.2412 ± 0.0207
cube term -0.169 ± 0.022
0
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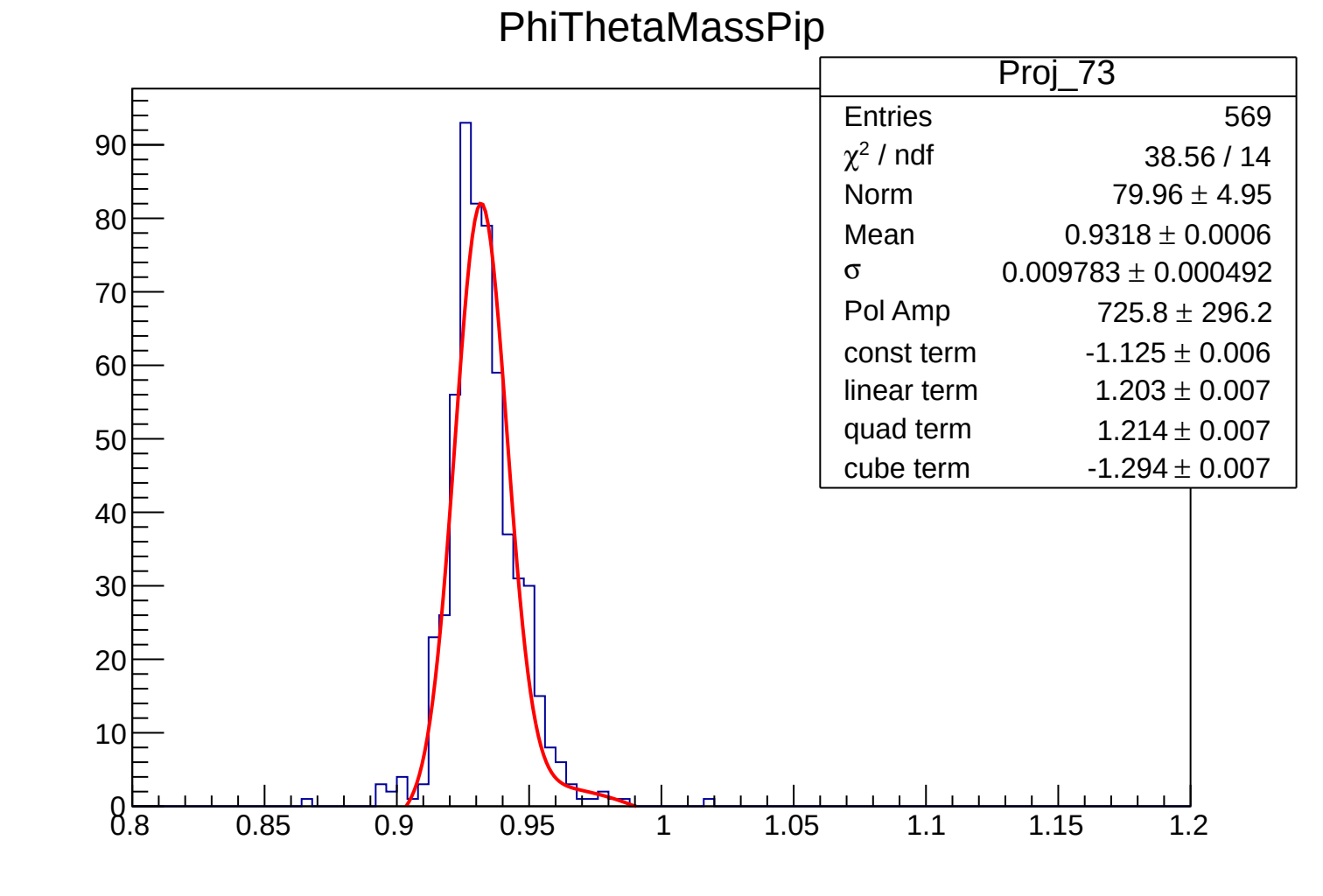
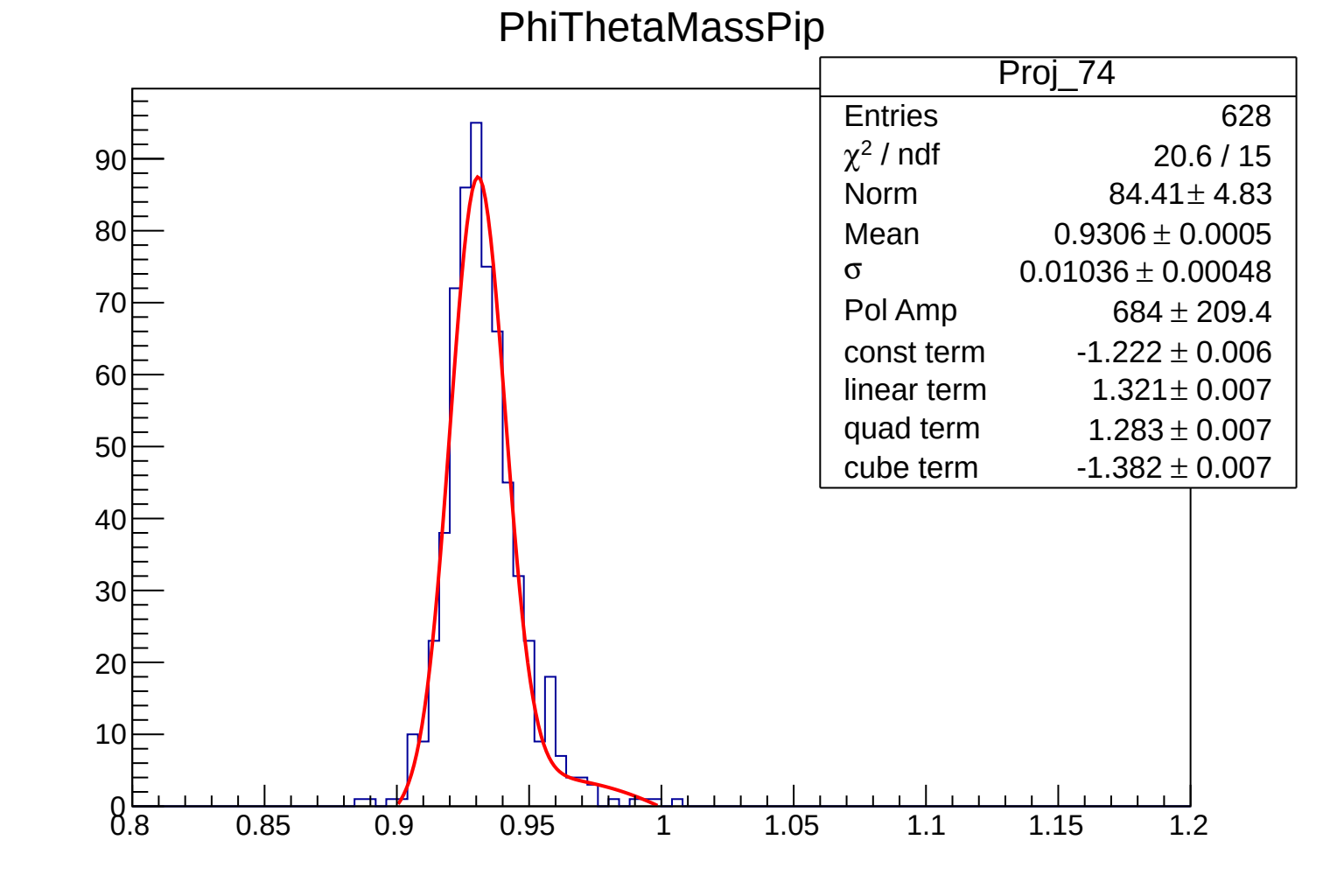
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_73
Entries 569
χ² / ndf 38.56 / 14
Norm 79.96 ± 4.95
Mean 0.9318 ± 0.0006
σ 0.009783 ± 0.000492
Pol Amp 725.8 ± 296.2
const term -1.125 ± 0.006
linear term 1.203 ± 0.007
quad term 1.214 ± 0.007
cube term -1.294 ± 0.007
0 10 20 30 40 50 60 70 80 90
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2


PhiThetaMassPip
Proj_74
Entries 628
χ² / ndf 20.6 / 15
Norm 84.41 ± 4.83
Mean 0.9306 ± 0.0005
σ 0.01036 ± 0.00048
Pol Amp 684 ± 209.4
const term -1.222 ± 0.006
linear term 1.321 ± 0.007
quad term 1.283 ± 0.007
cube term -1.382 ± 0.007
0
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40
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60
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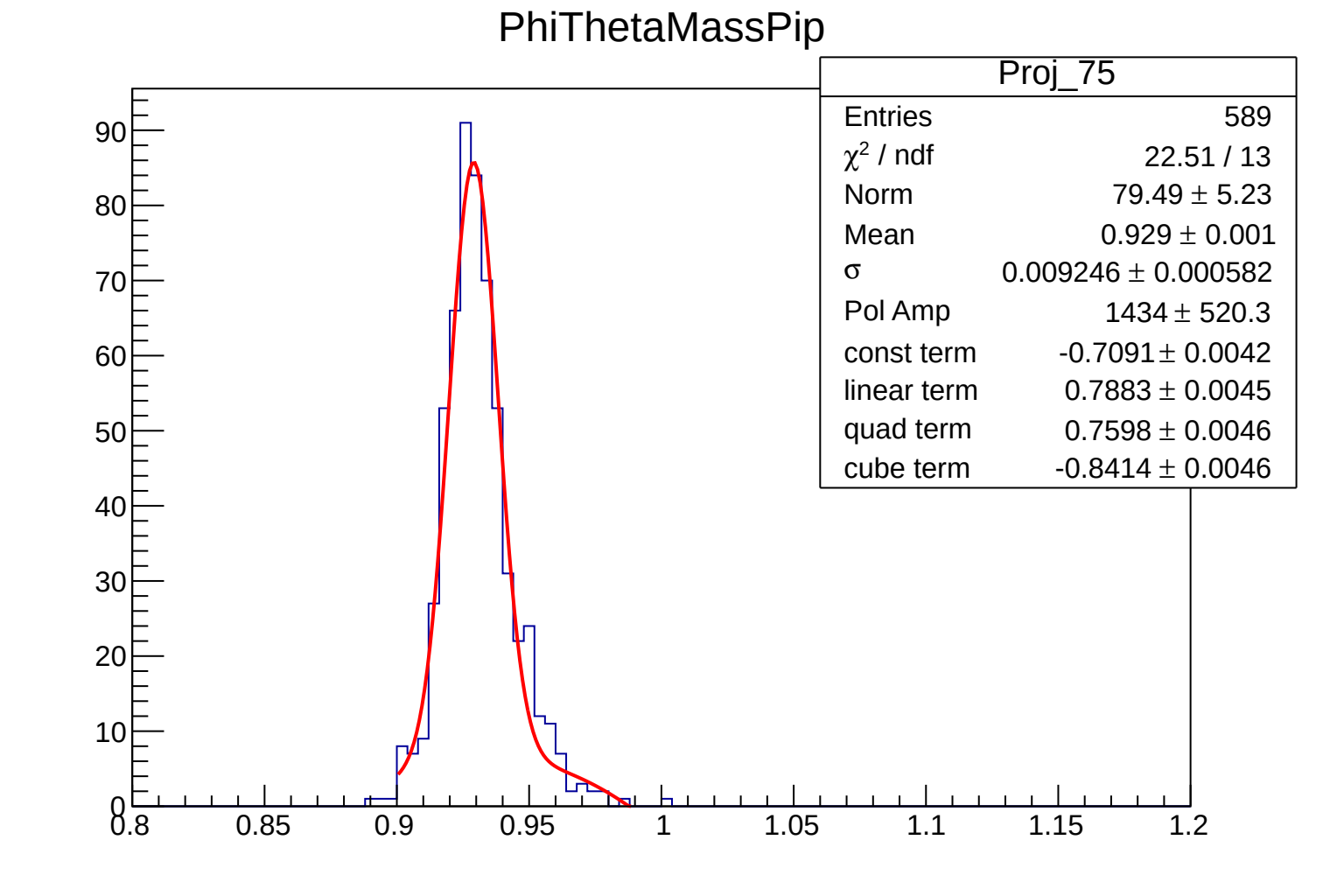
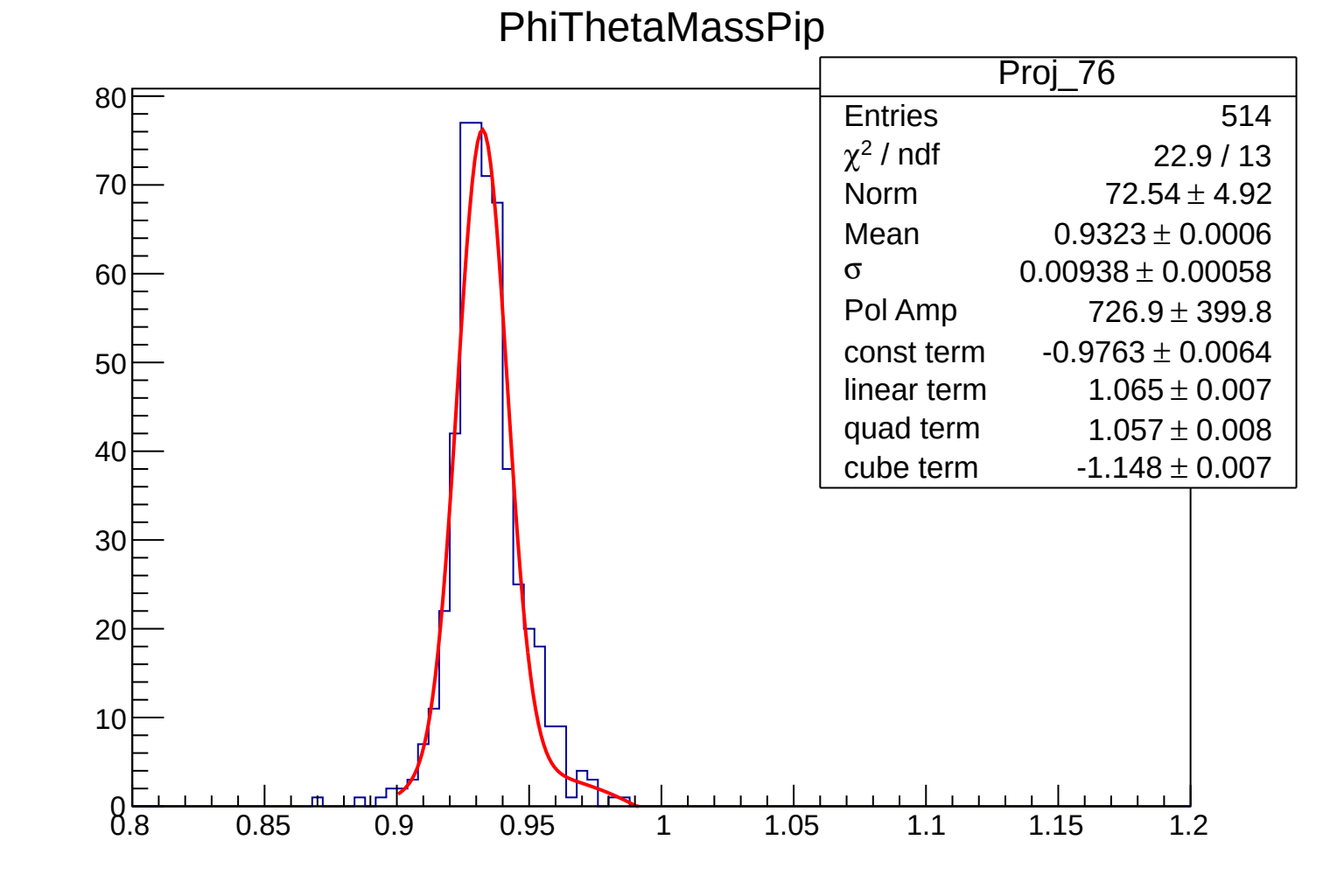
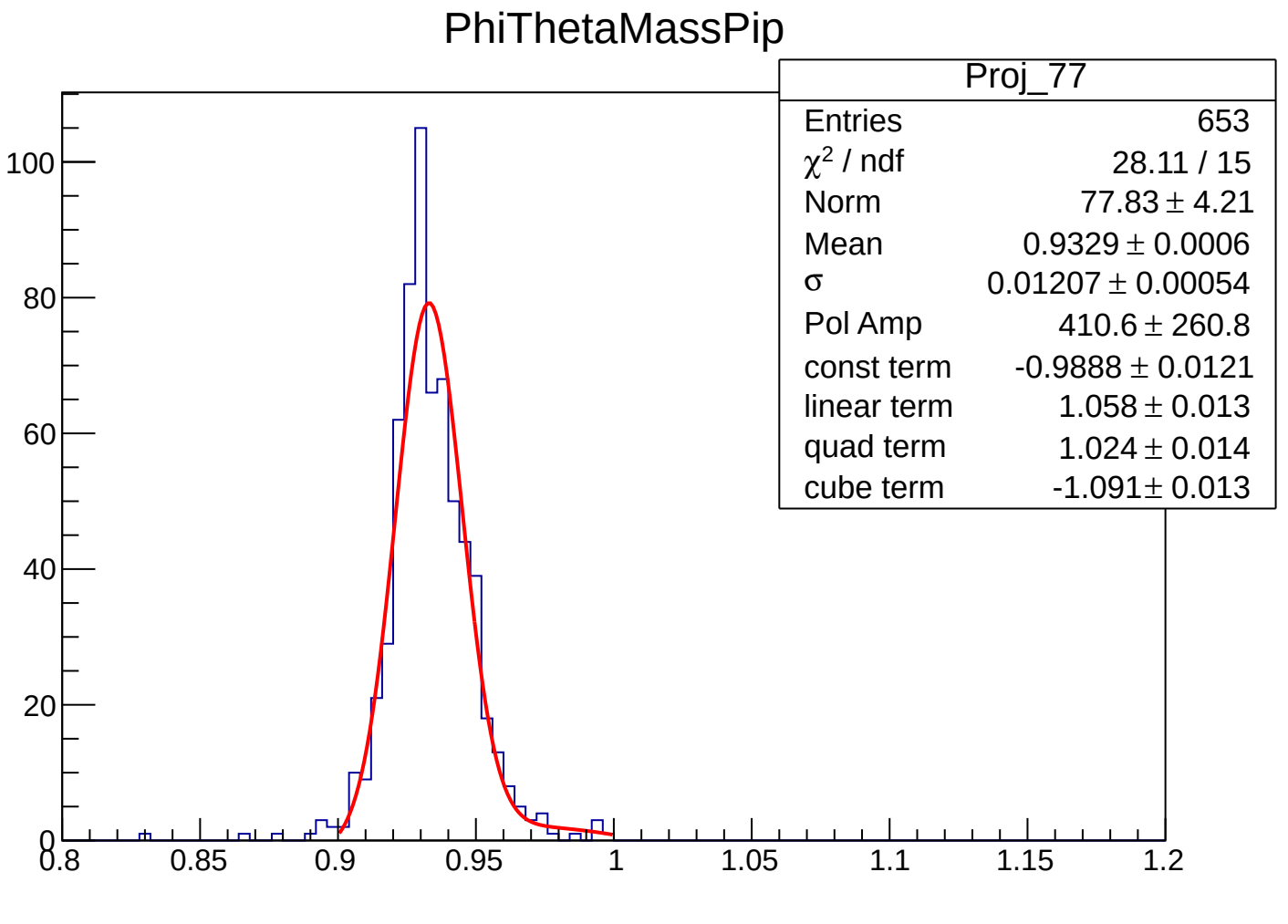
80
90
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_75
Entries 589
χ² / ndf 22.51 / 13
Norm 79.49 ± 5.23
Mean 0.929 ± 0.001
σ 0.009246 ± 0.000582
Pol Amp 1434 ± 520.3
const term -0.7091 ± 0.0042
linear term 0.7883 ± 0.0045
quad term 0.7598 ± 0.0046
cube term -0.8414 ± 0.0046
0 10 20 30 40 50 60 70 80 90
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2


PhiThetaMassPip
Proj_76
Entries 514
χ² / ndf 22.9 / 13
Norm 72.54 ± 4.92
Mean 0.9323 ± 0.0006
σ 0.00938 ± 0.00058
Pol Amp 726.9 ± 399.8
const term -0.9763 ± 0.0064
linear term 1.065 ± 0.007
quad term 1.057 ± 0.008
cube term -1.148 ± 0.007
0 10 20 30 40 50 60 70 80
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2


PhiThetaMassPip
Proj_77
Entries 653
χ² / ndf 28.11 / 15
Norm 77.83 ± 4.21
Mean 0.9329 ± 0.0006
σ 0.01207 ± 0.00054
Pol Amp 410.6 ± 260.8
const term -0.9888 ± 0.0121
linear term 1.058 ± 0.013
quad term 1.024 ± 0.014
cube term -1.091 ± 0.013
0
20
40
60
80
100
0.8
0.85
0.9
0.95
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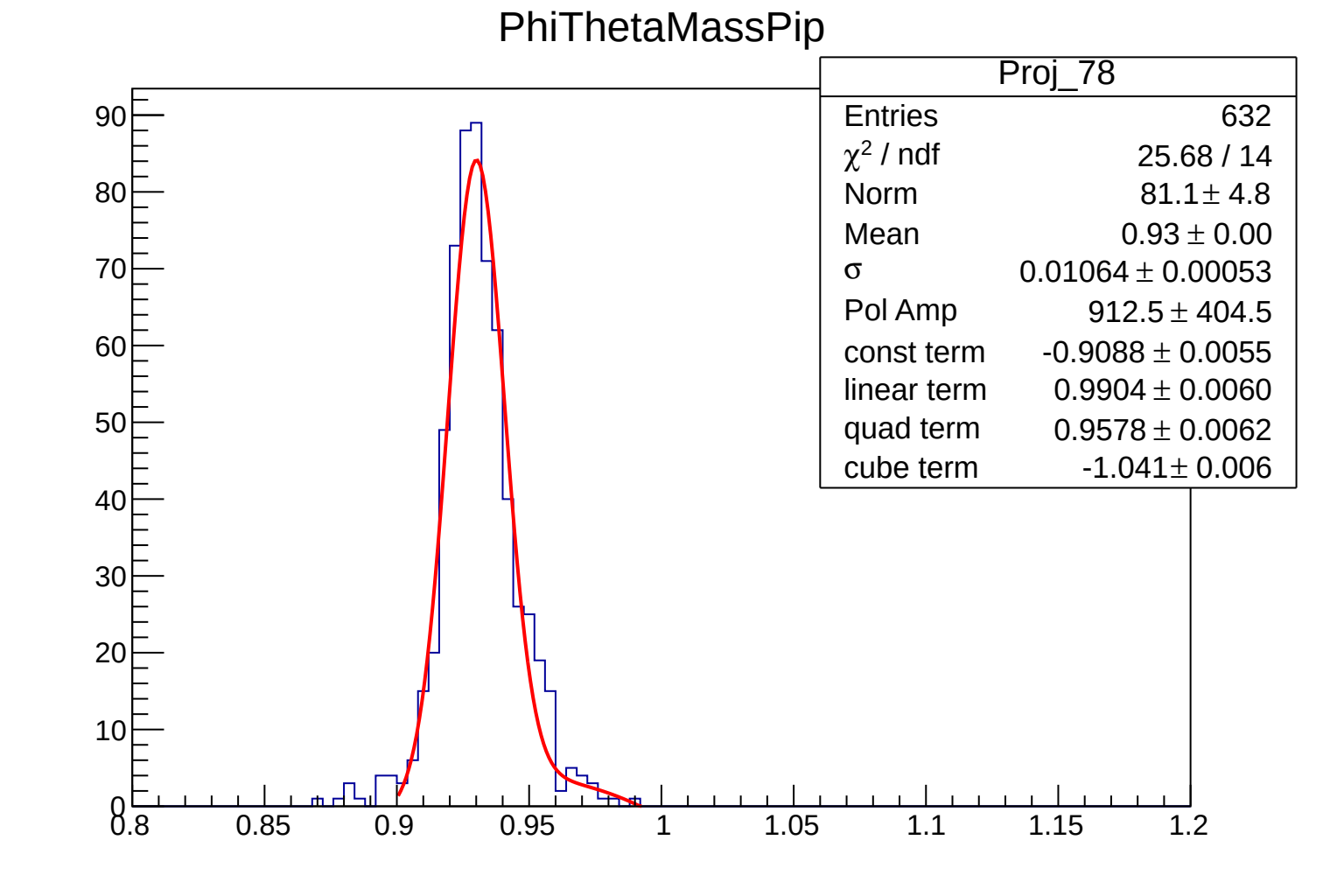
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_78
Entries 632
χ² / ndf 25.68 / 14
Norm 81.1 ± 4.8
Mean 0.93 ± 0.00
σ 0.01064 ± 0.00053
Pol Amp 912.5 ± 404.5
const term -0.9088 ± 0.0055
linear term 0.9904 ± 0.0060
quad term 0.9578 ± 0.0062
cube term -1.041 ± 0.006
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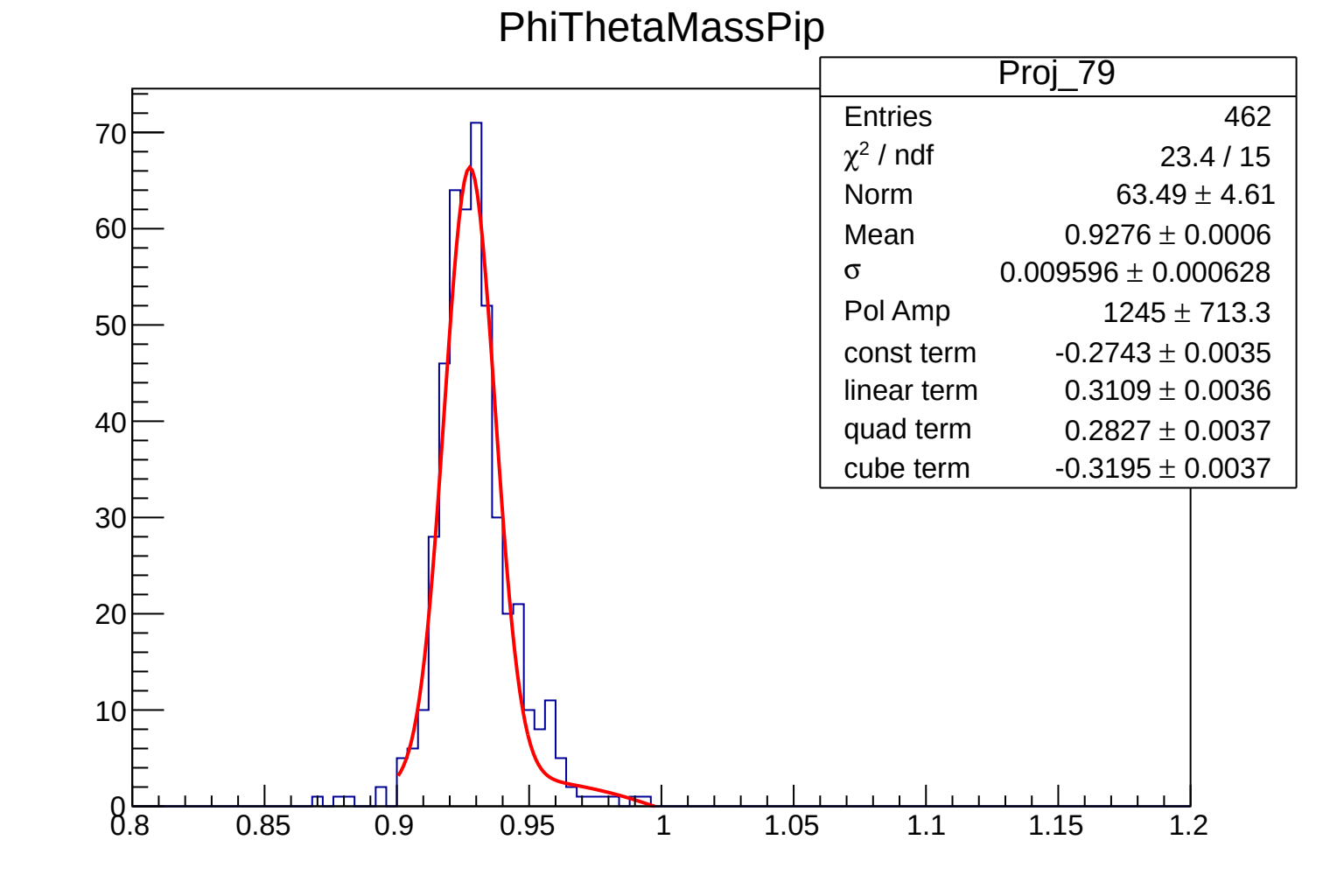
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2


PhiThetaMassPip
Proj_79
Entries 462
χ² / ndf 23.4 / 15
Norm 63.49 ± 4.61
Mean 0.9276 ± 0.0006
σ 0.009596 ± 0.000628
Pol Amp 1245 ± 713.3
const term -0.2743 ± 0.0035
linear term 0.3109 ± 0.0036
quad term 0.2827 ± 0.0037
cube term -0.3195 ± 0.0037
0
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60
70
0.8
0.85
0.9
0.95
1
1.05
1.1
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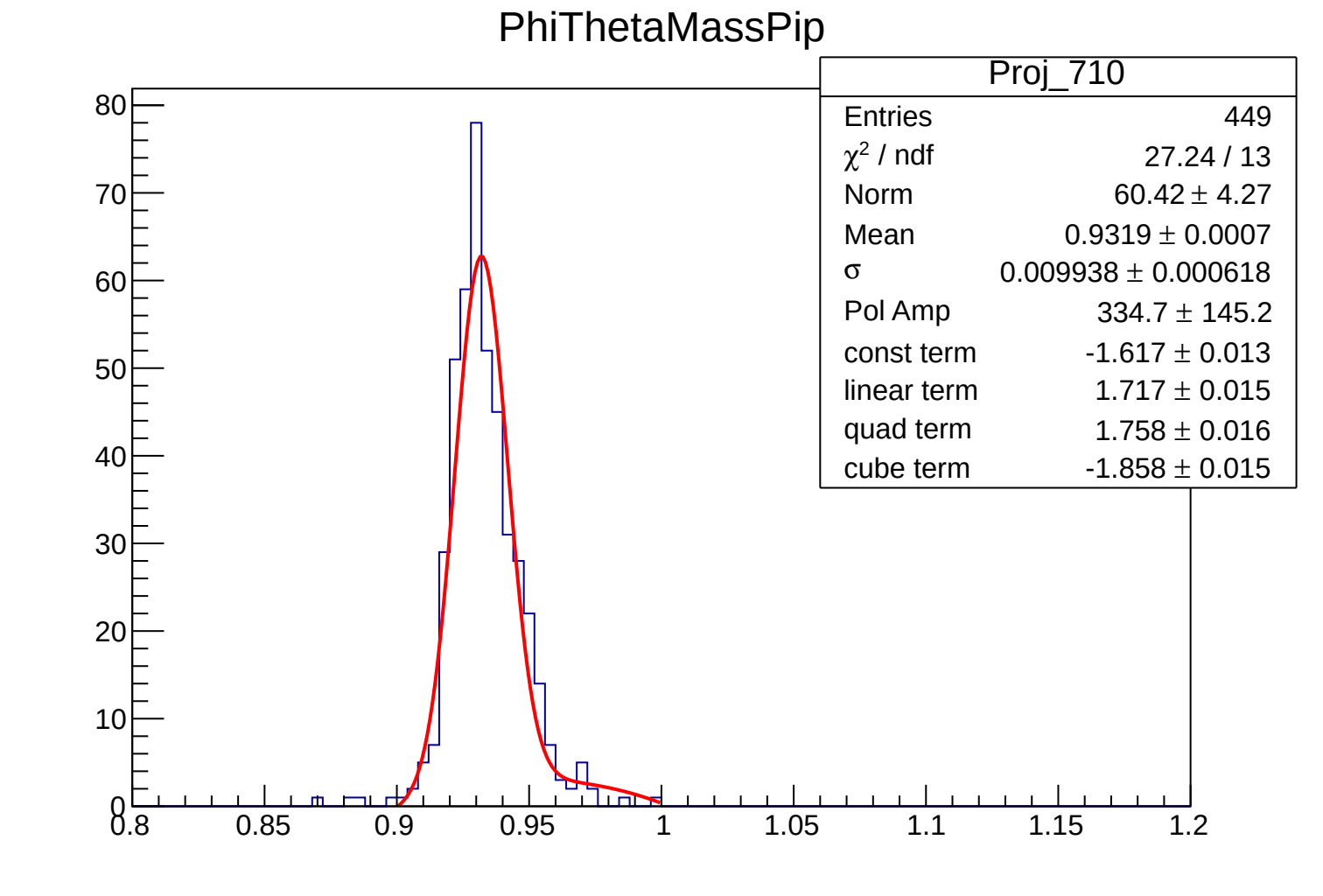
PhiThetaMassPip
Proj_710
Entries 449
χ² / ndf 27.24 / 13
Norm 60.42 ± 4.27
Mean 0.9319 ± 0.0007
σ 0.009938 ± 0.000618
Pol Amp 334.7 ± 145.2
const term -1.617 ± 0.013
linear term 1.717 ± 0.015
quad term 1.758 ± 0.016
cube term -1.858 ± 0.015
0
10
20
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70
80
0.8
0.85
0.9
0.95
1
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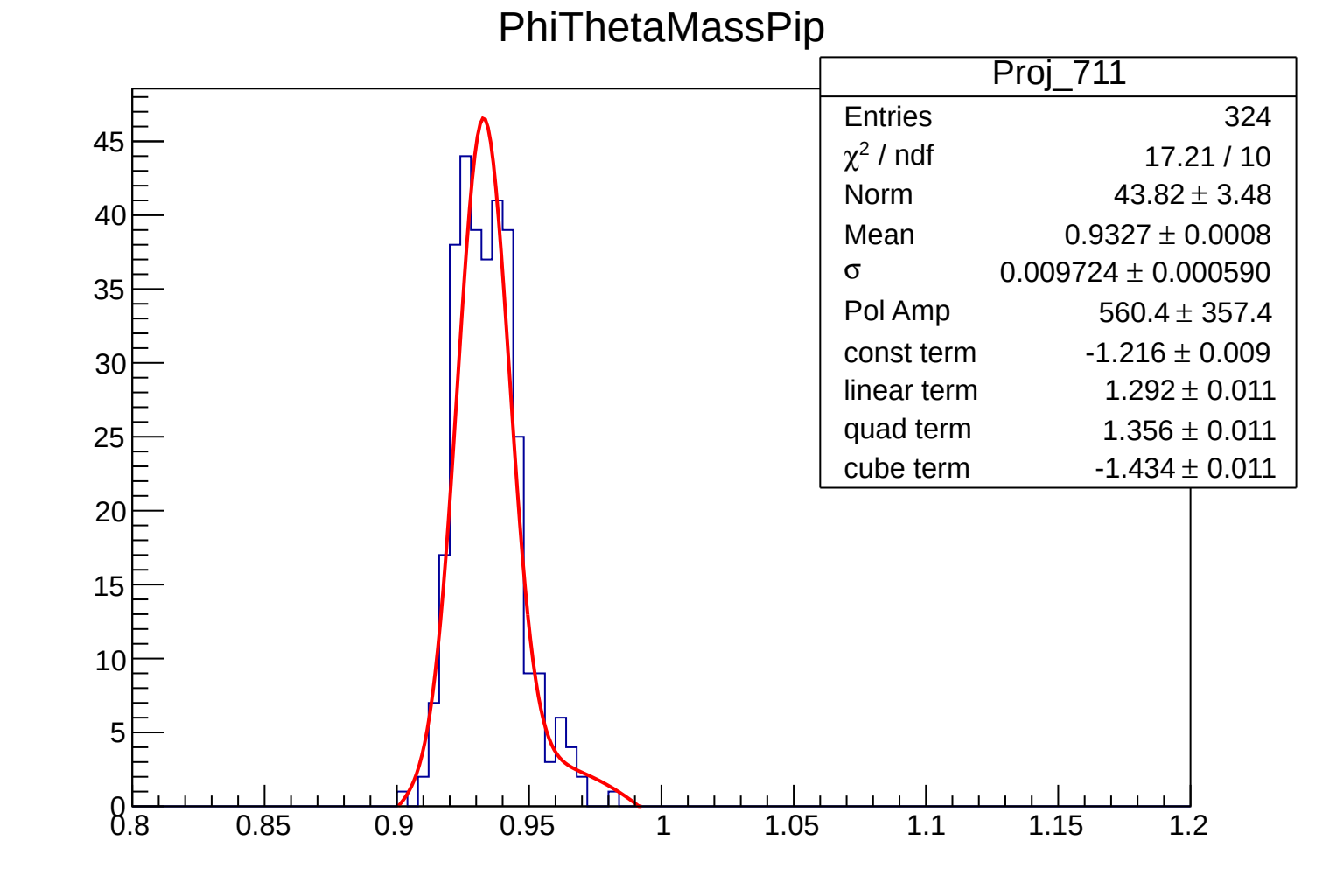
1.1
1.15
1.2


PhiThetaMassPip
Proj_711
Entries 324
χ² / ndf 17.21 / 10
Norm 43.82 ± 3.48
Mean 0.9327 ± 0.0008
σ 0.009724 ± 0.000590
Pol Amp 560.4 ± 357.4
const term -1.216 ± 0.009
linear term 1.292 ± 0.011
quad term 1.356 ± 0.011
cube term -1.434 ± 0.011
0
5
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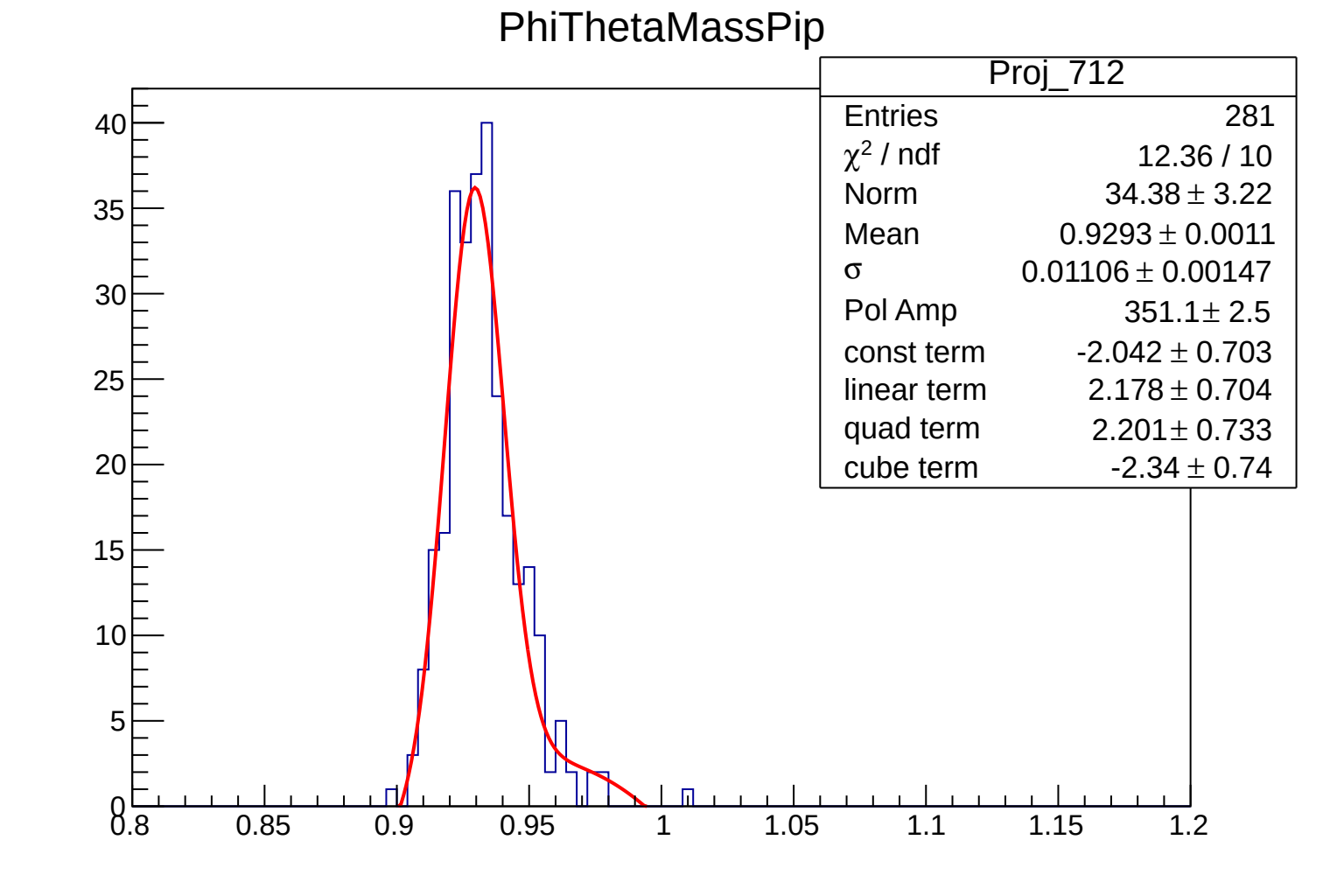
40
45
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_712
Entries 281
χ² / ndf 12.36 / 10
Norm 34.38 ± 3.22
Mean 0.9293 ± 0.0011
σ 0.01106 ± 0.00147
Pol Amp 351.1 ± 2.5
const term -2.042 ± 0.703
linear term 2.178 ± 0.704
quad term 2.201 ± 0.733
cube term -2.34 ± 0.74
0
5
10
15
20
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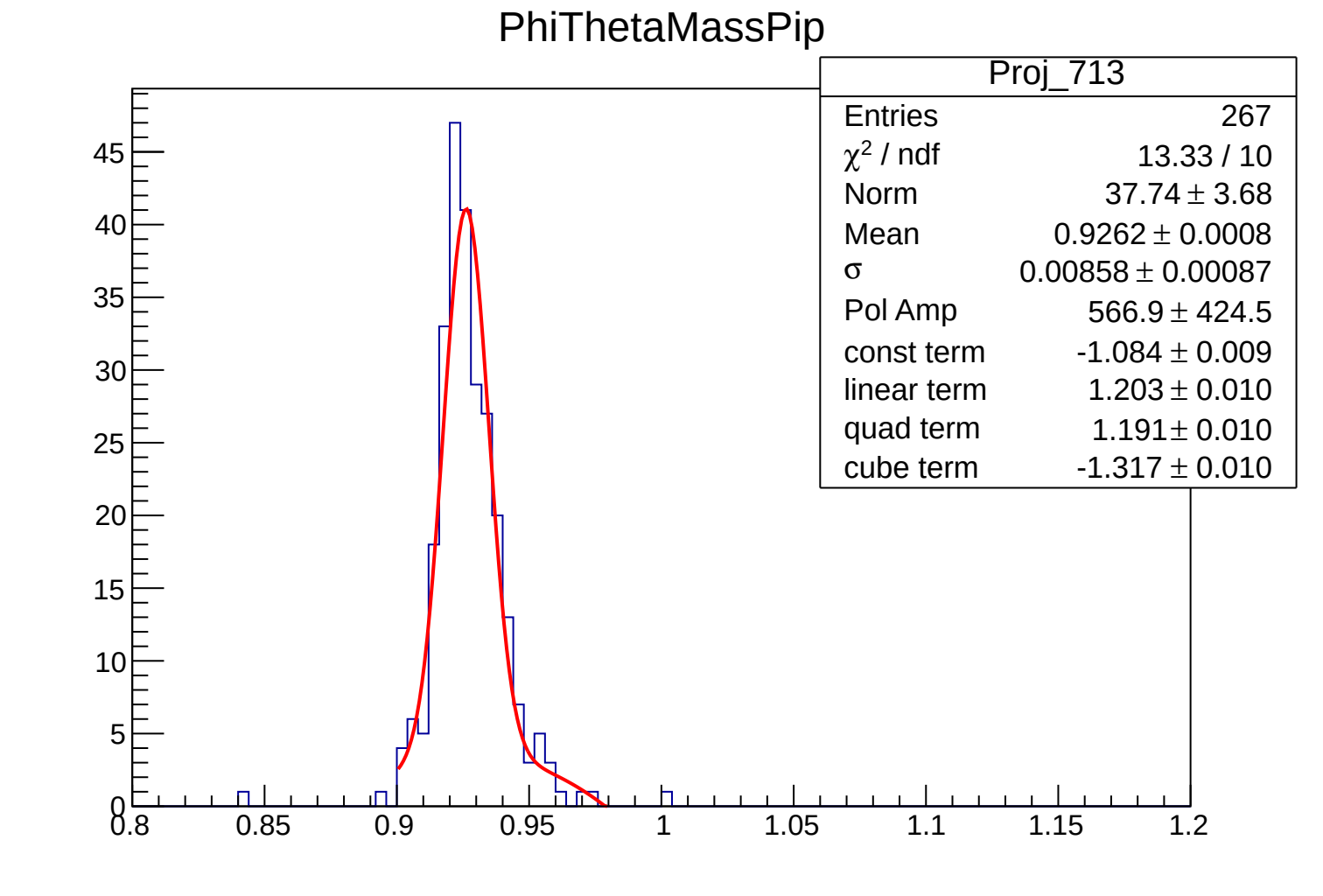
30
35
40
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_713
Entries 267
χ² / ndf 13.33 / 10
Norm 37.74 ± 3.68
Mean 0.9262 ± 0.0008
σ 0.00858 ± 0.00087
Pol Amp 566.9 ± 424.5
const term -1.084 ± 0.009
linear term 1.203 ± 0.010
quad term 1.191 ± 0.010
cube term -1.317 ± 0.010
0
5
10
15
20
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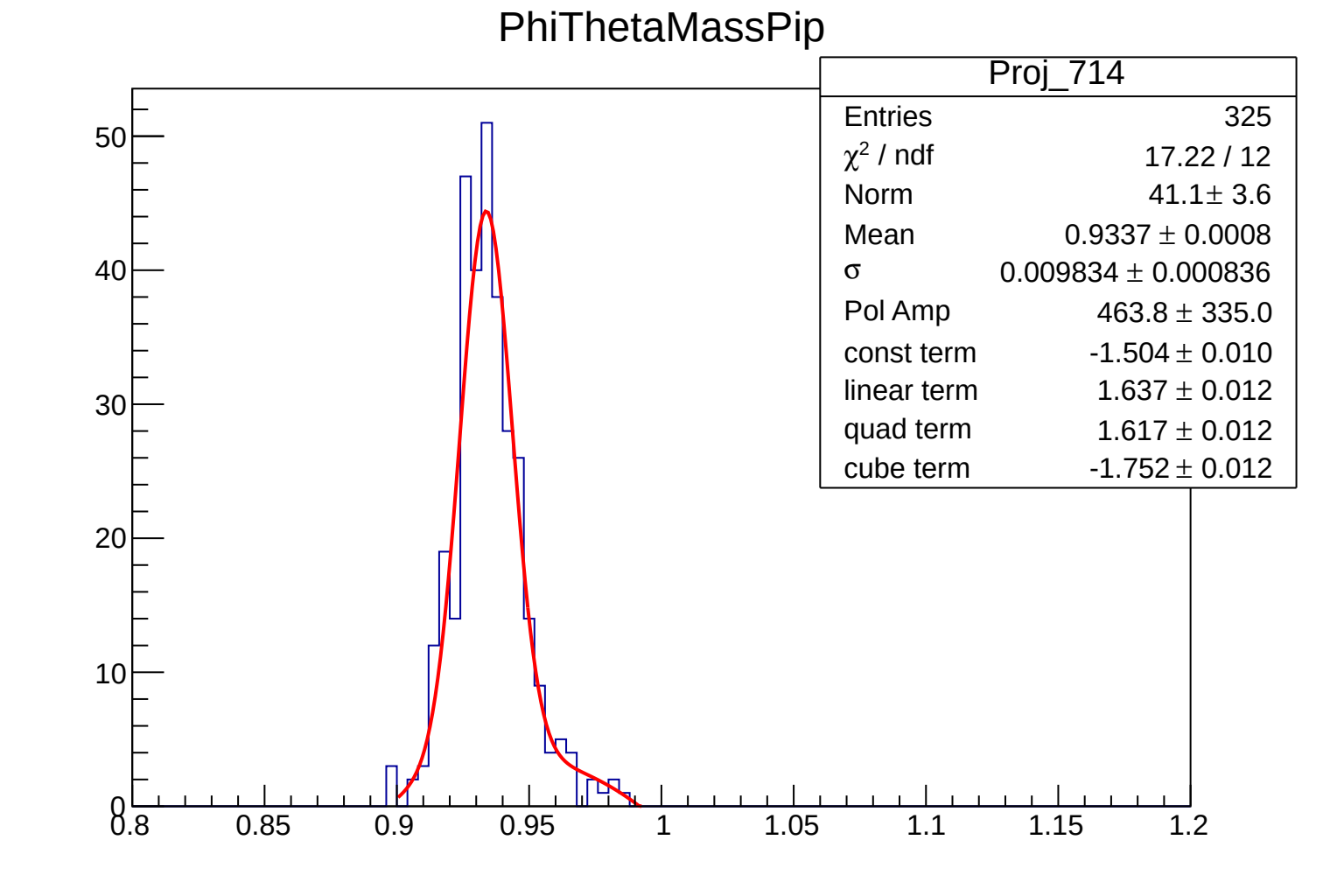
35
40
45
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_714
Entries 325
χ² / ndf 17.22 / 12
Norm 41.1± 3.6
Mean 0.9337 ± 0.0008
σ 0.009834 ± 0.000836
Pol Amp 463.8 ± 335.0
const term -1.504 ± 0.010
linear term 1.637 ± 0.012
quad term 1.617 ± 0.012
cube term -1.752 ± 0.012
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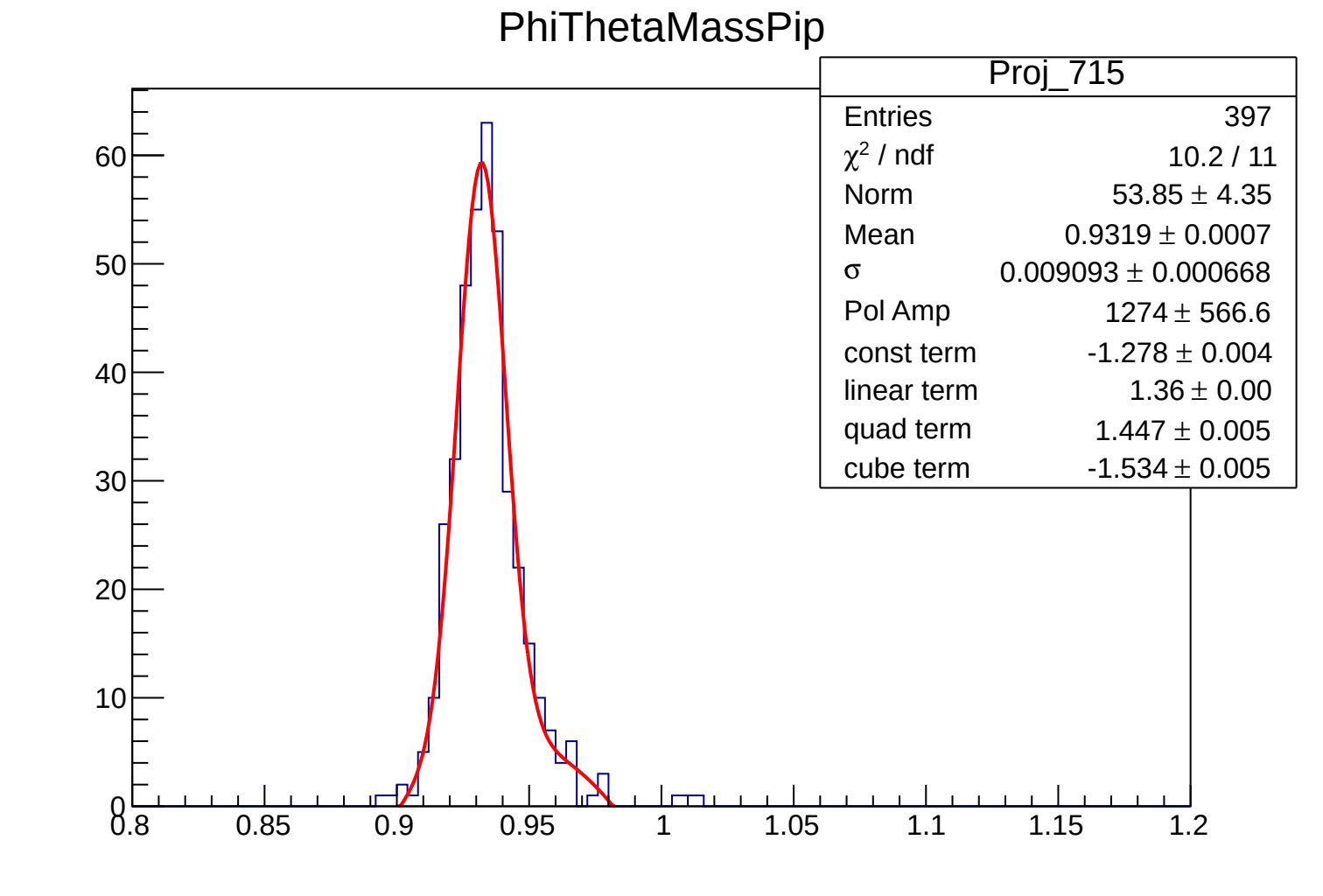
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_715
Entries 397
χ² / ndf 10.2 / 11
Norm 53.85 ± 4.35
Mean 0.9319 ± 0.0007
σ 0.009093 ± 0.000668
Pol Amp 1274 ± 566.6
const term -1.278 ± 0.004
linear term 1.36 ± 0.00
quad term 1.447 ± 0.005
cube term -1.534 ± 0.005
0
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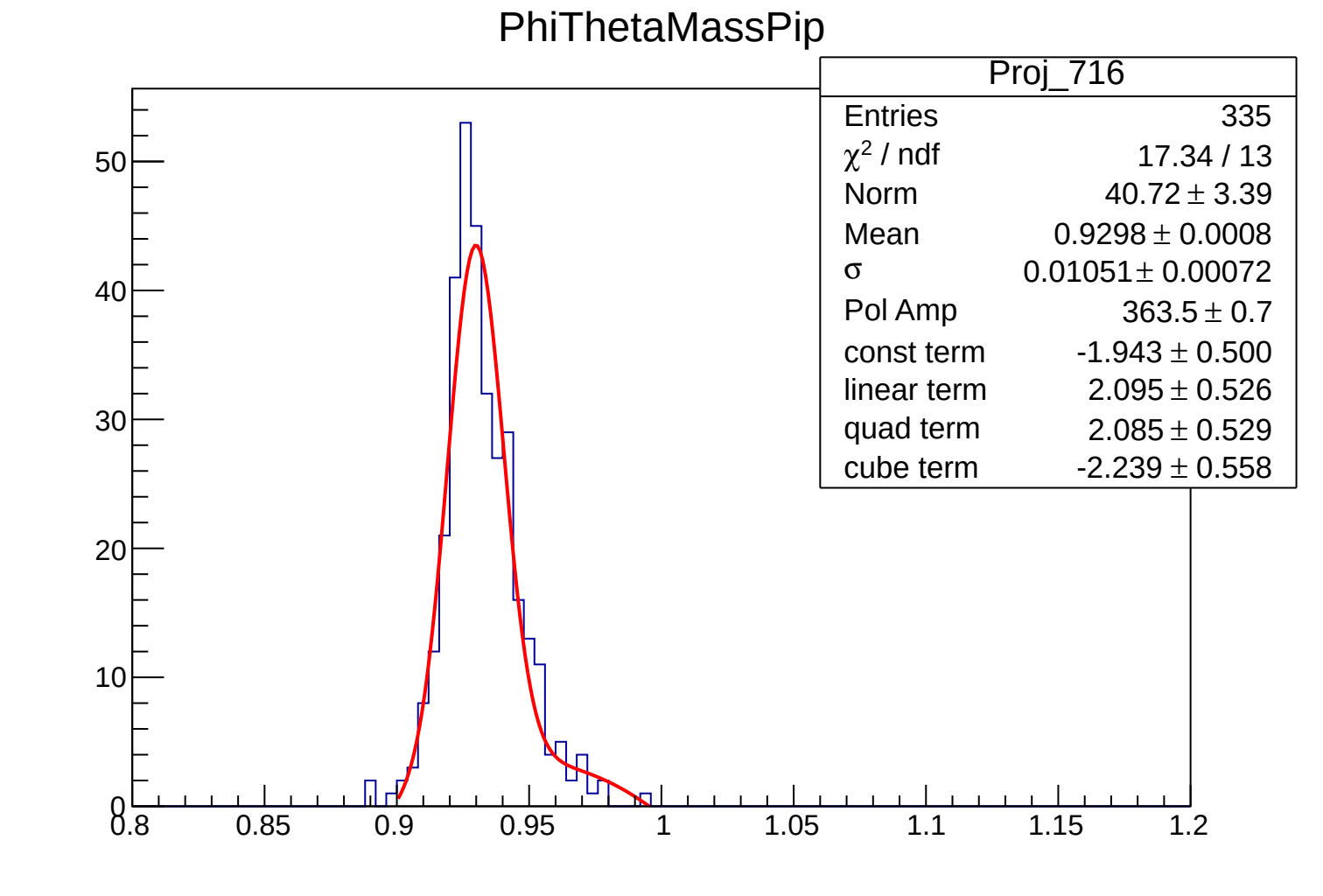
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_716
Entries 335
χ² / ndf 17.34 / 13
Norm 40.72 ± 3.39
Mean 0.9298 ± 0.0008
σ 0.01051 ± 0.00072
Pol Amp 363.5 ± 0.7
const term -1.943 ± 0.500
linear term 2.095 ± 0.526
quad term 2.085 ± 0.529
cube term -2.239 ± 0.558
0
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50
0.8
0.85
0.9
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1
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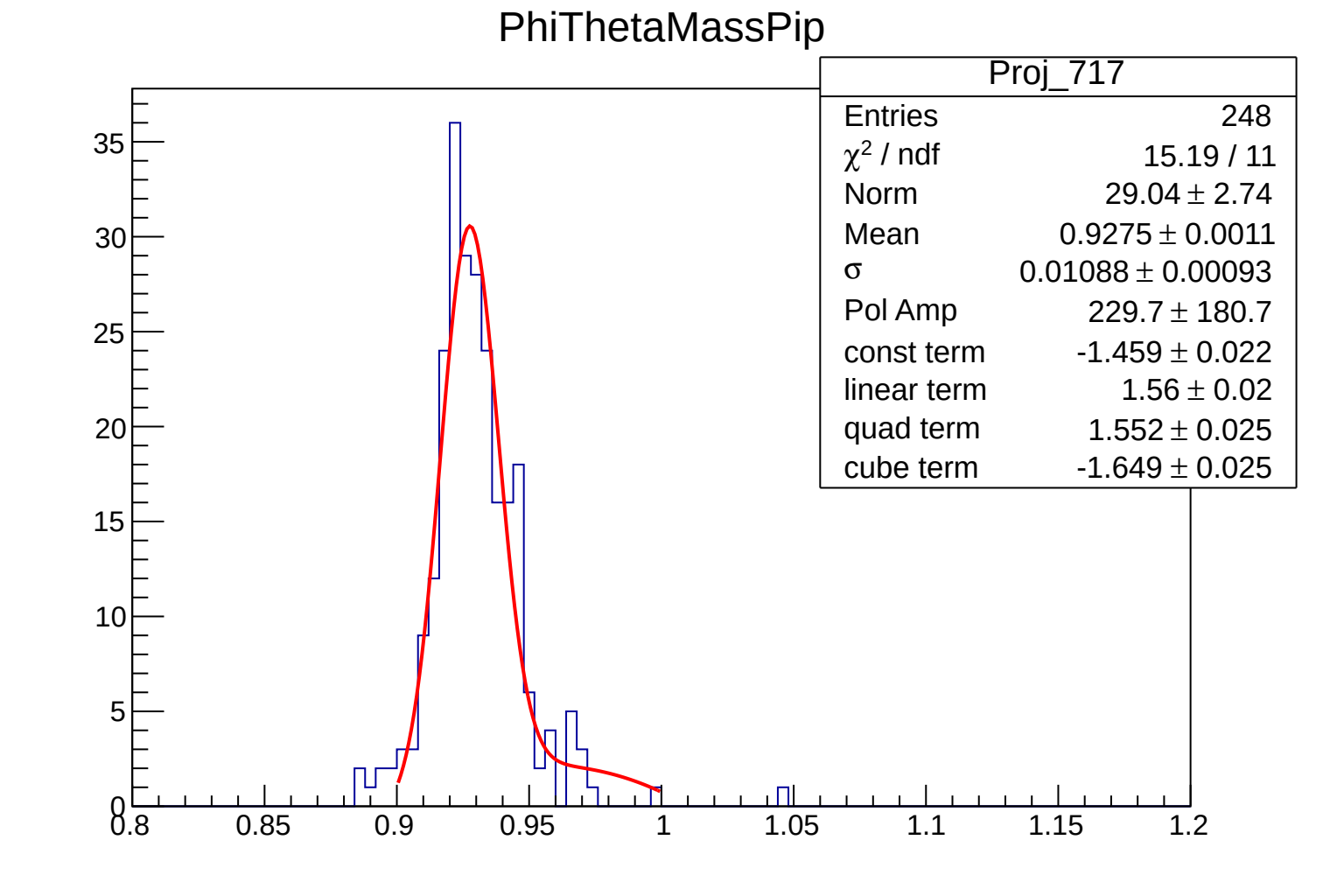
PhiThetaMassPip
Proj_717
Entries 248
χ² / ndf 15.19 / 11
Norm 29.04 ± 2.74
Mean 0.9275 ± 0.0011
σ 0.01088 ± 0.00093
Pol Amp 229.7 ± 180.7
const term -1.459 ± 0.022
linear term 1.56 ± 0.02
quad term 1.552 ± 0.025
cube term -1.649 ± 0.025
0
5
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0.8
0.85
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1
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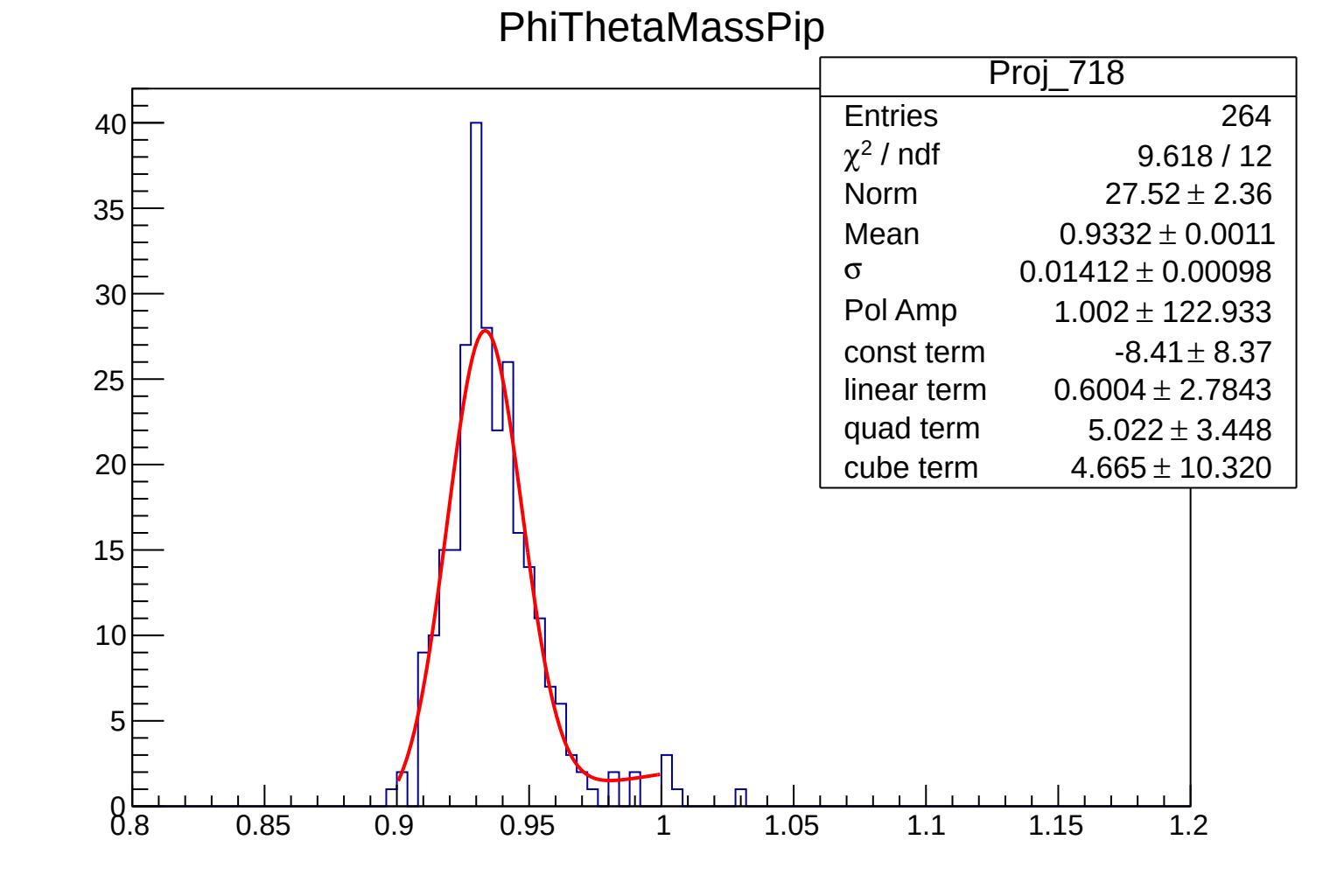
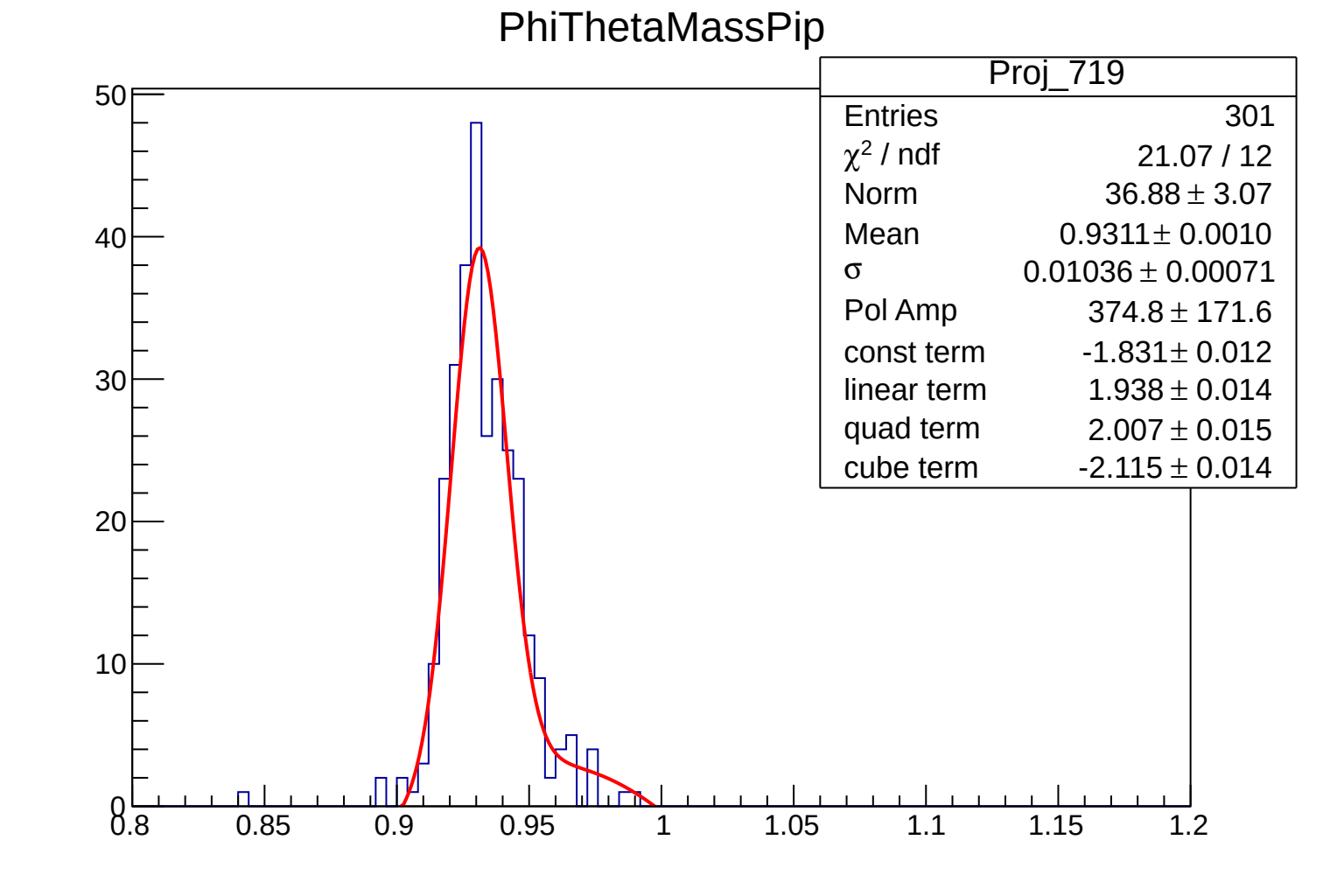

PhiThetaMassPip
Proj_718
Entries 264
χ² / ndf 9.618 / 12
Norm 27.52 ± 2.36
Mean 0.9332 ± 0.0011
σ 0.01412 ± 0.00098
Pol Amp 1.002 ± 122.933
const term -8.41 ± 8.37
linear term 0.6004 ± 2.7843
quad term 5.022 ± 3.448
cube term 4.665 ± 10.320
40
35
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_719
Entries 301
χ² / ndf 21.07 / 12
Norm 36.88 ± 3.07
Mean 0.9311 ± 0.0010
σ 0.01036 ± 0.00071
Pol Amp 374.8 ± 171.6
const term -1.831 ± 0.012
linear term 1.938 ± 0.014
quad term 2.007 ± 0.015
cube term -2.115 ± 0.014
50
40
30
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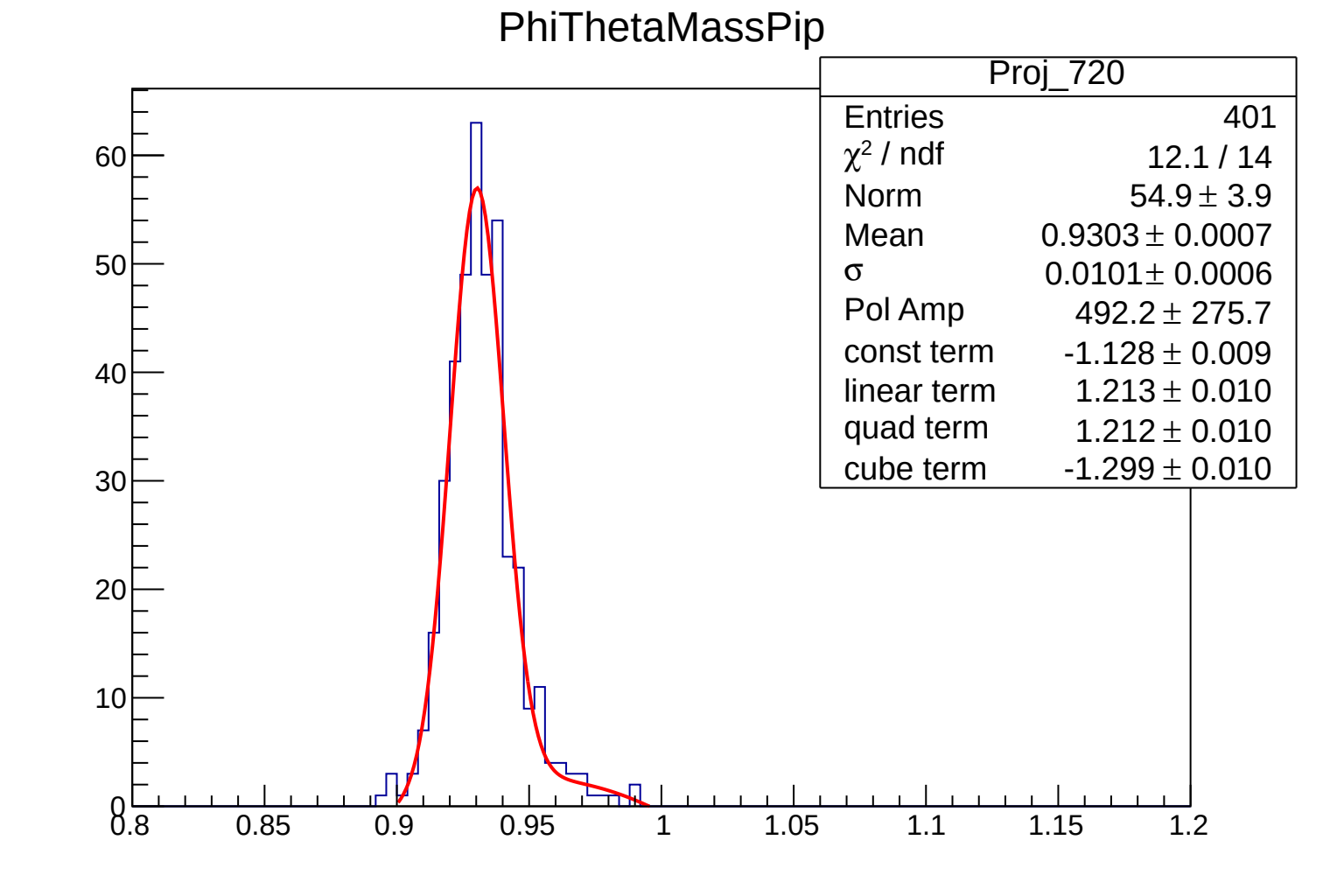
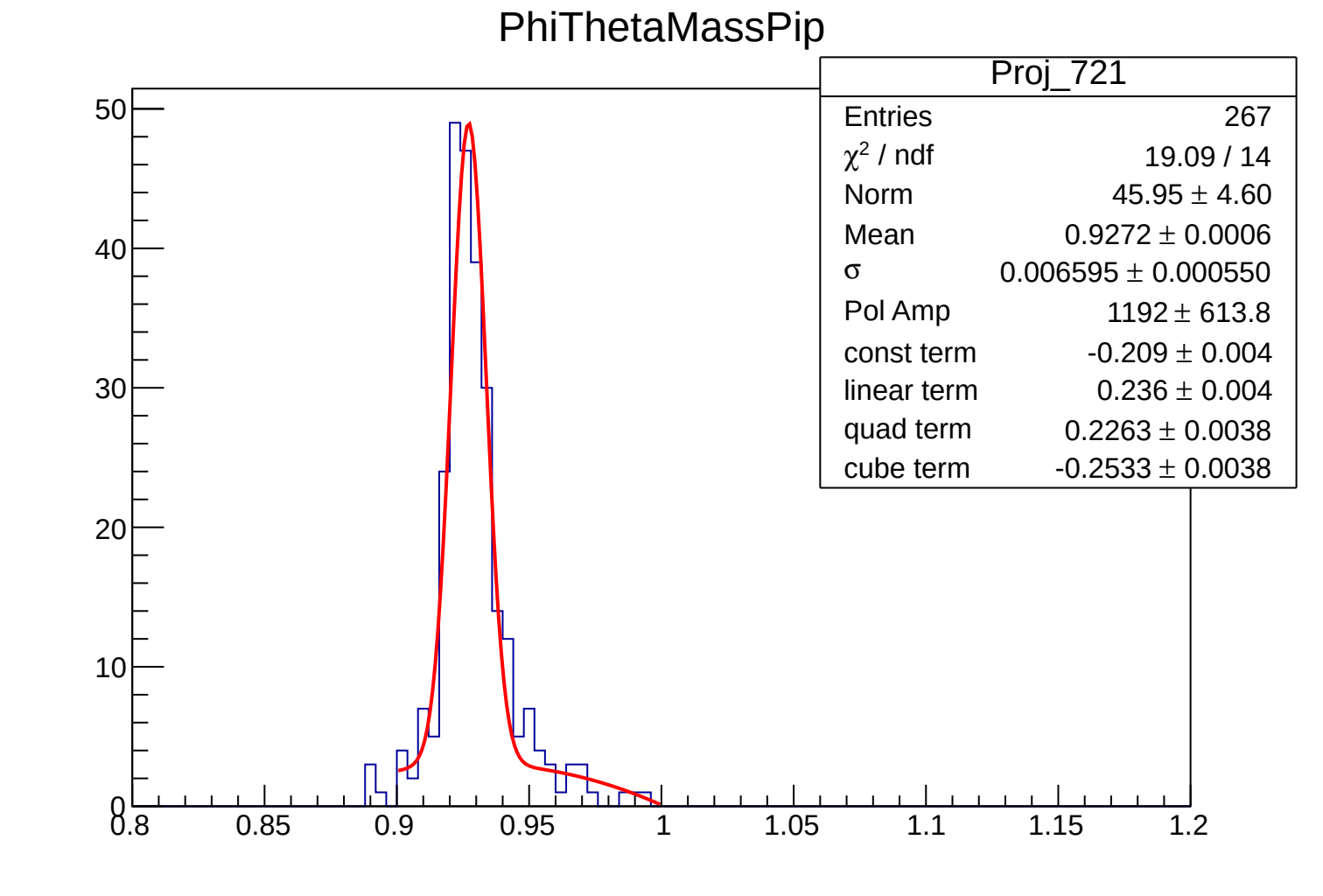
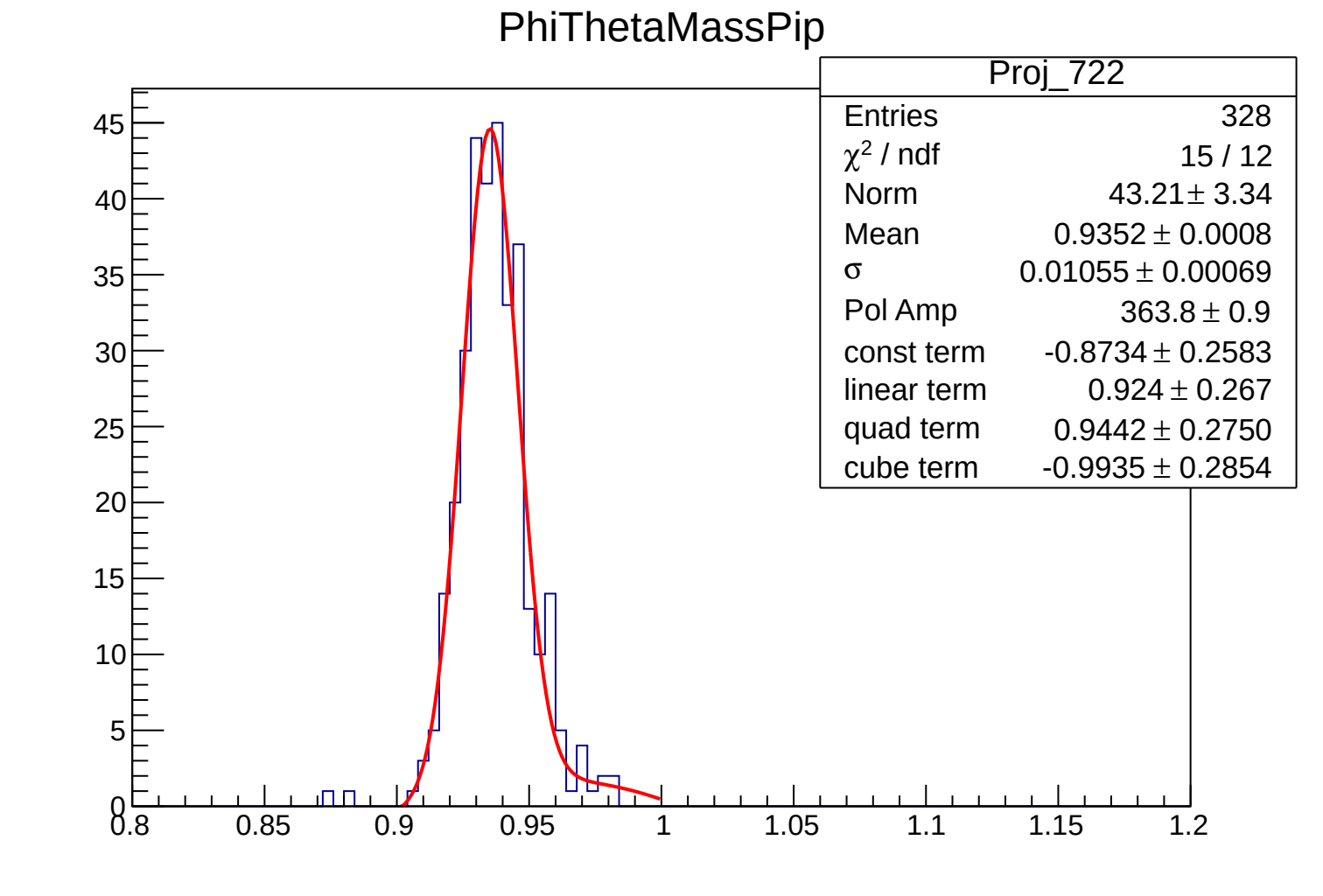
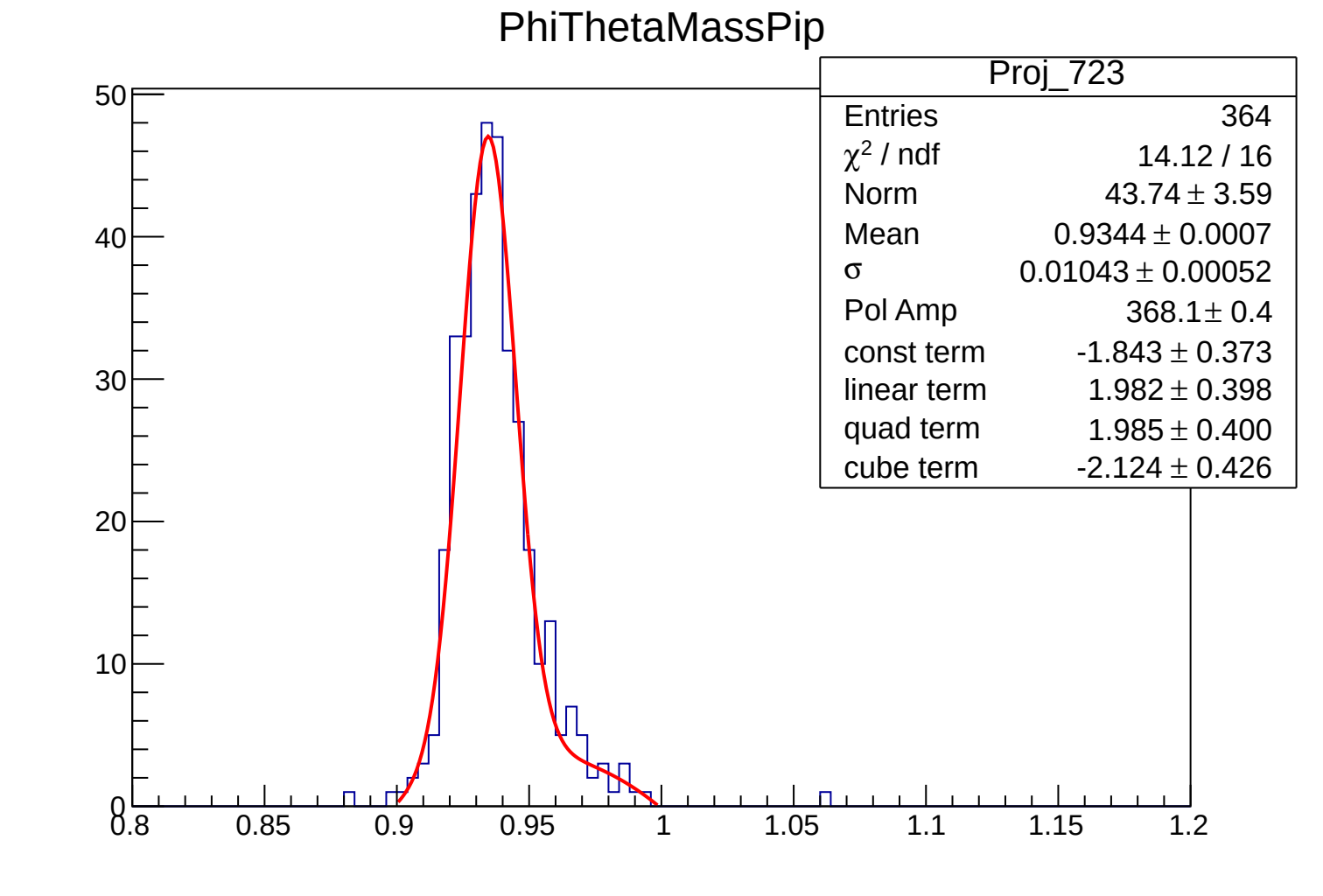
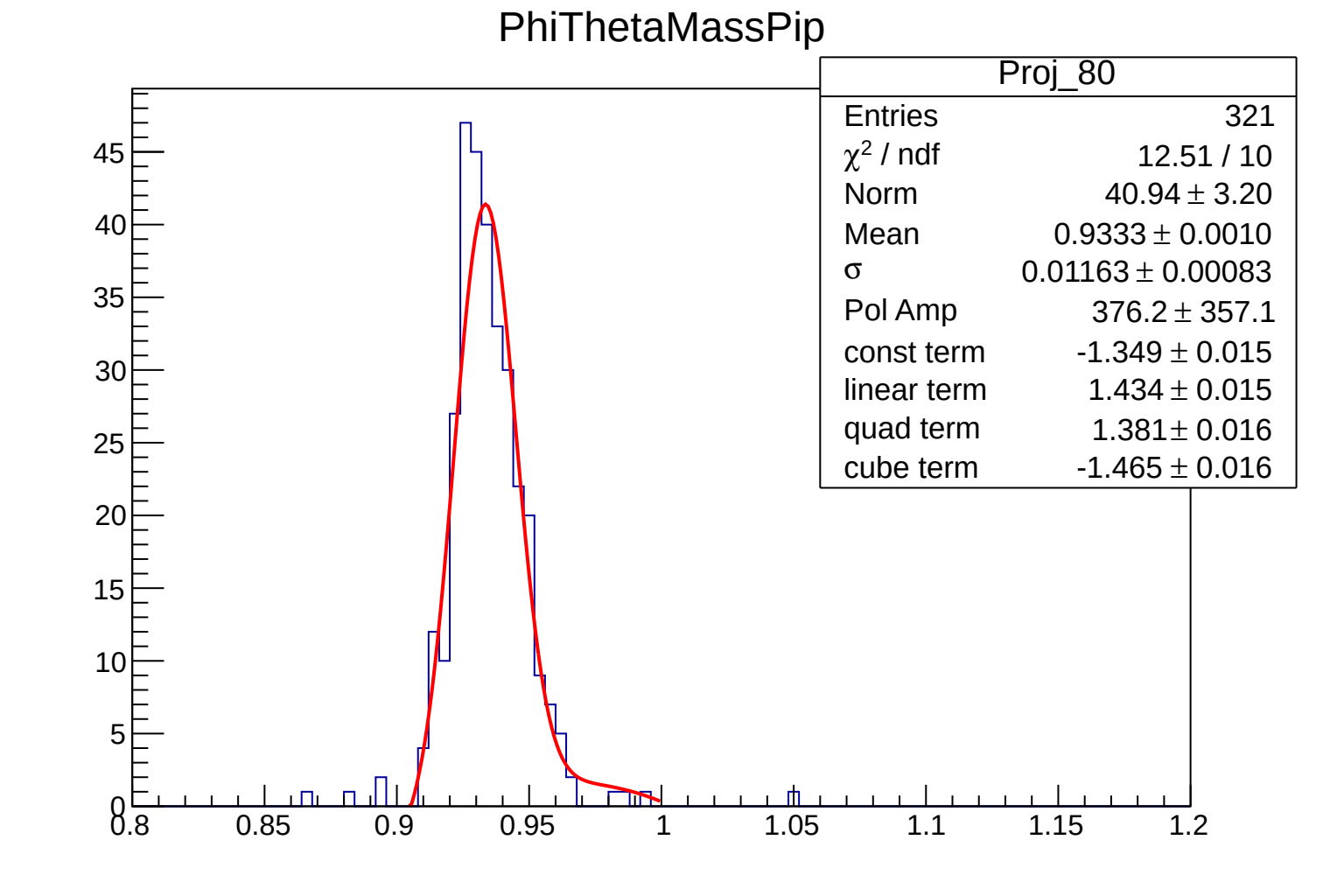
10
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

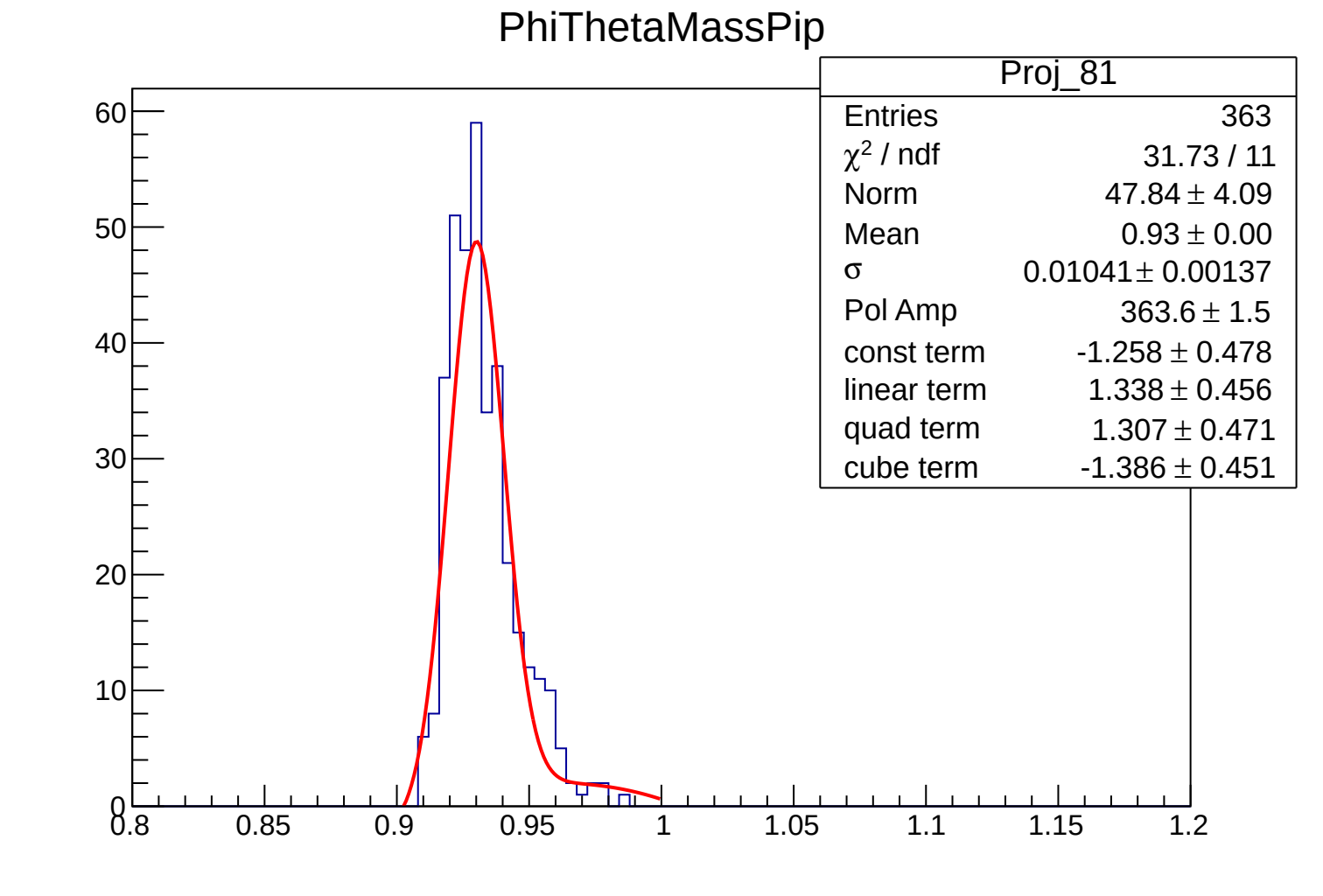

PhiThetaMassPip
Proj_720
Entries 401
χ² / ndf 12.1 / 14
Norm 54.9 ± 3.9
Mean 0.9303 ± 0.0007
σ 0.0101 ± 0.0006
Pol Amp 492.2 ± 275.7
const term -1.128 ± 0.009
linear term 1.213 ± 0.010
quad term 1.212 ± 0.010
cube term -1.299 ± 0.010
0
10
20
30
40
50
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

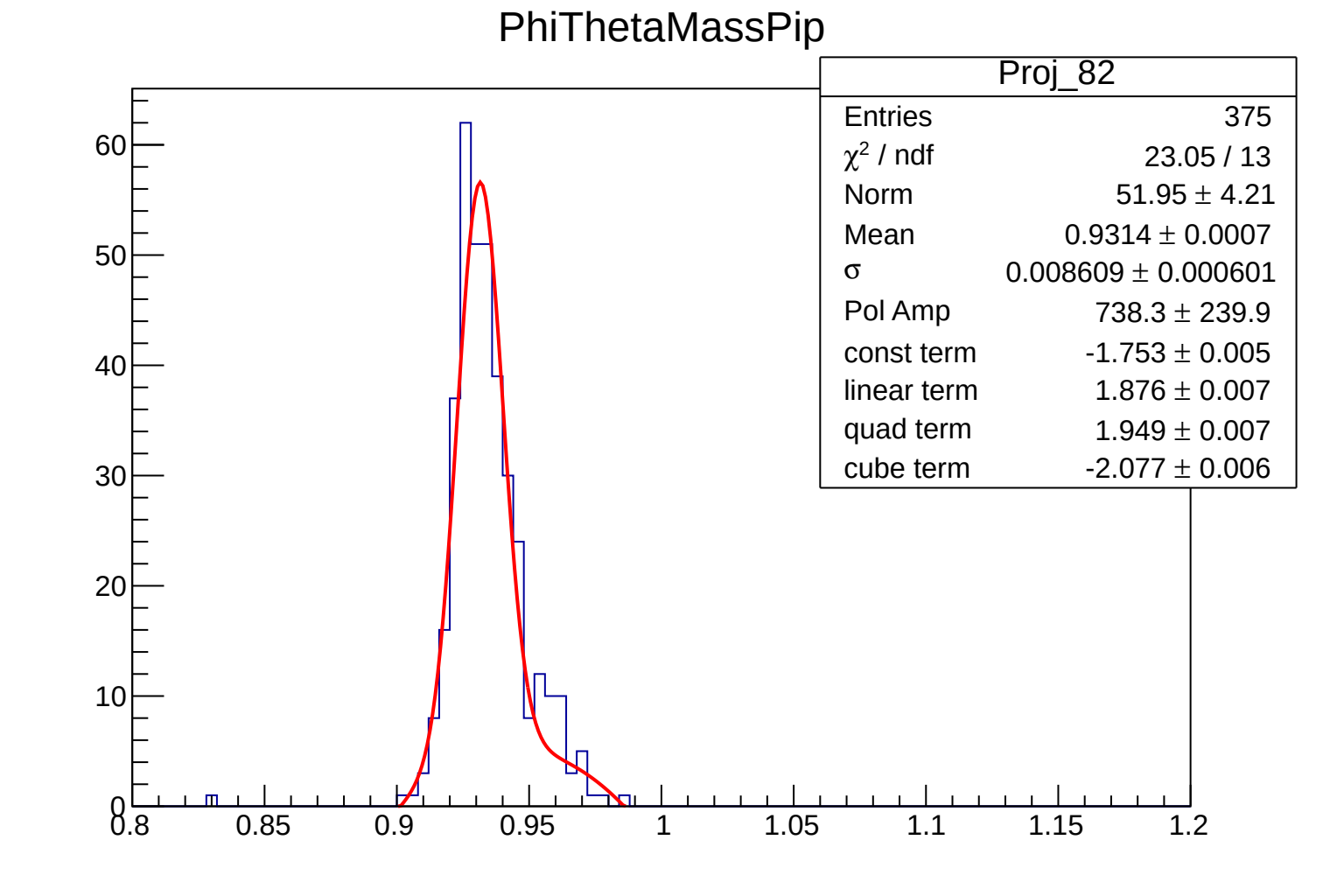

PhiThetaMassPip
Proj_721
Entries 267
χ² / ndf 19.09 / 14
Norm 45.95 ± 4.60
Mean 0.9272 ± 0.0006
σ 0.006595 ± 0.000550
Pol Amp 1192 ± 613.8
const term -0.209 ± 0.004
linear term 0.236 ± 0.004
quad term 0.2263 ± 0.0038
cube term -0.2533 ± 0.0038
50
40
30
20
10
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

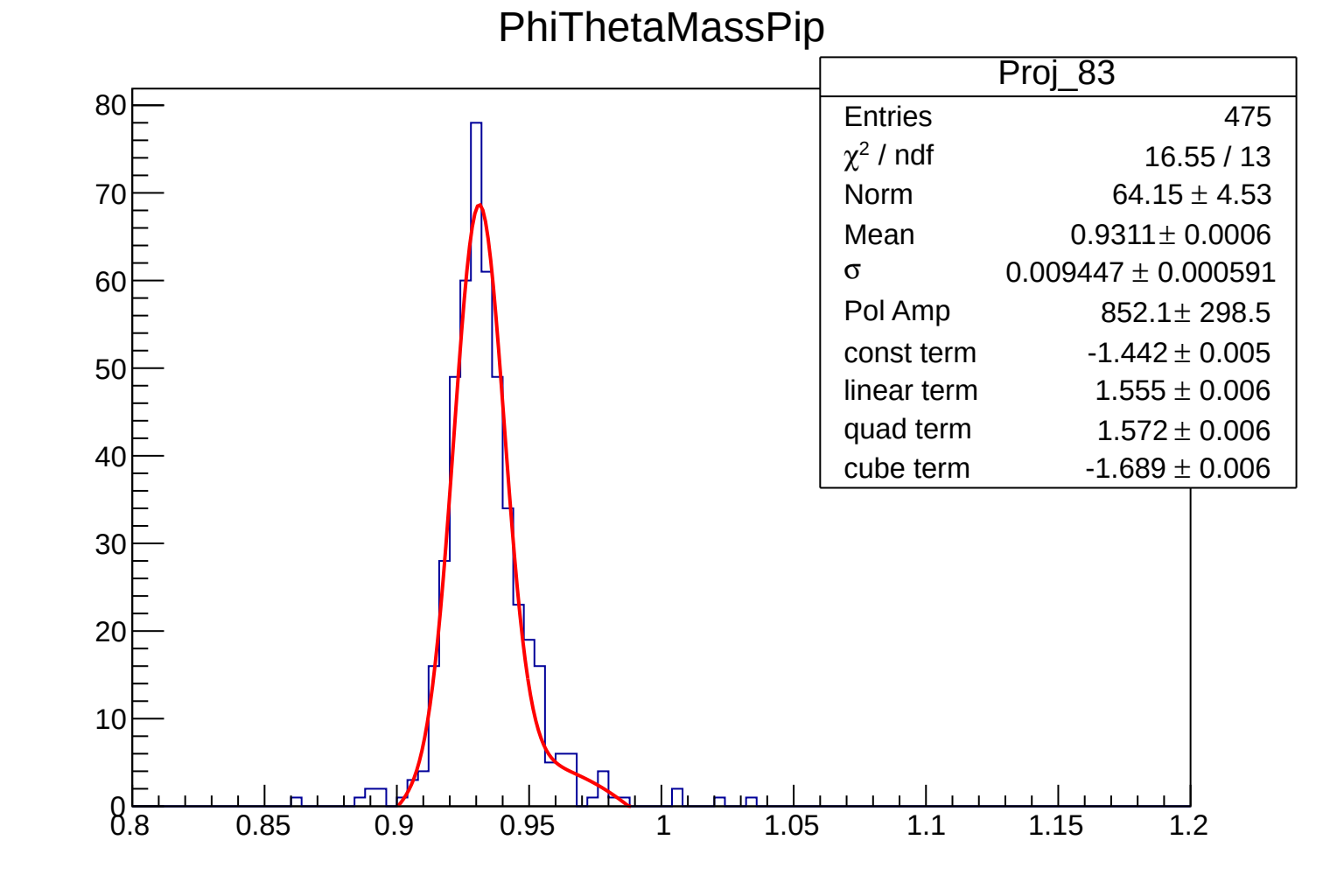

PhiThetaMassPip
Proj_722
Entries 328
χ² / ndf 15 / 12
Norm 43.21 ± 3.34
Mean 0.9352 ± 0.0008
σ 0.01055 ± 0.00069
Pol Amp 363.8 ± 0.9
const term -0.8734 ± 0.2583
linear term 0.924 ± 0.267
quad term 0.9442 ± 0.2750
cube term -0.9935 ± 0.2854
0
5
10
15
20
25
30
35
40
45
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

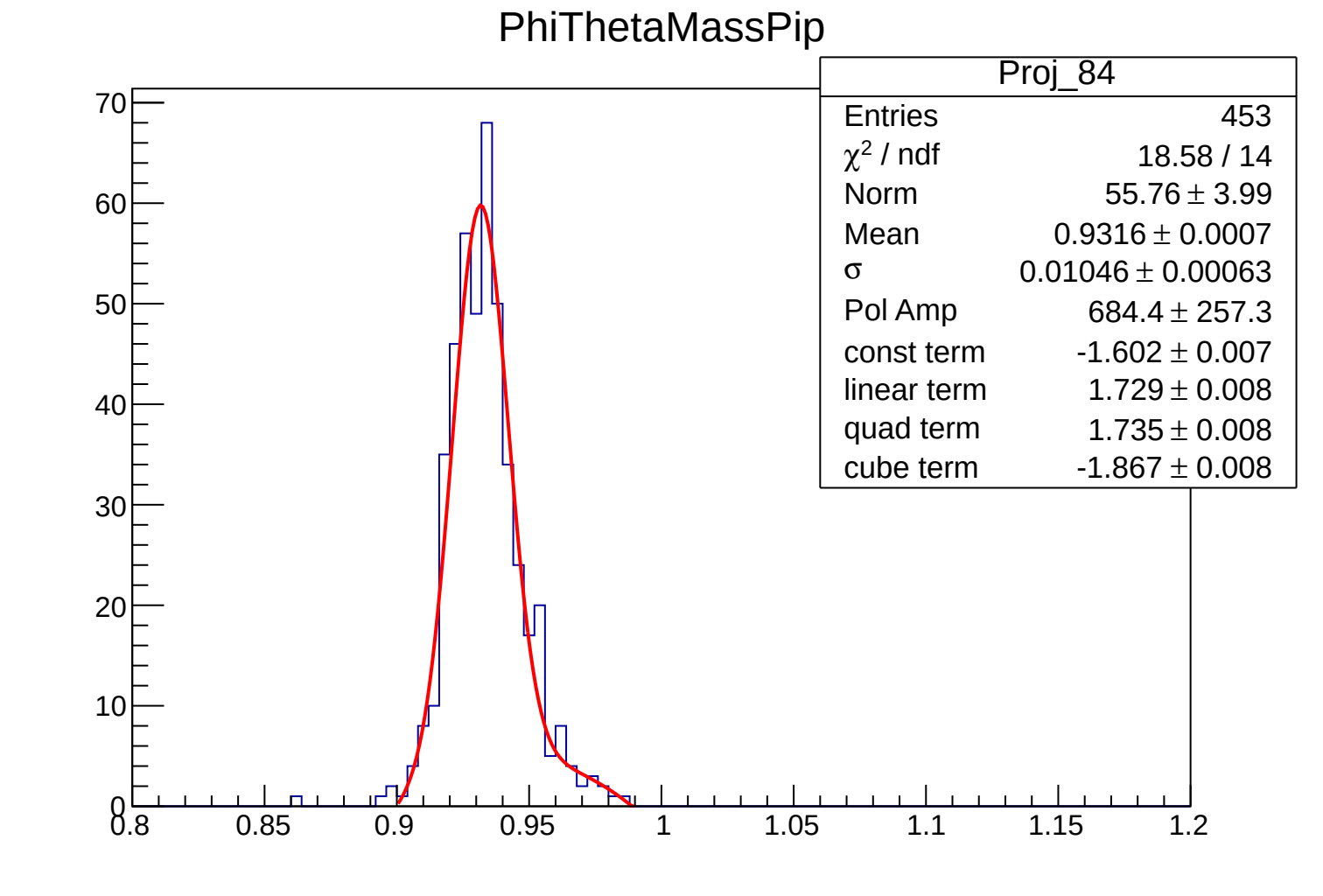

PhiThetaMassPip
Proj_723
Entries 364
χ² / ndf 14.12 / 16
Norm 43.74 ± 3.59
Mean 0.9344 ± 0.0007
σ 0.01043 ± 0.00052
Pol Amp 368.1 ± 0.4
const term -1.843 ± 0.373
linear term 1.982 ± 0.398
quad term 1.985 ± 0.400
cube term -2.124 ± 0.426
50
40
30
20
10
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

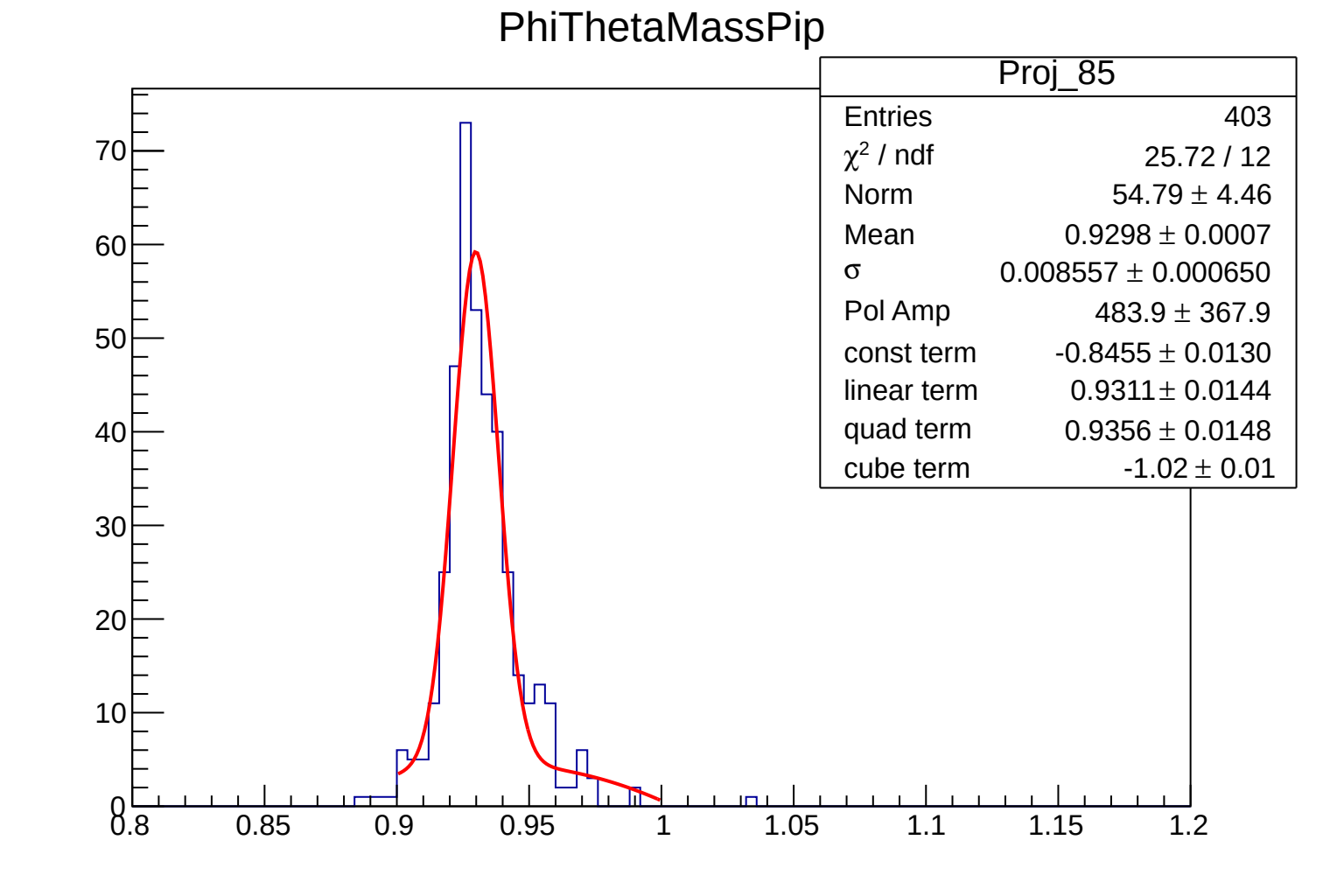

PhiThetaMassPip
Proj_80
Entries 321
χ² / ndf 12.51 / 10
Norm 40.94 ± 3.20
Mean 0.9333 ± 0.0010
σ 0.01163 ± 0.00083
Pol Amp 376.2 ± 357.1
const term -1.349 ± 0.015
linear term 1.434 ± 0.015
quad term 1.381 ± 0.016
cube term -1.465 ± 0.016
0 5 10 15 20 25 30 35 40 45
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

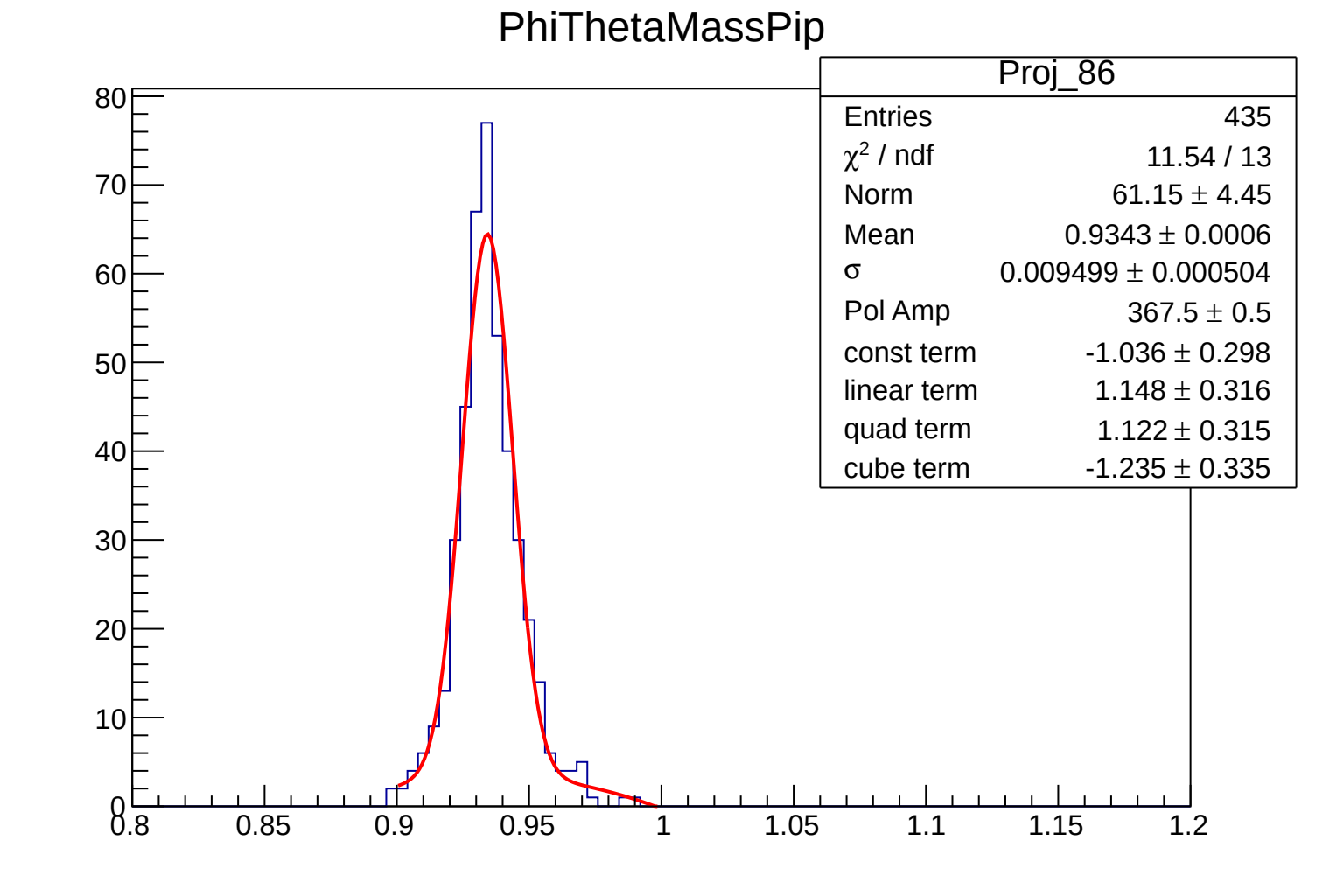

PhiThetaMassPip
Proj_81
Entries 363
χ² / ndf 31.73 / 11
Norm 47.84 ± 4.09
Mean 0.93 ± 0.00
σ 0.01041 ± 0.00137
Pol Amp 363.6 ± 1.5
const term -1.258 ± 0.478
linear term 1.338 ± 0.456
quad term 1.307 ± 0.471
cube term -1.386 ± 0.451
60
50
40
30
20
10
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

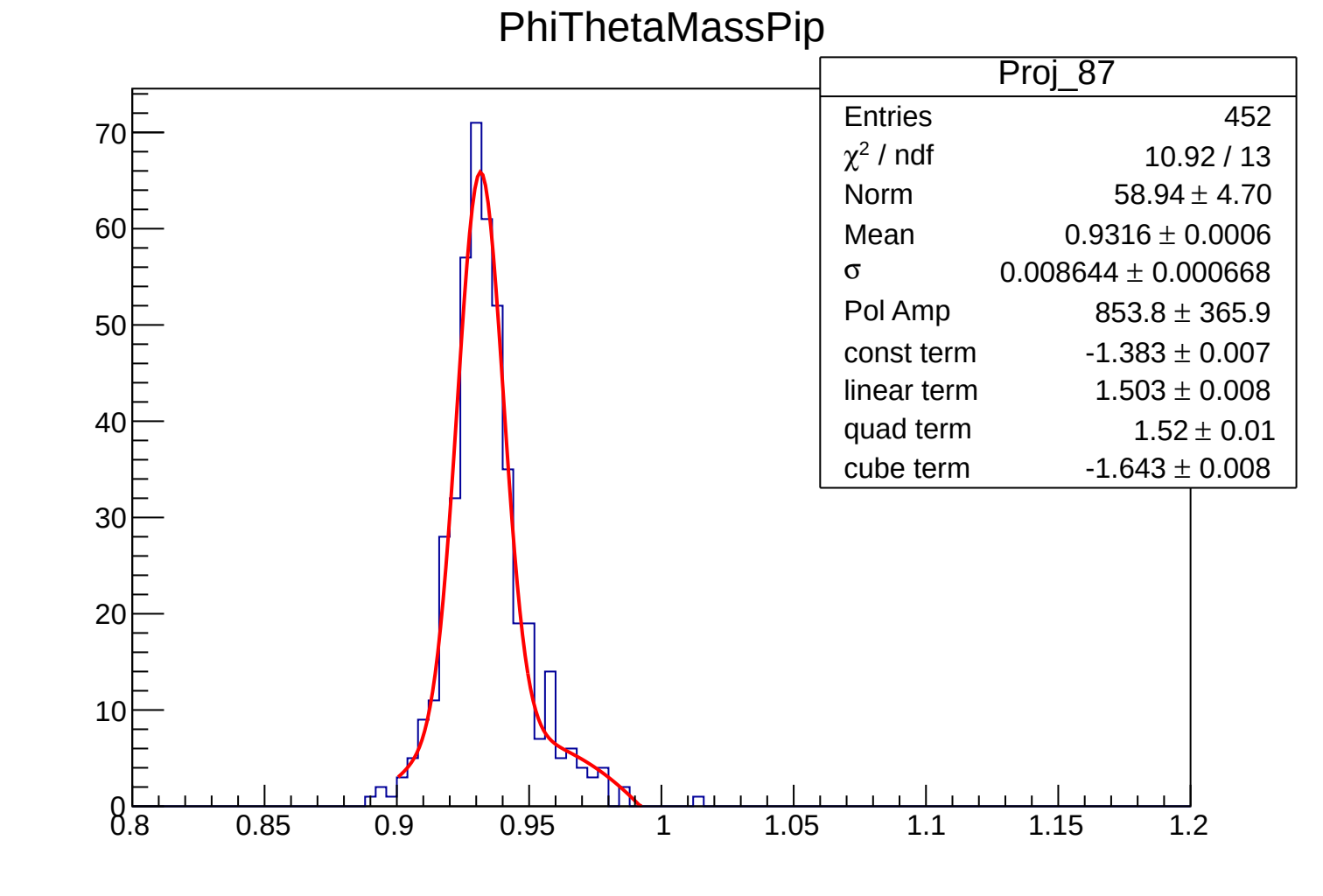

PhiThetaMassPip
Proj_82
Entries 375
χ² / ndf 23.05 / 13
Norm 51.95 ± 4.21
Mean 0.9314 ± 0.0007
σ 0.008609 ± 0.000601
Pol Amp 738.3 ± 239.9
const term -1.753 ± 0.005
linear term 1.876 ± 0.007
quad term 1.949 ± 0.007
cube term -2.077 ± 0.006
0
10
20
30
40
50
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

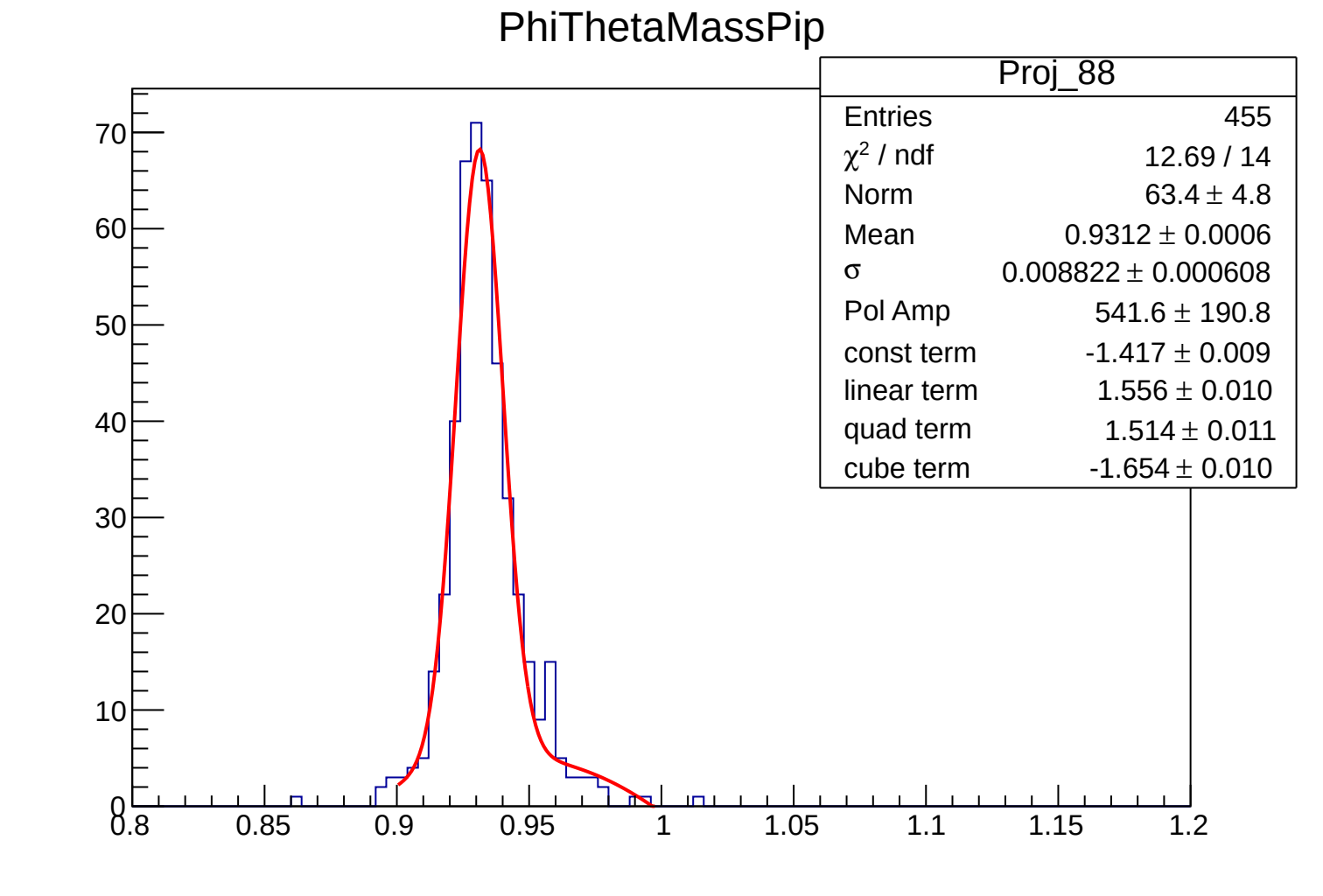

PhiThetaMassPip
Proj_83
Entries 475
χ² / ndf 16.55 / 13
Norm 64.15 ± 4.53
Mean 0.9311 ± 0.0006
σ 0.009447 ± 0.000591
Pol Amp 852.1 ± 298.5
const term -1.442 ± 0.005
linear term 1.555 ± 0.006
quad term 1.572 ± 0.006
cube term -1.689 ± 0.006
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

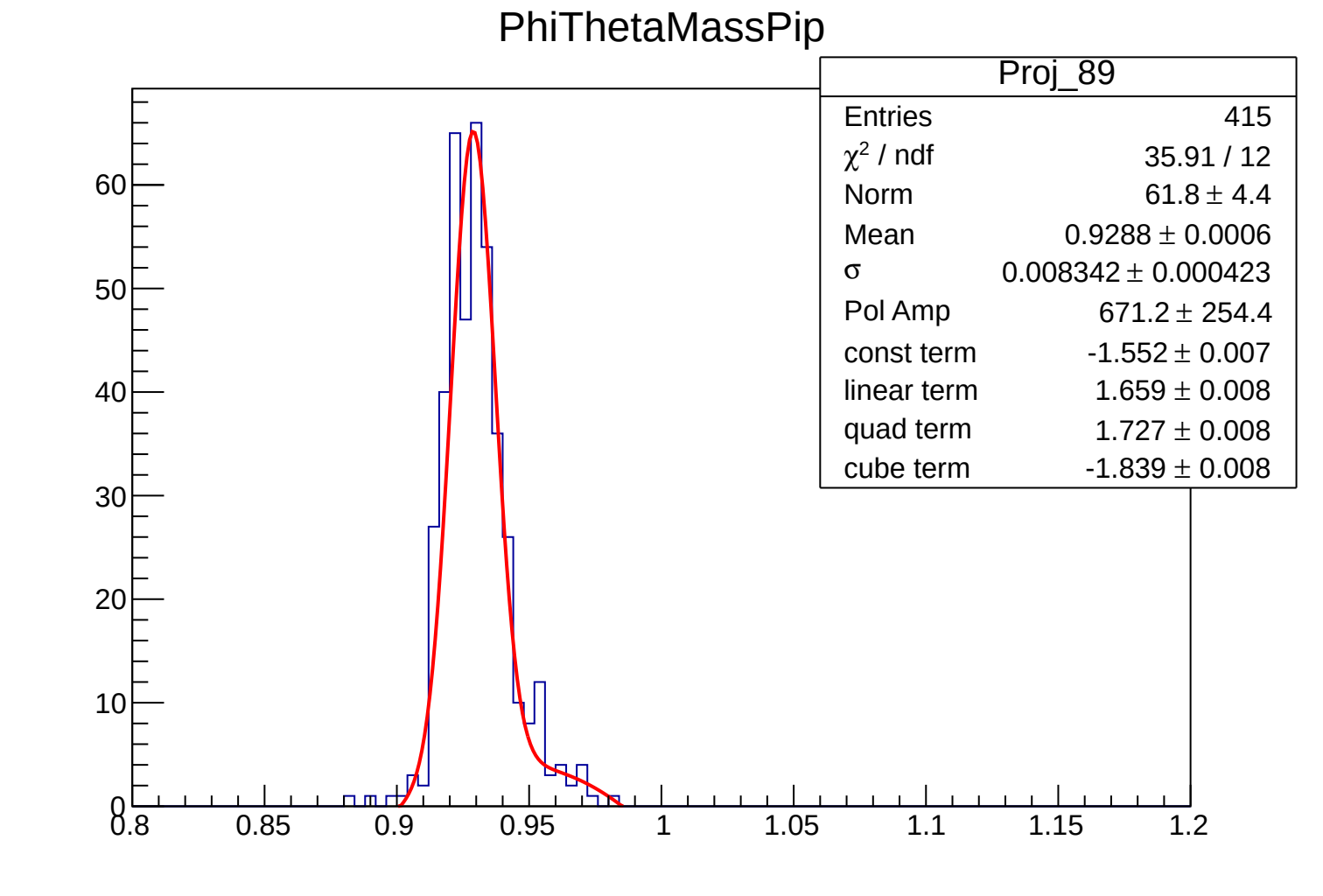

PhiThetaMassPip
Proj_84
Entries 453
χ² / ndf 18.58 / 14
Norm 55.76 ± 3.99
Mean 0.9316 ± 0.0007
σ 0.01046 ± 0.00063
Pol Amp 684.4 ± 257.3
const term -1.602 ± 0.007
linear term 1.729 ± 0.008
quad term 1.735 ± 0.008
cube term -1.867 ± 0.008
0
10
20
30
40
50
60
70
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

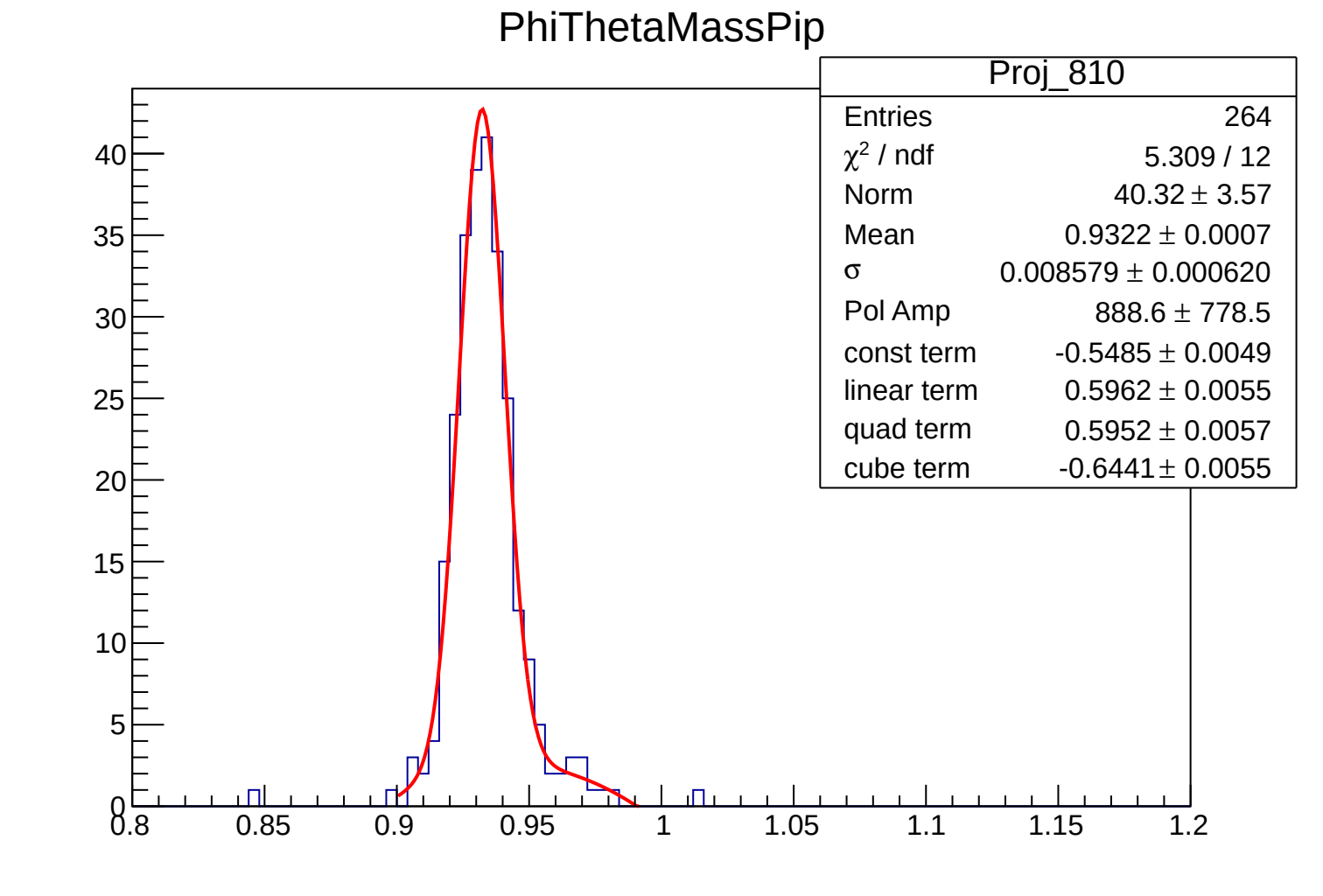

PhiThetaMassPip
Proj_85
Entries 403
χ² / ndf 25.72 / 12
Norm 54.79 ± 4.46
Mean 0.9298 ± 0.0007
σ 0.008557 ± 0.000650
Pol Amp 483.9 ± 367.9
const term -0.8455 ± 0.0130
linear term 0.9311 ± 0.0144
quad term 0.9356 ± 0.0148
cube term -1.02 ± 0.01
0
10
20
30
40
50
60
70
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

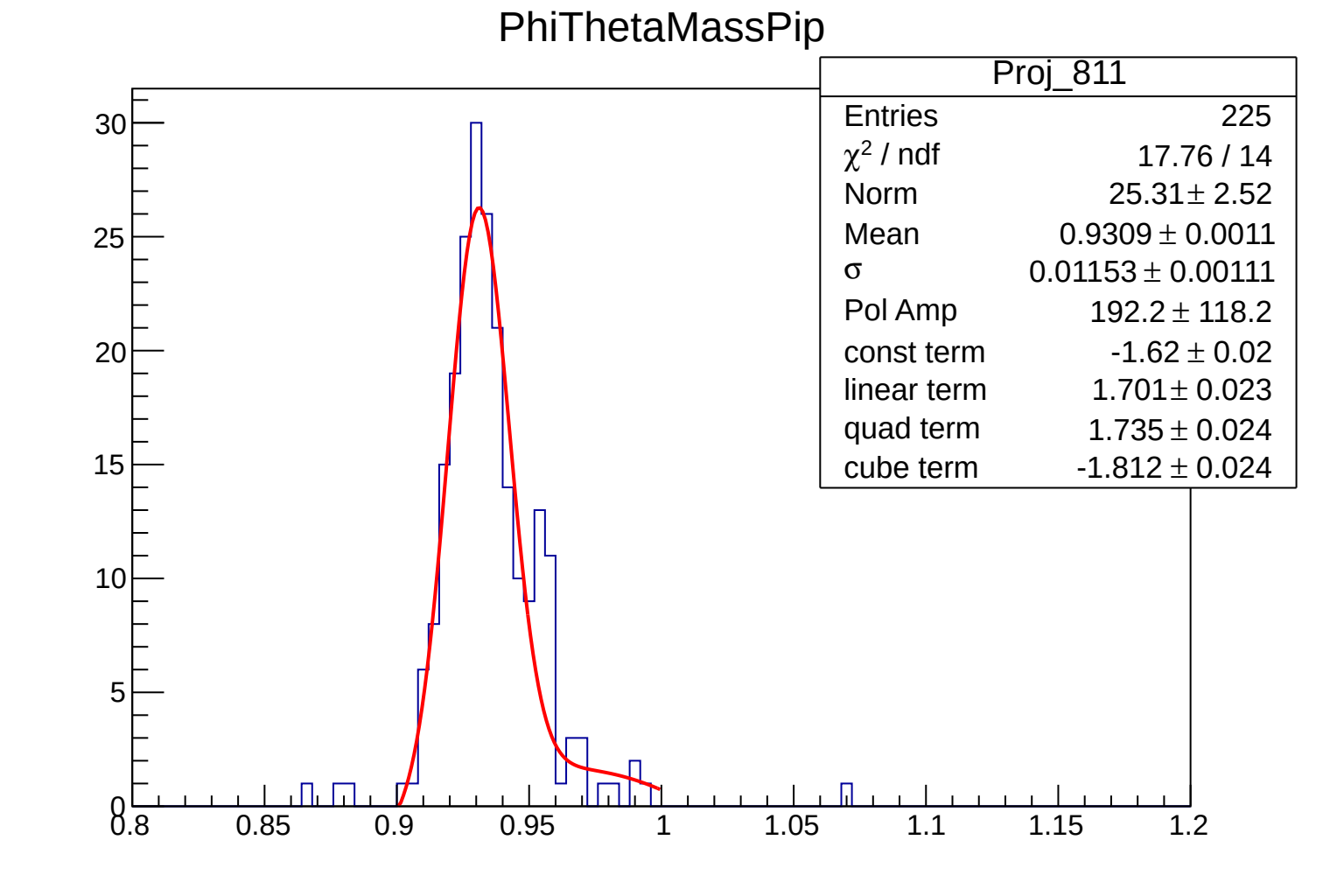

PhiThetaMassPip
Proj_86
Entries 435
χ² / ndf 11.54 / 13
Norm 61.15 ± 4.45
Mean 0.9343 ± 0.0006
σ 0.009499 ± 0.000504
Pol Amp 367.5 ± 0.5
const term -1.036 ± 0.298
linear term 1.148 ± 0.316
quad term 1.122 ± 0.315
cube term -1.235 ± 0.335
0
10
20
30
40
50
60
70
80
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

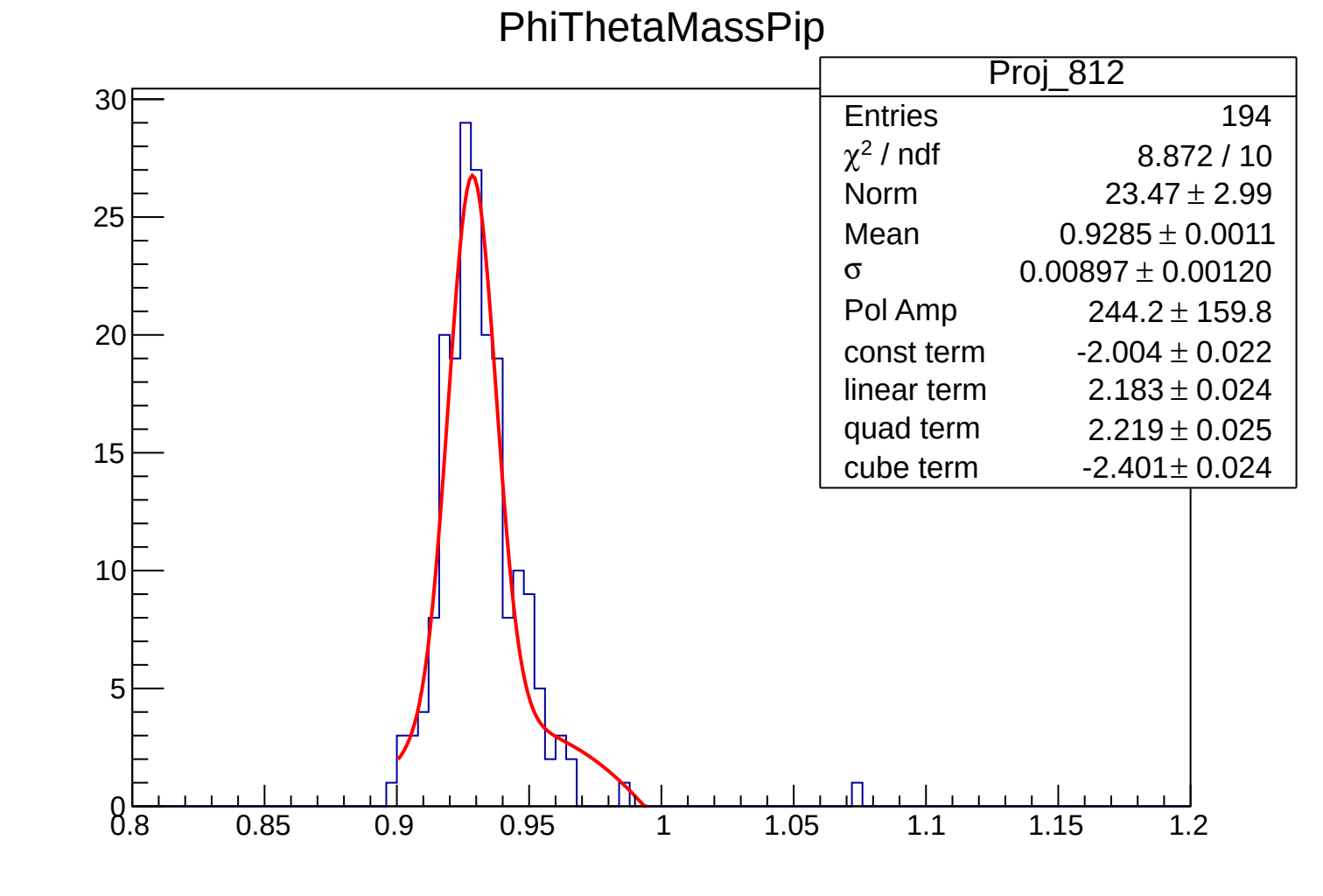

PhiThetaMassPip
Proj_87
Entries 452
χ² / ndf 10.92 / 13
Norm 58.94 ± 4.70
Mean 0.9316 ± 0.0006
σ 0.008644 ± 0.000668
Pol Amp 853.8 ± 365.9
const term -1.383 ± 0.007
linear term 1.503 ± 0.008
quad term 1.52 ± 0.01
cube term -1.643 ± 0.008
0
10
20
30
40
50
60
70
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

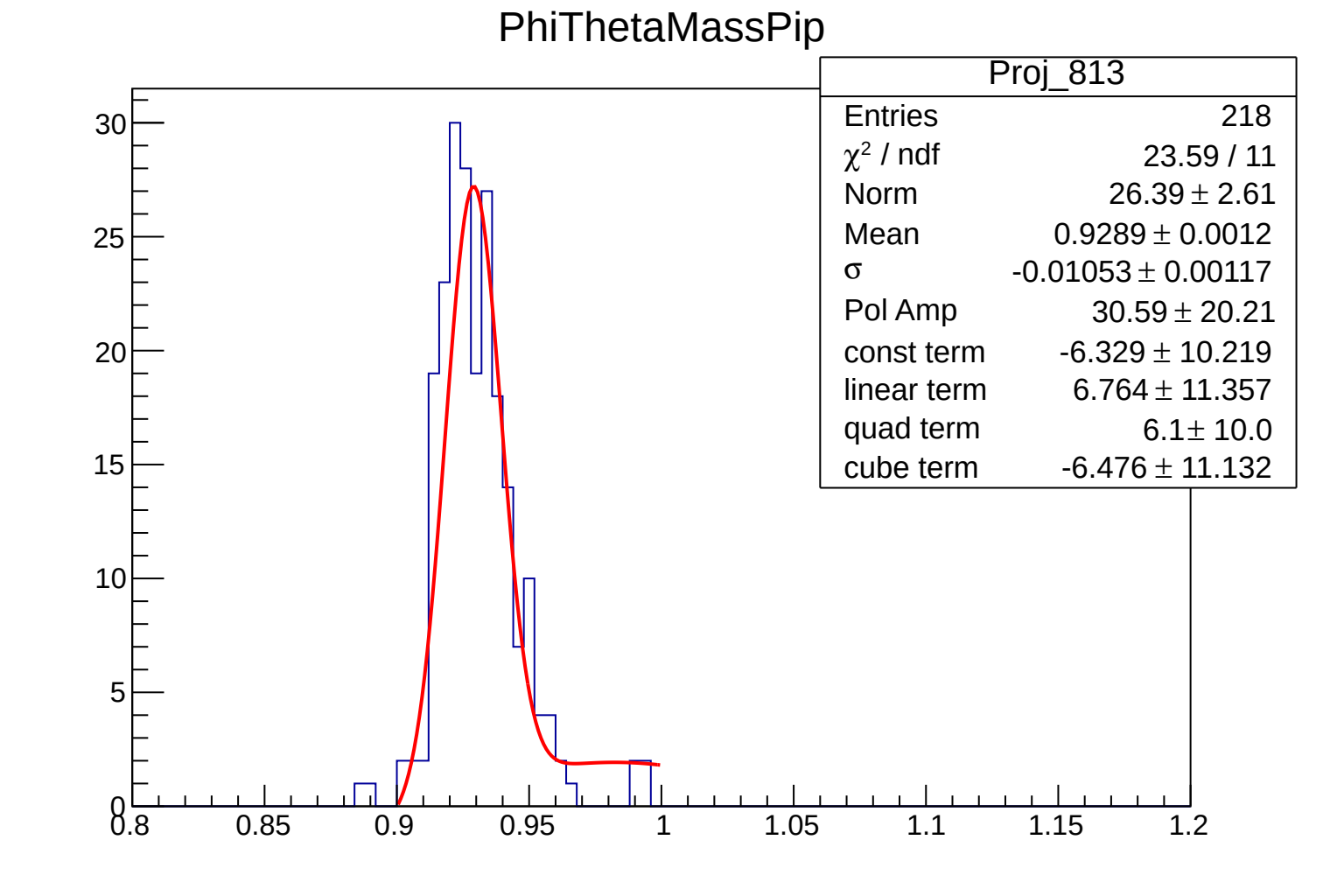

PhiThetaMassPip
Proj_88
Entries 455
χ² / ndf 12.69 / 14
Norm 63.4 ± 4.8
Mean 0.9312 ± 0.0006
σ 0.008822 ± 0.000608
Pol Amp 541.6 ± 190.8
const term -1.417 ± 0.009
linear term 1.556 ± 0.010
quad term 1.514 ± 0.011
cube term -1.654 ± 0.010
0
10
20
30
40
50
60
70
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

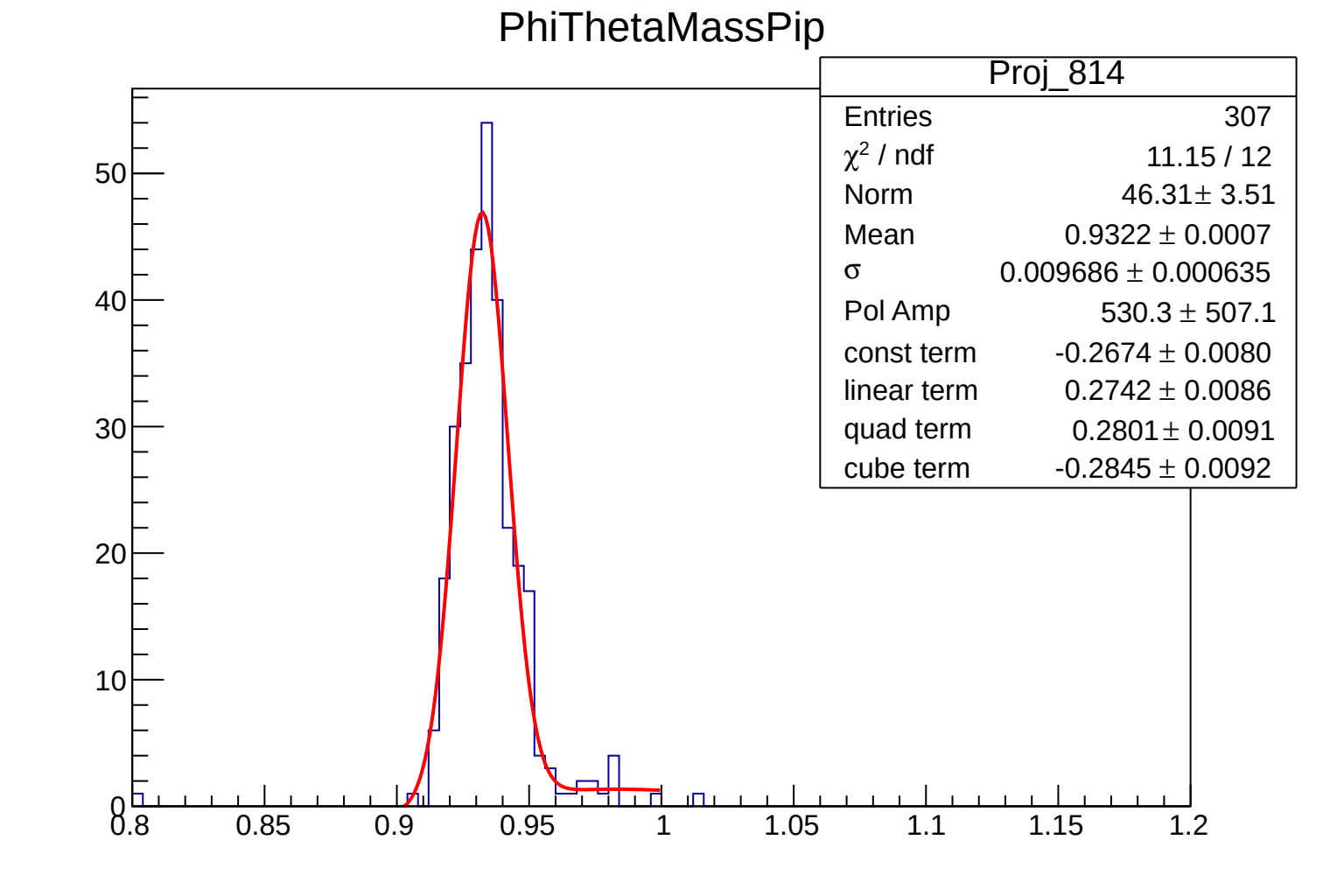

PhiThetaMassPip
Proj_89
Entries 415
χ² / ndf 35.91 / 12
Norm 61.8 ± 4.4
Mean 0.9288 ± 0.0006
σ 0.008342 ± 0.000423
Pol Amp 671.2 ± 254.4
const term -1.552 ± 0.007
linear term 1.659 ± 0.008
quad term 1.727 ± 0.008
cube term -1.839 ± 0.008
0
10
20
30
40
50
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

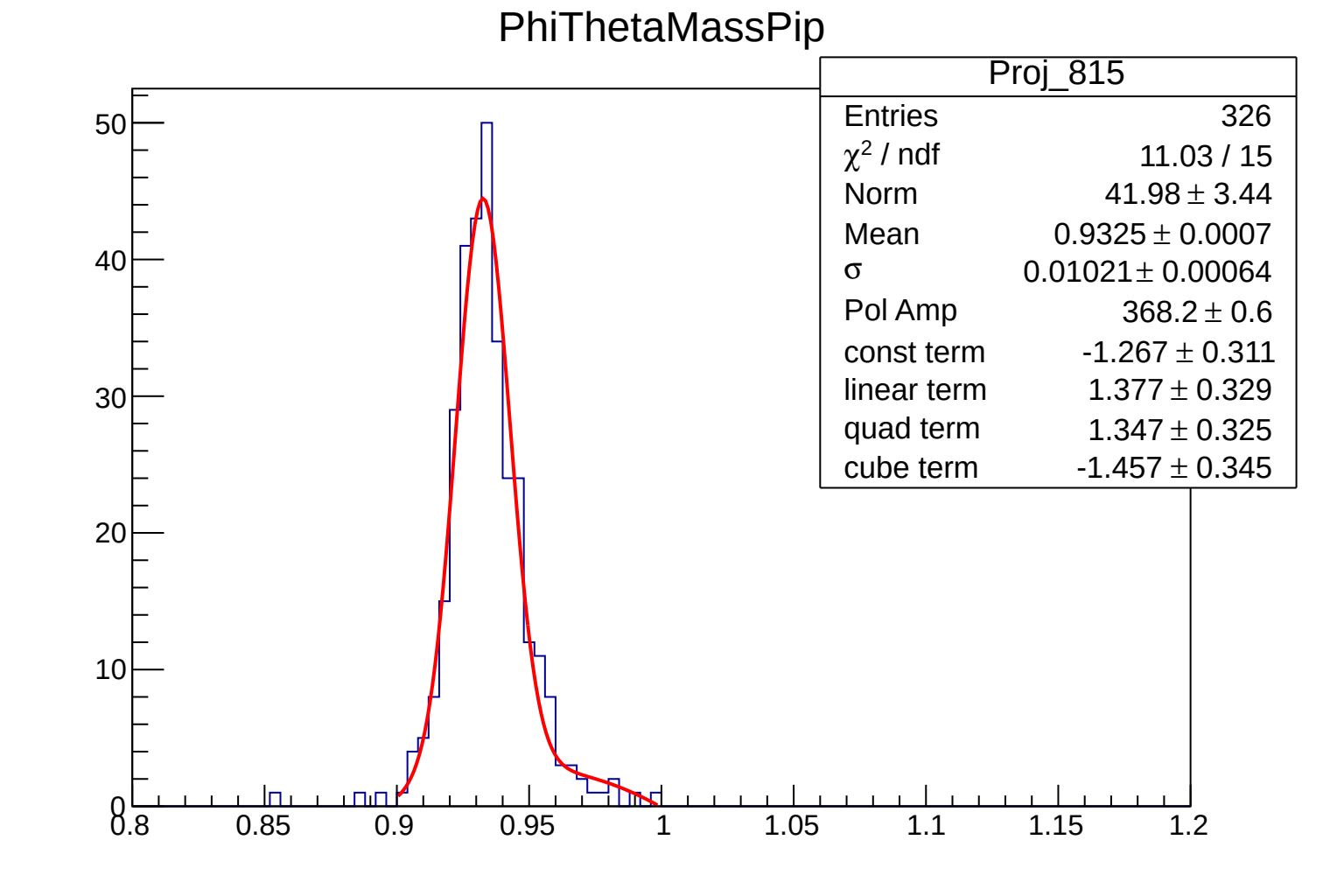

PhiThetaMassPip
Proj_810
Entries 264
χ² / ndf 5.309 / 12
Norm 40.32 ± 3.57
Mean 0.9322 ± 0.0007
σ 0.008579 ± 0.000620
Pol Amp 888.6 ± 778.5
const term -0.5485 ± 0.0049
linear term 0.5962 ± 0.0055
quad term 0.5952 ± 0.0057
cube term -0.6441 ± 0.0055
0
5
10
15
20
25
30
35
40
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

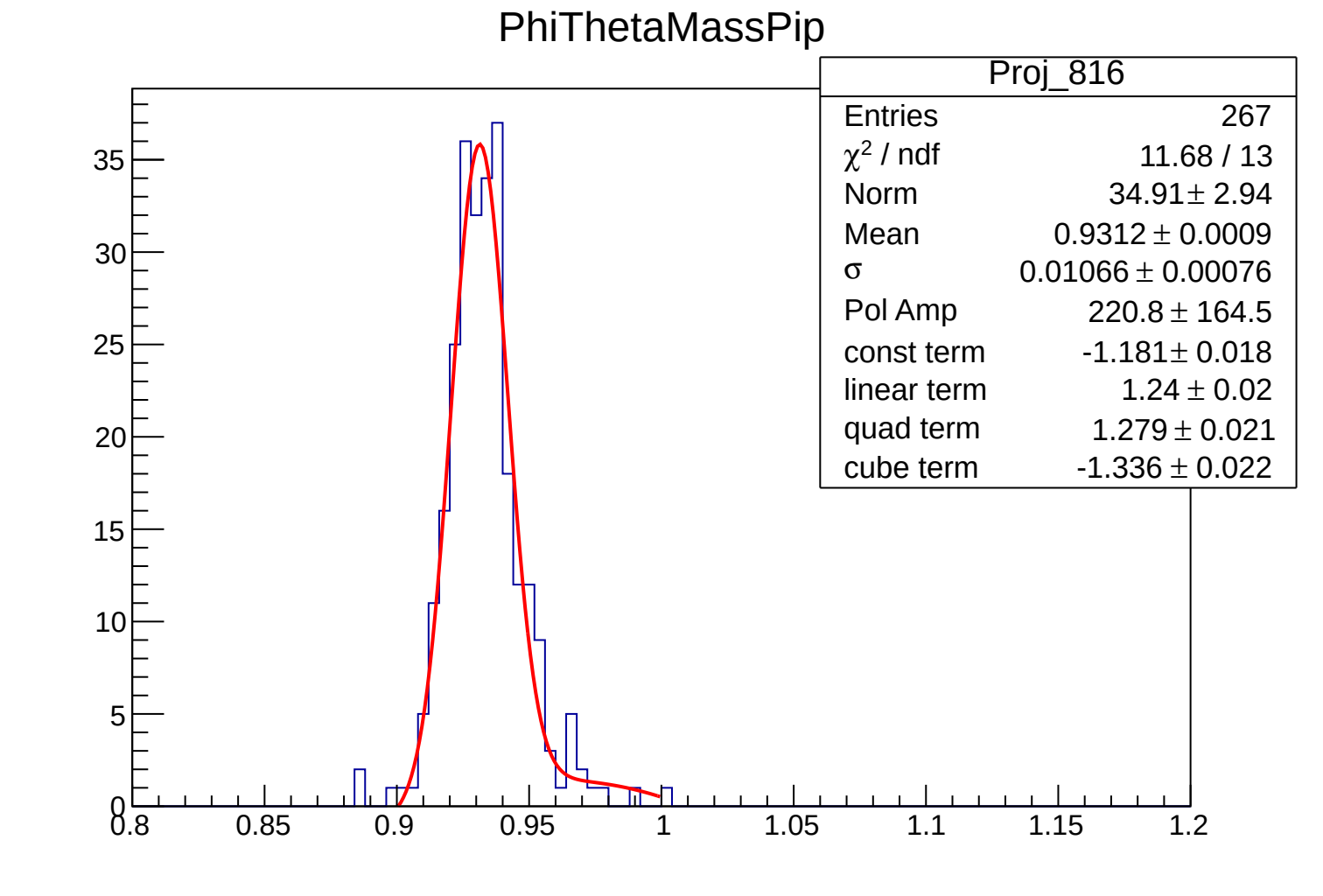

PhiThetaMassPip
Proj_811
Entries 225
χ² / ndf 17.76 / 14
Norm 25.31 ± 2.52
Mean 0.9309 ± 0.0011
σ 0.01153 ± 0.00111
Pol Amp 192.2 ± 118.2
const term -1.62 ± 0.02
linear term 1.701 ± 0.023
quad term 1.735 ± 0.024
cube term -1.812 ± 0.024
0
5
10
15
20
25
30
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

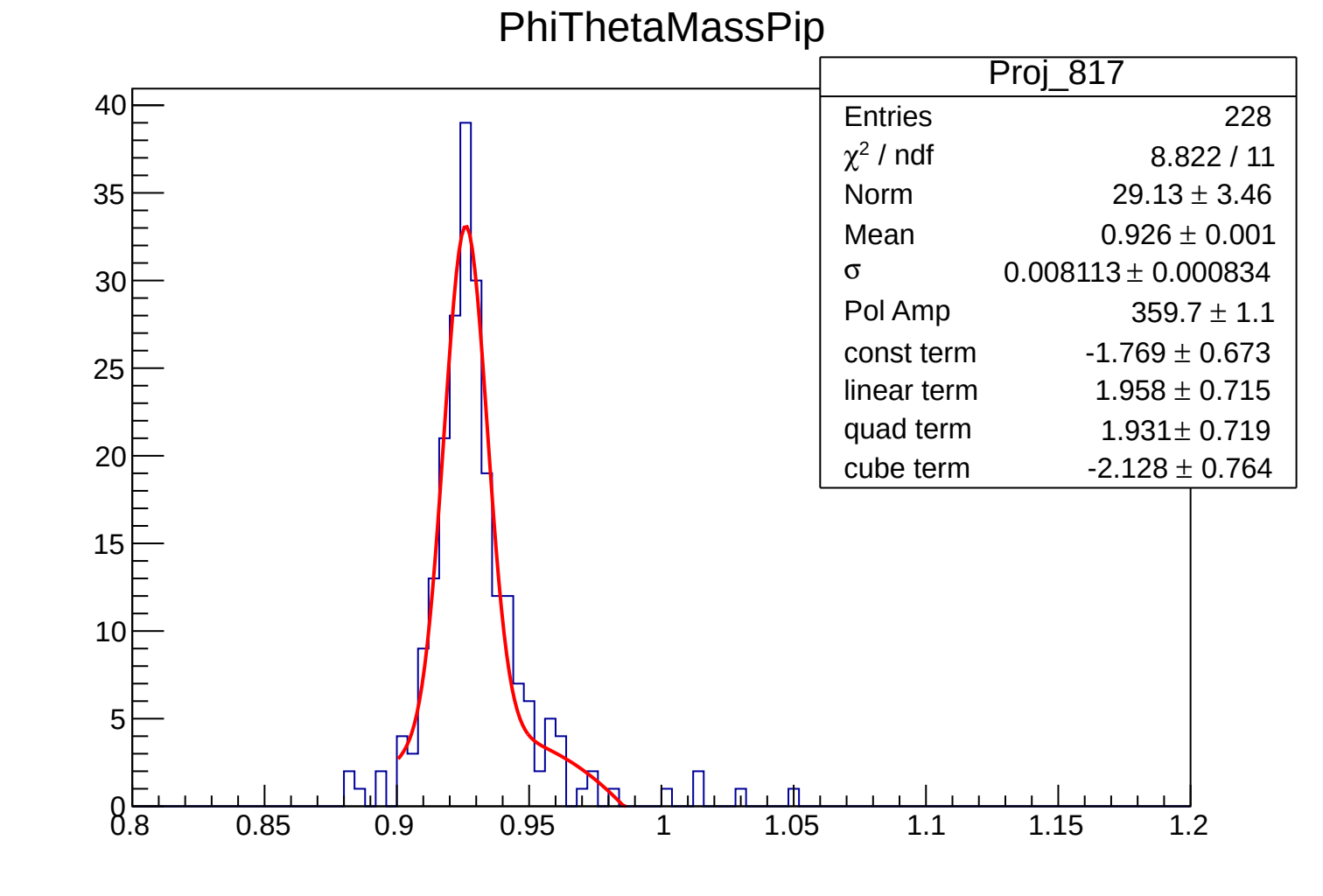

PhiThetaMassPip
Proj_812
Entries 194
χ² / ndf 8.872 / 10
Norm 23.47 ± 2.99
Mean 0.9285 ± 0.0011
σ 0.00897 ± 0.00120
Pol Amp 244.2 ± 159.8
const term -2.004 ± 0.022
linear term 2.183 ± 0.024
quad term 2.219 ± 0.025
cube term -2.401 ± 0.024
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

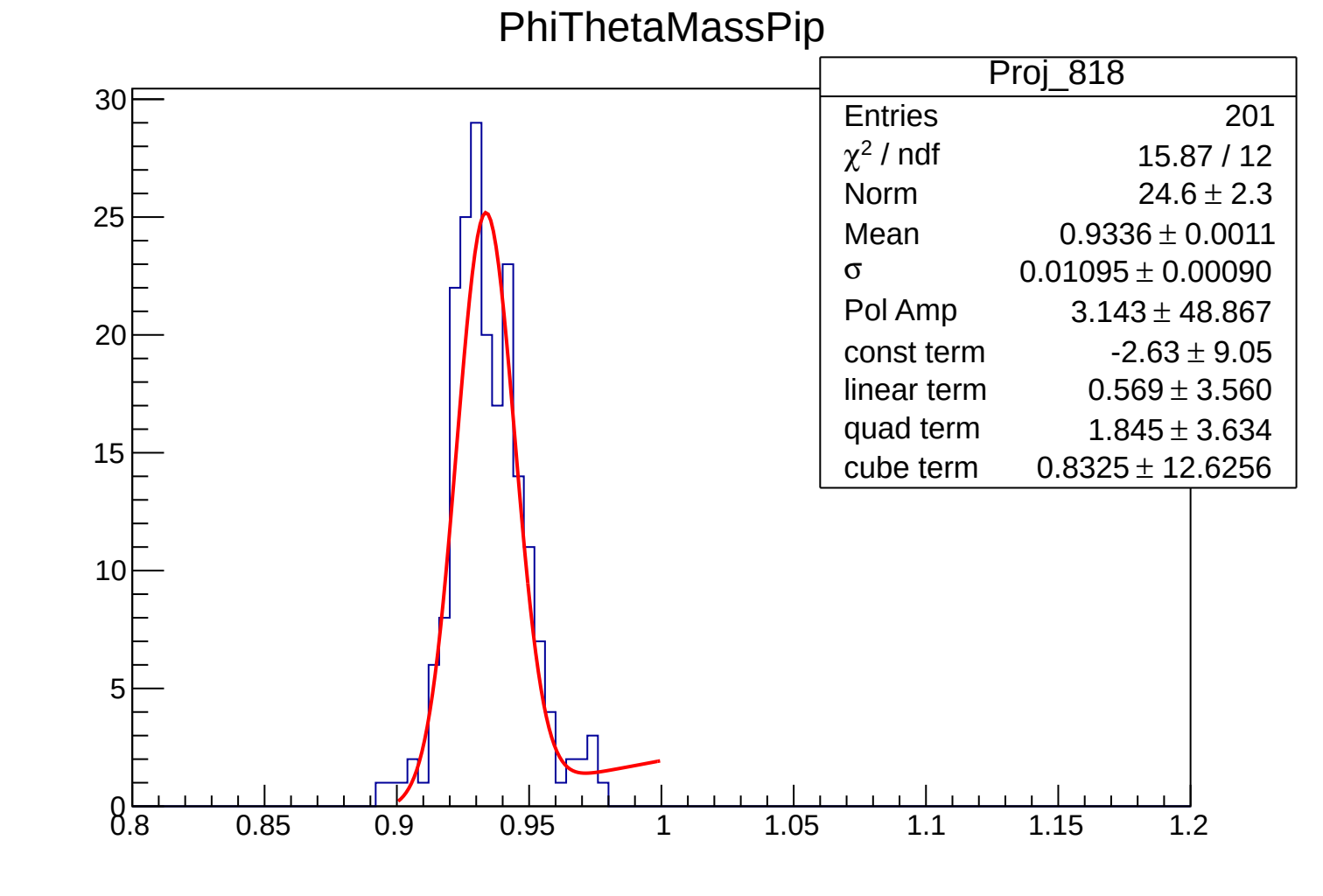

PhiThetaMassPip
Proj_813
Entries 218
χ² / ndf 23.59 / 11
Norm 26.39 ± 2.61
Mean 0.9289 ± 0.0012
σ -0.01053 ± 0.00117
Pol Amp 30.59 ± 20.21
const term -6.329 ± 10.219
linear term 6.764 ± 11.357
quad term 6.1 ± 10.0
cube term -6.476 ± 11.132
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

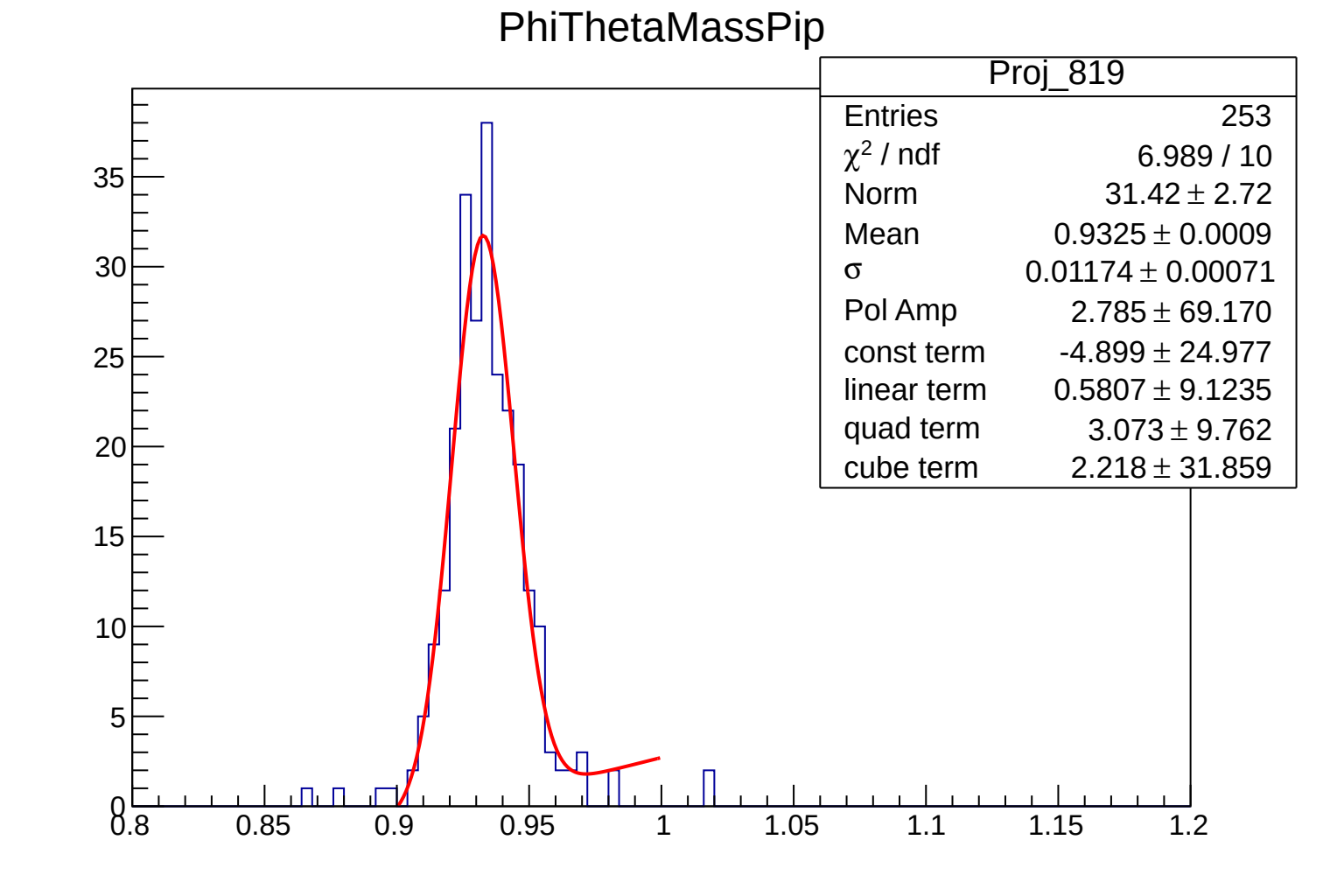

PhiThetaMassPip
Proj_814
Entries 307
χ² / ndf 11.15 / 12
Norm 46.31 ± 3.51
Mean 0.9322 ± 0.0007
σ 0.009686 ± 0.000635
Pol Amp 530.3 ± 507.1
const term -0.2674 ± 0.0080
linear term 0.2742 ± 0.0086
quad term 0.2801 ± 0.0091
cube term -0.2845 ± 0.0092
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_815
Entries 326
χ² / ndf 11.03 / 15
Norm 41.98 ± 3.44
Mean 0.9325 ± 0.0007
σ 0.01021 ± 0.00064
Pol Amp 368.2 ± 0.6
const term -1.267 ± 0.311
linear term 1.377 ± 0.329
quad term 1.347 ± 0.325
cube term -1.457 ± 0.345
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_816
Entries 267
χ² / ndf 11.68 / 13
Norm 34.91 ± 2.94
Mean 0.9312 ± 0.0009
σ 0.01066 ± 0.00076
Pol Amp 220.8 ± 164.5
const term -1.181 ± 0.018
linear term 1.24 ± 0.02
quad term 1.279 ± 0.021
cube term -1.336 ± 0.022
0
5
10
15
20
25
30
35
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_817
Entries 228
χ² / ndf 8.822 / 11
Norm 29.13 ± 3.46
Mean 0.926 ± 0.001
σ 0.008113 ± 0.000834
Pol Amp 359.7 ± 1.1
const term -1.769 ± 0.673
linear term 1.958 ± 0.715
quad term 1.931 ± 0.719
cube term -2.128 ± 0.764
0
5
10
15
20
25
30
35
40
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_818
Entries 201
χ² / ndf 15.87 / 12
Norm 24.6 ± 2.3
Mean 0.9336 ± 0.0011
σ 0.01095 ± 0.00090
Pol Amp 3.143 ± 48.867
const term -2.63 ± 9.05
linear term 0.569 ± 3.560
quad term 1.845 ± 3.634
cube term 0.8325 ± 12.6256
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_819
Entries 253
χ² / ndf 6.989 / 10
Norm 31.42 ± 2.72
Mean 0.9325 ± 0.0009
σ 0.01174 ± 0.00071
Pol Amp 2.785 ± 69.170
const term -4.899 ± 24.977
linear term 0.5807 ± 9.1235
quad term 3.073 ± 9.762
cube term 2.218 ± 31.859
0
5
10
15
20
25
30
35
0.8
0.85
0.9
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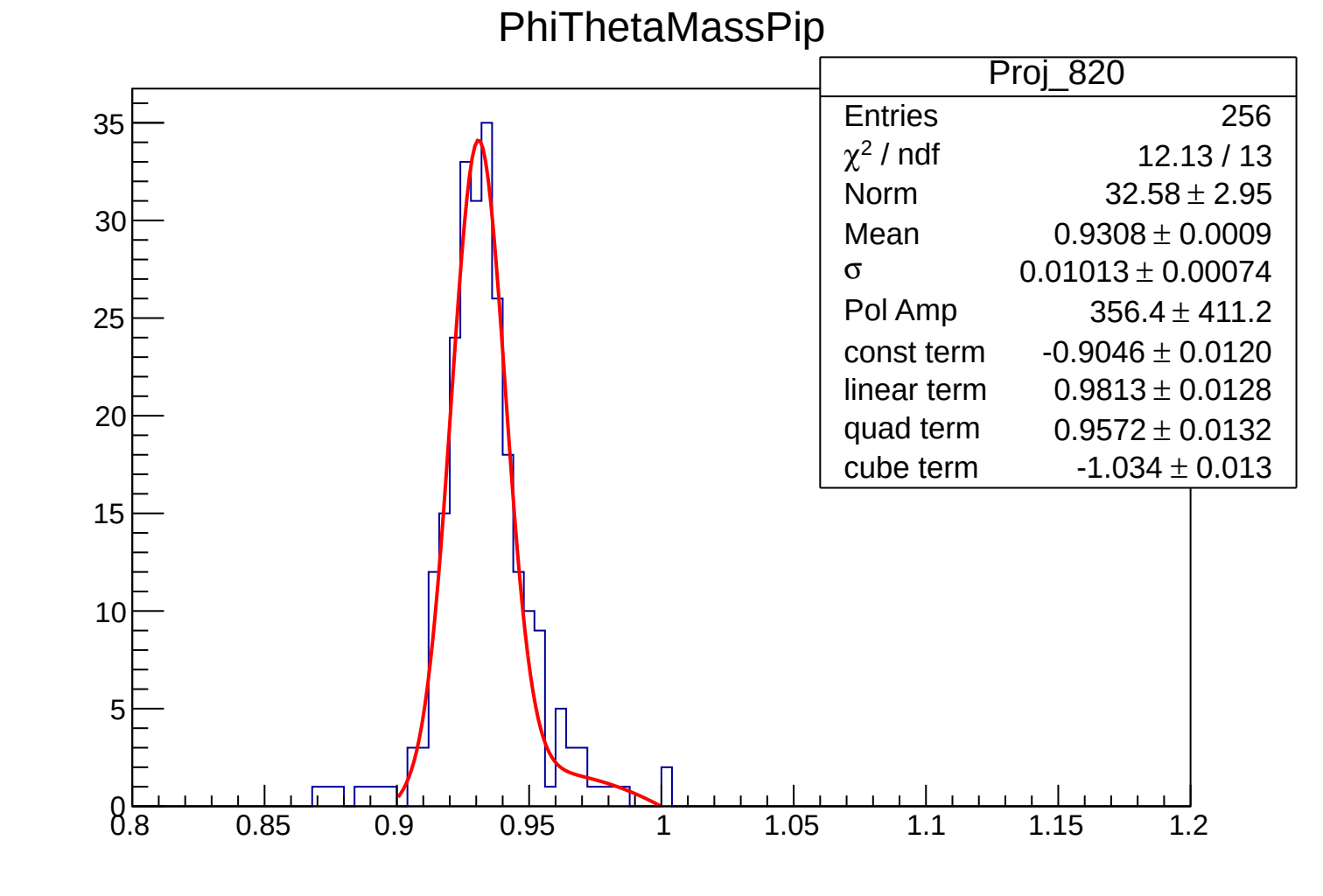
PhiThetaMassPip
Proj_820
Entries 256
χ² / ndf 12.13 / 13
Norm 32.58 ± 2.95
Mean 0.9308 ± 0.0009
σ 0.01013 ± 0.00074
Pol Amp 356.4 ± 411.2
const term -0.9046 ± 0.0120
linear term 0.9813 ± 0.0128
quad term 0.9572 ± 0.0132
cube term -1.034 ± 0.013
0
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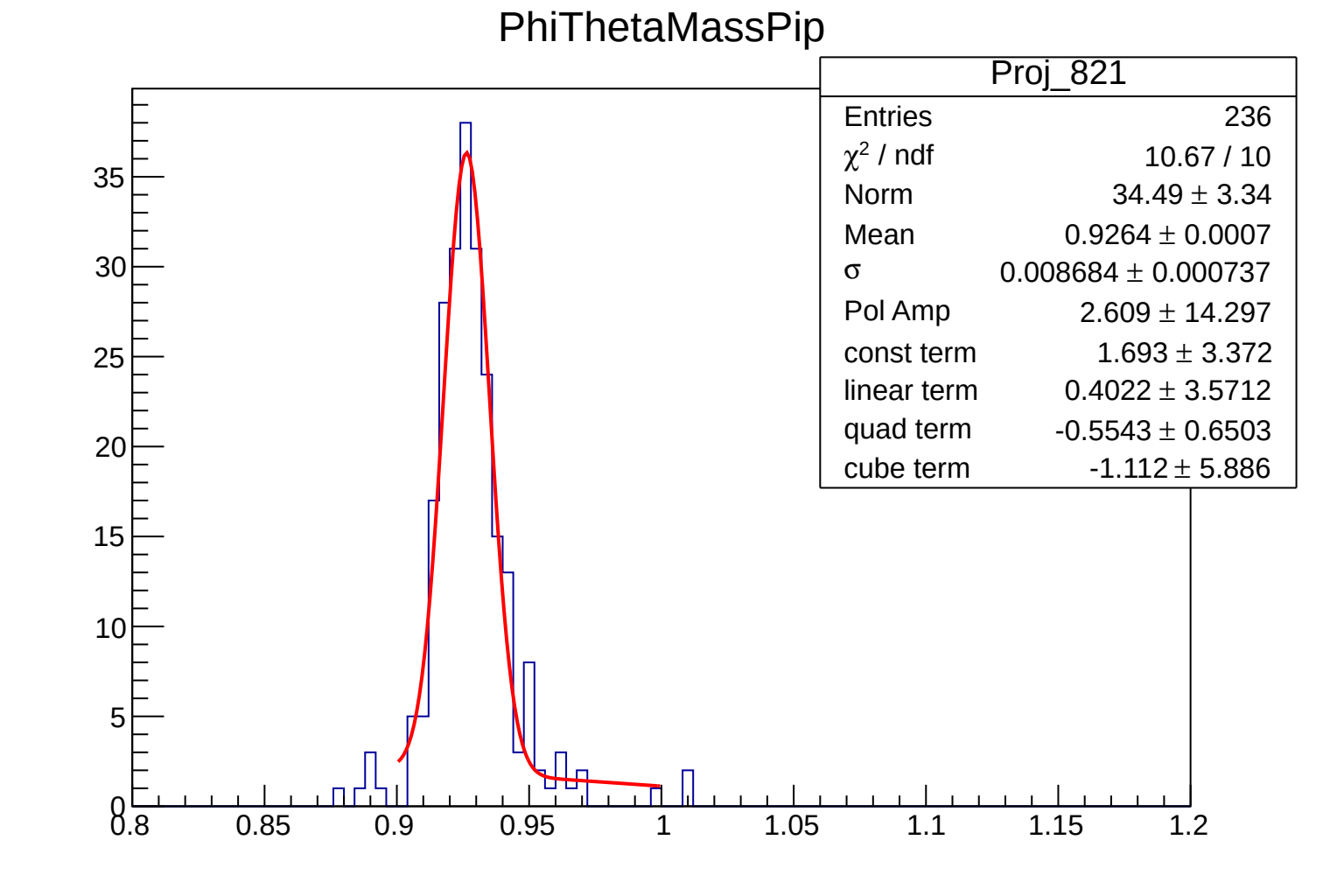
PhiThetaMassPip
Proj_821
Entries 236
χ² / ndf 10.67 / 10
Norm 34.49 ± 3.34
Mean 0.9264 ± 0.0007
σ 0.008684 ± 0.000737
Pol Amp 2.609 ± 14.297
const term 1.693 ± 3.372
linear term 0.4022 ± 3.5712
quad term -0.5543 ± 0.6503
cube term -1.112 ± 5.886
0
5
10
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30
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0.8
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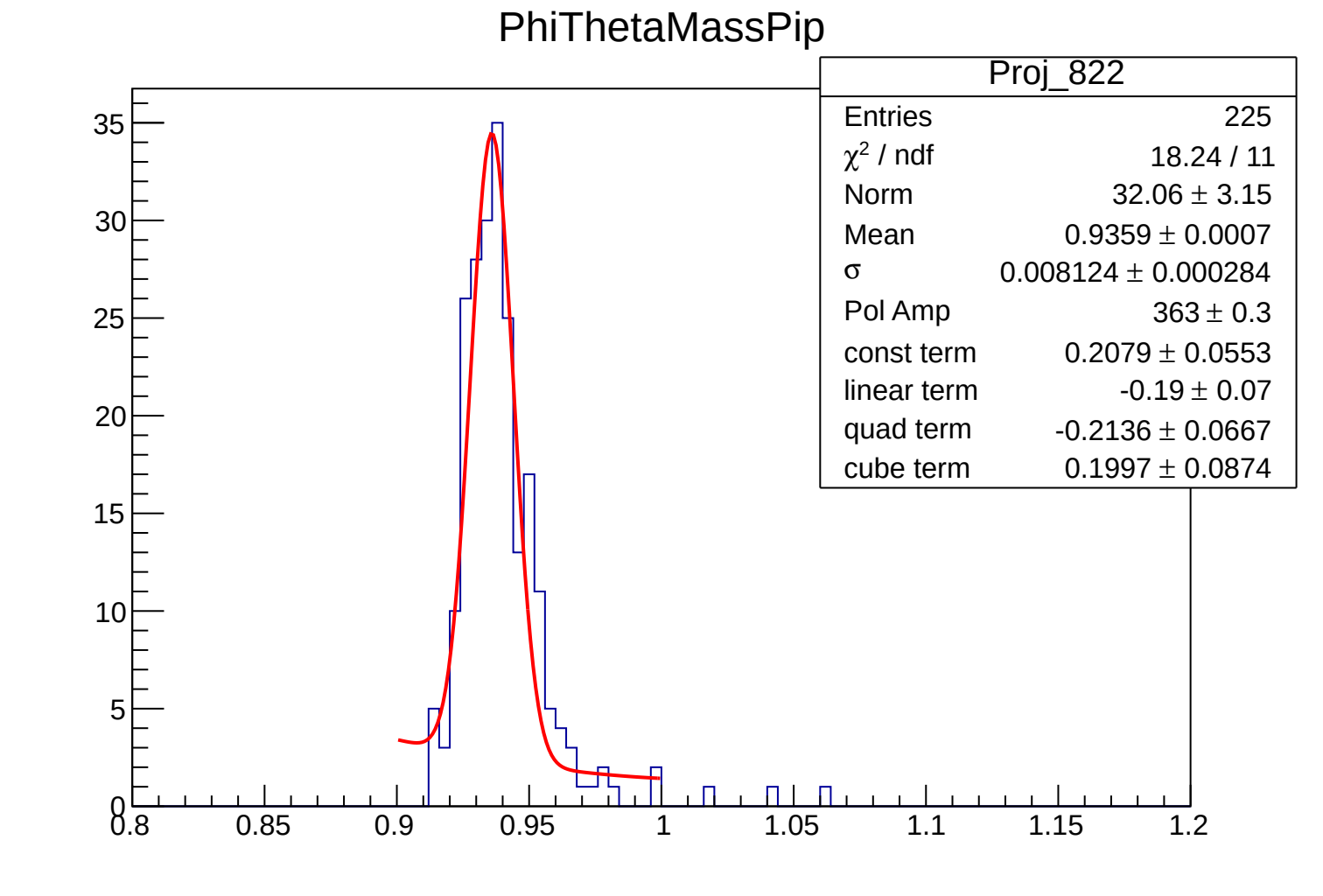
PhiThetaMassPip
Proj_822
Entries 225
χ² / ndf 18.24 / 11
Norm 32.06 ± 3.15
Mean 0.9359 ± 0.0007
σ 0.008124 ± 0.000284
Pol Amp 363 ± 0.3
const term 0.2079 ± 0.0553
linear term -0.19 ± 0.07
quad term -0.2136 ± 0.0667
cube term 0.1997 ± 0.0874
35
30
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5
0
0.8
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0.9
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1
1.05
1.1
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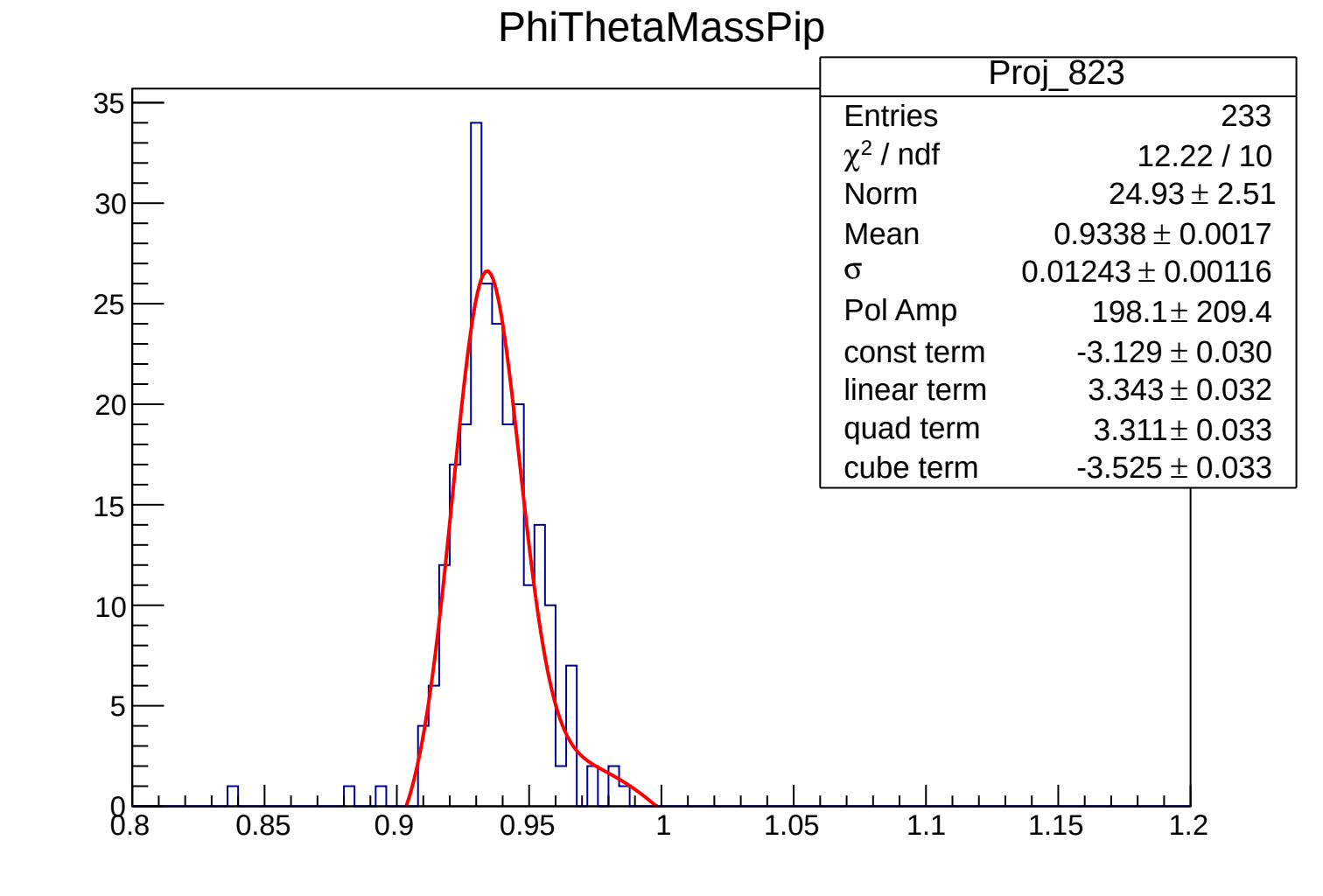
PhiThetaMassPip
Proj_823
Entries 233
χ² / ndf 12.22 / 10
Norm 24.93 ± 2.51
Mean 0.9338 ± 0.0017
σ 0.01243 ± 0.00116
Pol Amp 198.1 ± 209.4
const term -3.129 ± 0.030
linear term 3.343 ± 0.032
quad term 3.311 ± 0.033
cube term -3.525 ± 0.033
35
30
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0.8
0.85
0.9
0.95
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1.05
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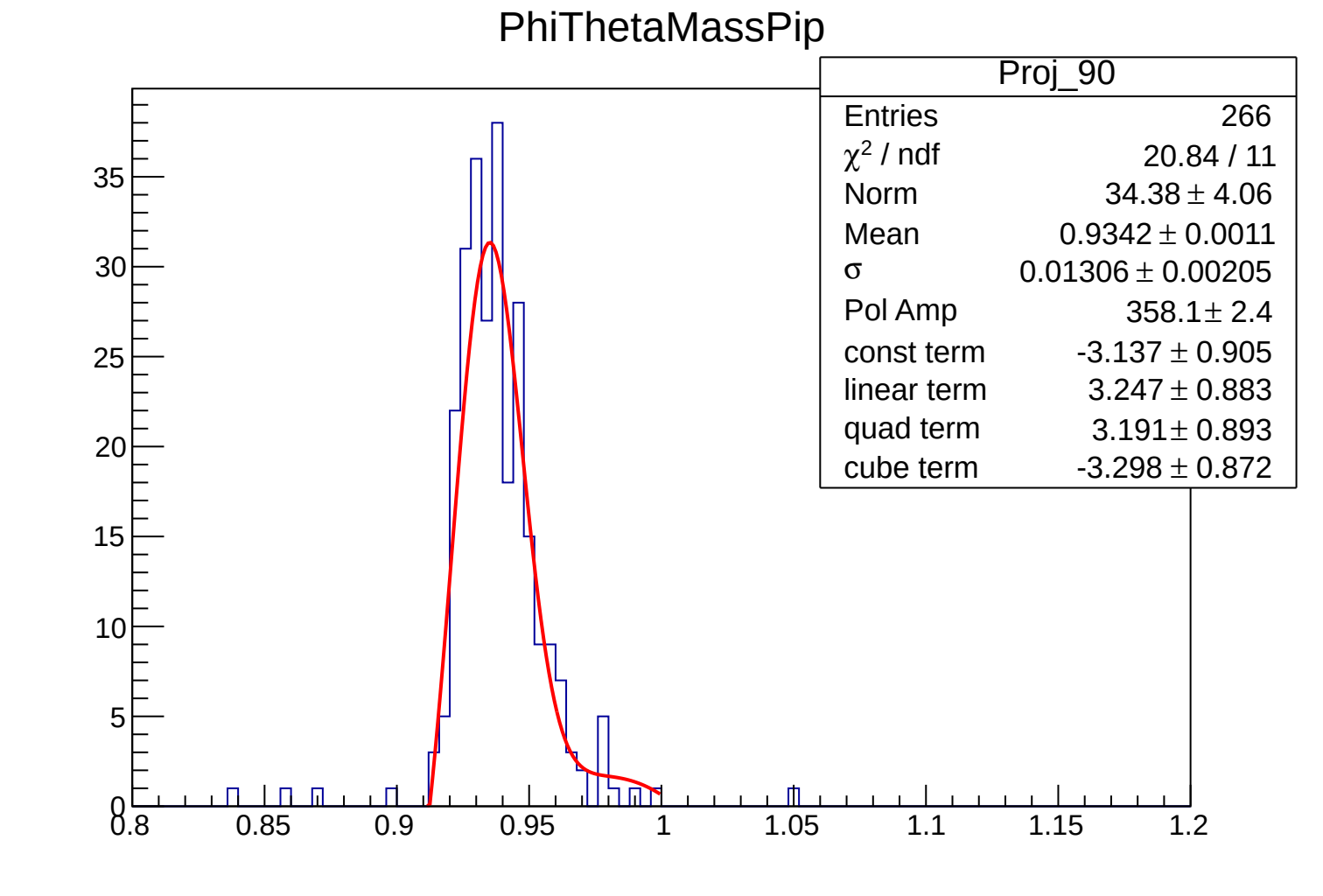
PhiThetaMassPip
Proj_90
Entries 266
χ² / ndf 20.84 / 11
Norm 34.38 ± 4.06
Mean 0.9342 ± 0.0011
σ 0.01306 ± 0.00205
Pol Amp 358.1 ± 2.4
const term -3.137 ± 0.905
linear term 3.247 ± 0.883
quad term 3.191 ± 0.893
cube term -3.298 ± 0.872
0
5
10
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30
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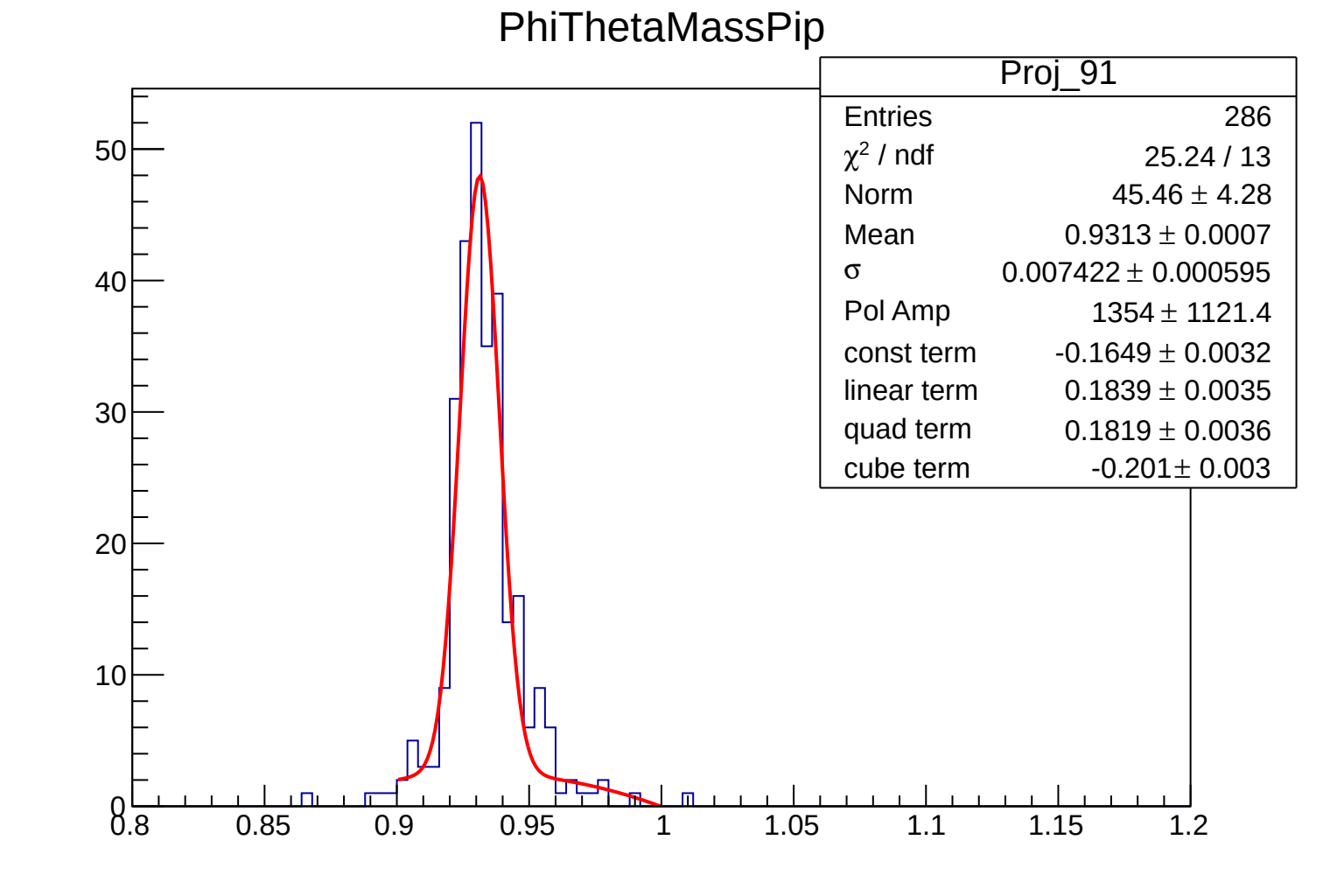
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_91
Entries 286
χ² / ndf 25.24 / 13
Norm 45.46 ± 4.28
Mean 0.9313 ± 0.0007
σ 0.007422 ± 0.000595
Pol Amp 1354 ± 1121.4
const term -0.1649 ± 0.0032
linear term 0.1839 ± 0.0035
quad term 0.1819 ± 0.0036
cube term -0.201 ± 0.003
0
10
20
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40
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0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
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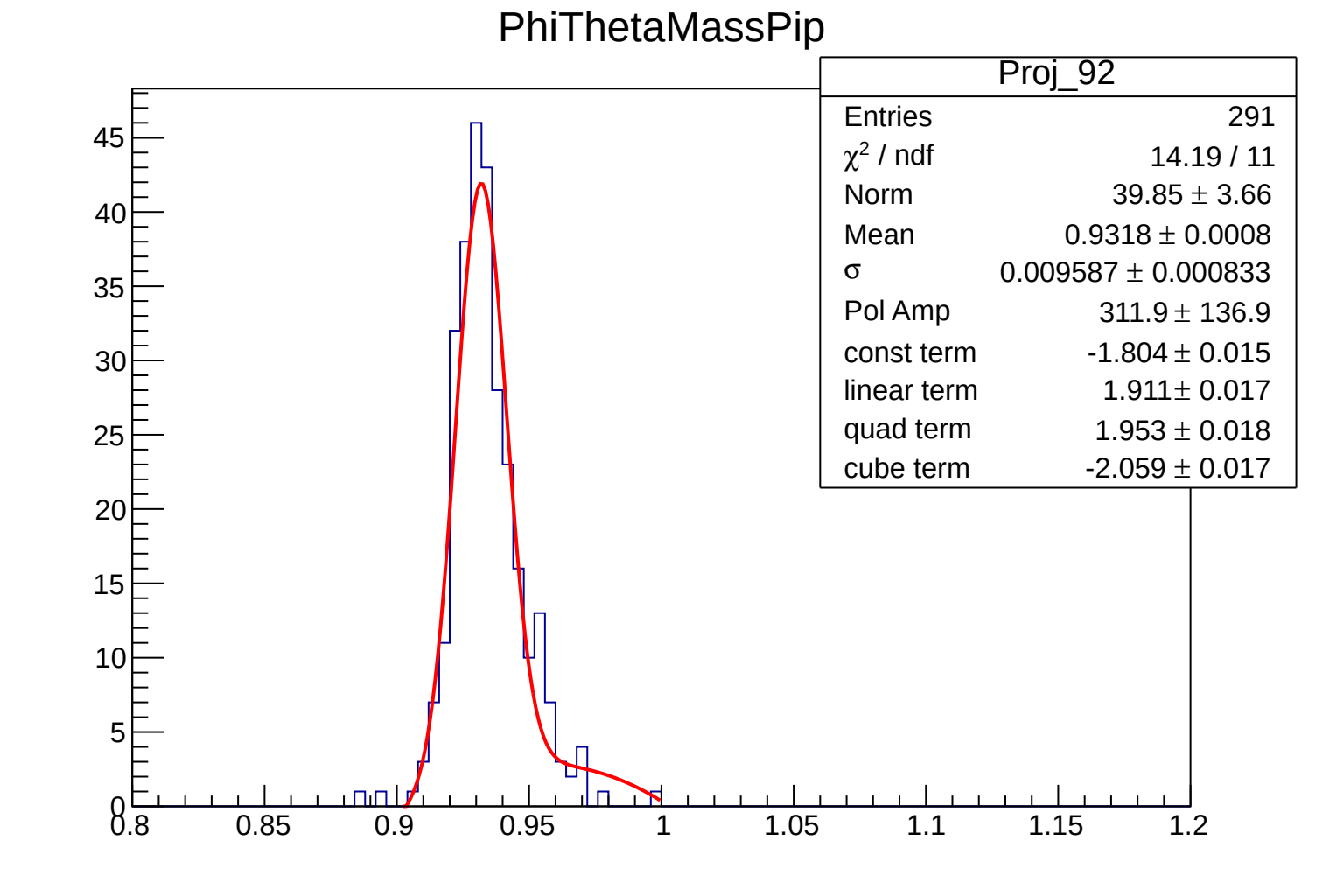
PhiThetaMassPip
Proj_92
Entries 291
χ² / ndf 14.19 / 11
Norm 39.85 ± 3.66
Mean 0.9318 ± 0.0008
σ 0.009587 ± 0.000833
Pol Amp 311.9 ± 136.9
const term -1.804 ± 0.015
linear term 1.911 ± 0.017
quad term 1.953 ± 0.018
cube term -2.059 ± 0.017
0
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10
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20
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40
45
0.8
0.85
0.9
0.95
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1.1
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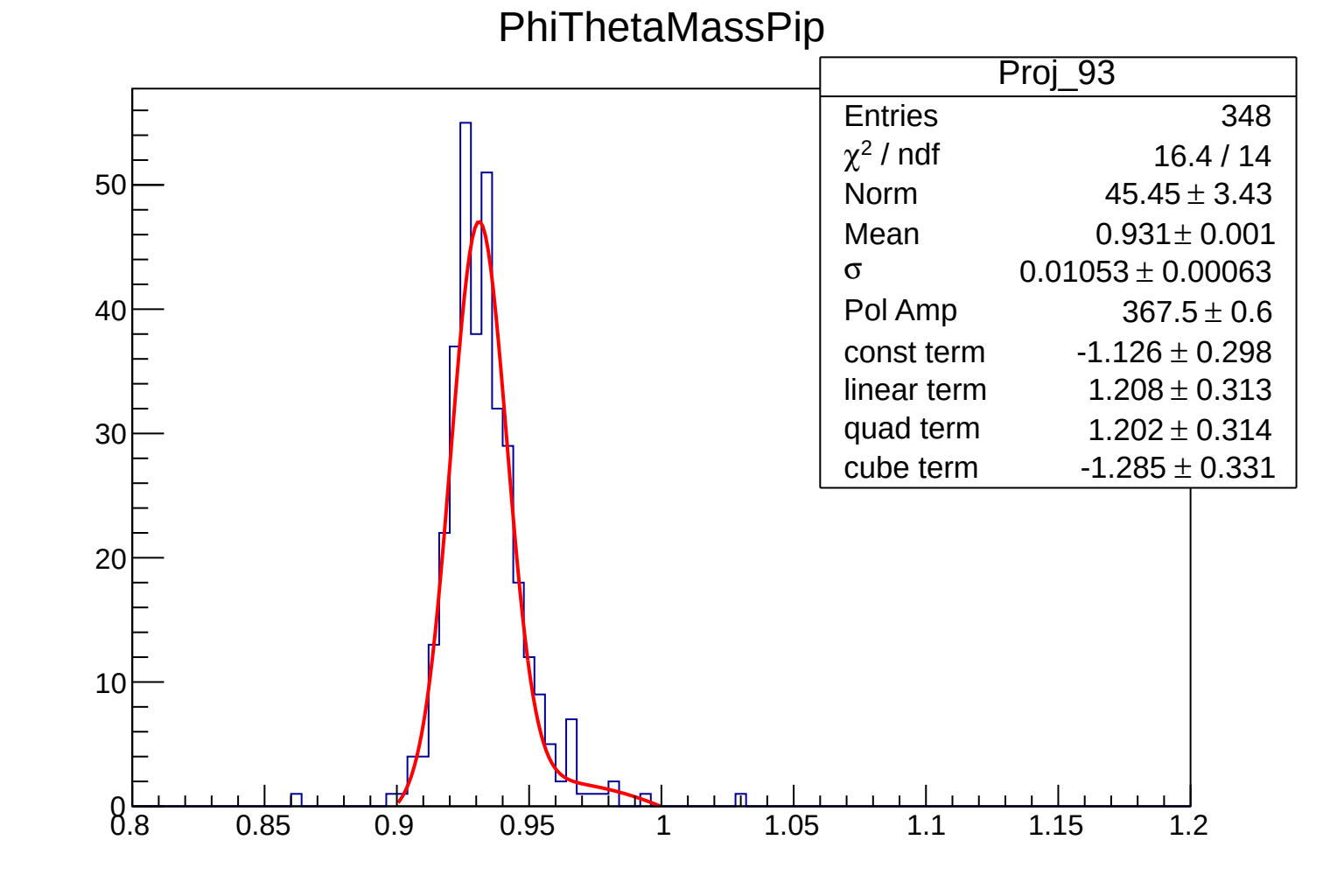
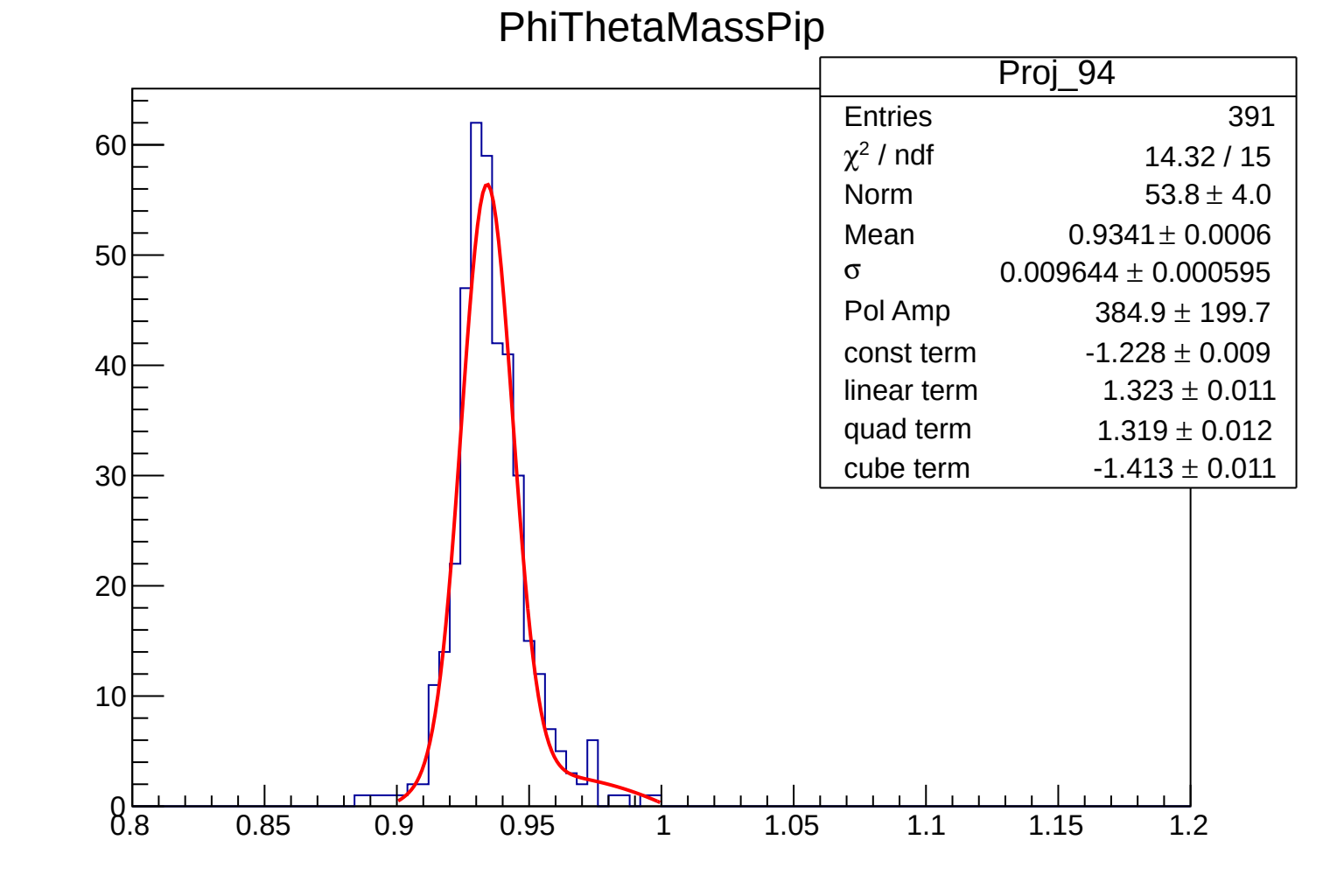

PhiThetaMassPip
Proj_93
Entries 348
χ² / ndf 16.4 / 14
Norm 45.45 ± 3.43
Mean 0.931 ± 0.001
σ 0.01053 ± 0.00063
Pol Amp 367.5 ± 0.6
const term -1.126 ± 0.298
linear term 1.208 ± 0.313
quad term 1.202 ± 0.314
cube term -1.285 ± 0.331
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_94
Entries 391
χ² / ndf 14.32 / 15
Norm 53.8 ± 4.0
Mean 0.9341 ± 0.0006
σ 0.009644 ± 0.000595
Pol Amp 384.9 ± 199.7
const term -1.228 ± 0.009
linear term 1.323 ± 0.011
quad term 1.319 ± 0.012
cube term -1.413 ± 0.011
0
10
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50
60
0.8
0.85
0.9
0.95
1
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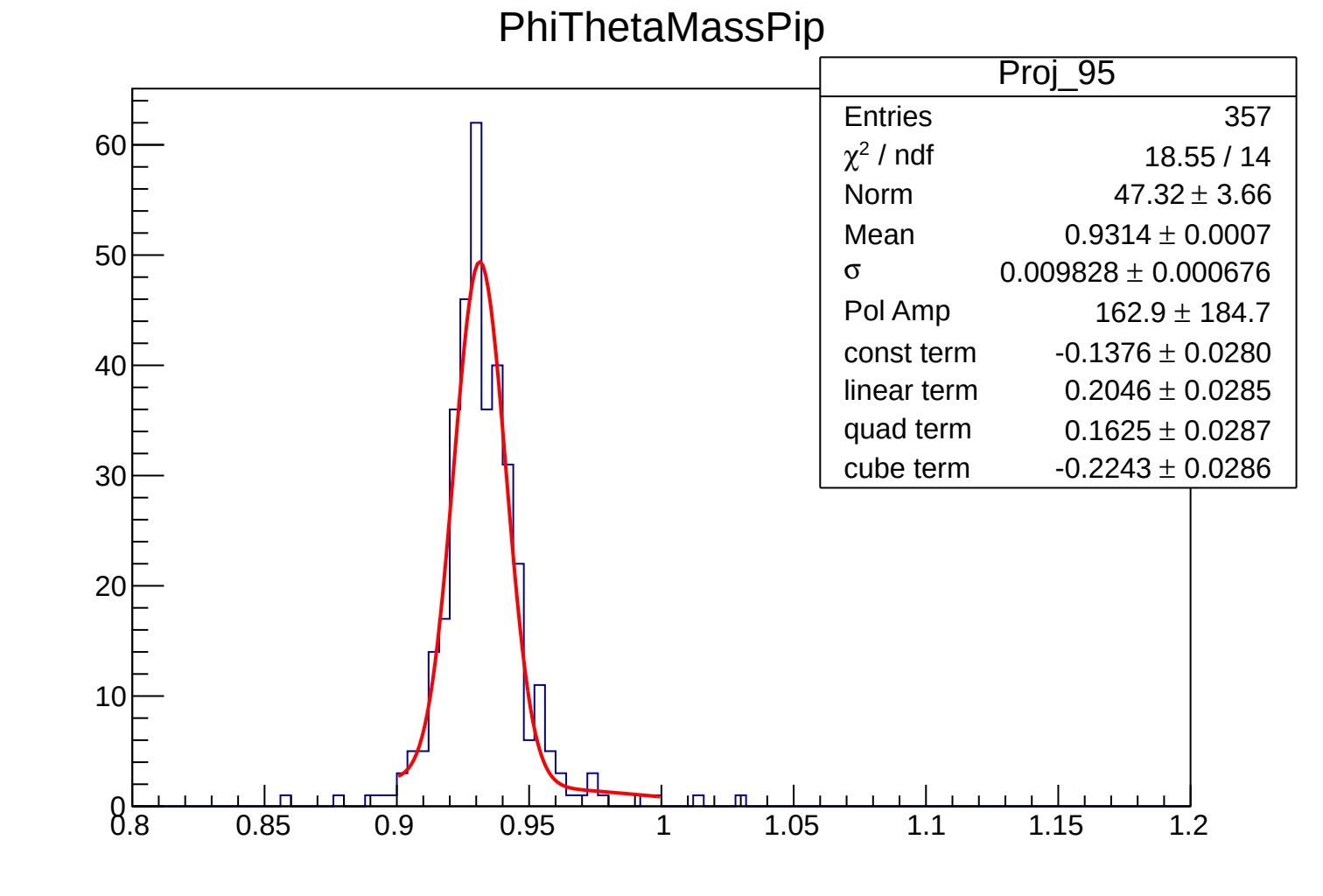
PhiThetaMassPip
Proj_95
Entries 357
χ² / ndf 18.55 / 14
Norm 47.32 ± 3.66
Mean 0.9314 ± 0.0007
σ 0.009828 ± 0.000676
Pol Amp 162.9 ± 184.7
const term -0.1376 ± 0.0280
linear term 0.2046 ± 0.0285
quad term 0.1625 ± 0.0287
cube term -0.2243 ± 0.0286
0
10
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40
50
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
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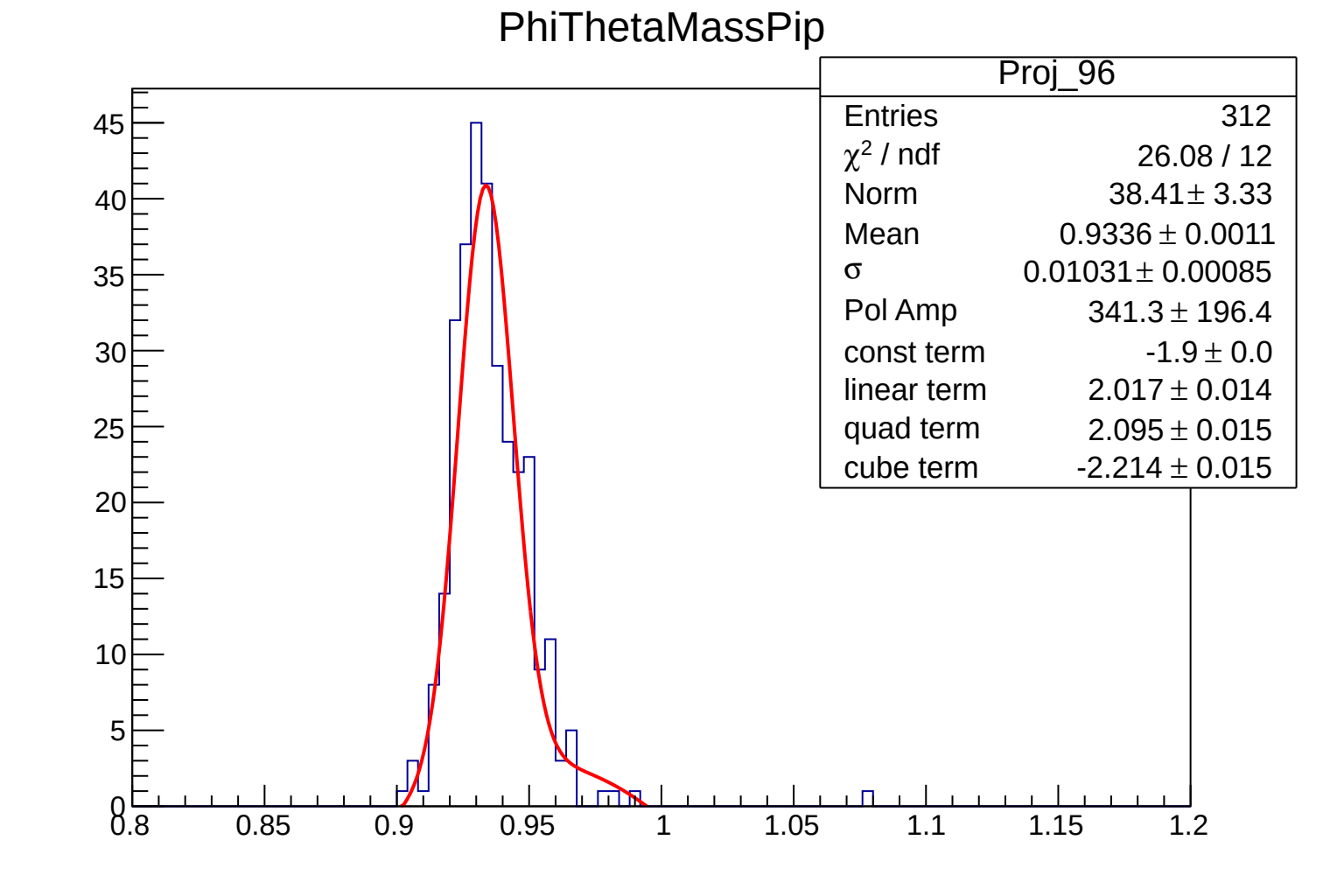
PhiThetaMassPip
Proj_96
Entries 312
χ² / ndf 26.08 / 12
Norm 38.41 ± 3.33
Mean 0.9336 ± 0.0011
σ 0.01031 ± 0.00085
Pol Amp 341.3 ± 196.4
const term -1.9 ± 0.0
linear term 2.017 ± 0.014
quad term 2.095 ± 0.015
cube term -2.214 ± 0.015
0
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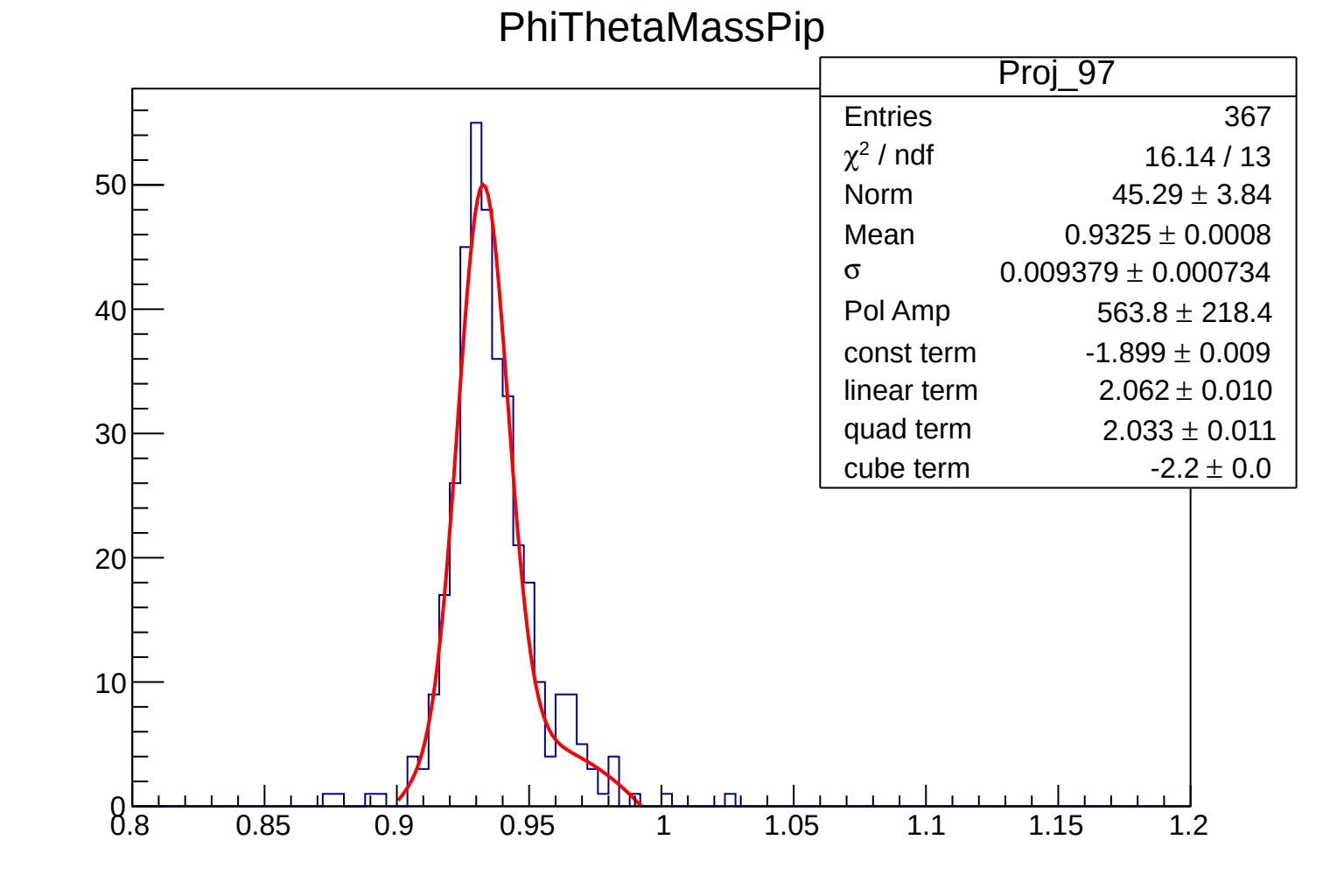
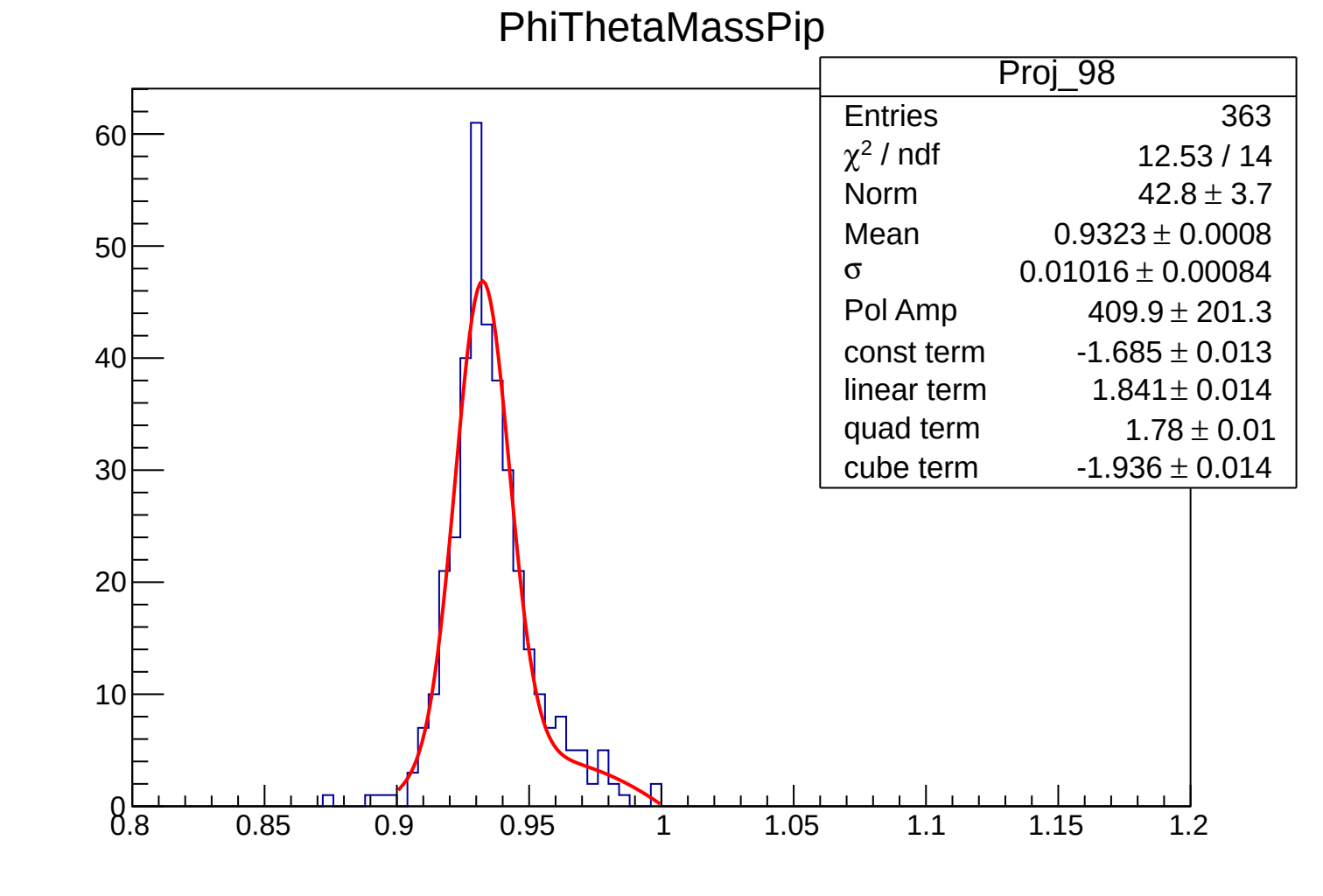
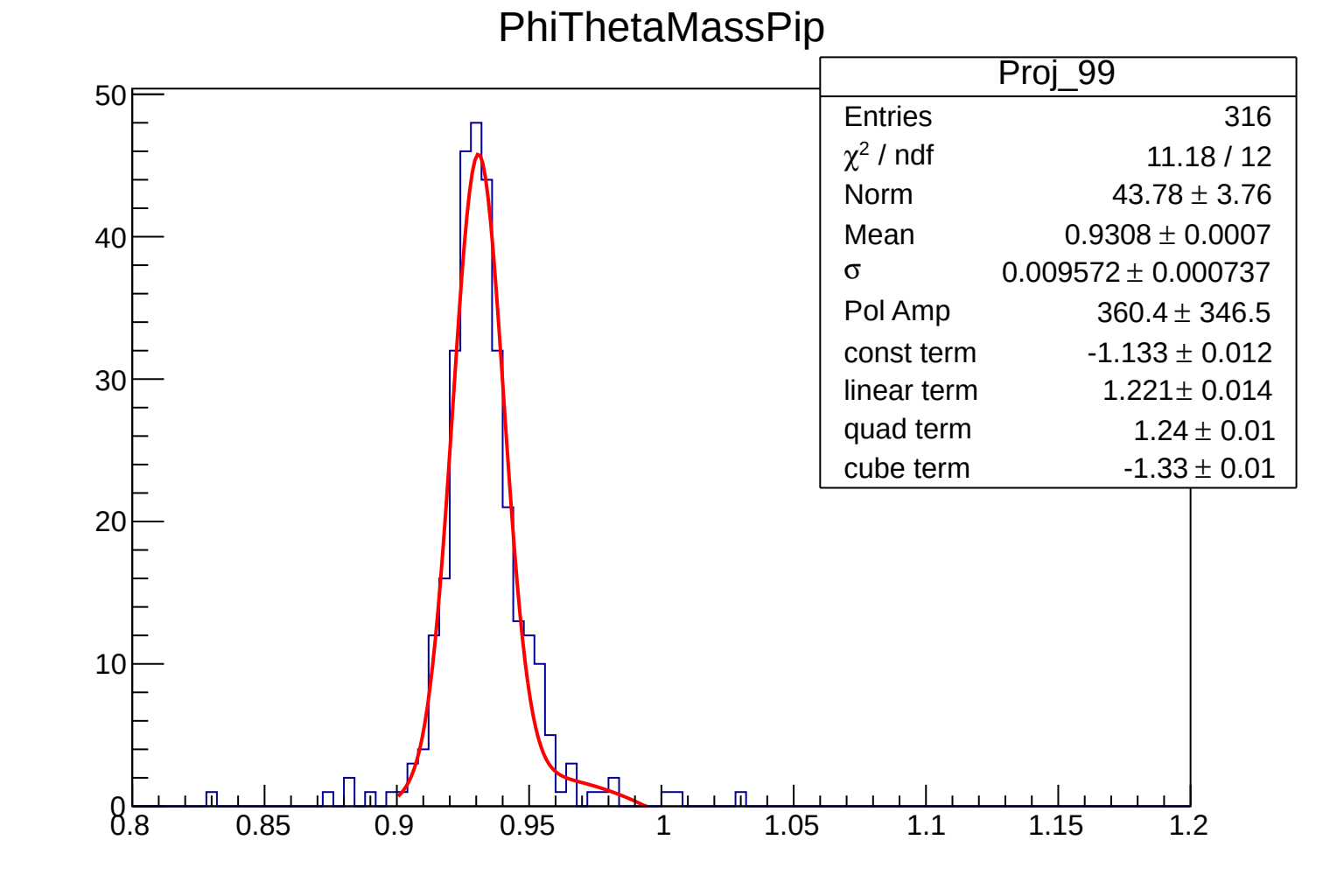
20
25
30
35
40
45
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_97
Entries 367
χ² / ndf 16.14 / 13
Norm 45.29 ± 3.84
Mean 0.9325 ± 0.0008
σ 0.009379 ± 0.000734
Pol Amp 563.8 ± 218.4
const term -1.899 ± 0.009
linear term 2.062 ± 0.010
quad term 2.033 ± 0.011
cube term -2.2 ± 0.0
0
10
20
30
40
50
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_98
Entries 363
χ² / ndf 12.53 / 14
Norm 42.8 ± 3.7
Mean 0.9323 ± 0.0008
σ 0.01016 ± 0.00084
Pol Amp 409.9 ± 201.3
const term -1.685 ± 0.013
linear term 1.841 ± 0.014
quad term 1.78 ± 0.01
cube term -1.936 ± 0.014
0
10
20
30
40
50
60
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_99
Entries 316
χ² / ndf 11.18 / 12
Norm 43.78 ± 3.76
Mean 0.9308 ± 0.0007
σ 0.009572 ± 0.000737
Pol Amp 360.4 ± 346.5
const term -1.133 ± 0.012
linear term 1.221 ± 0.014
quad term 1.24 ± 0.01
cube term -1.33 ± 0.01
50
40
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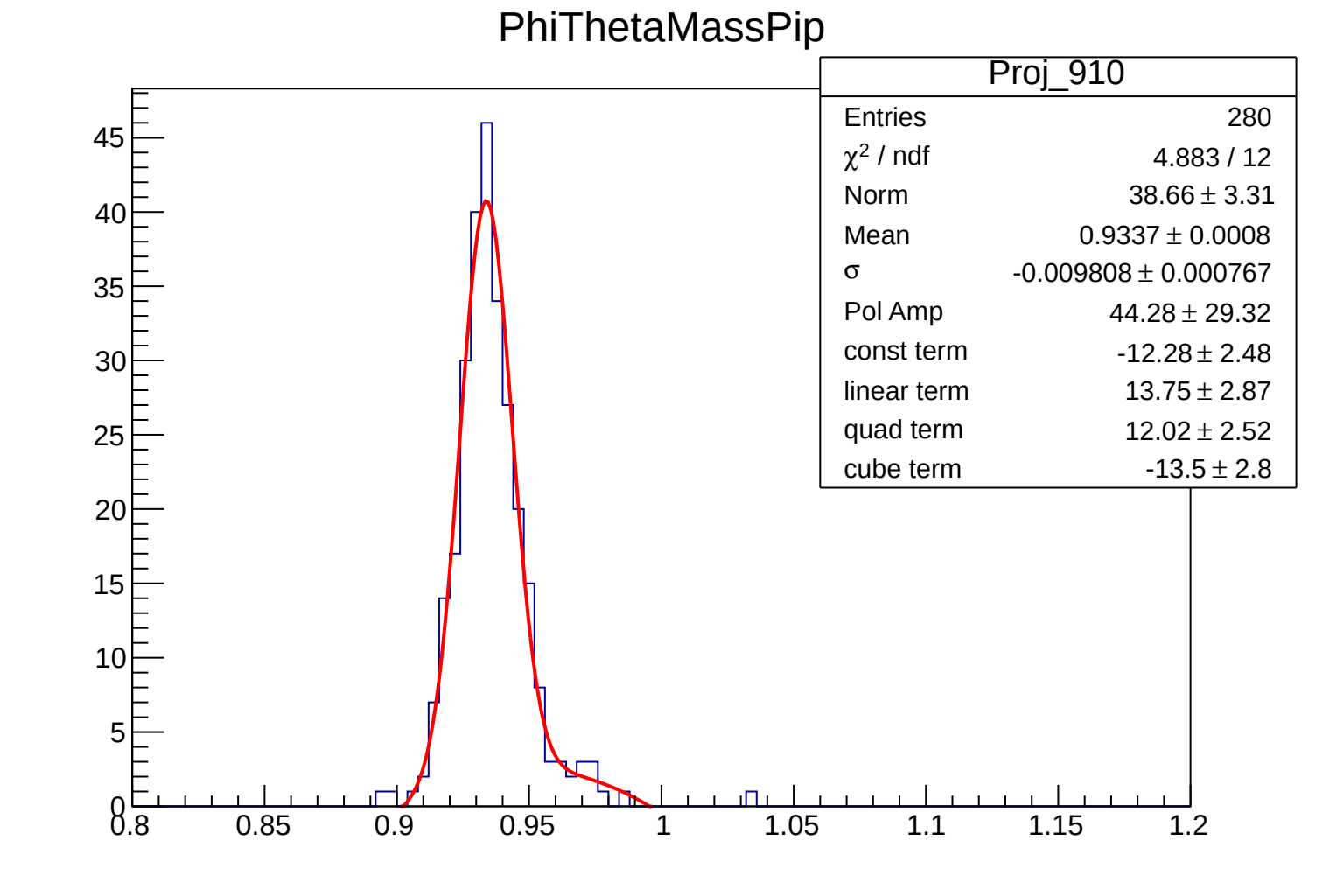
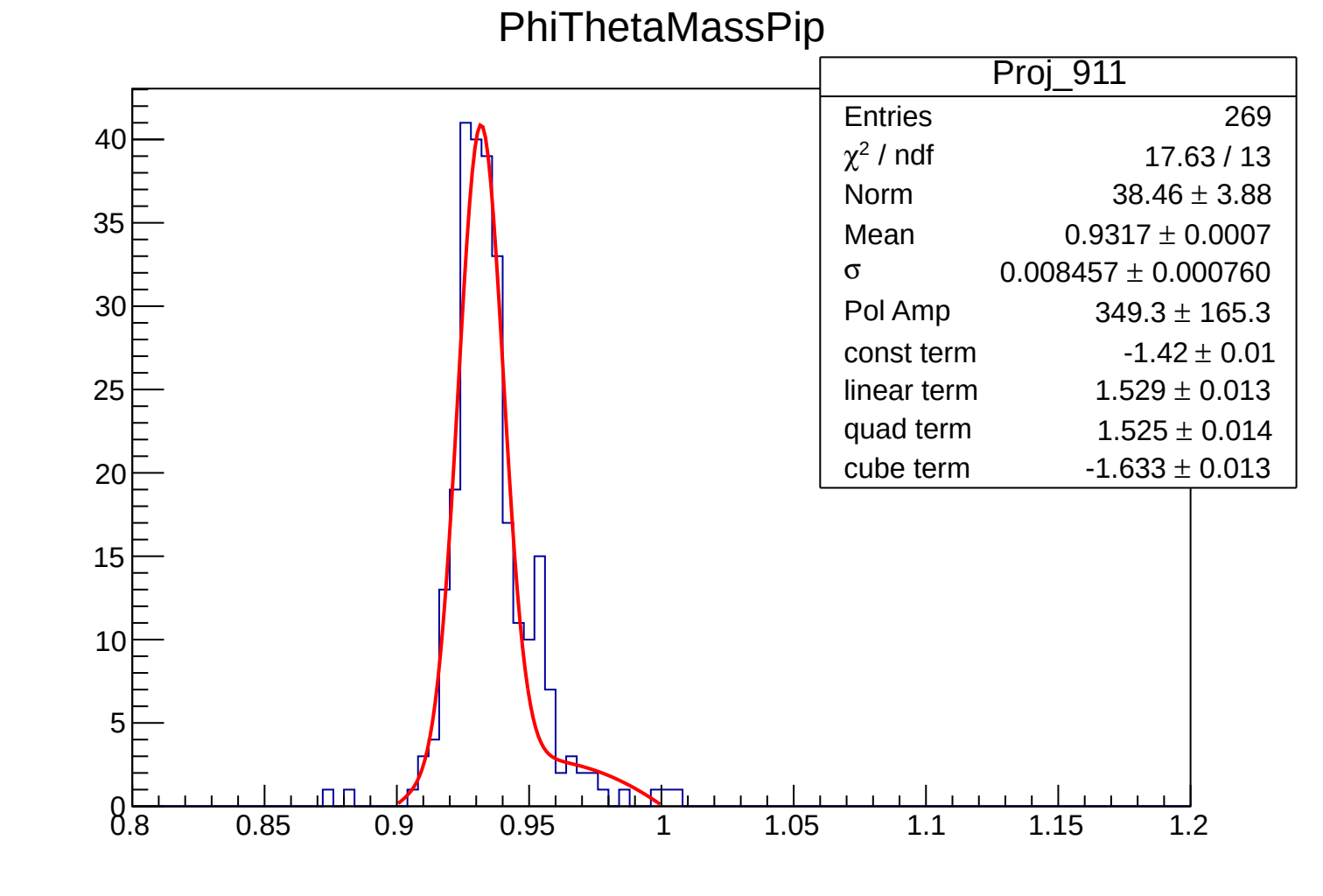
20
10
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_910
Entries 280
χ² / ndf 4.883 / 12
Norm 38.66 ± 3.31
Mean 0.9337 ± 0.0008
σ -0.009808 ± 0.000767
Pol Amp 44.28 ± 29.32
const term -12.28 ± 2.48
linear term 13.75 ± 2.87
quad term 12.02 ± 2.52
cube term -13.5 ± 2.8
0 5 10 15 20 25 30 35 40 45
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2


PhiThetaMassPip
Proj_911
Entries 269
χ² / ndf 17.63 / 13
Norm 38.46 ± 3.88
Mean 0.9317 ± 0.0007
σ 0.008457 ± 0.000760
Pol Amp 349.3 ± 165.3
const term -1.42 ± 0.01
linear term 1.529 ± 0.013
quad term 1.525 ± 0.014
cube term -1.633 ± 0.013
0
5
10
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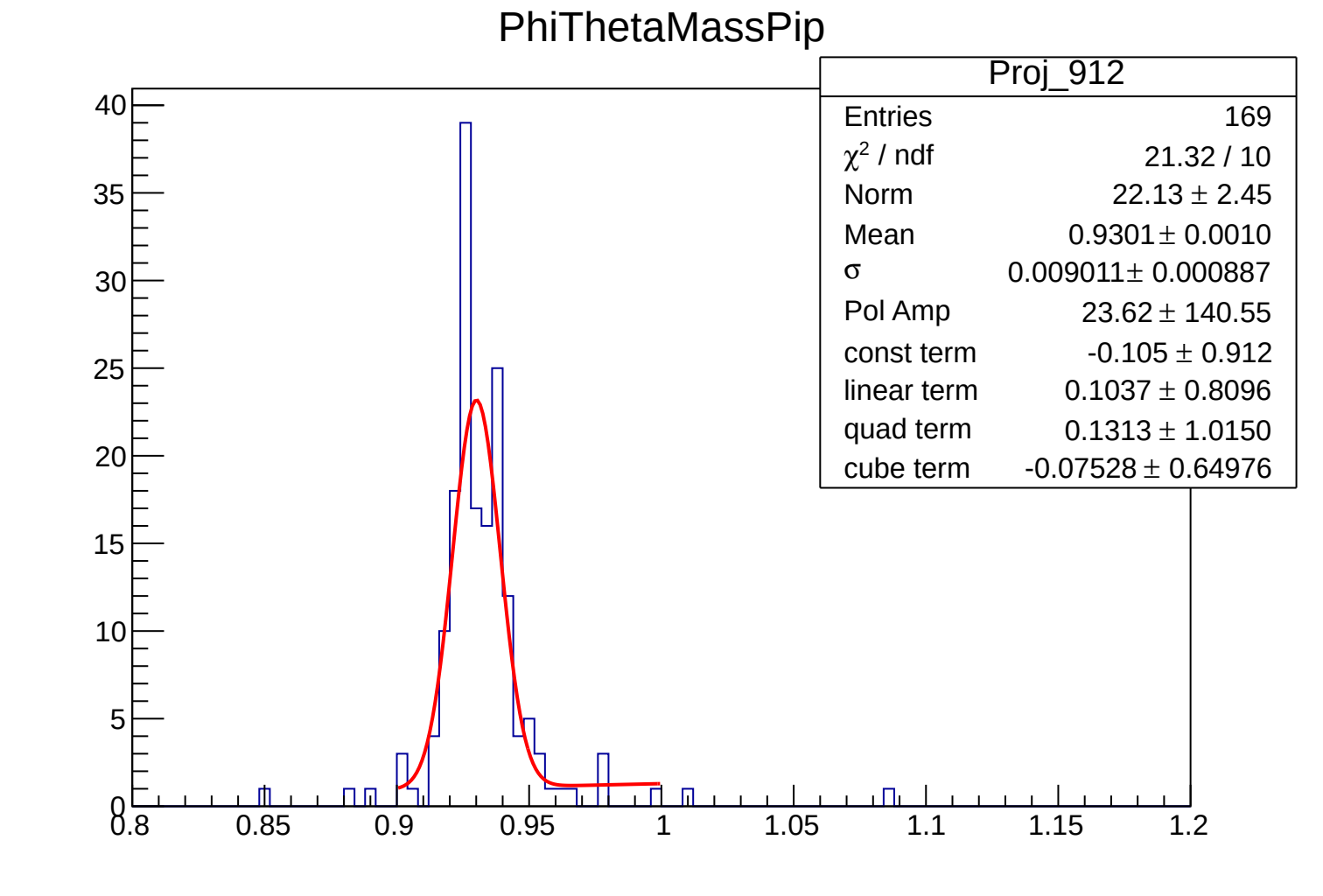
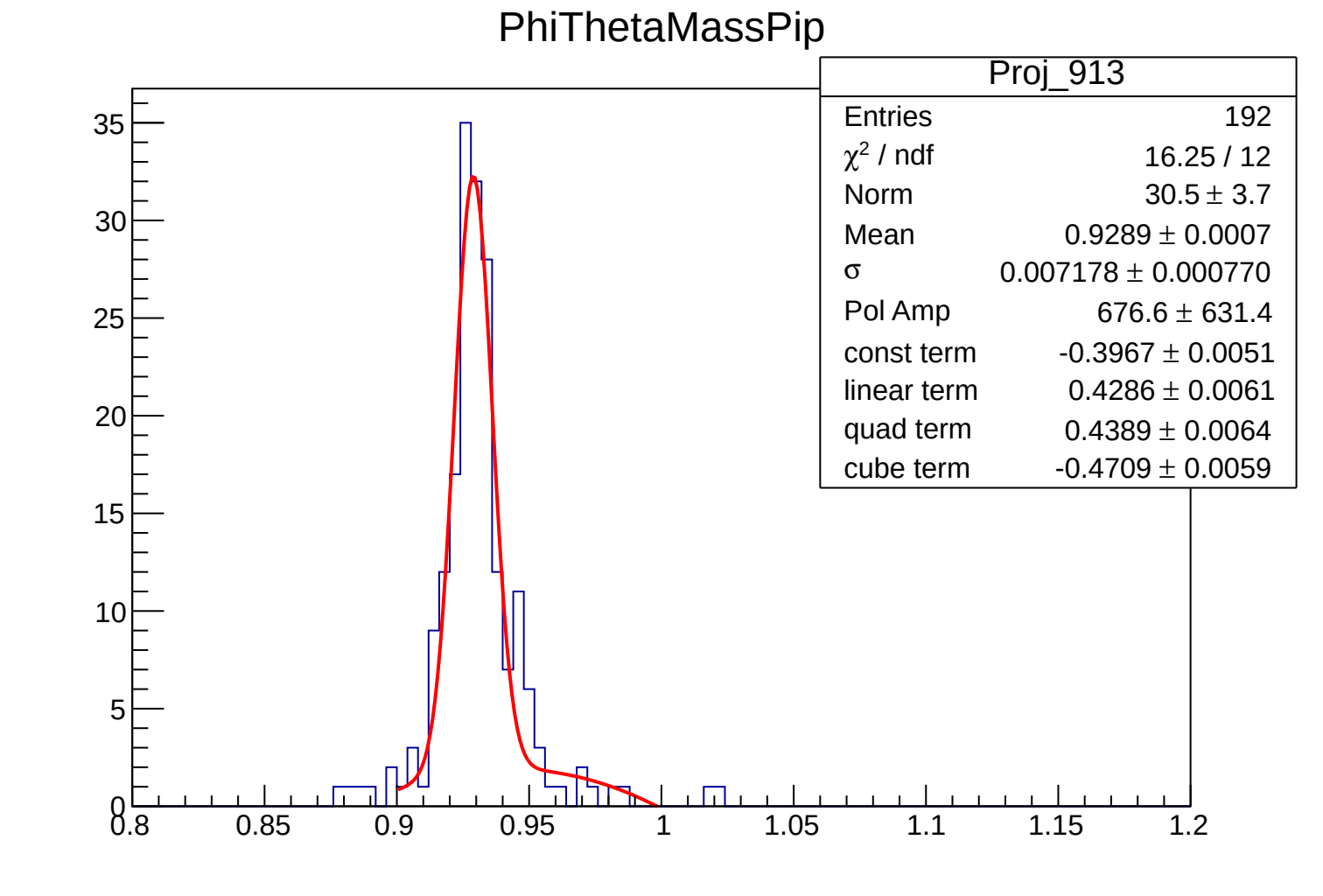
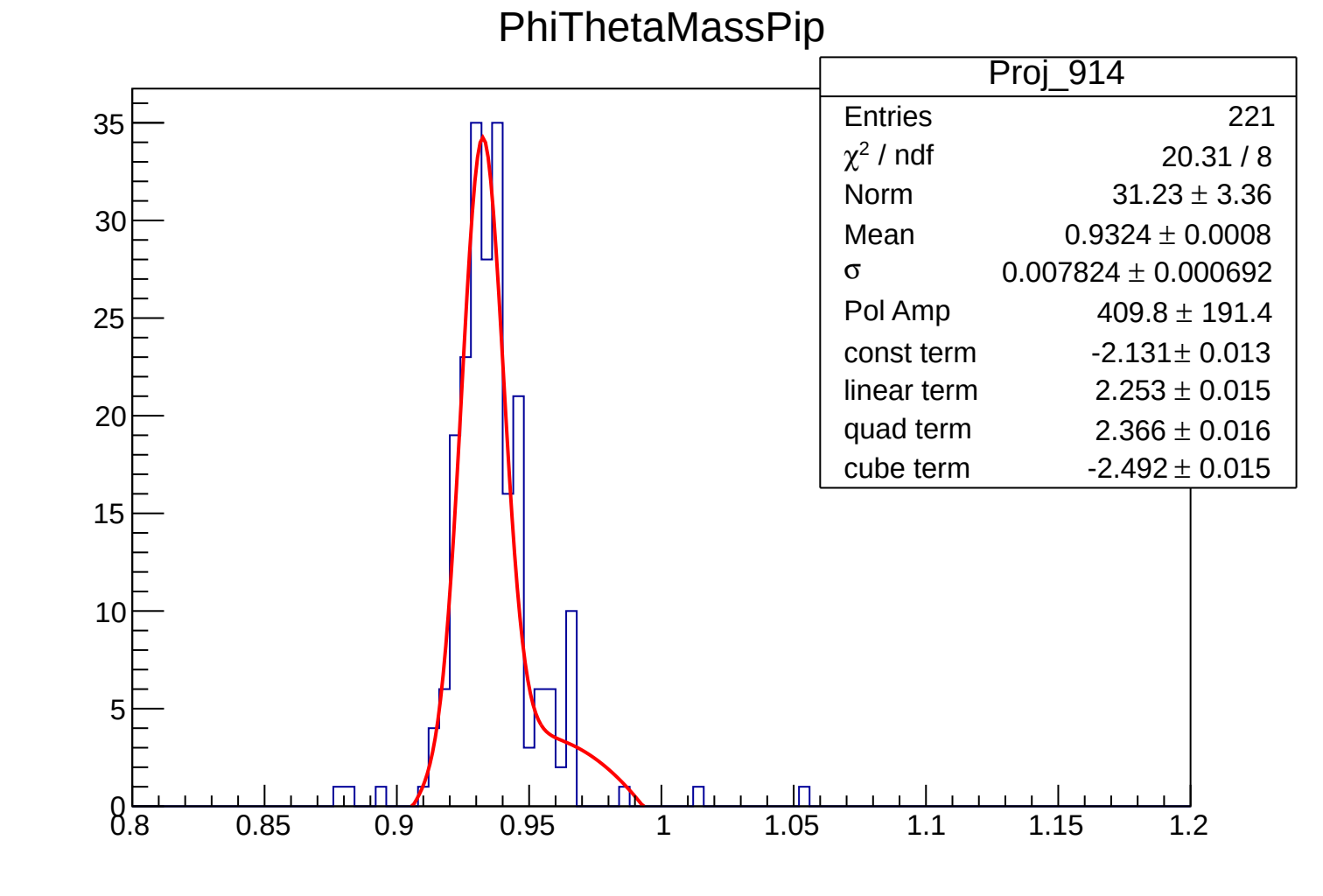
40
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_912
Entries 169
χ² / ndf 21.32 / 10
Norm 22.13 ± 2.45
Mean 0.9301 ± 0.0010
σ 0.009011 ± 0.000887
Pol Amp 23.62 ± 140.55
const term -0.105 ± 0.912
linear term 0.1037 ± 0.8096
quad term 0.1313 ± 1.0150
cube term -0.07528 ± 0.64976
40
35
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_913
Entries 192
χ² / ndf 16.25 / 12
Norm 30.5 ± 3.7
Mean 0.9289 ± 0.0007
σ 0.007178 ± 0.000770
Pol Amp 676.6 ± 631.4
const term -0.3967 ± 0.0051
linear term 0.4286 ± 0.0061
quad term 0.4389 ± 0.0064
cube term -0.4709 ± 0.0059
0
5
10
15
20
25
30
35
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_914
Entries 221
χ² / ndf 20.31 / 8
Norm 31.23 ± 3.36
Mean 0.9324 ± 0.0008
σ 0.007824 ± 0.000692
Pol Amp 409.8 ± 191.4
const term -2.131± 0.013
linear term 2.253 ± 0.015
quad term 2.366 ± 0.016
cube term -2.492 ± 0.015
0
5
10
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20
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30
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0.8
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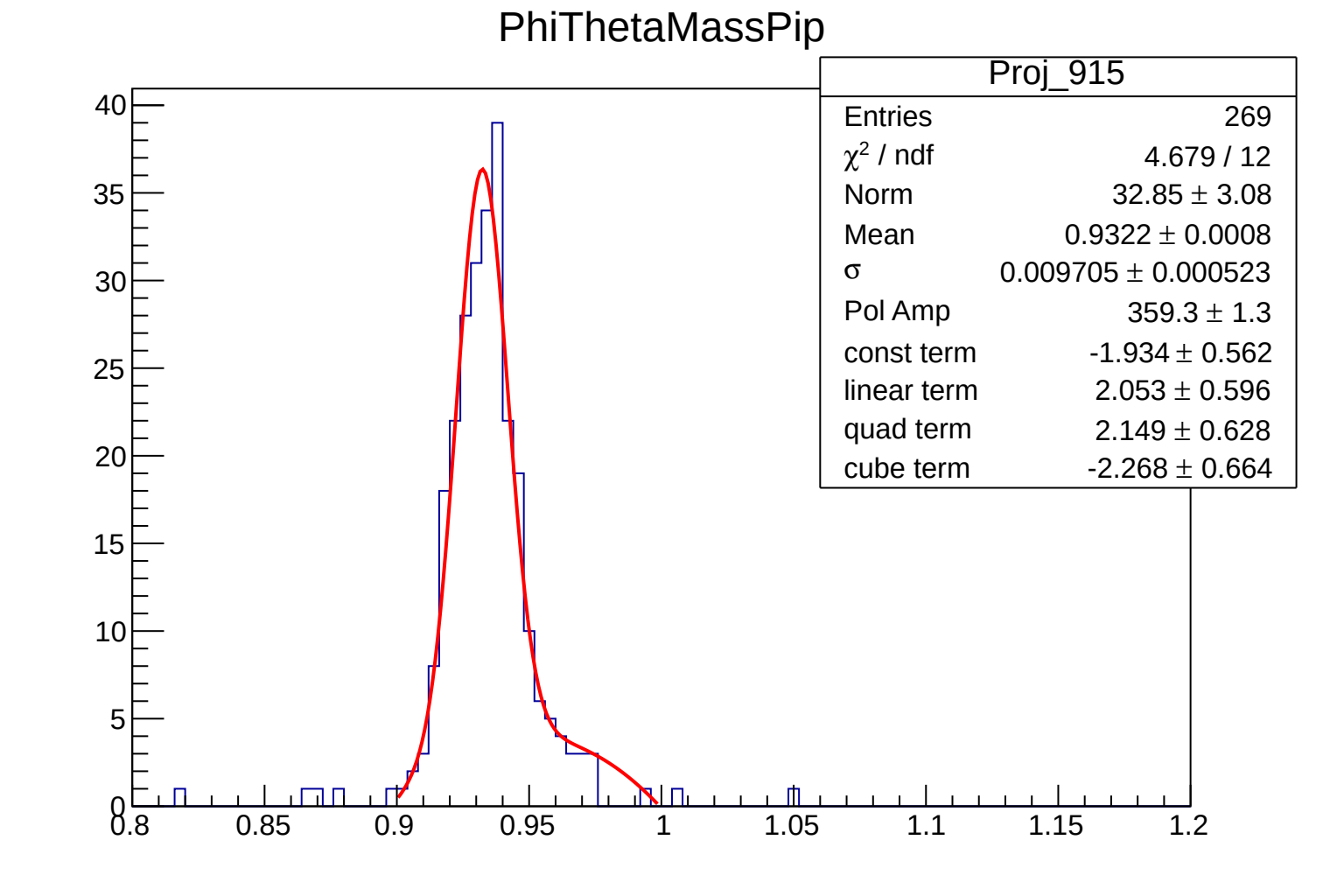
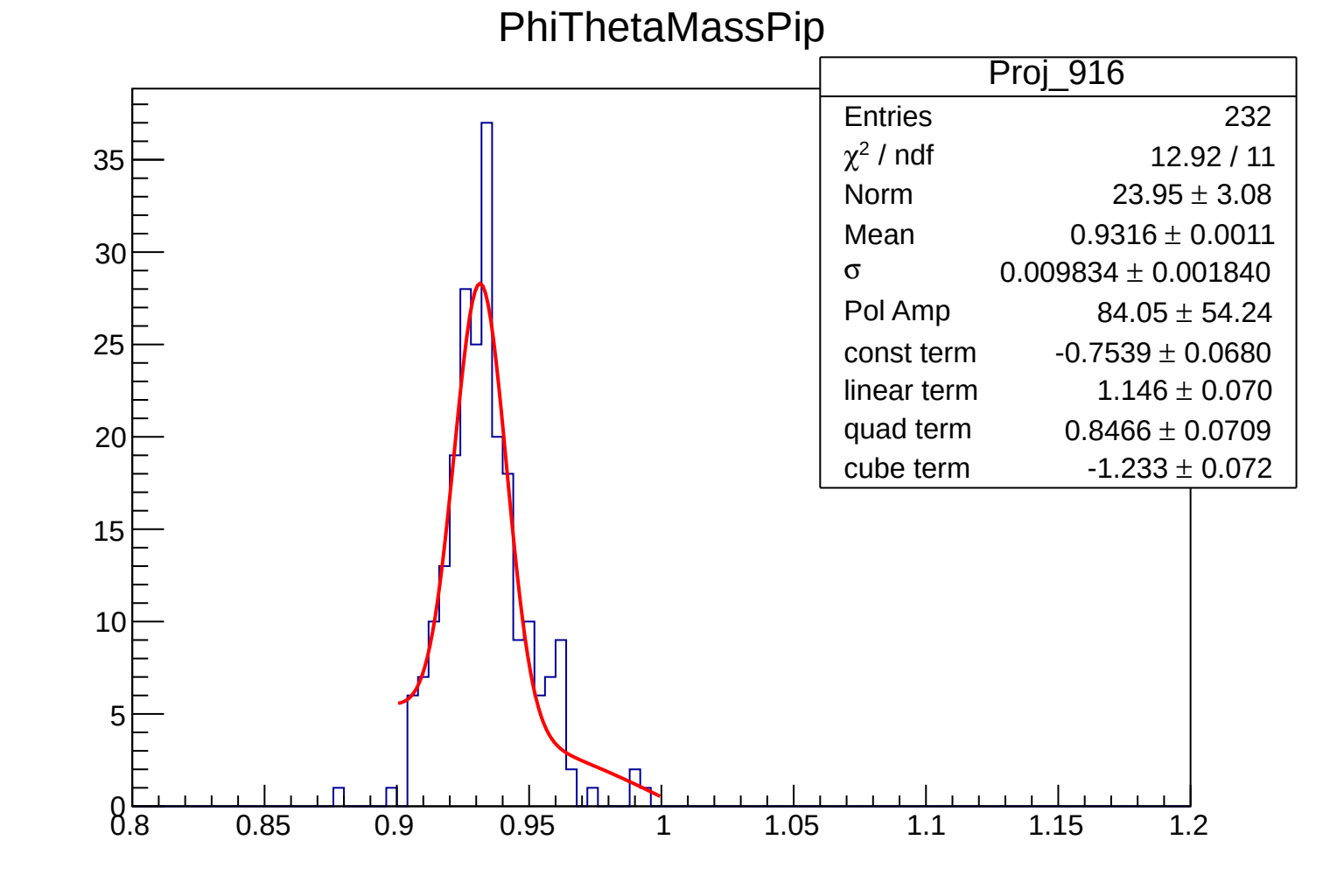
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_915
Entries 269
χ² / ndf 4.679 / 12
Norm 32.85 ± 3.08
Mean 0.9322 ± 0.0008
σ 0.009705 ± 0.000523
Pol Amp 359.3 ± 1.3
const term -1.934 ± 0.562
linear term 2.053 ± 0.596
quad term 2.149 ± 0.628
cube term -2.268 ± 0.664
40
35
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_916
Entries 232
χ² / ndf 12.92 / 11
Norm 23.95 ± 3.08
Mean 0.9316 ± 0.0011
σ 0.009834 ± 0.001840
Pol Amp 84.05 ± 54.24
const term -0.7539 ± 0.0680
linear term 1.146 ± 0.070
quad term 0.8466 ± 0.0709
cube term -1.233 ± 0.072
0
5
10
15
20
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30
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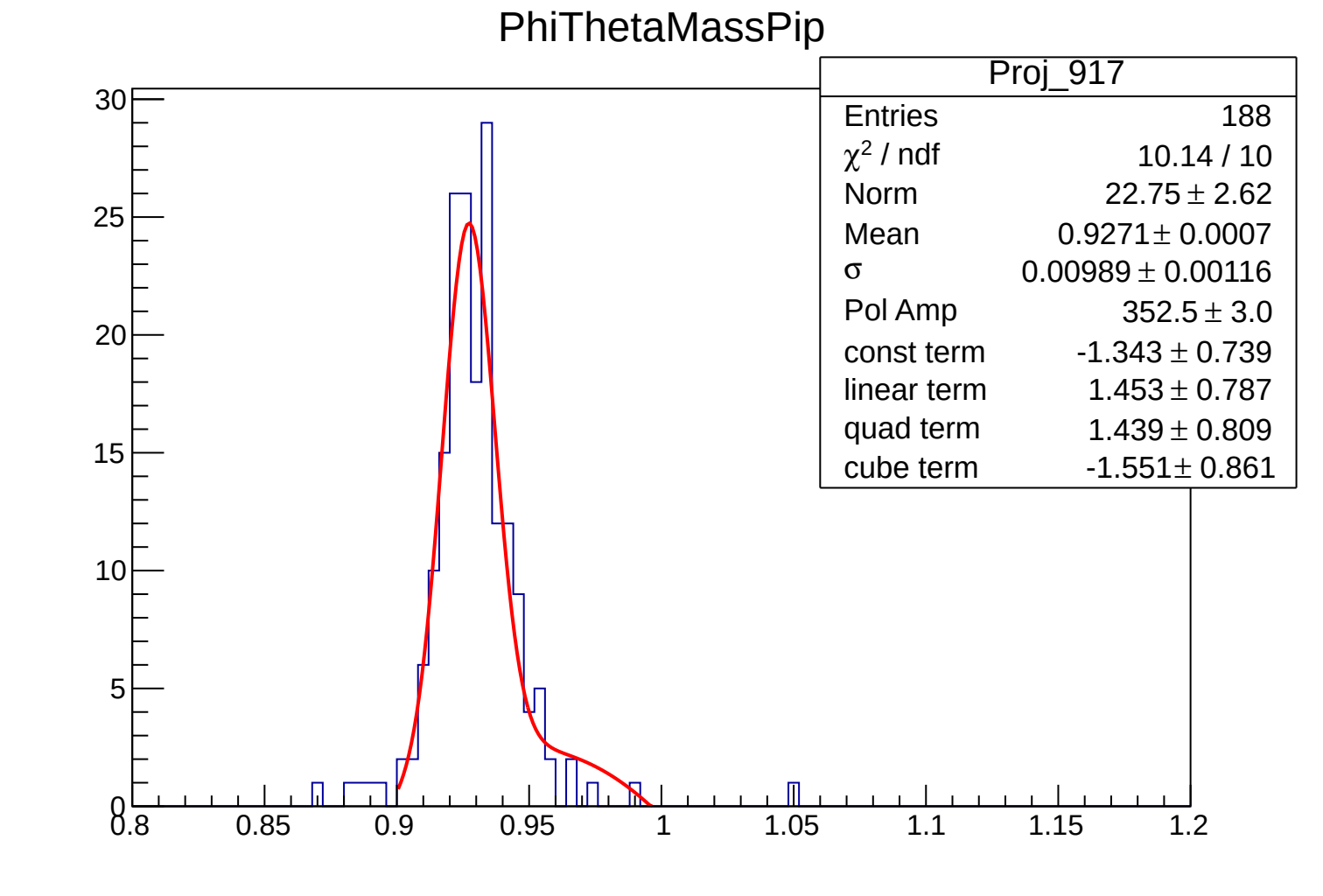
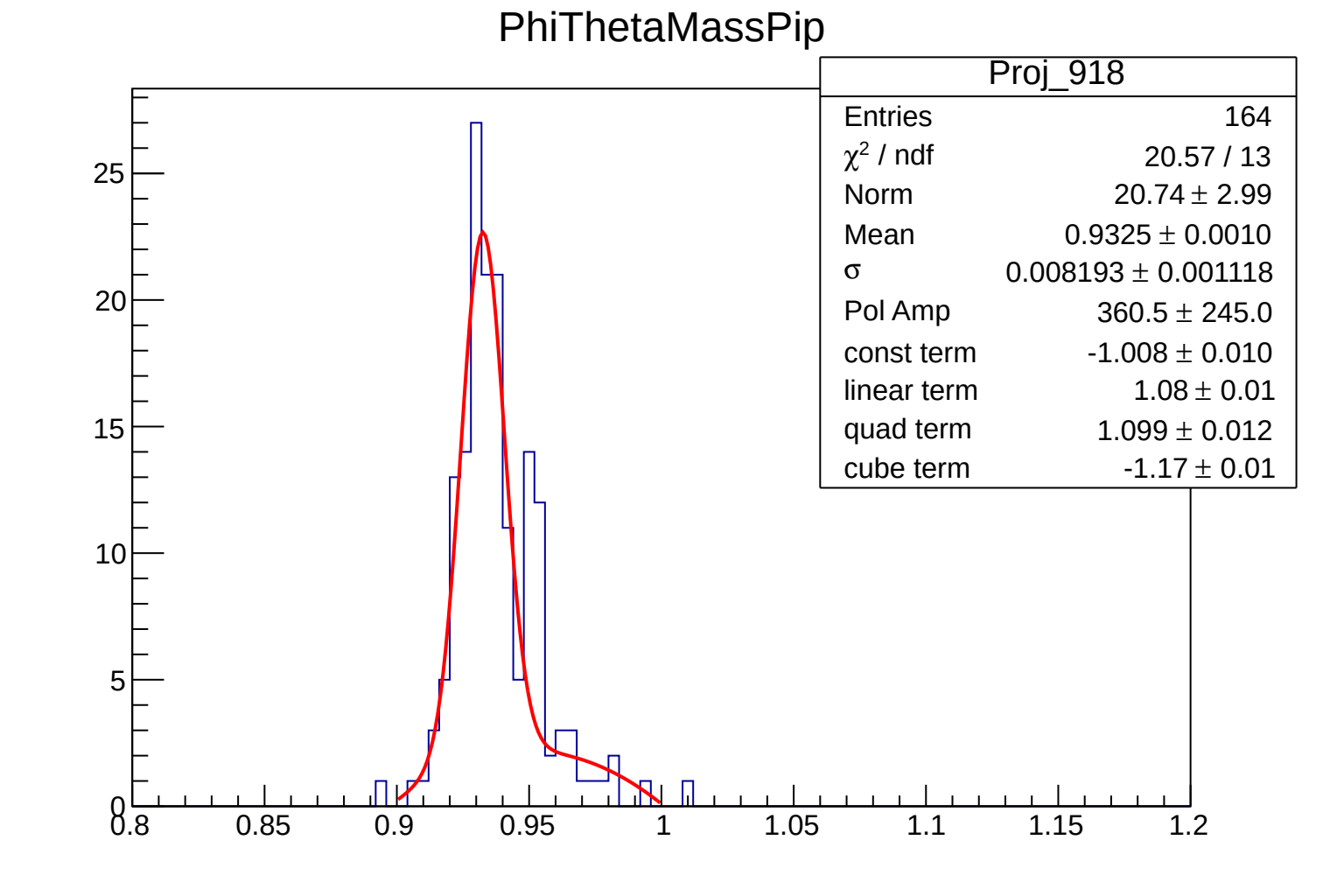
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_917
Entries 188
χ² / ndf 10.14 / 10
Norm 22.75 ± 2.62
Mean 0.9271 ± 0.0007
σ 0.00989 ± 0.00116
Pol Amp 352.5 ± 3.0
const term -1.343 ± 0.739
linear term 1.453 ± 0.787
quad term 1.439 ± 0.809
cube term -1.551 ± 0.861
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_918
Entries 164
χ² / ndf 20.57 / 13
Norm 20.74 ± 2.99
Mean 0.9325 ± 0.0010
σ 0.008193 ± 0.001118
Pol Amp 360.5 ± 245.0
const term -1.008 ± 0.010
linear term 1.08 ± 0.01
quad term 1.099 ± 0.012
cube term -1.17 ± 0.01
0
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0.8
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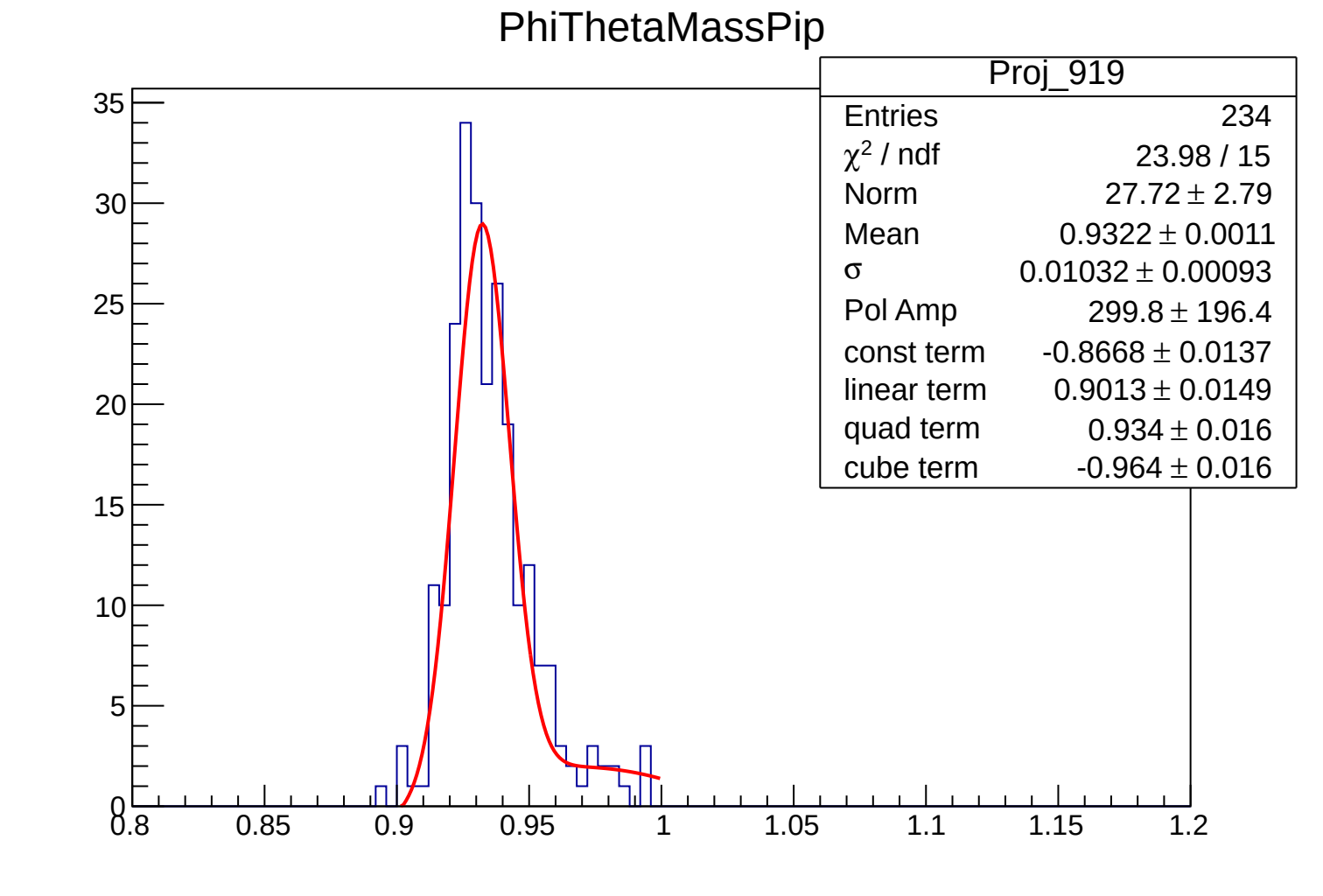
PhiThetaMassPip
Proj_919
Entries 234
χ² / ndf 23.98 / 15
Norm 27.72 ± 2.79
Mean 0.9322 ± 0.0011
σ 0.01032 ± 0.00093
Pol Amp 299.8 ± 196.4
const term -0.8668 ± 0.0137
linear term 0.9013 ± 0.0149
quad term 0.934 ± 0.016
cube term -0.964 ± 0.016
35
30
25
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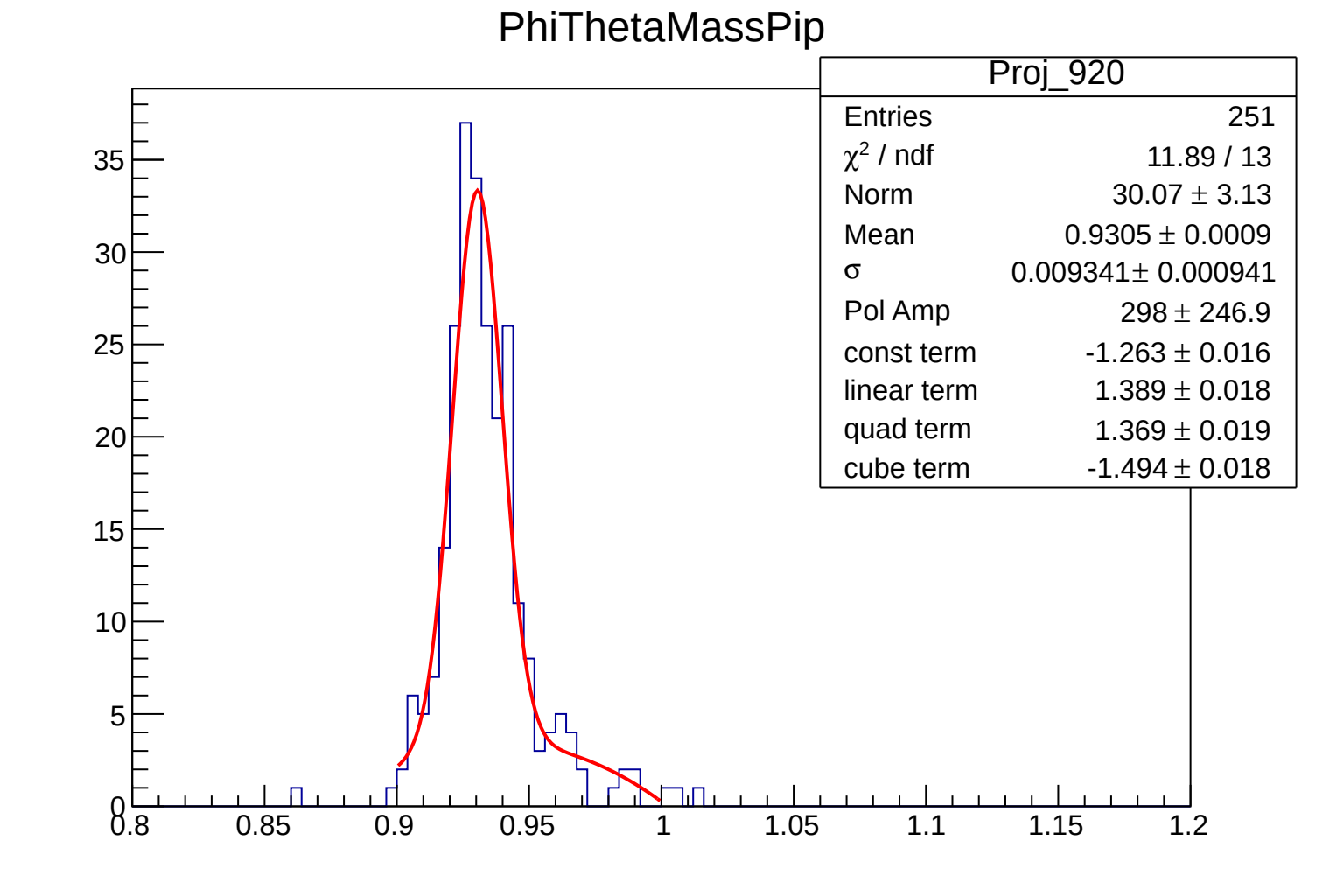
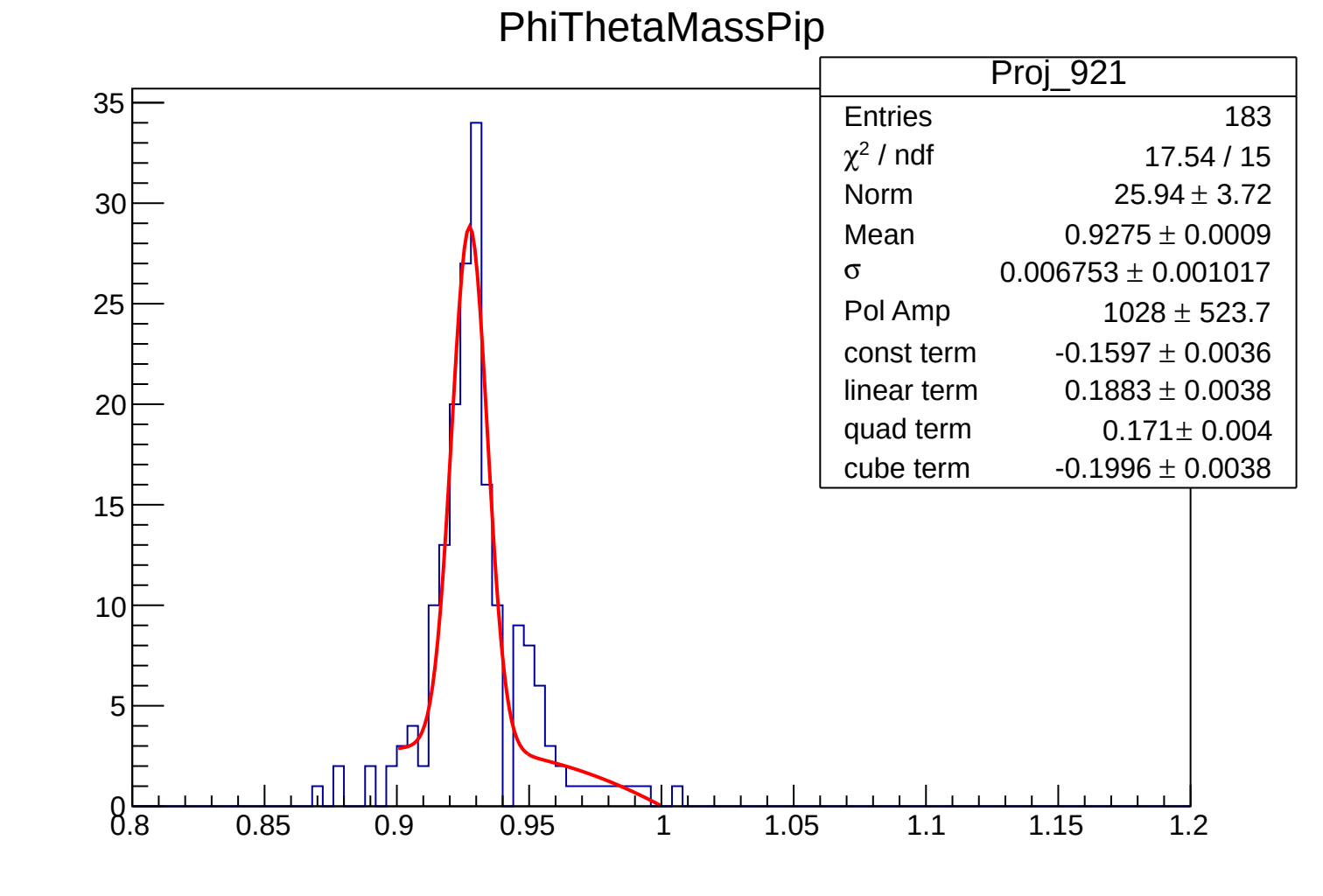
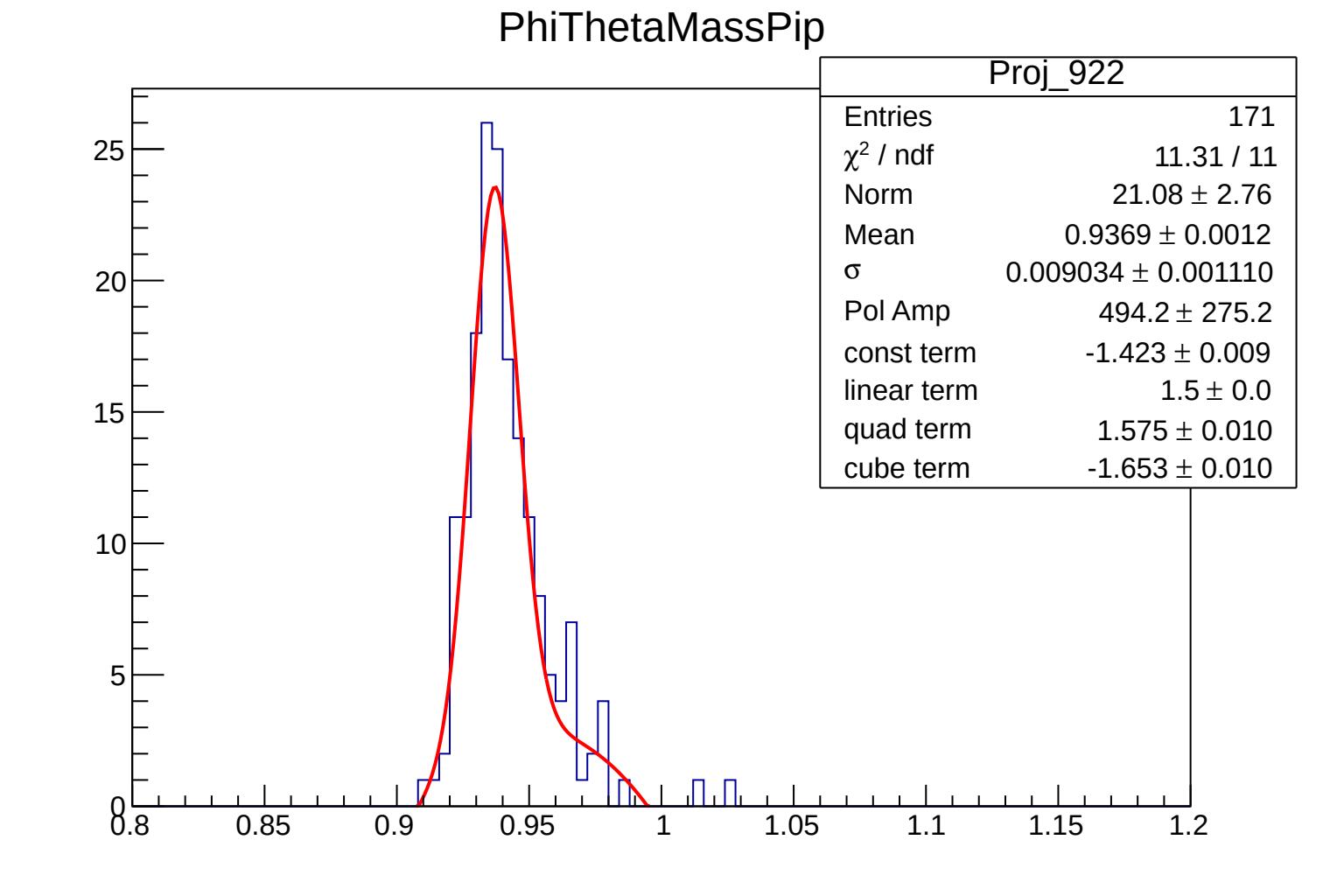
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_920
Entries 251
χ² / ndf 11.89 / 13
Norm 30.07 ± 3.13
Mean 0.9305 ± 0.0009
σ 0.009341± 0.000941
Pol Amp 298 ± 246.9
const term -1.263 ± 0.016
linear term 1.389 ± 0.018
quad term 1.369 ± 0.019
cube term -1.494 ± 0.018
0
5
10
15
20
25
30
35
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_921
Entries 183
χ² / ndf 17.54 / 15
Norm 25.94 ± 3.72
Mean 0.9275 ± 0.0009
σ 0.006753 ± 0.001017
Pol Amp 1028 ± 523.7
const term -0.1597 ± 0.0036
linear term 0.1883 ± 0.0038
quad term 0.171± 0.004
cube term -0.1996 ± 0.0038
35
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_922
Entries 171
χ² / ndf 11.31 / 11
Norm 21.08 ± 2.76
Mean 0.9369 ± 0.0012
σ 0.009034 ± 0.001110
Pol Amp 494.2 ± 275.2
const term -1.423 ± 0.009
linear term 1.5 ± 0.0
quad term 1.575 ± 0.010
cube term -1.653 ± 0.010
25
20
15
10
5
0
0.8
0.85
0.9
0.95
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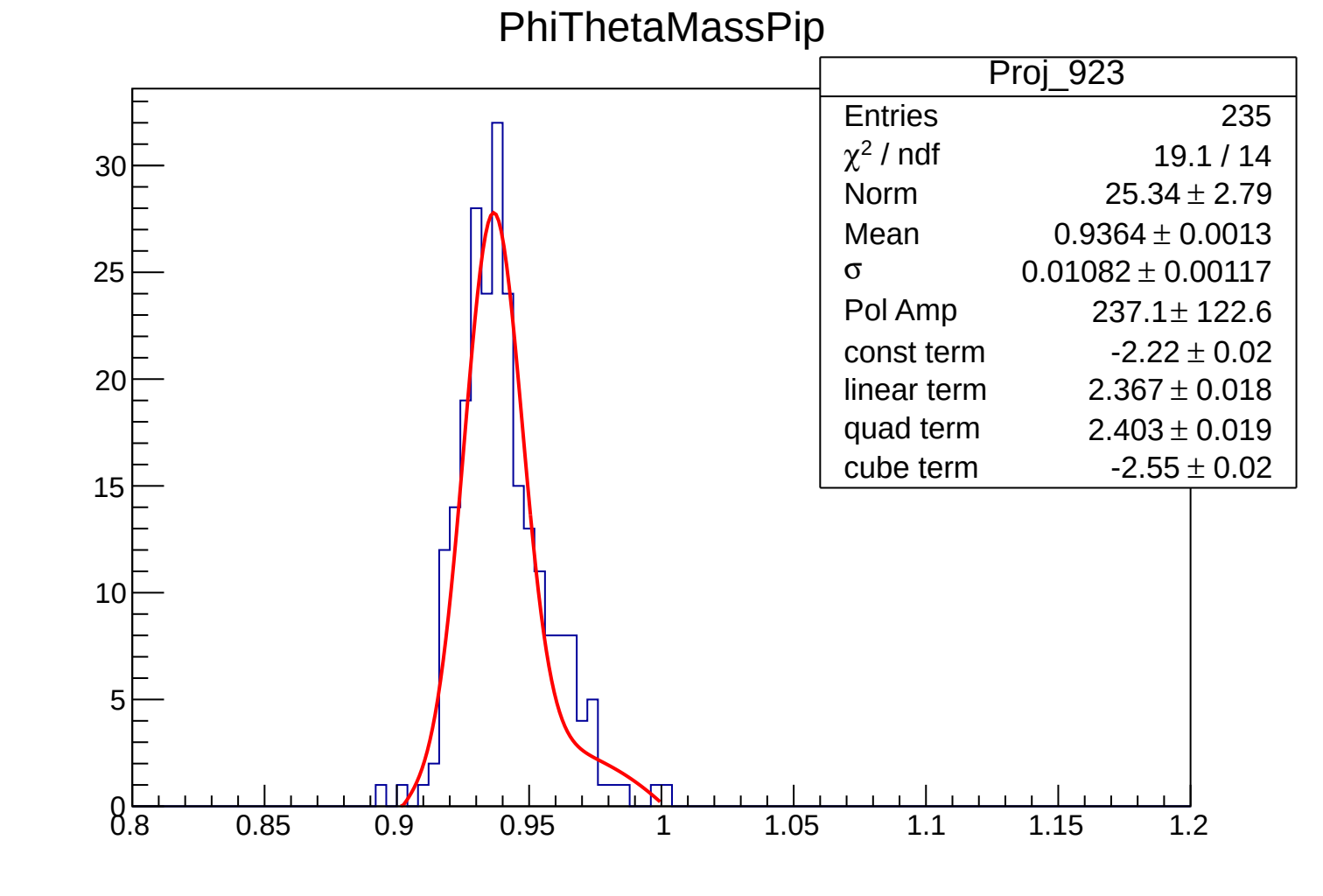
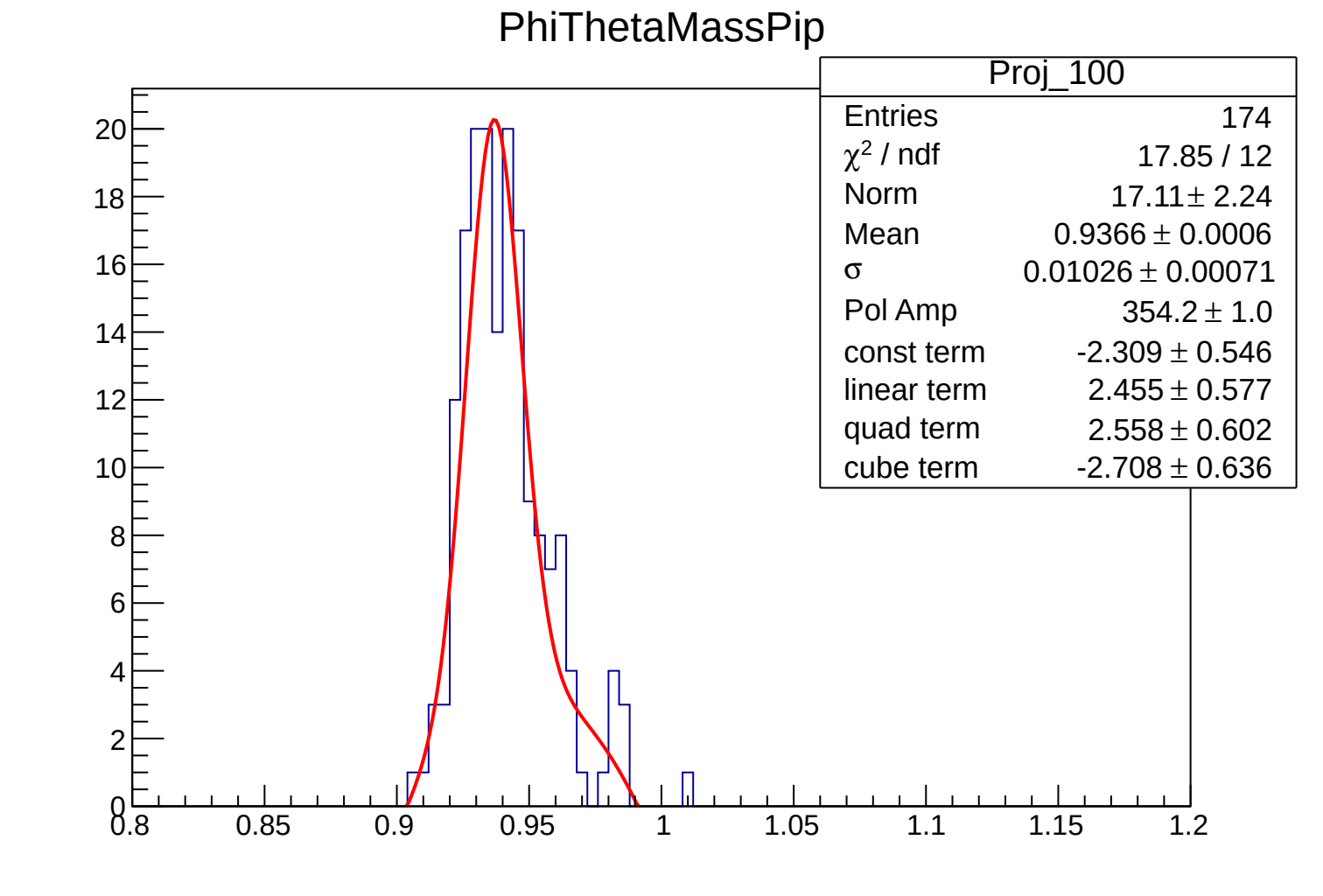
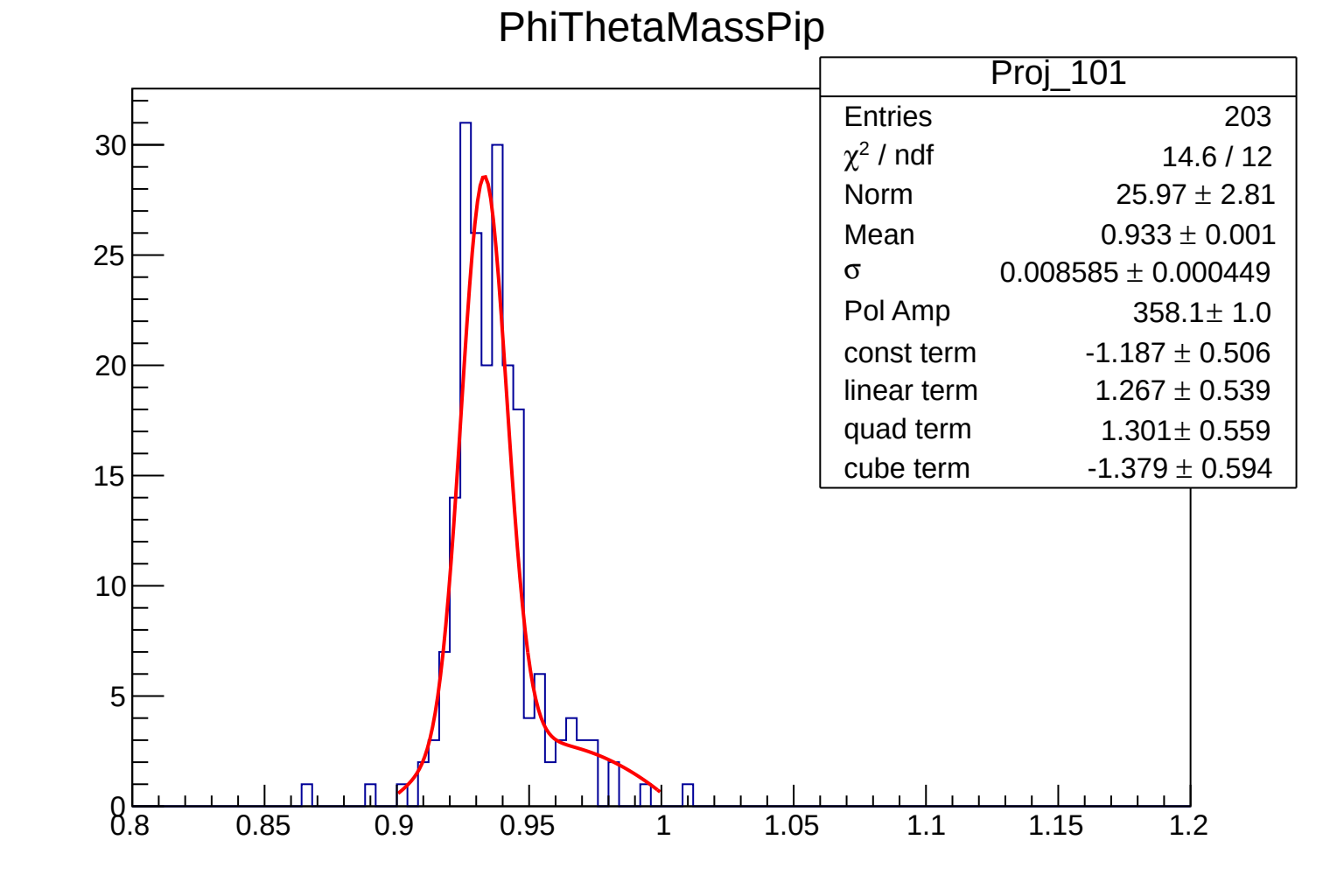
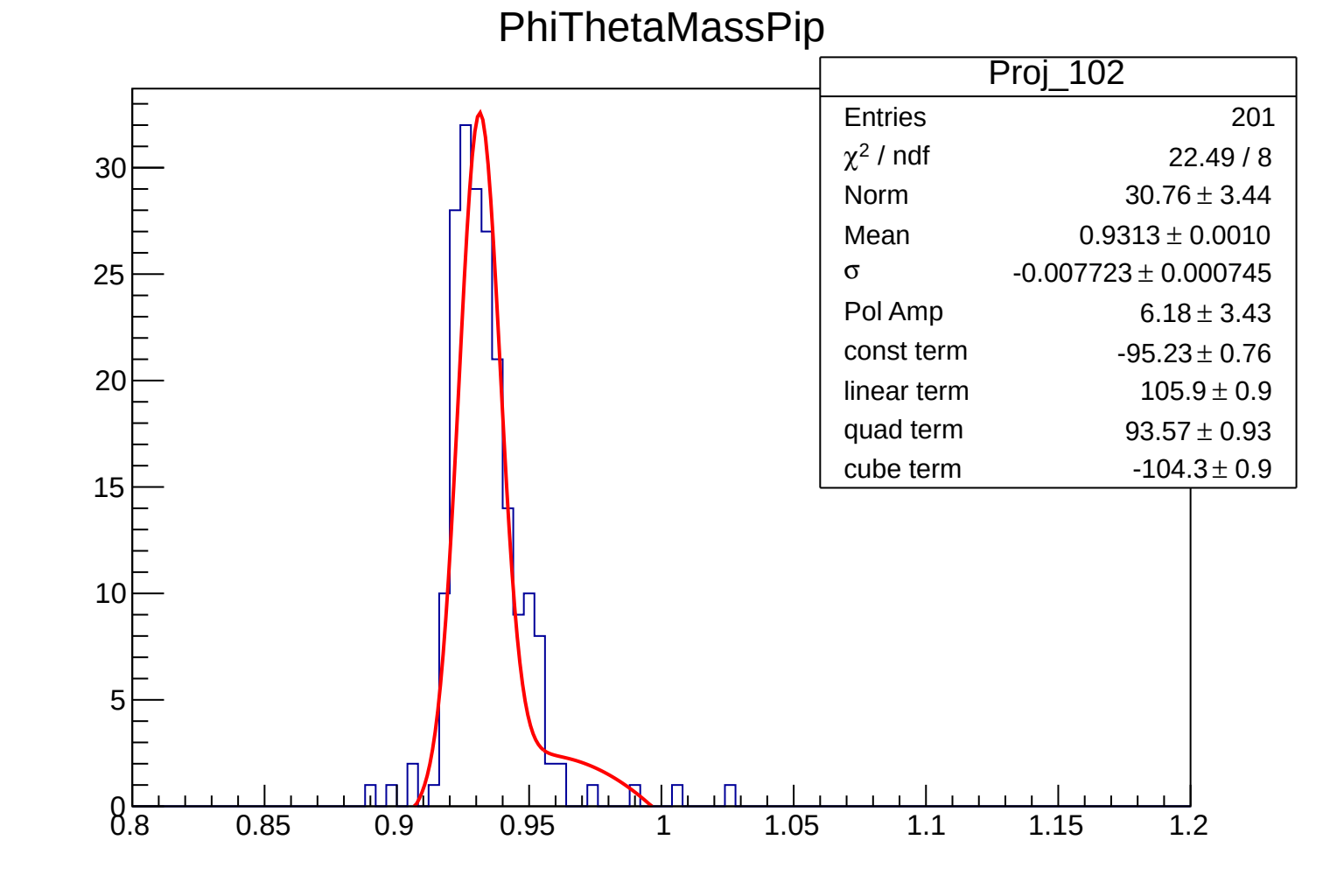
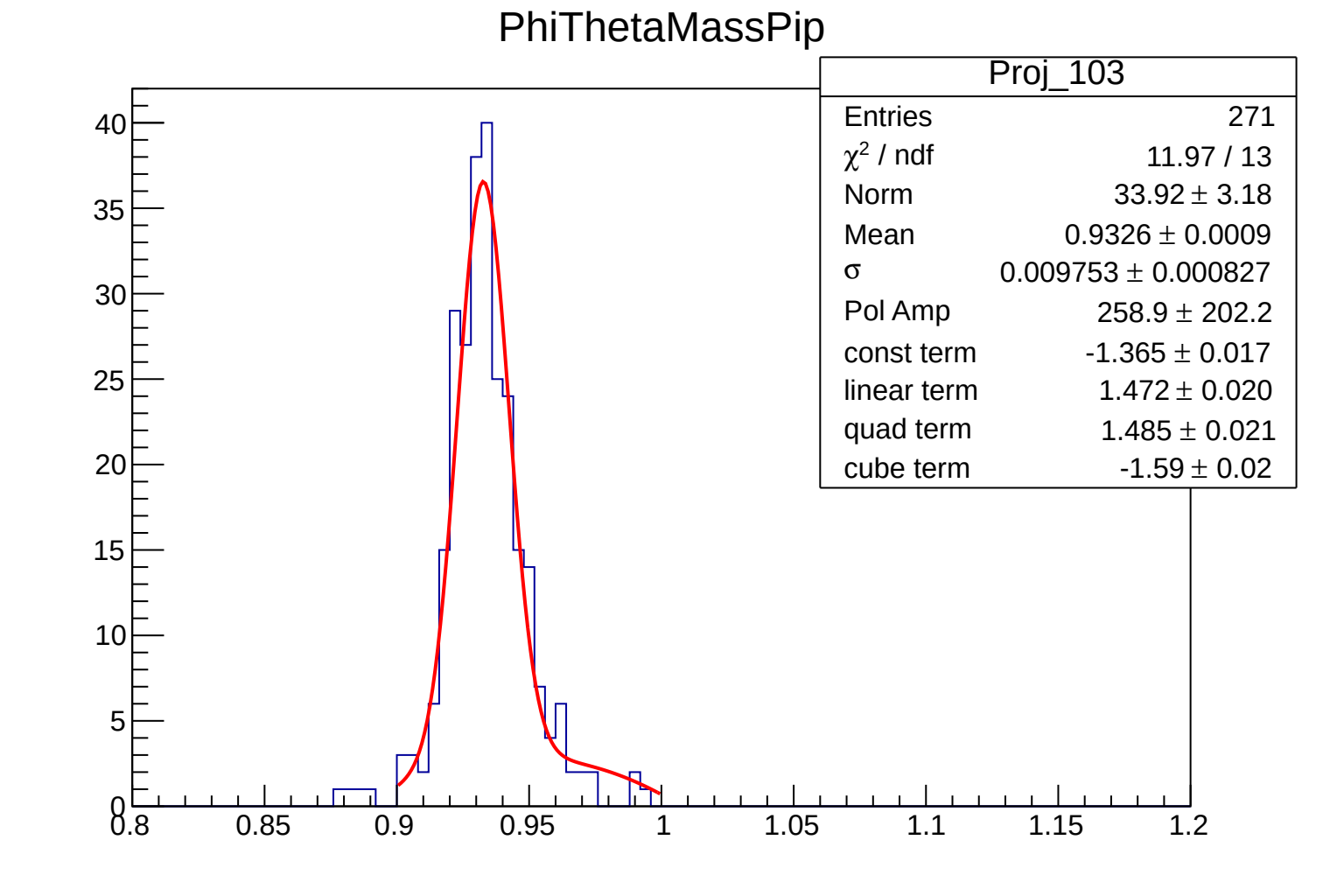
1.15
1.2

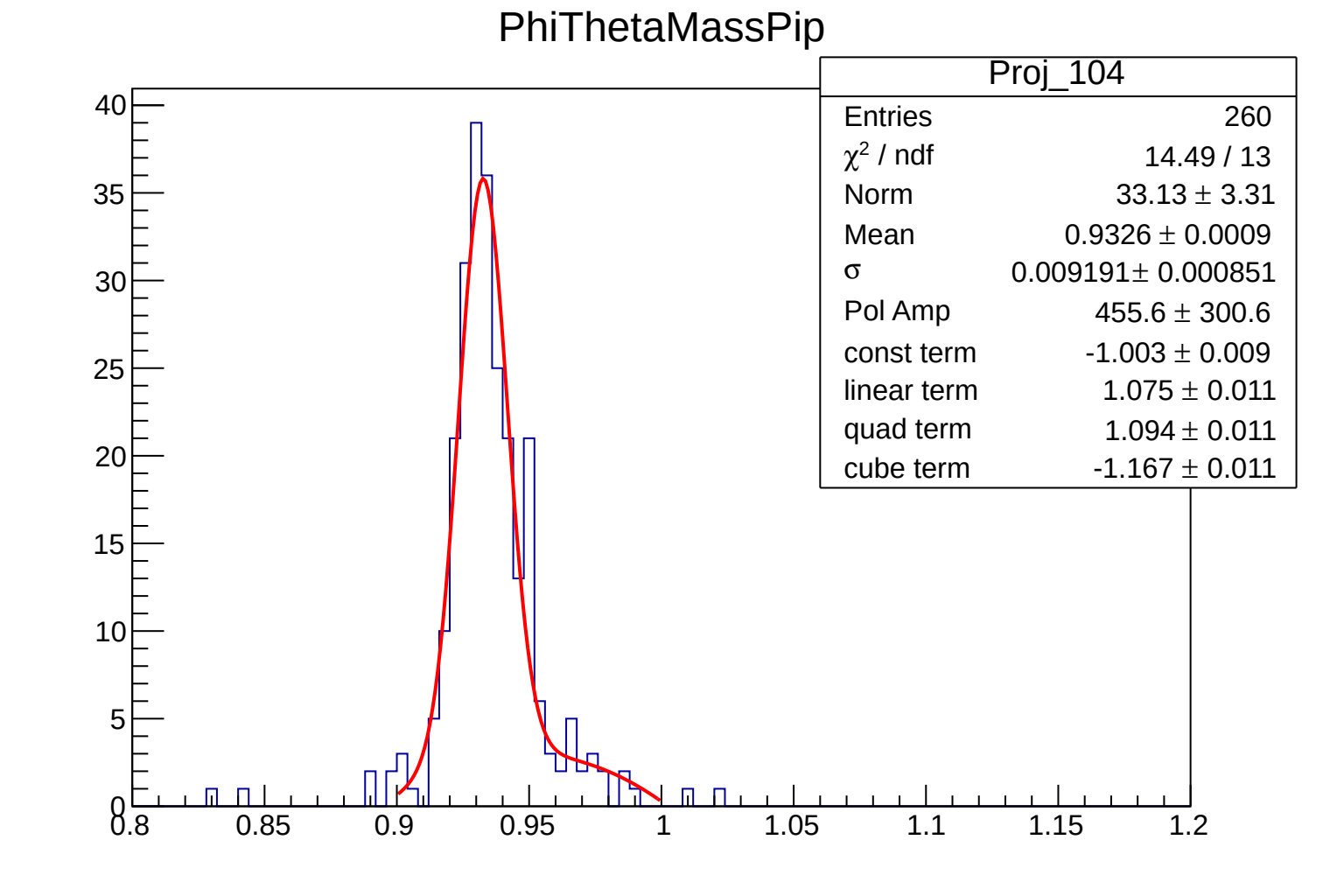

PhiThetaMassPip
Proj_923
Entries 235
χ² / ndf 19.1 / 14
Norm 25.34 ± 2.79
Mean 0.9364 ± 0.0013
σ 0.01082 ± 0.00117
Pol Amp 237.1 ± 122.6
const term -2.22 ± 0.02
linear term 2.367 ± 0.018
quad term 2.403 ± 0.019
cube term -2.55 ± 0.02
0
5
10
15
20
25
30
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

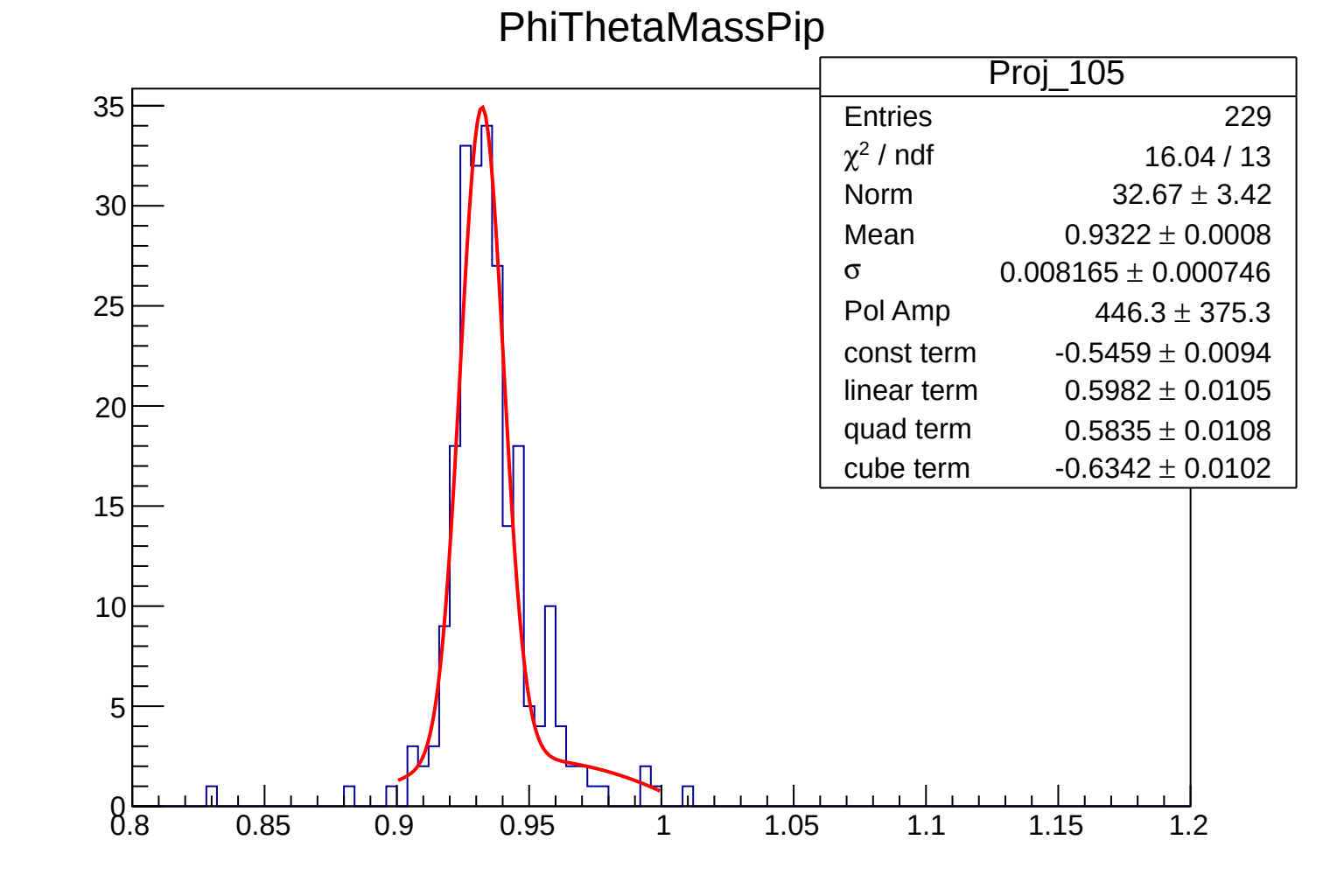

PhiThetaMassPip
Proj_100
Entries 174
χ² / ndf 17.85 / 12
Norm 17.11 ± 2.24
Mean 0.9366 ± 0.0006
σ 0.01026 ± 0.00071
Pol Amp 354.2 ± 1.0
const term -2.309 ± 0.546
linear term 2.455 ± 0.577
quad term 2.558 ± 0.602
cube term -2.708 ± 0.636
0
2
4
6
8
10
12
14
16
18
20
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

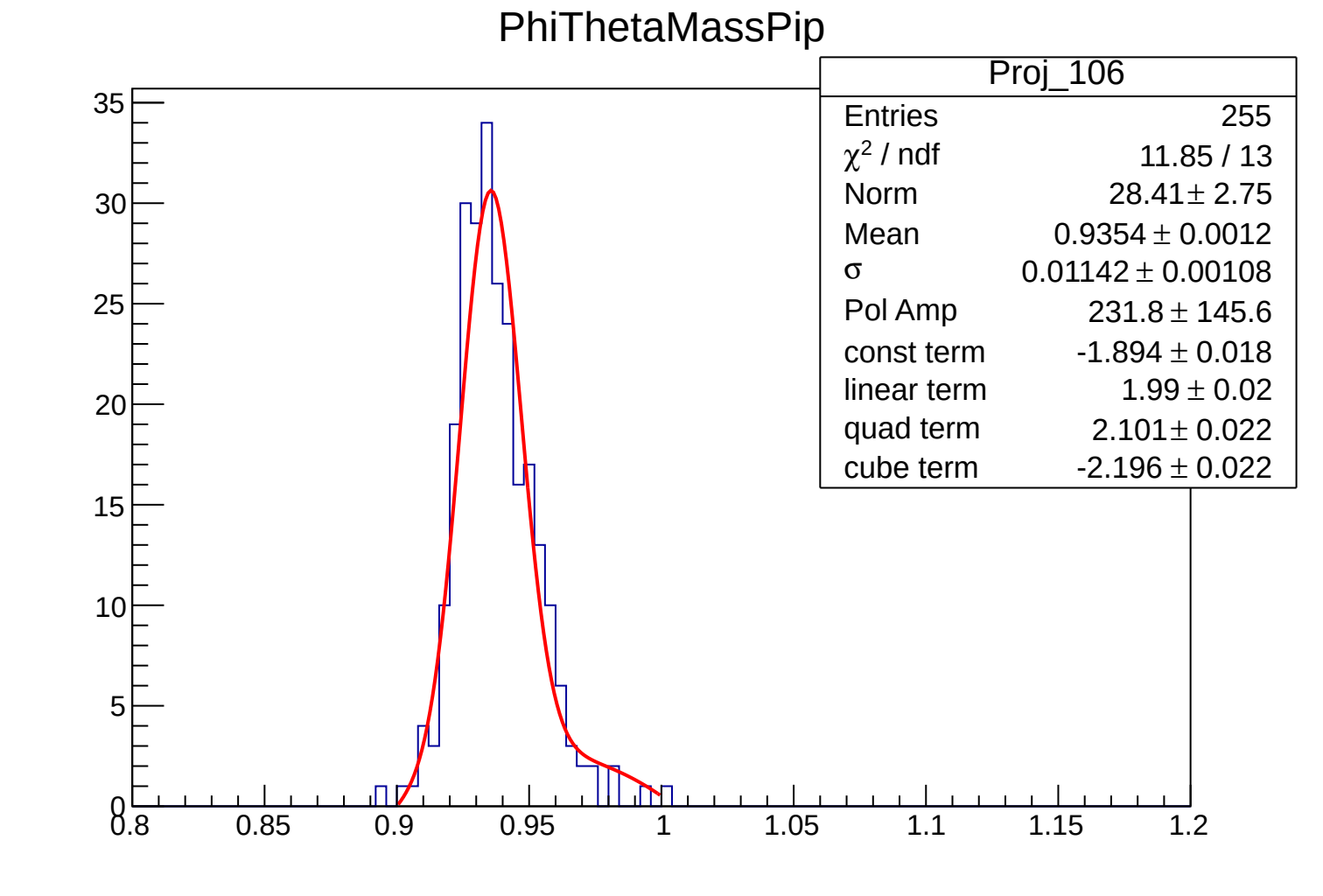

PhiThetaMassPip
Proj_101
Entries 203
χ² / ndf 14.6 / 12
Norm 25.97 ± 2.81
Mean 0.933 ± 0.001
σ 0.008585 ± 0.000449
Pol Amp 358.1± 1.0
const term -1.187 ± 0.506
linear term 1.267 ± 0.539
quad term 1.301± 0.559
cube term -1.379 ± 0.594
0
5
10
15
20
25
30
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

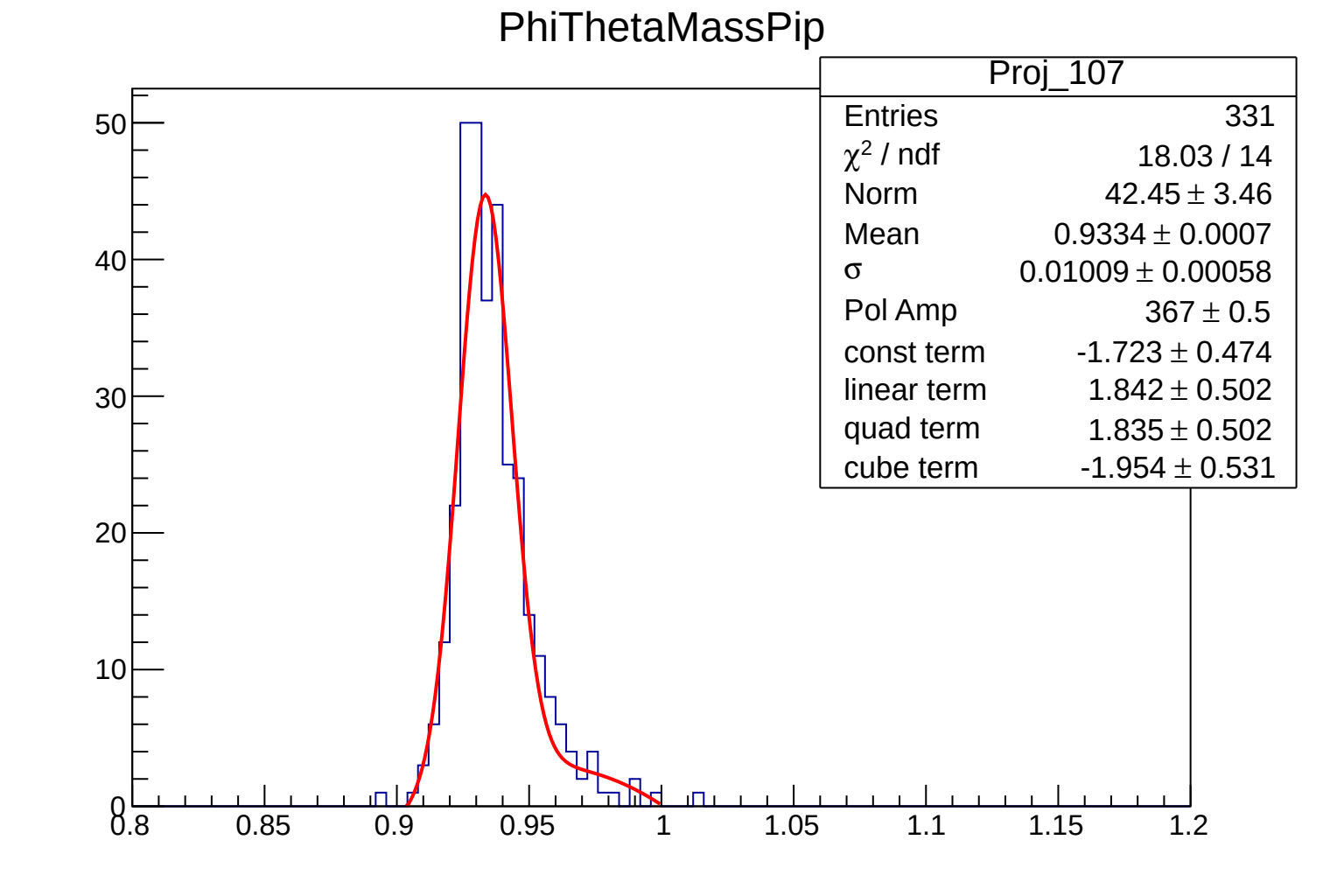

PhiThetaMassPip
Proj_102
Entries 201
χ² / ndf 22.49 / 8
Norm 30.76 ± 3.44
Mean 0.9313 ± 0.0010
σ -0.007723 ± 0.000745
Pol Amp 6.18 ± 3.43
const term -95.23 ± 0.76
linear term 105.9 ± 0.9
quad term 93.57 ± 0.93
cube term -104.3 ± 0.9
0
5
10
15
20
25
30
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

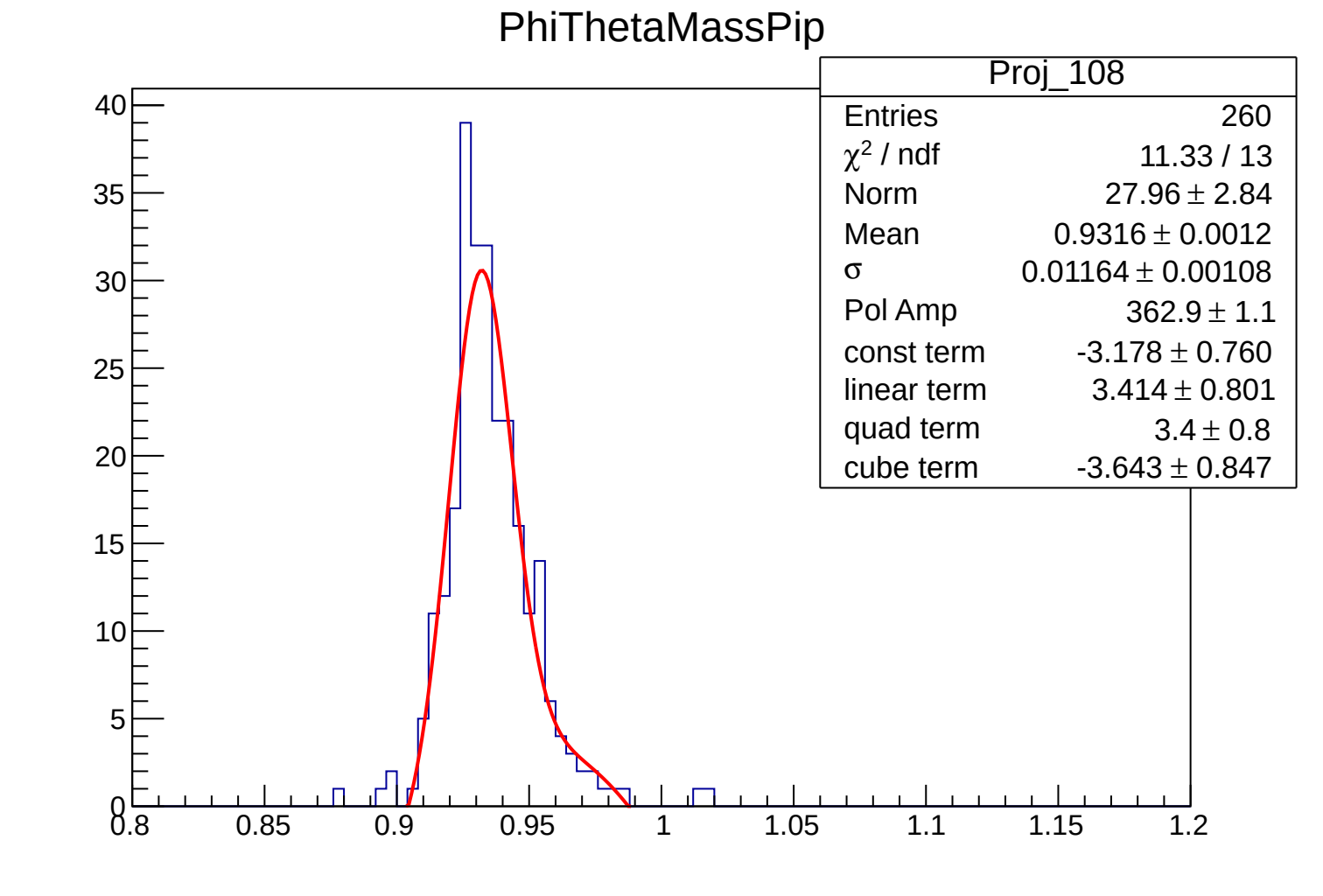

PhiThetaMassPip
Proj_103
Entries 271
χ² / ndf 11.97 / 13
Norm 33.92 ± 3.18
Mean 0.9326 ± 0.0009
σ 0.009753 ± 0.000827
Pol Amp 258.9 ± 202.2
const term -1.365 ± 0.017
linear term 1.472 ± 0.020
quad term 1.485 ± 0.021
cube term -1.59 ± 0.02
0
5
10
15
20
25
30
35
40
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_104
Entries 260
χ² / ndf 14.49 / 13
Norm 33.13 ± 3.31
Mean 0.9326 ± 0.0009
σ 0.009191± 0.000851
Pol Amp 455.6 ± 300.6
const term -1.003 ± 0.009
linear term 1.075 ± 0.011
quad term 1.094 ± 0.011
cube term -1.167 ± 0.011
0
5
10
15
20
25
30
35
40
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_105
Entries 229
χ² / ndf 16.04 / 13
Norm 32.67 ± 3.42
Mean 0.9322 ± 0.0008
σ 0.008165 ± 0.000746
Pol Amp 446.3 ± 375.3
const term -0.5459 ± 0.0094
linear term 0.5982 ± 0.0105
quad term 0.5835 ± 0.0108
cube term -0.6342 ± 0.0102
0
5
10
15
20
25
30
35
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_106
Entries 255
χ² / ndf 11.85 / 13
Norm 28.41 ± 2.75
Mean 0.9354 ± 0.0012
σ 0.01142 ± 0.00108
Pol Amp 231.8 ± 145.6
const term -1.894 ± 0.018
linear term 1.99 ± 0.02
quad term 2.101 ± 0.022
cube term -2.196 ± 0.022
35
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_107
Entries 331
χ² / ndf 18.03 / 14
Norm 42.45 ± 3.46
Mean 0.9334 ± 0.0007
σ 0.01009 ± 0.00058
Pol Amp 367 ± 0.5
const term -1.723 ± 0.474
linear term 1.842 ± 0.502
quad term 1.835 ± 0.502
cube term -1.954 ± 0.531
50
40
30
20
10
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_108
Entries 260
χ² / ndf 11.33 / 13
Norm 27.96 ± 2.84
Mean 0.9316 ± 0.0012
σ 0.01164 ± 0.00108
Pol Amp 362.9 ± 1.1
const term -3.178 ± 0.760
linear term 3.414 ± 0.801
quad term 3.4 ± 0.8
cube term -3.643 ± 0.847
40
35
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
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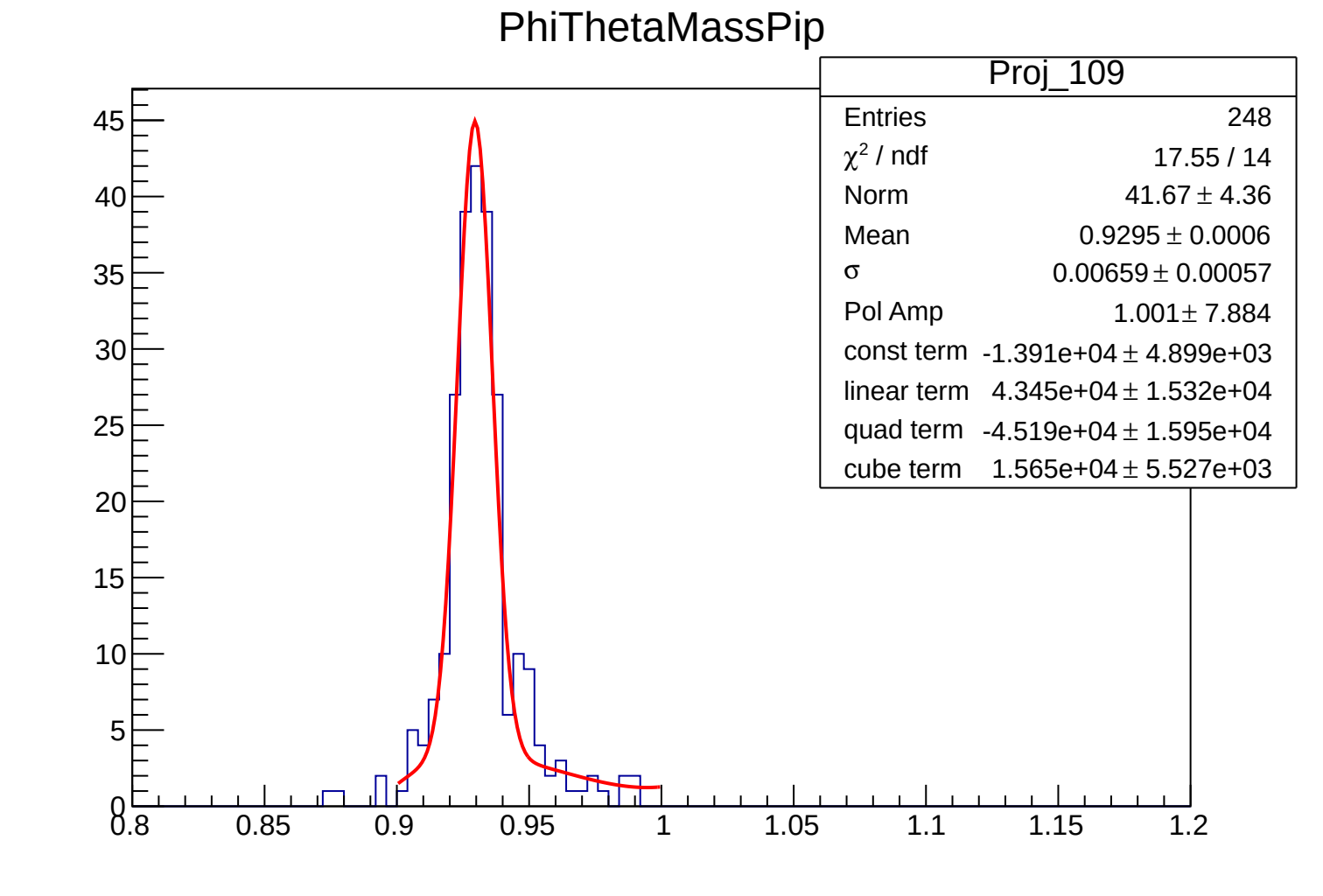
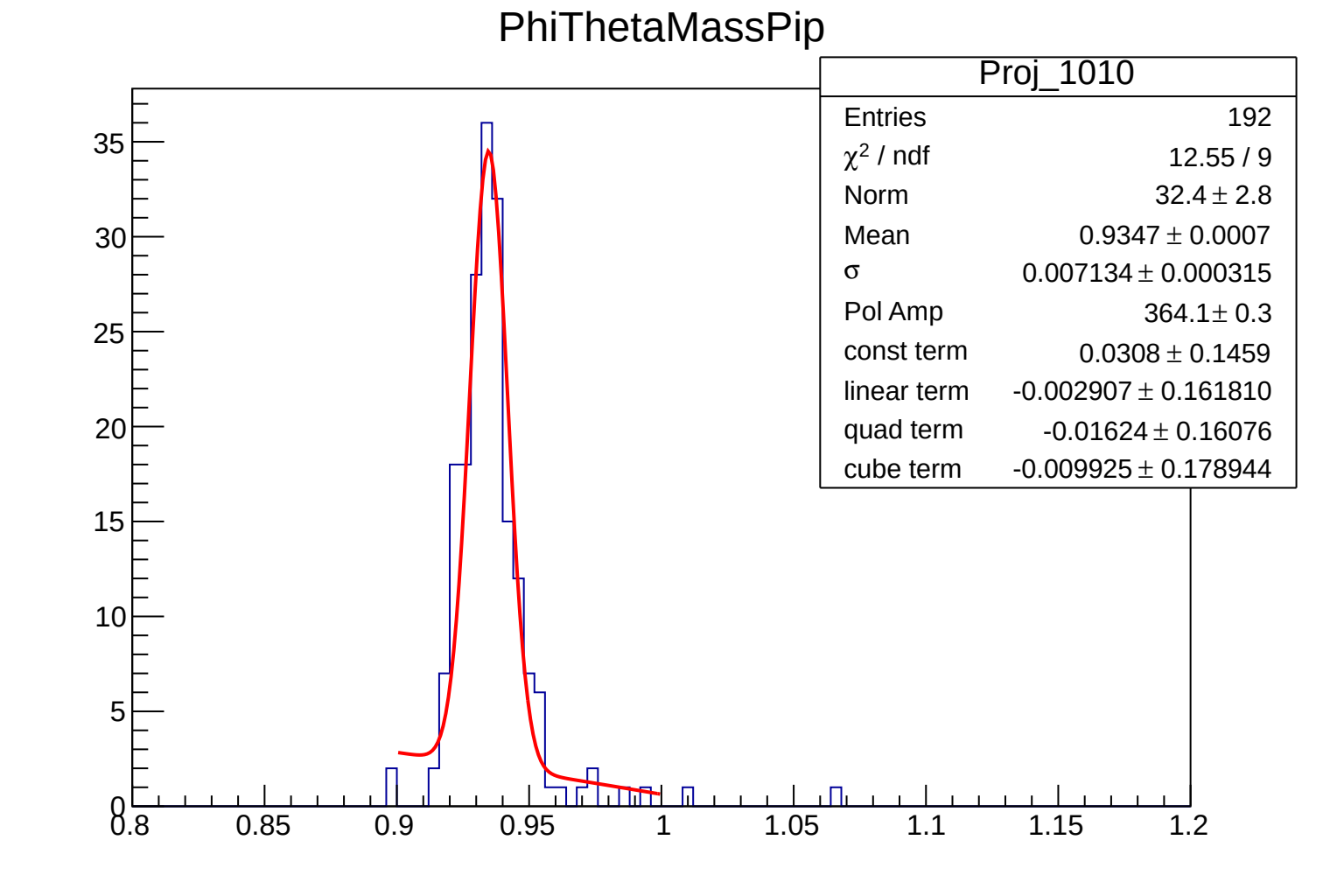
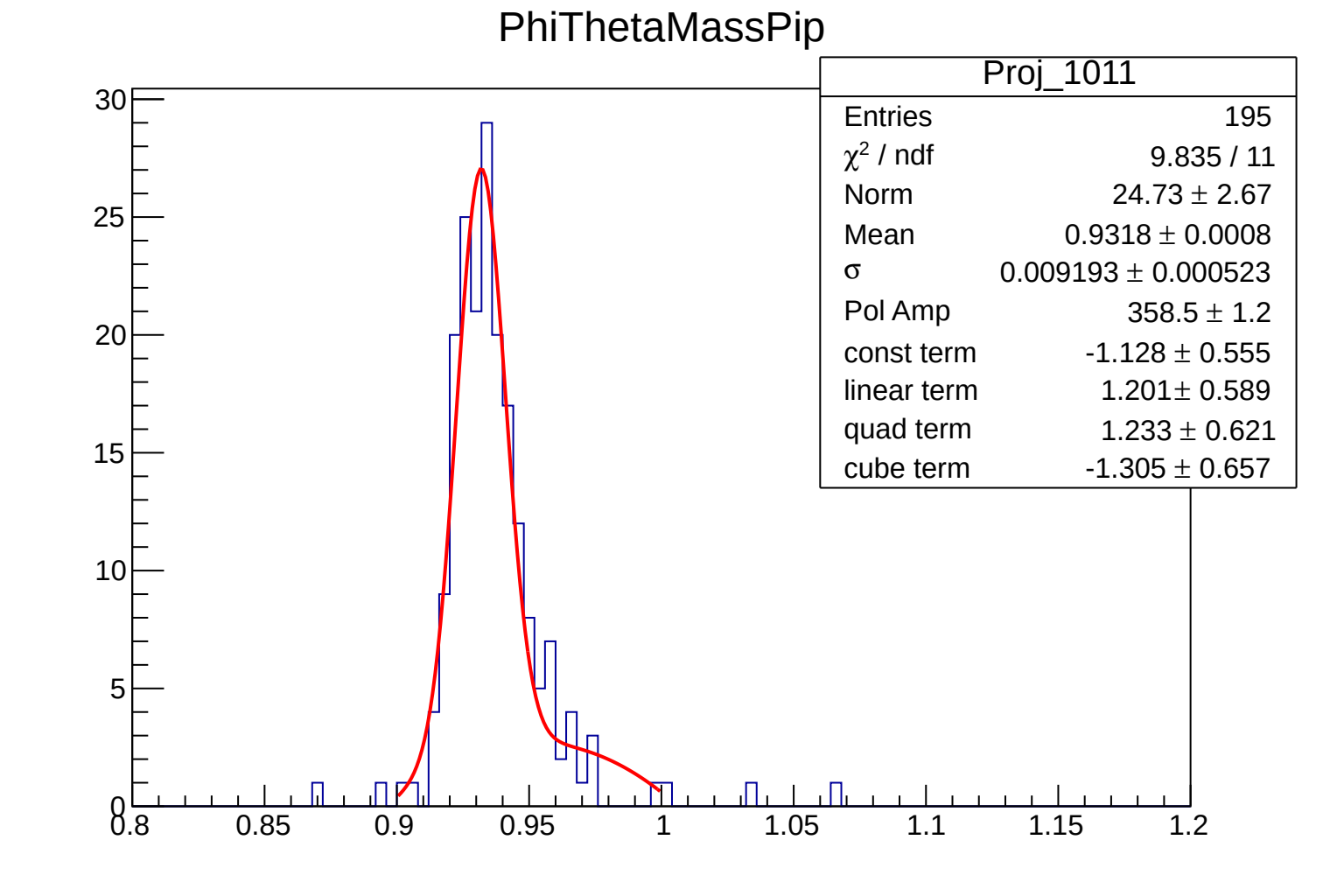
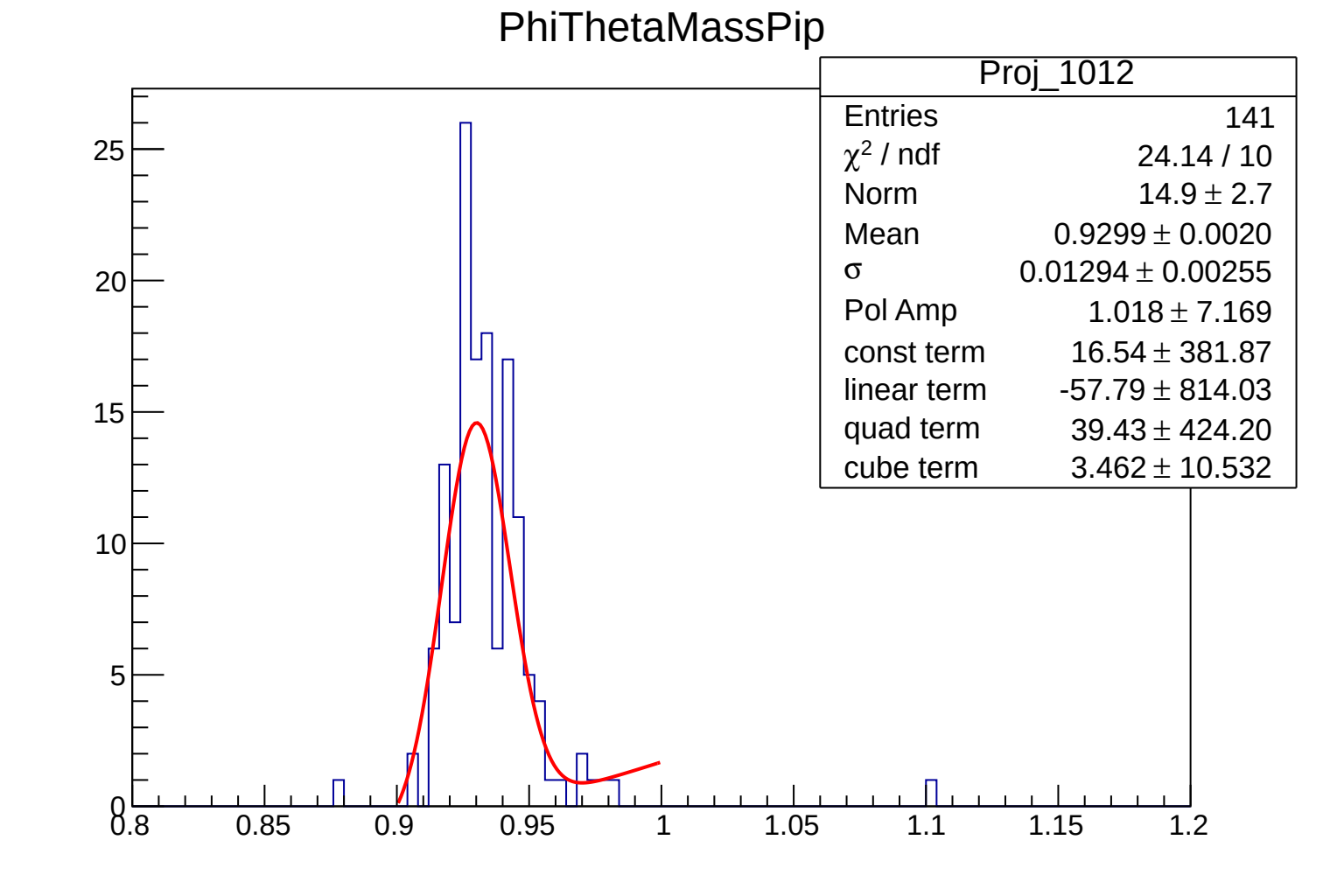
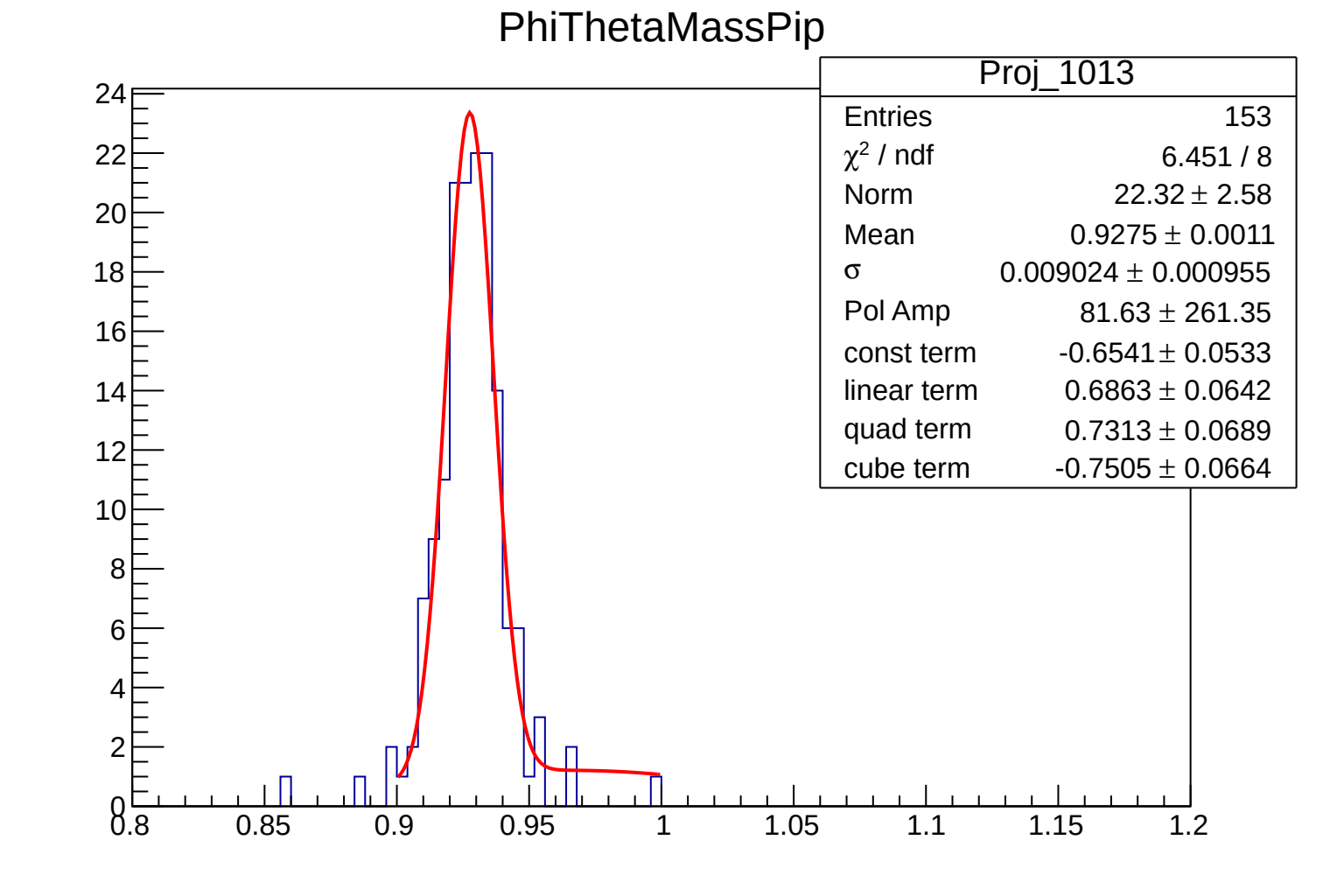
1.1
1.15
1.2

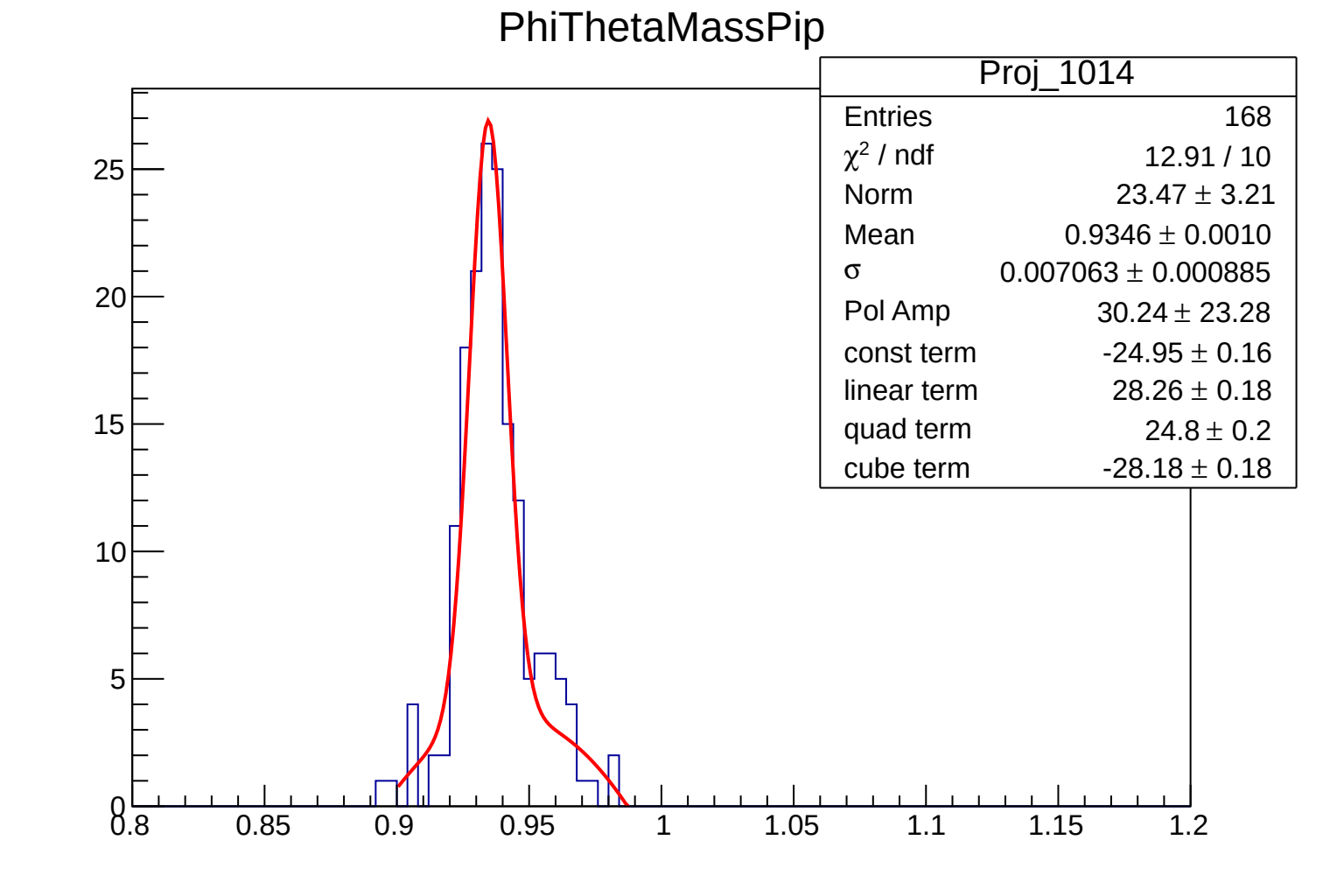

PhiThetaMassPip
Proj_109
Entries 248
χ² / ndf 17.55 / 14
Norm 41.67 ± 4.36
Mean 0.9295 ± 0.0006
σ 0.00659 ± 0.00057
Pol Amp 1.001 ± 7.884
const term -1.391e+04 ± 4.899e+03
linear term 4.345e+04 ± 1.532e+04
quad term -4.519e+04 ± 1.595e+04
cube term 1.565e+04 ± 5.527e+03
0 5 10 15 20 25 30 35 40 45
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

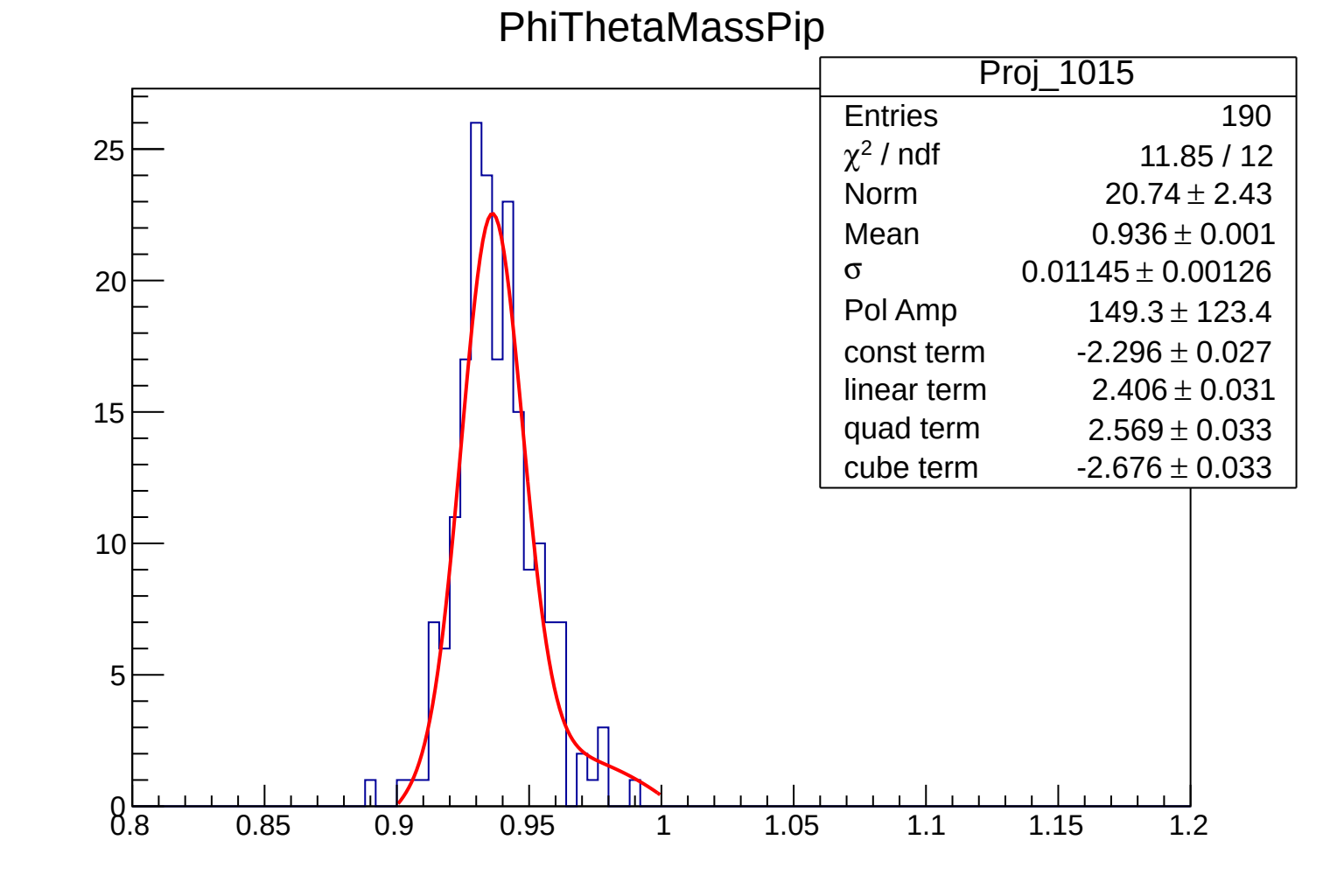

PhiThetaMassPip
Proj_1010
Entries 192
χ² / ndf 12.55 / 9
Norm 32.4 ± 2.8
Mean 0.9347 ± 0.0007
σ 0.007134 ± 0.000315
Pol Amp 364.1 ± 0.3
const term 0.0308 ± 0.1459
linear term -0.002907 ± 0.161810
quad term -0.01624 ± 0.16076
cube term -0.009925 ± 0.178944
0
5
10
15
20
25
30
35
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

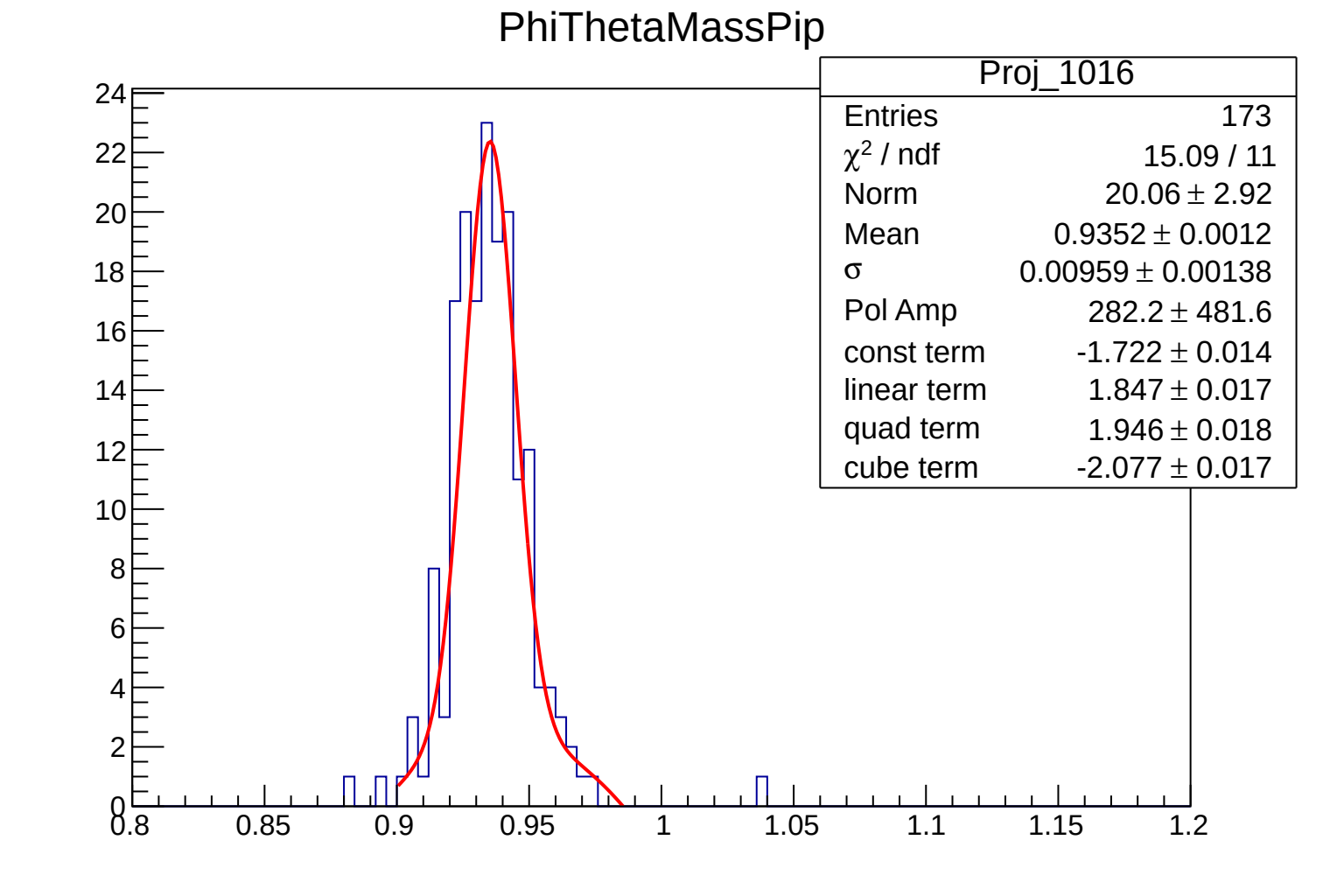

PhiThetaMassPip
Proj_1011
Entries 195
χ² / ndf 9.835 / 11
Norm 24.73 ± 2.67
Mean 0.9318 ± 0.0008
σ 0.009193 ± 0.000523
Pol Amp 358.5 ± 1.2
const term -1.128 ± 0.555
linear term 1.201± 0.589
quad term 1.233 ± 0.621
cube term -1.305 ± 0.657
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

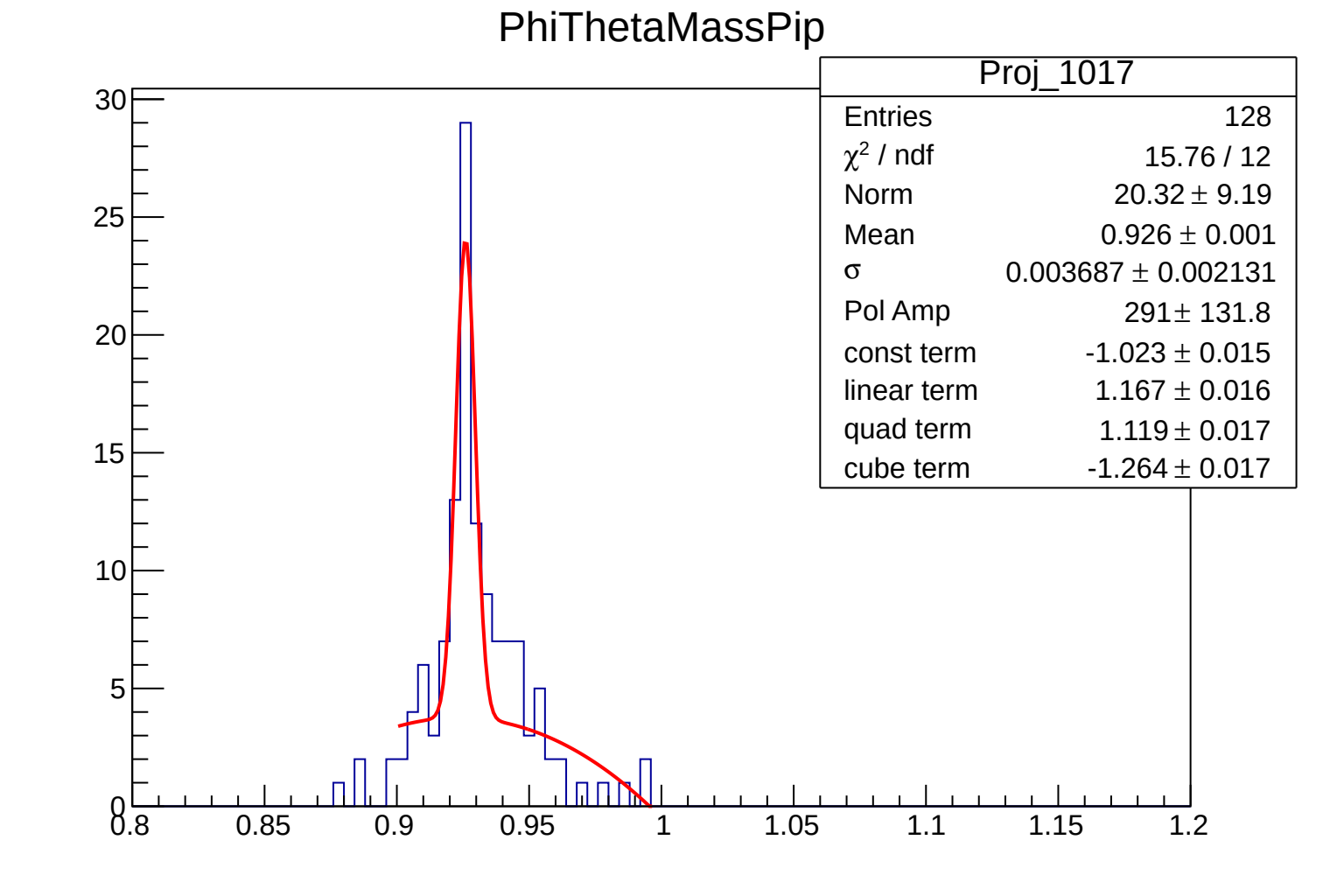

PhiThetaMassPip
Proj_1012
Entries 141
χ² / ndf 24.14 / 10
Norm 14.9 ± 2.7
Mean 0.9299 ± 0.0020
σ 0.01294 ± 0.00255
Pol Amp 1.018 ± 7.169
const term 16.54 ± 381.87
linear term -57.79 ± 814.03
quad term 39.43 ± 424.20
cube term 3.462 ± 10.532
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

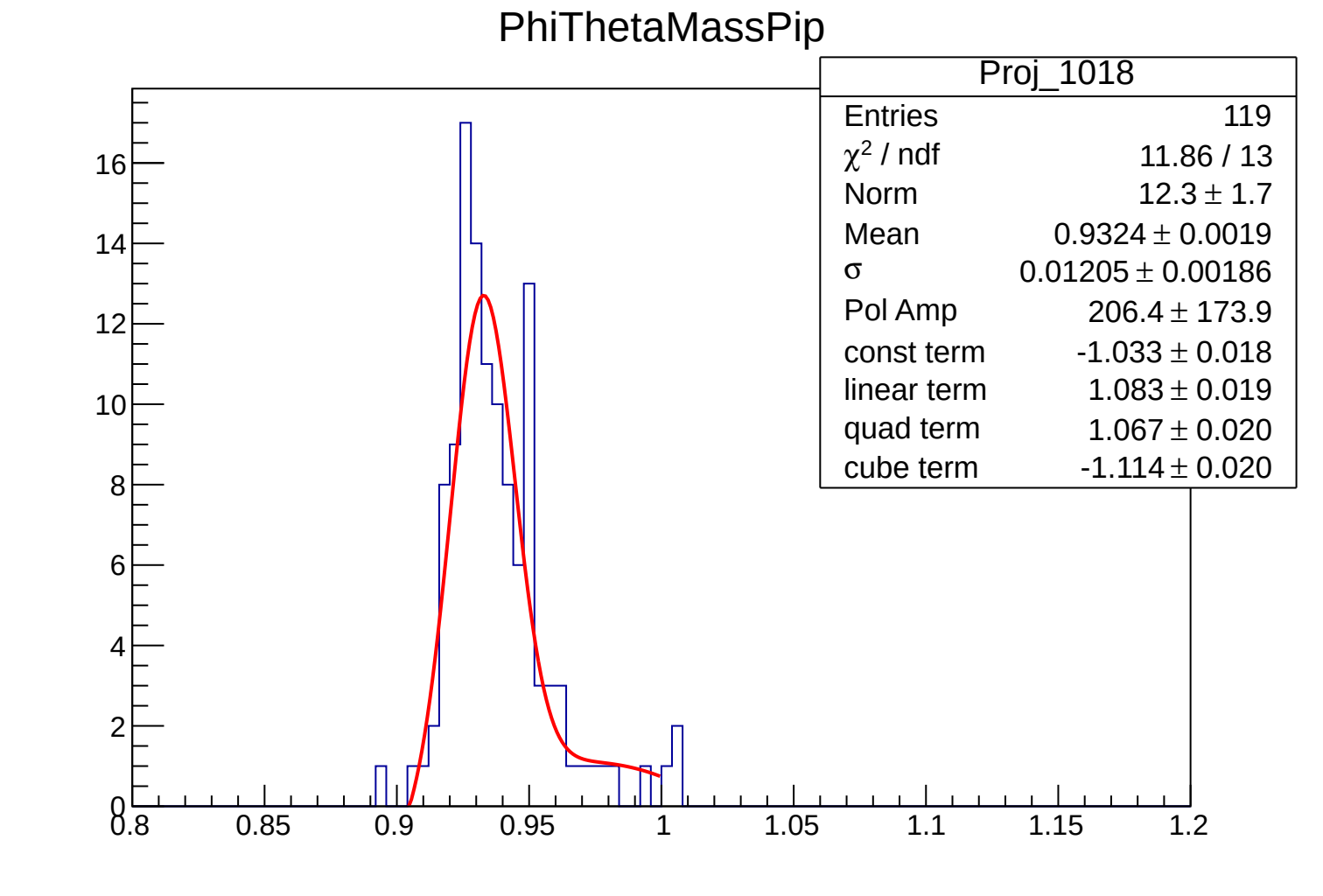

PhiThetaMassPip
Proj_1013
Entries 153
χ² / ndf 6.451 / 8
Norm 22.32 ± 2.58
Mean 0.9275 ± 0.0011
σ 0.009024 ± 0.000955
Pol Amp 81.63 ± 261.35
const term -0.6541 ± 0.0533
linear term 0.6863 ± 0.0642
quad term 0.7313 ± 0.0689
cube term -0.7505 ± 0.0664
0 2 4 6 8 10 12 14 16 18 20 22 24
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

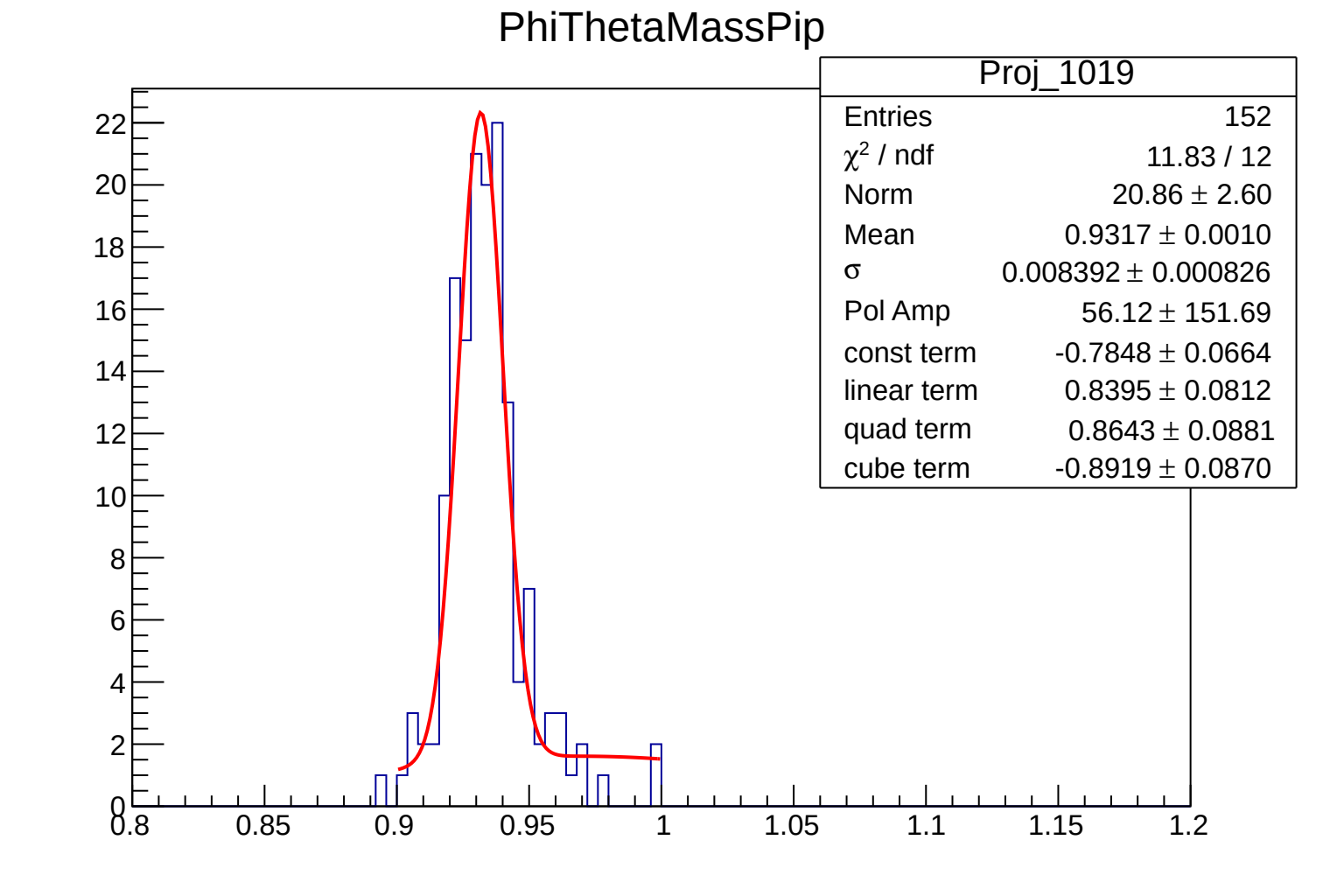

PhiThetaMassPip
Proj_1014
Entries 168
χ² / ndf 12.91 / 10
Norm 23.47 ± 3.21
Mean 0.9346 ± 0.0010
σ 0.007063 ± 0.000885
Pol Amp 30.24 ± 23.28
const term -24.95 ± 0.16
linear term 28.26 ± 0.18
quad term 24.8 ± 0.2
cube term -28.18 ± 0.18
0
5
10
15
20
25
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

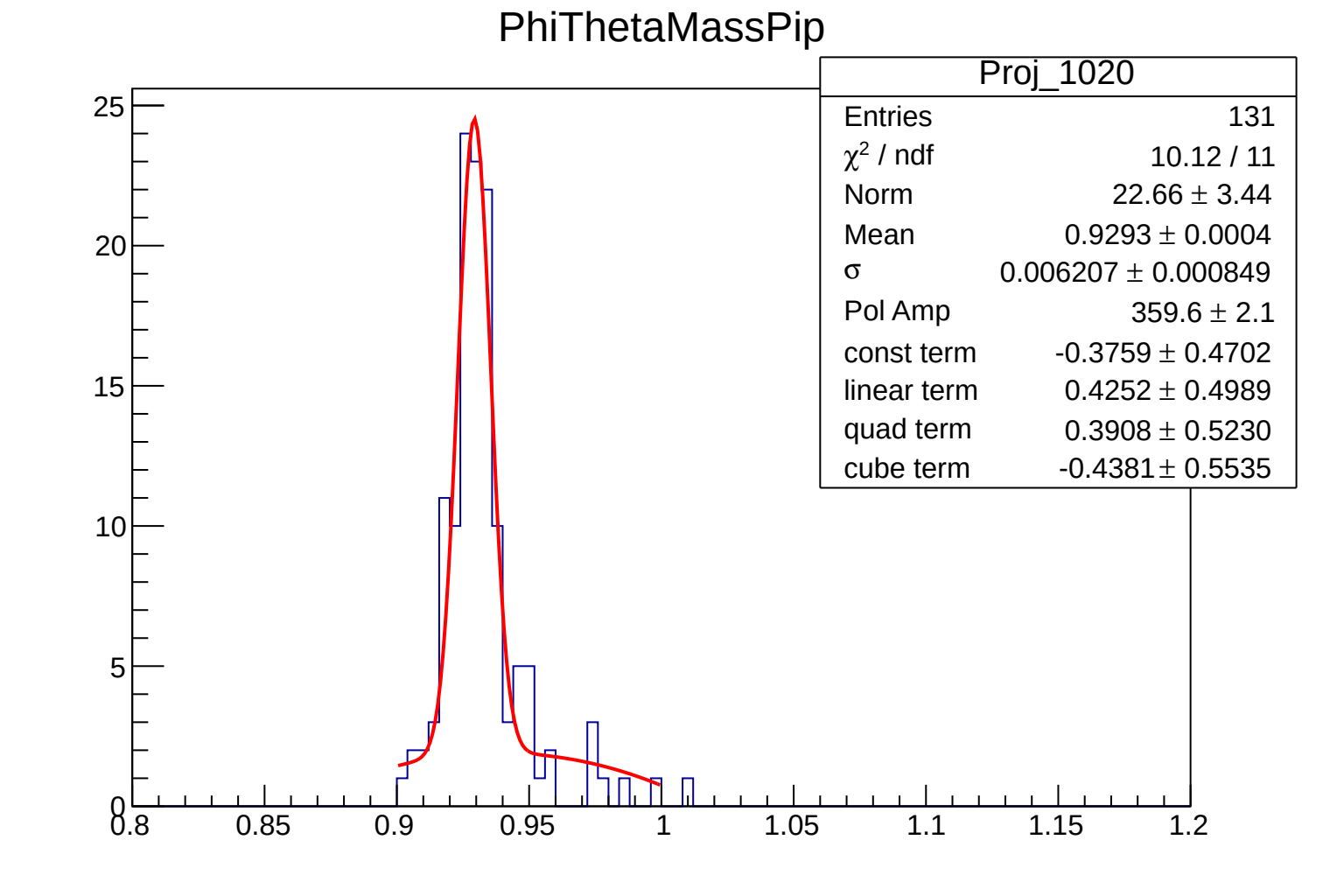

PhiThetaMassPip
Proj_1015
Entries 190
χ² / ndf 11.85 / 12
Norm 20.74 ± 2.43
Mean 0.936 ± 0.001
σ 0.01145 ± 0.00126
Pol Amp 149.3 ± 123.4
const term -2.296 ± 0.027
linear term 2.406 ± 0.031
quad term 2.569 ± 0.033
cube term -2.676 ± 0.033
0
5
10
15
20
25
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

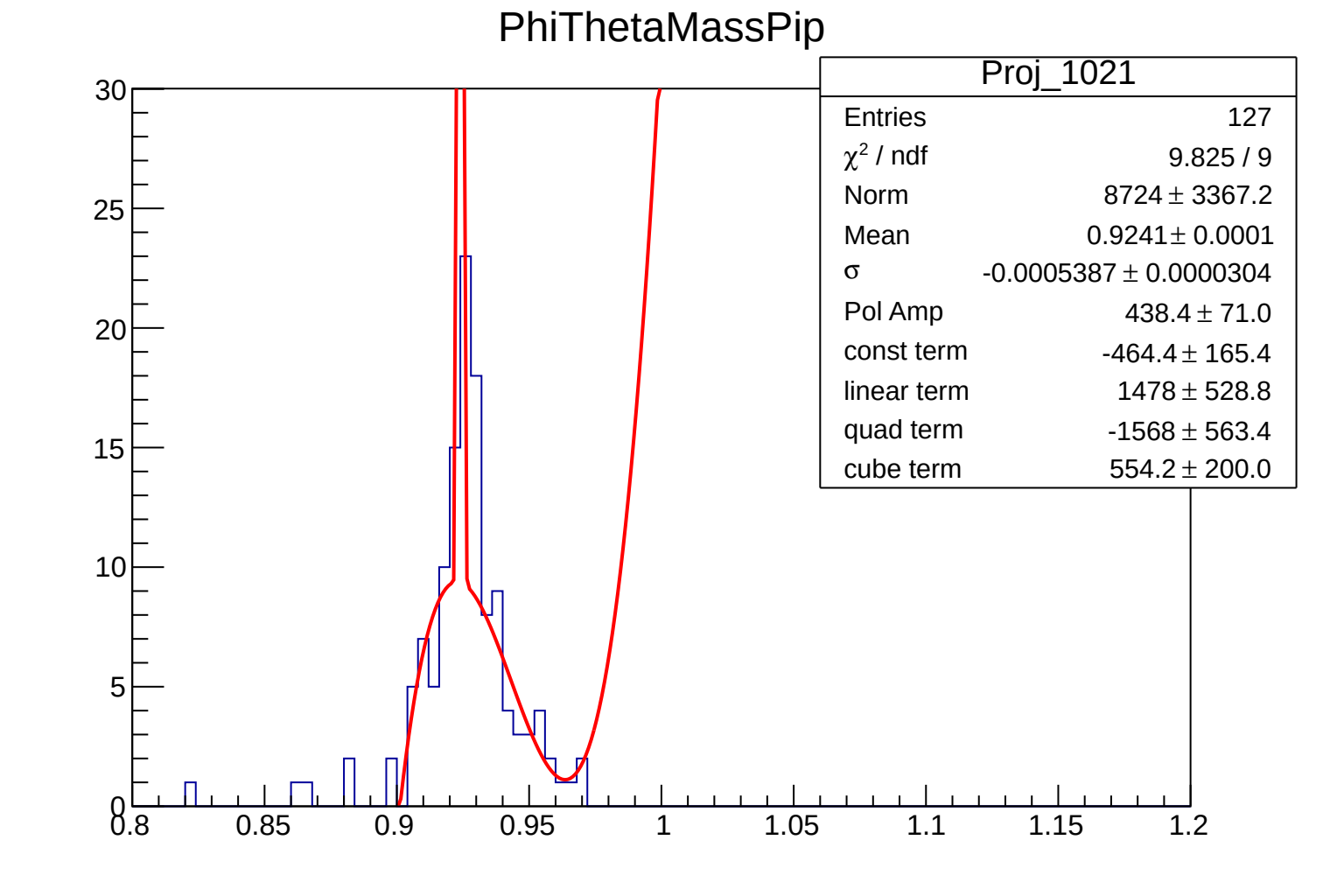

PhiThetaMassPip
Proj_1016
Entries 173
χ² / ndf 15.09 / 11
Norm 20.06 ± 2.92
Mean 0.9352 ± 0.0012
σ 0.00959 ± 0.00138
Pol Amp 282.2 ± 481.6
const term -1.722 ± 0.014
linear term 1.847 ± 0.017
quad term 1.946 ± 0.018
cube term -2.077 ± 0.017
0 2 4 6 8 10 12 14 16 18 20 22 24
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

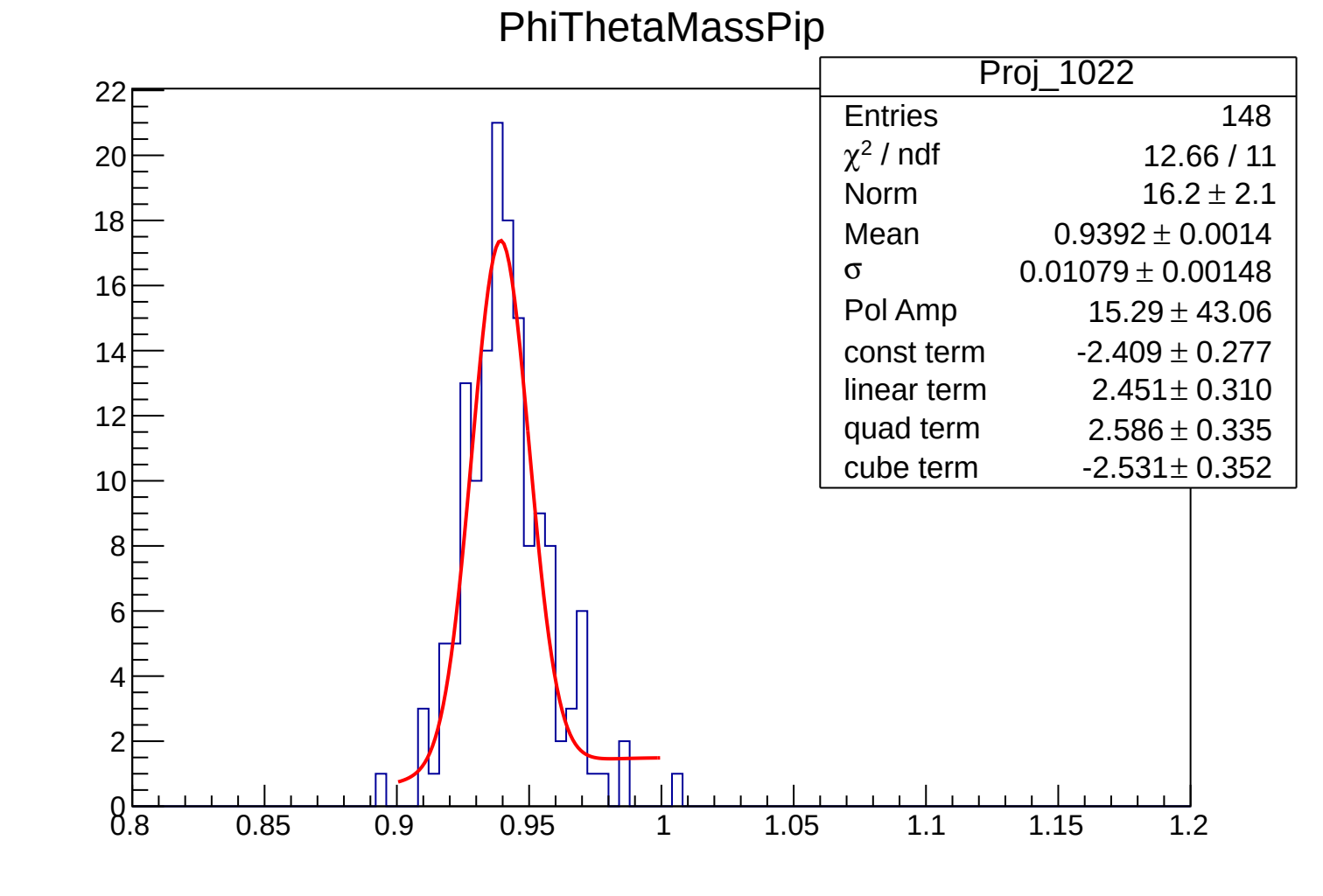

PhiThetaMassPip
Proj_1017
Entries 128
χ² / ndf 15.76 / 12
Norm 20.32 ± 9.19
Mean 0.926 ± 0.001
σ 0.003687 ± 0.002131
Pol Amp 291 ± 131.8
const term -1.023 ± 0.015
linear term 1.167 ± 0.016
quad term 1.119 ± 0.017
cube term -1.264 ± 0.017
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

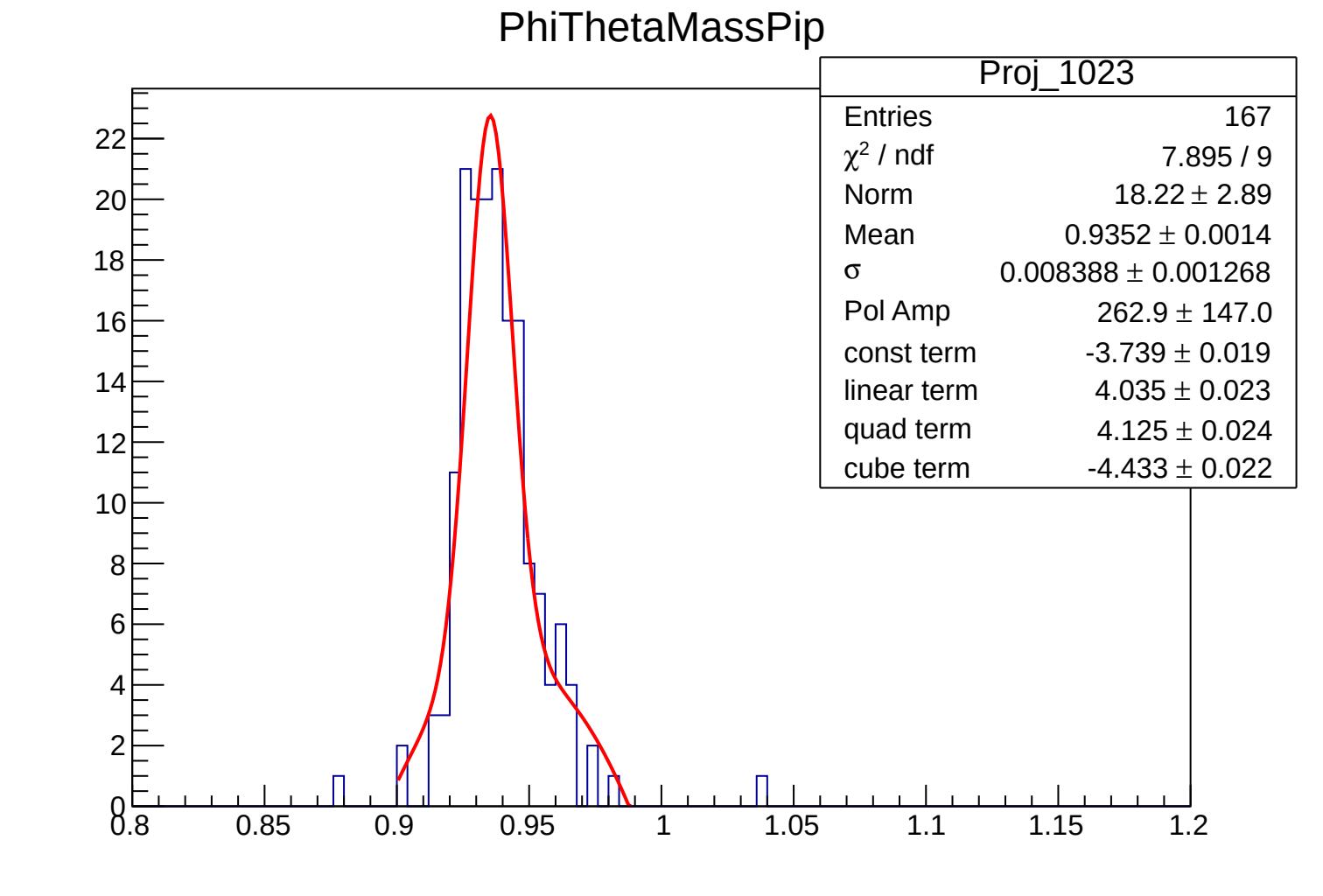

PhiThetaMassPip
Proj_1018
Entries 119
χ² / ndf 11.86 / 13
Norm 12.3 ± 1.7
Mean 0.9324 ± 0.0019
σ 0.01205 ± 0.00186
Pol Amp 206.4 ± 173.9
const term -1.033 ± 0.018
linear term 1.083 ± 0.019
quad term 1.067 ± 0.020
cube term -1.114 ± 0.020
0
2
4
6
8
10
12
14
16
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

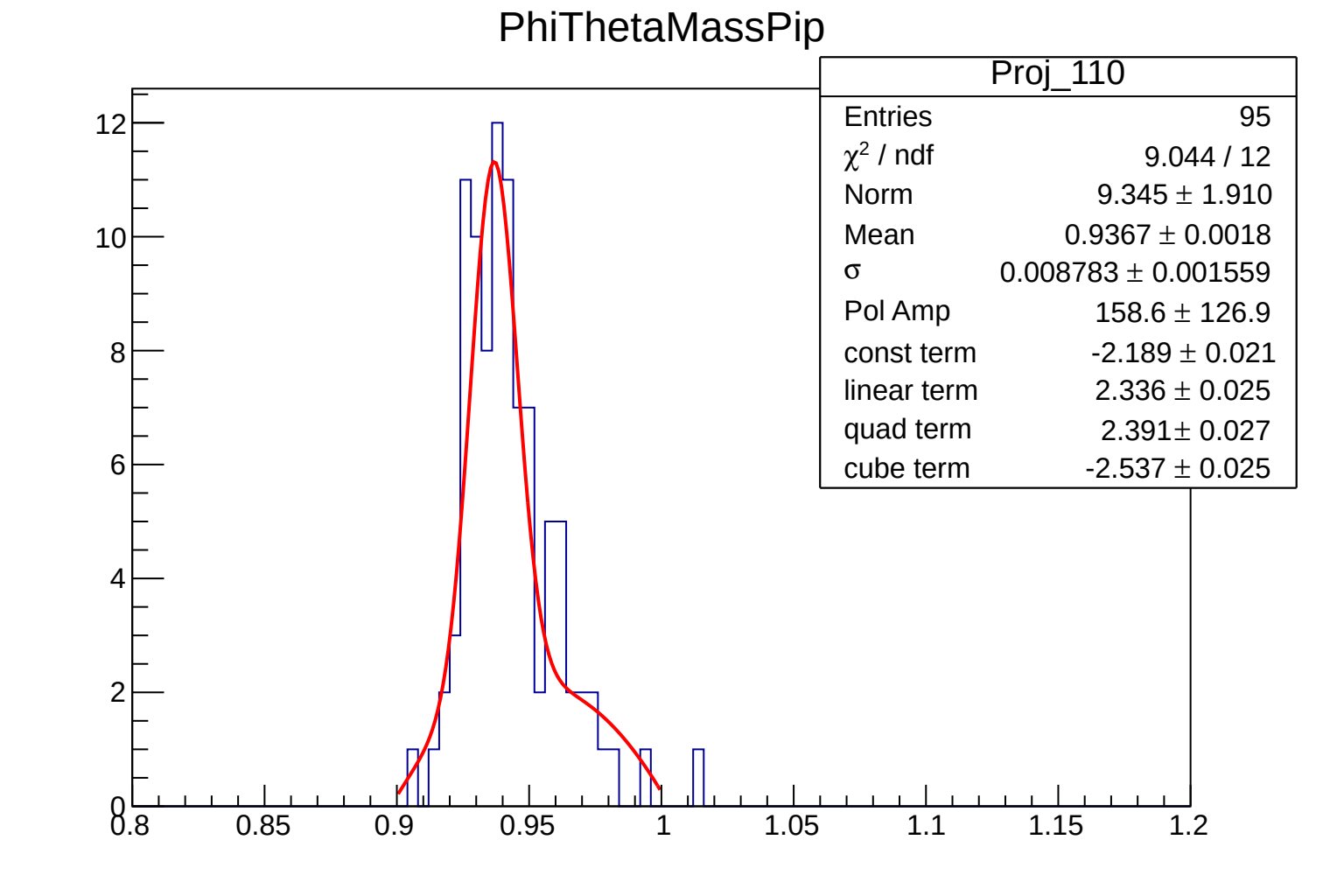

PhiThetaMassPip
Proj_1019
Entries 152
χ² / ndf 11.83 / 12
Norm 20.86 ± 2.60
Mean 0.9317 ± 0.0010
σ 0.008392 ± 0.000826
Pol Amp 56.12 ± 151.69
const term -0.7848 ± 0.0664
linear term 0.8395 ± 0.0812
quad term 0.8643 ± 0.0881
cube term -0.8919 ± 0.0870
0 2 4 6 8 10 12 14 16 18 20 22
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

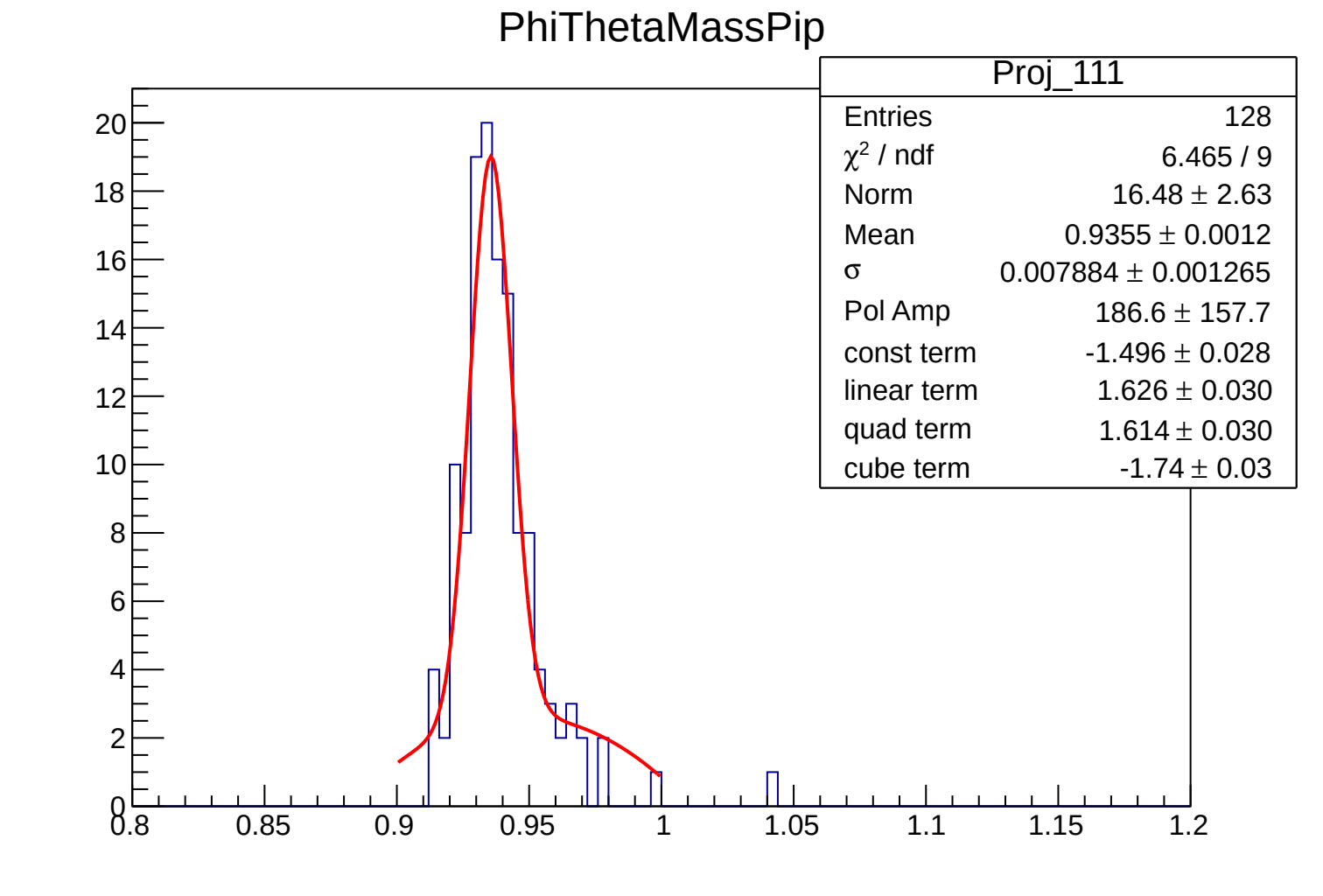

PhiThetaMassPip
Proj_1020
Entries 131
χ² / ndf 10.12 / 11
Norm 22.66 ± 3.44
Mean 0.9293 ± 0.0004
σ 0.006207 ± 0.000849
Pol Amp 359.6 ± 2.1
const term -0.3759 ± 0.4702
linear term 0.4252 ± 0.4989
quad term 0.3908 ± 0.5230
cube term -0.4381 ± 0.5535
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

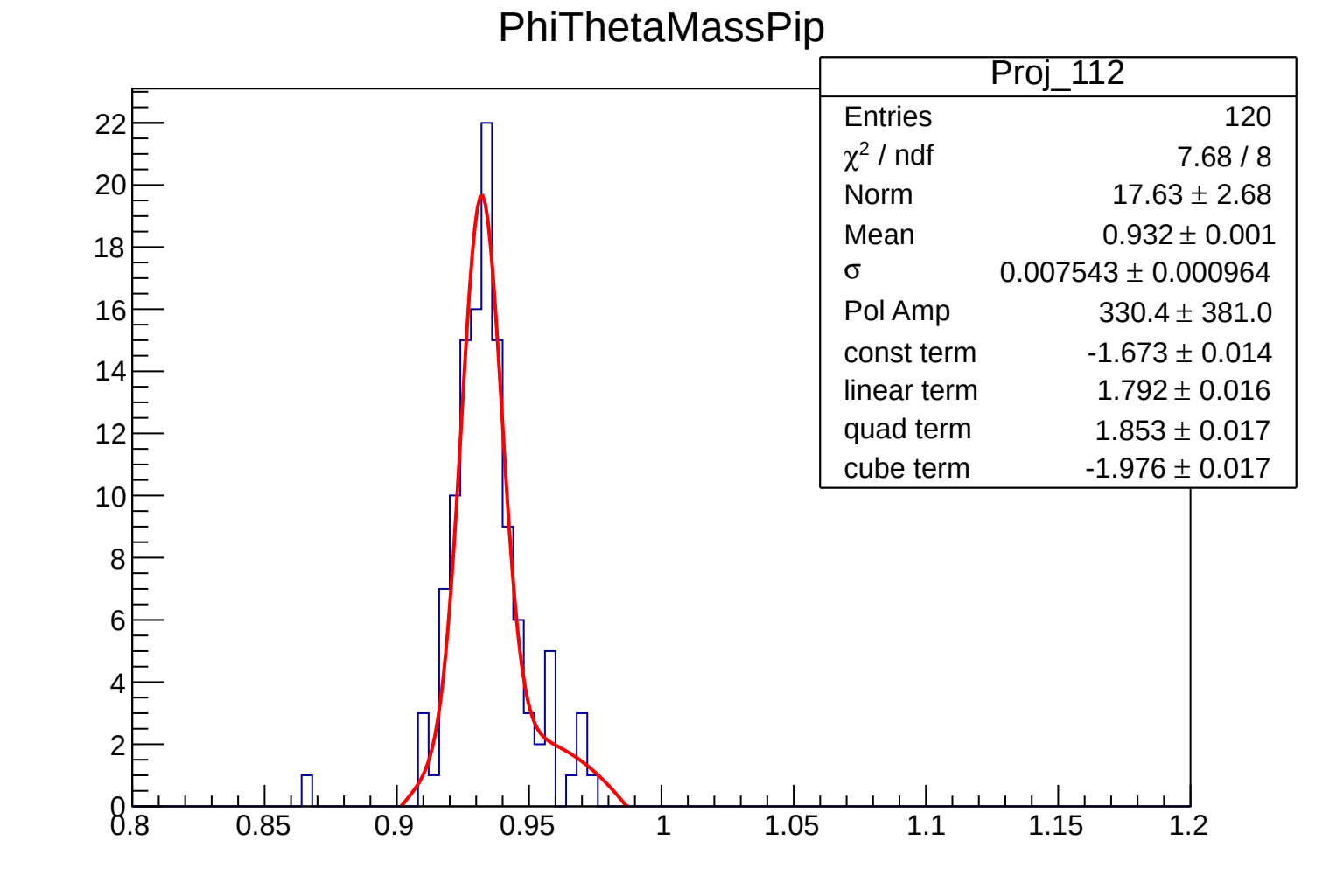

PhiThetaMassPip
Proj_1021
Entries 127
χ² / ndf 9.825 / 9
Norm 8724 ± 3367.2
Mean 0.9241 ± 0.0001
σ -0.0005387 ± 0.0000304
Pol Amp 438.4 ± 71.0
const term -464.4 ± 165.4
linear term 1478 ± 528.8
quad term -1568 ± 563.4
cube term 554.2 ± 200.0
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

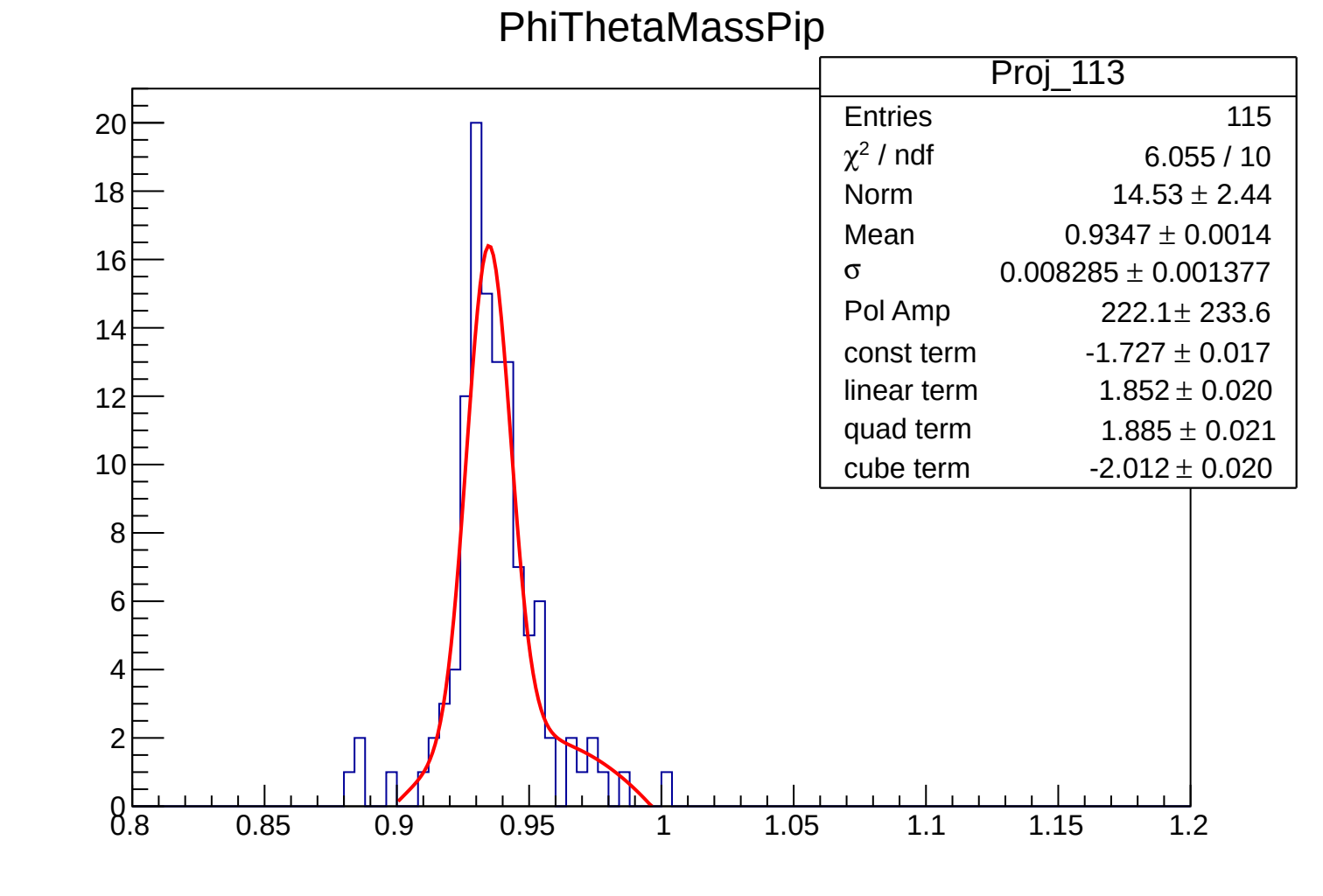

PhiThetaMassPip
Proj_1022
Entries 148
χ² / ndf 12.66 / 11
Norm 16.2 ± 2.1
Mean 0.9392 ± 0.0014
σ 0.01079 ± 0.00148
Pol Amp 15.29 ± 43.06
const term -2.409 ± 0.277
linear term 2.451 ± 0.310
quad term 2.586 ± 0.335
cube term -2.531 ± 0.352
0 2 4 6 8 10 12 14 16 18 20 22
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

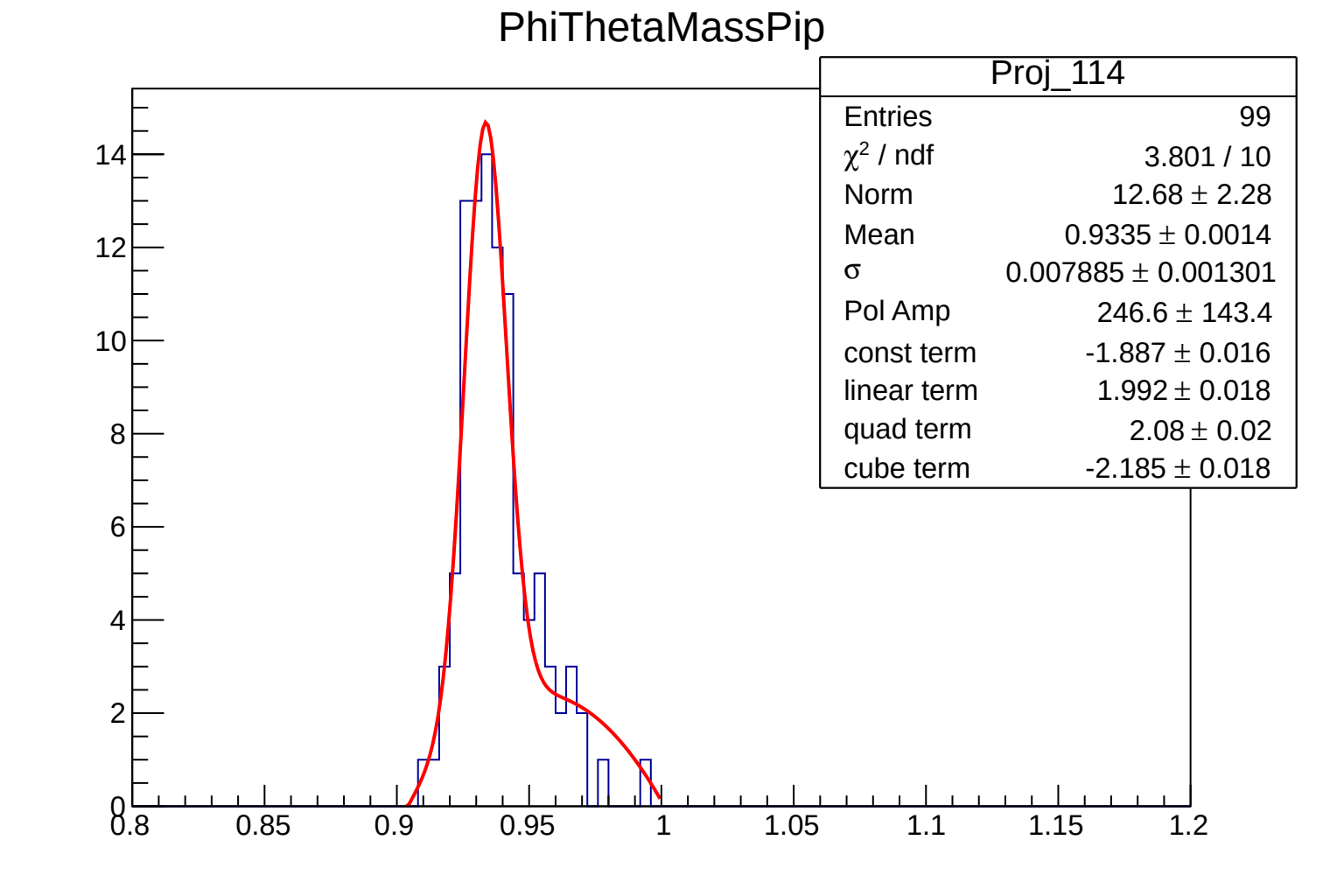

PhiThetaMassPip
Proj_1023
Entries 167
χ² / ndf 7.895 / 9
Norm 18.22 ± 2.89
Mean 0.9352 ± 0.0014
σ 0.008388 ± 0.001268
Pol Amp 262.9 ± 147.0
const term -3.739 ± 0.019
linear term 4.035 ± 0.023
quad term 4.125 ± 0.024
cube term -4.433 ± 0.022
0 2 4 6 8 10 12 14 16 18 20 22
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

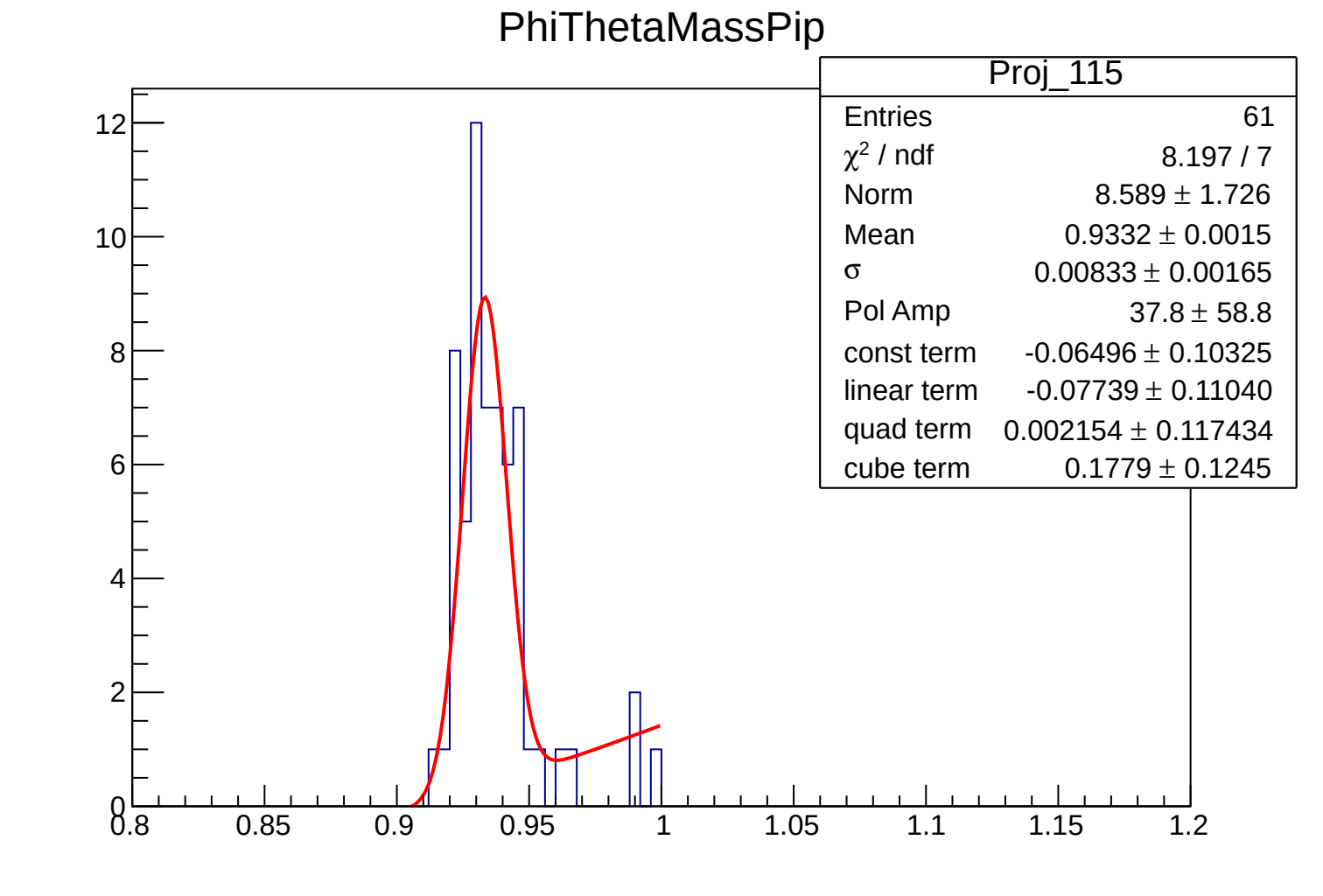

PhiThetaMassPip
Proj_110
Entries 95
χ² / ndf 9.044 / 12
Norm 9.345 ± 1.910
Mean 0.9367 ± 0.0018
σ 0.008783 ± 0.001559
Pol Amp 158.6 ± 126.9
const term -2.189 ± 0.021
linear term 2.336 ± 0.025
quad term 2.391± 0.027
cube term -2.537 ± 0.025
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

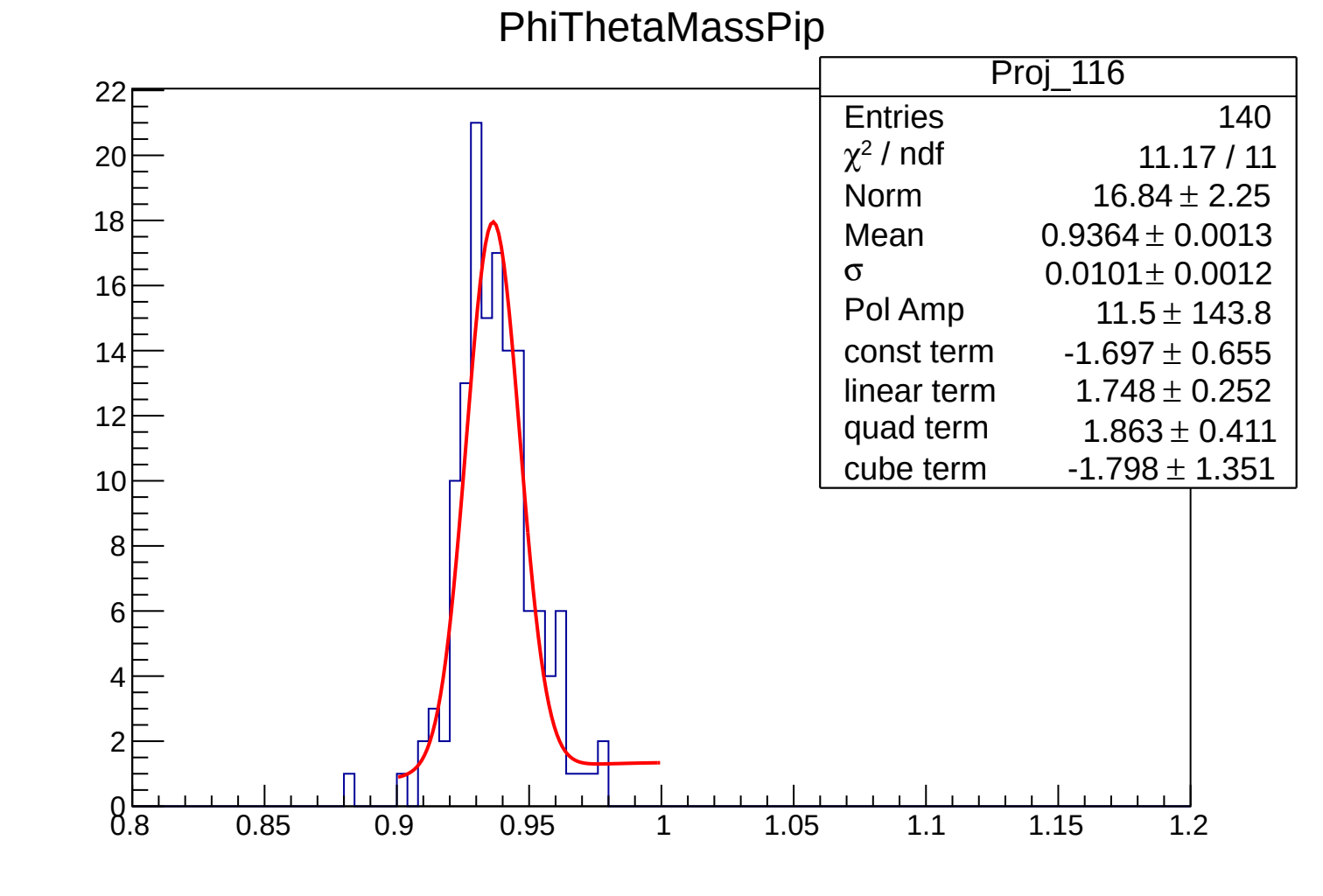

PhiThetaMassPip
Proj_111
Entries 128
χ² / ndf 6.465 / 9
Norm 16.48 ± 2.63
Mean 0.9355 ± 0.0012
σ 0.007884 ± 0.001265
Pol Amp 186.6 ± 157.7
const term -1.496 ± 0.028
linear term 1.626 ± 0.030
quad term 1.614 ± 0.030
cube term -1.74 ± 0.03
0 2 4 6 8 10 12 14 16 18 20
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

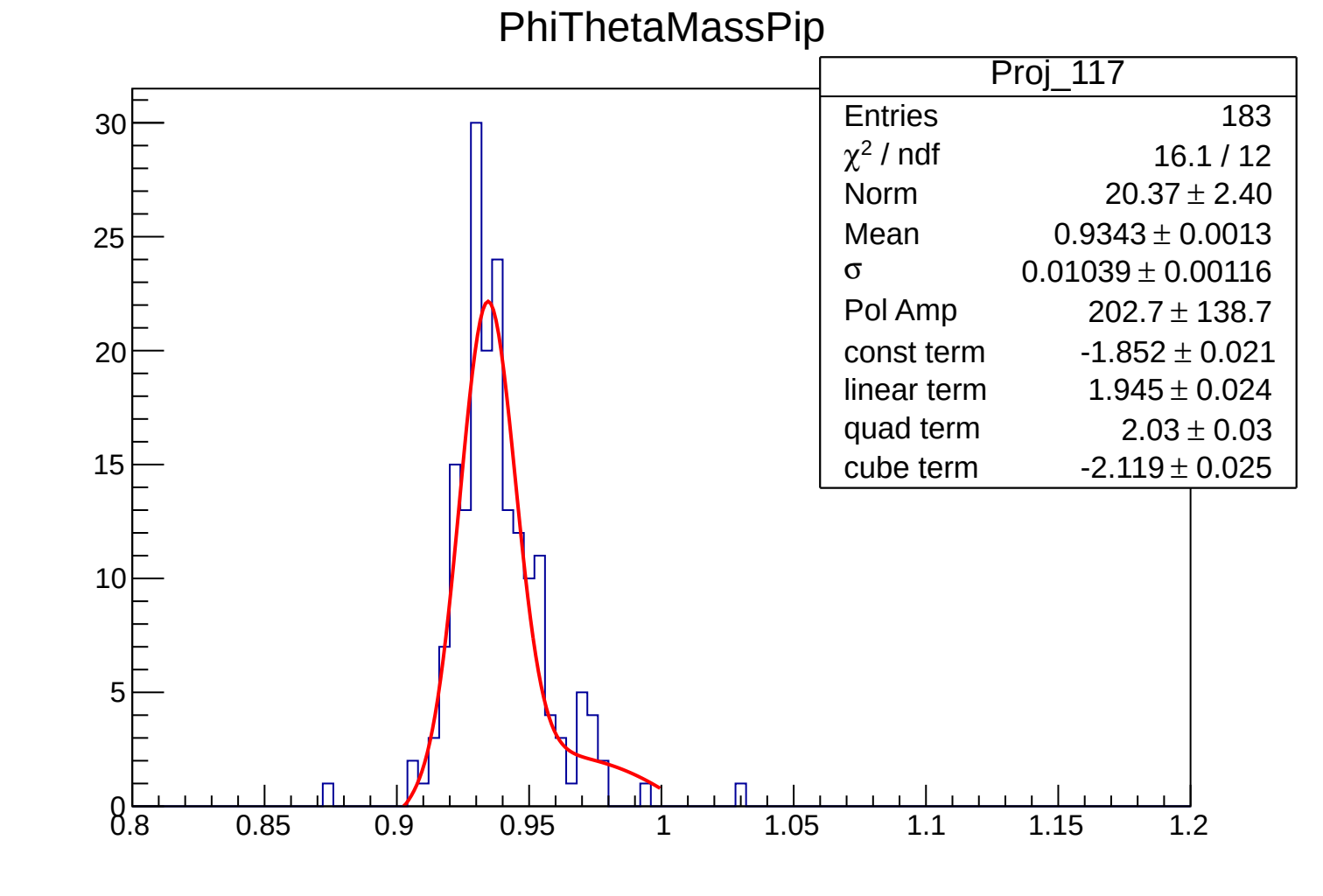

PhiThetaMassPip
Proj_112
Entries 120
χ² / ndf 7.68 / 8
Norm 17.63 ± 2.68
Mean 0.932 ± 0.001
σ 0.007543 ± 0.000964
Pol Amp 330.4 ± 381.0
const term -1.673 ± 0.014
linear term 1.792 ± 0.016
quad term 1.853 ± 0.017
cube term -1.976 ± 0.017
0 2 4 6 8 10 12 14 16 18 20 22
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

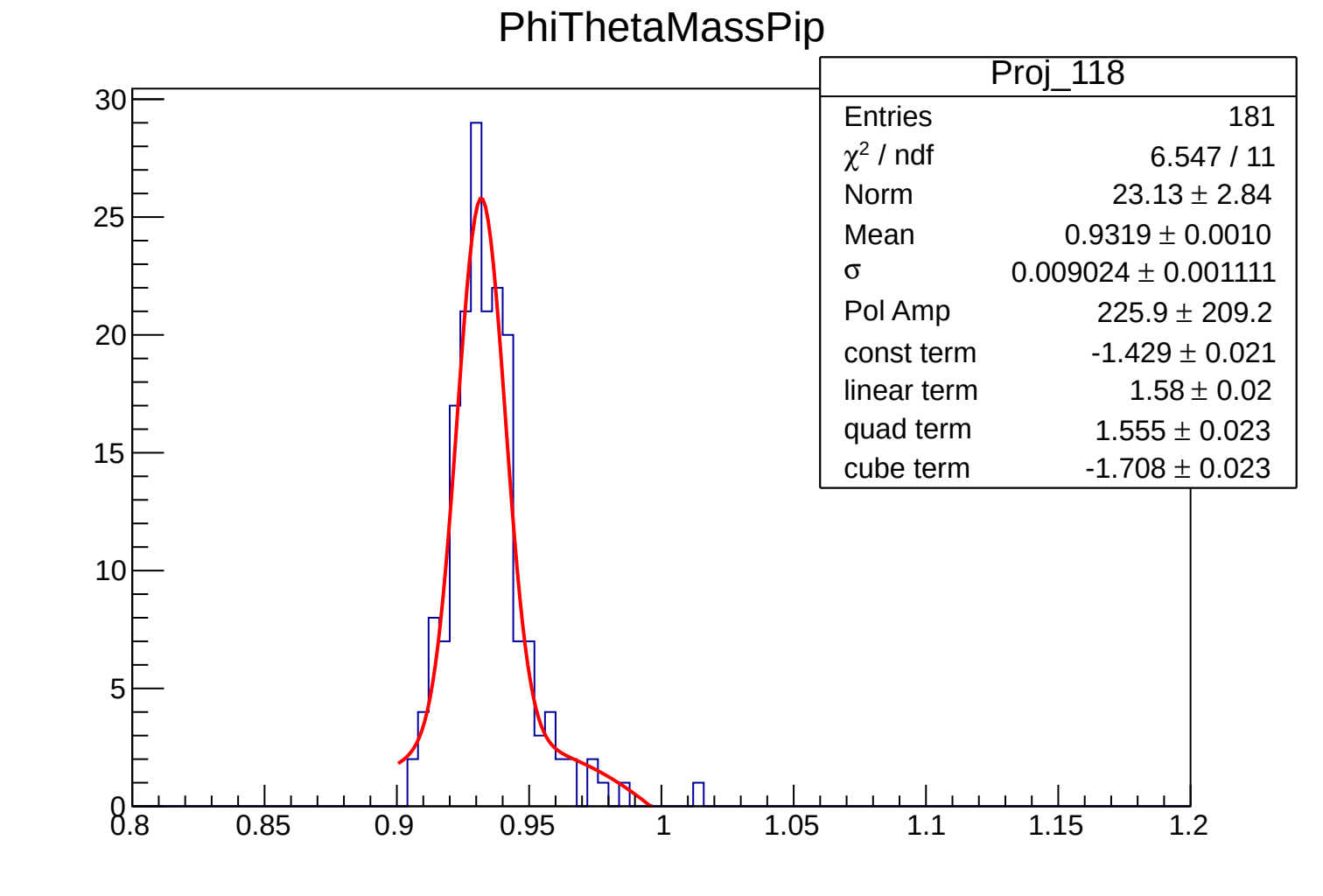

PhiThetaMassPip
Proj_113
Entries 115
χ² / ndf 6.055 / 10
Norm 14.53 ± 2.44
Mean 0.9347 ± 0.0014
σ 0.008285 ± 0.001377
Pol Amp 222.1 ± 233.6
const term -1.727 ± 0.017
linear term 1.852 ± 0.020
quad term 1.885 ± 0.021
cube term -2.012 ± 0.020
0 2 4 6 8 10 12 14 16 18 20
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

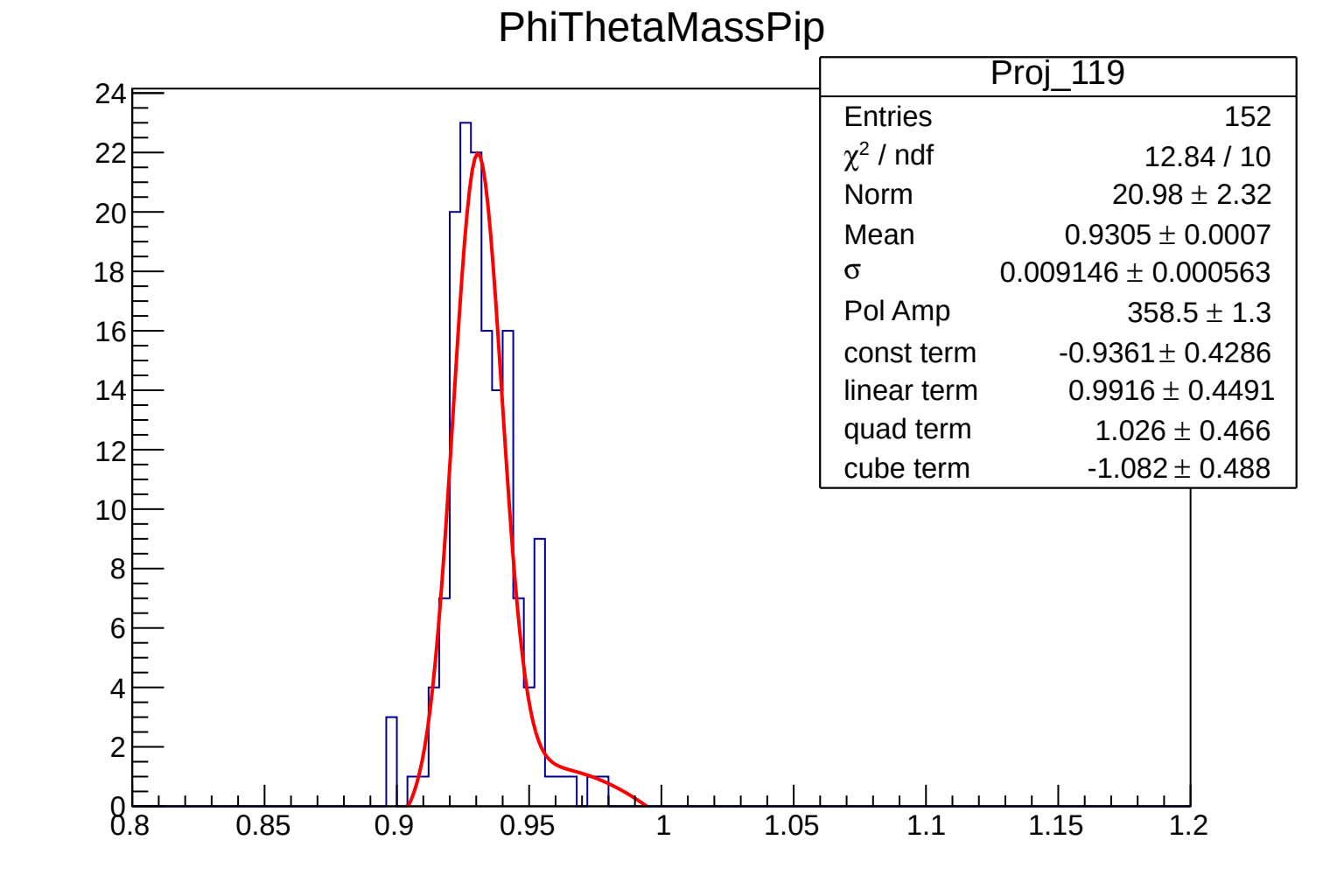

PhiThetaMassPip
Proj_114
Entries 99
χ² / ndf 3.801 / 10
Norm 12.68 ± 2.28
Mean 0.9335 ± 0.0014
σ 0.007885 ± 0.001301
Pol Amp 246.6 ± 143.4
const term -1.887 ± 0.016
linear term 1.992 ± 0.018
quad term 2.08 ± 0.02
cube term -2.185 ± 0.018
0
2
4
6
8
10
12
14
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

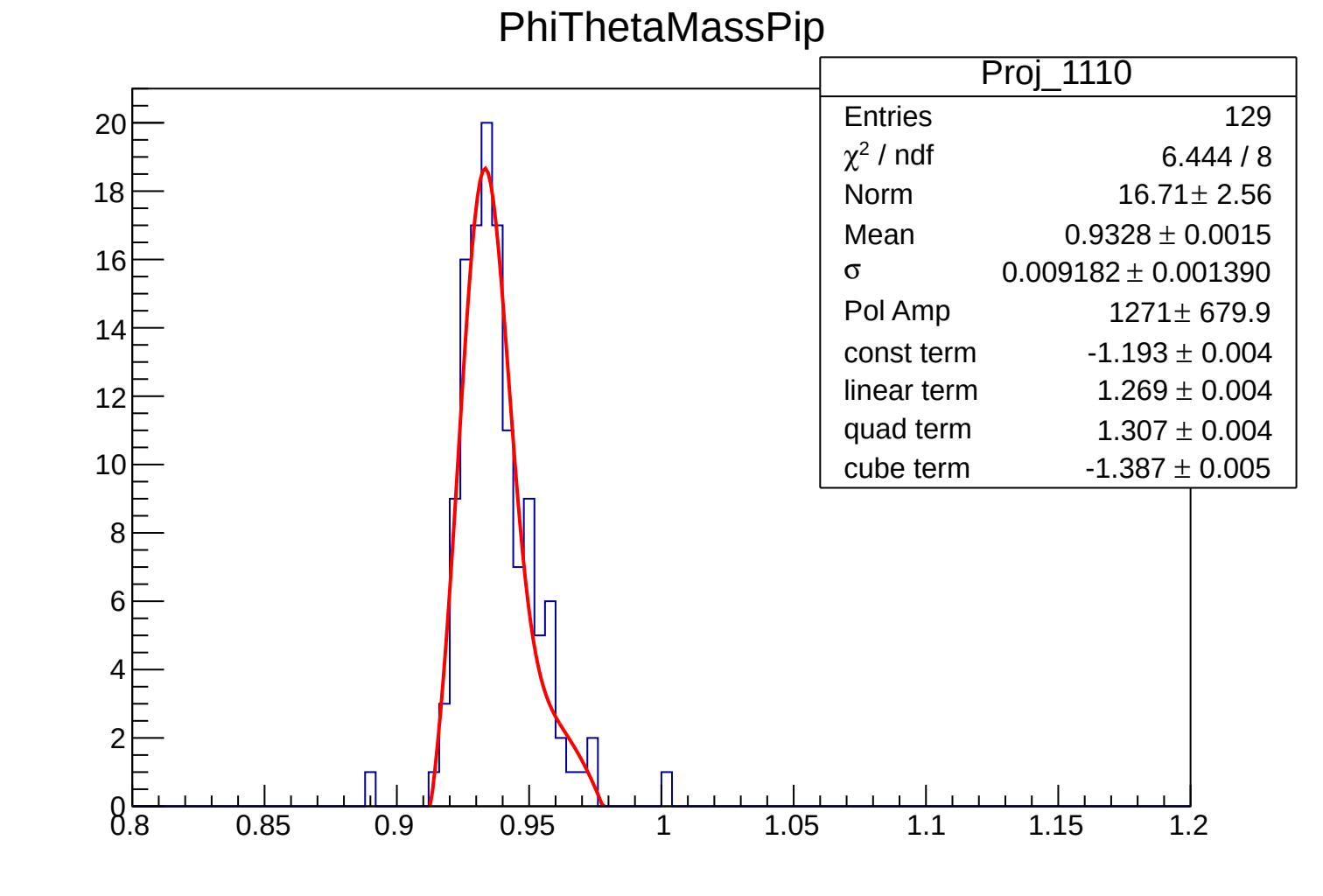

PhiThetaMassPip
Proj_115
Entries 61
χ² / ndf 8.197 / 7
Norm 8.589 ± 1.726
Mean 0.9332 ± 0.0015
σ 0.00833 ± 0.00165
Pol Amp 37.8 ± 58.8
const term -0.06496 ± 0.10325
linear term -0.07739 ± 0.11040
quad term 0.002154 ± 0.117434
cube term 0.1779 ± 0.1245
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

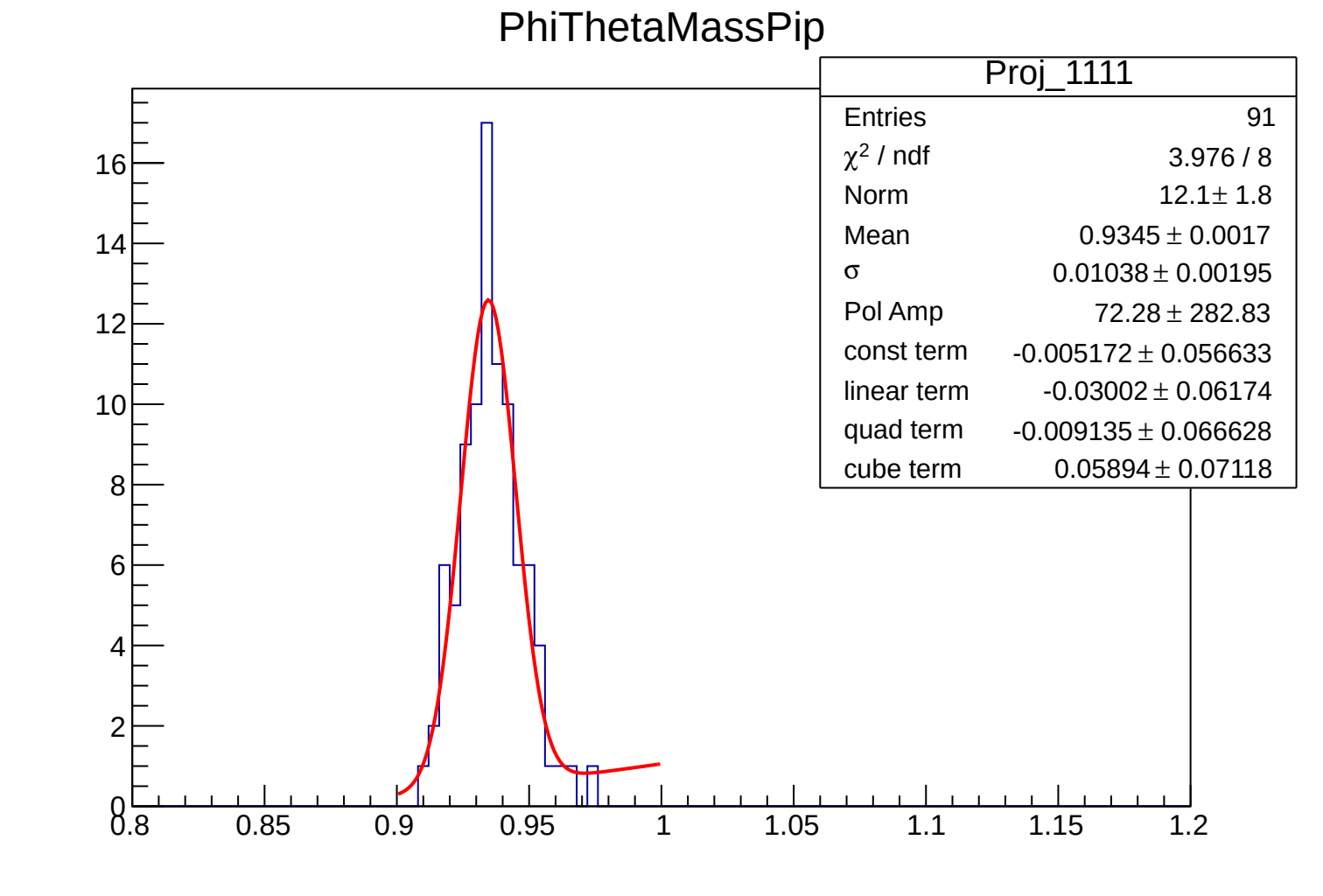

PhiThetaMassPip
Proj_116
Entries 140
χ² / ndf 11.17 / 11
Norm 16.84 ± 2.25
Mean 0.9364 ± 0.0013
σ 0.0101 ± 0.0012
Pol Amp 11.5 ± 143.8
const term -1.697 ± 0.655
linear term 1.748 ± 0.252
quad term 1.863 ± 0.411
cube term -1.798 ± 1.351
0 2 4 6 8 10 12 14 16 18 20 22
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

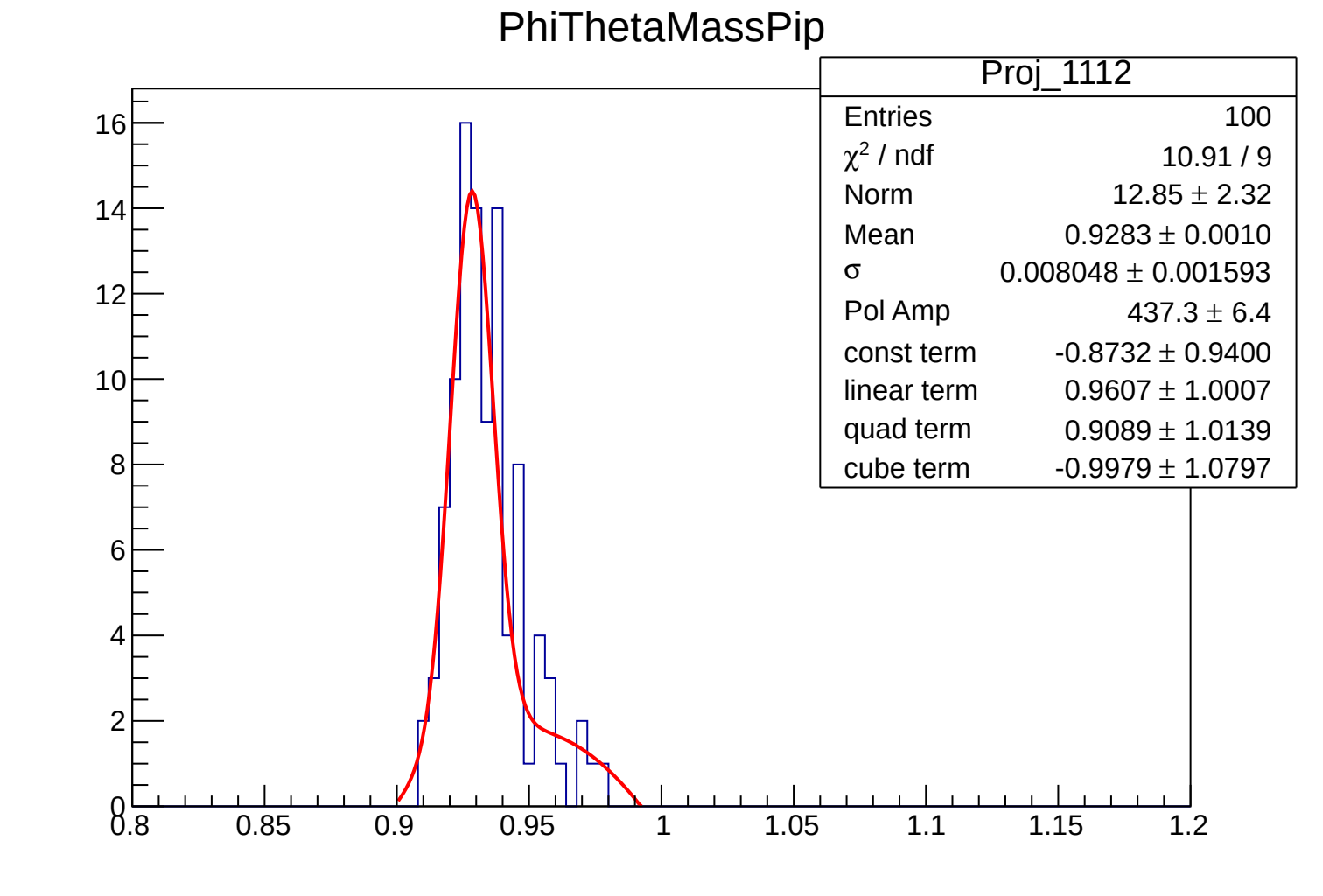

PhiThetaMassPip
Proj_117
Entries 183
χ² / ndf 16.1 / 12
Norm 20.37 ± 2.40
Mean 0.9343 ± 0.0013
σ 0.01039 ± 0.00116
Pol Amp 202.7 ± 138.7
const term -1.852 ± 0.021
linear term 1.945 ± 0.024
quad term 2.03 ± 0.03
cube term -2.119 ± 0.025
0
5
10
15
20
25
30
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

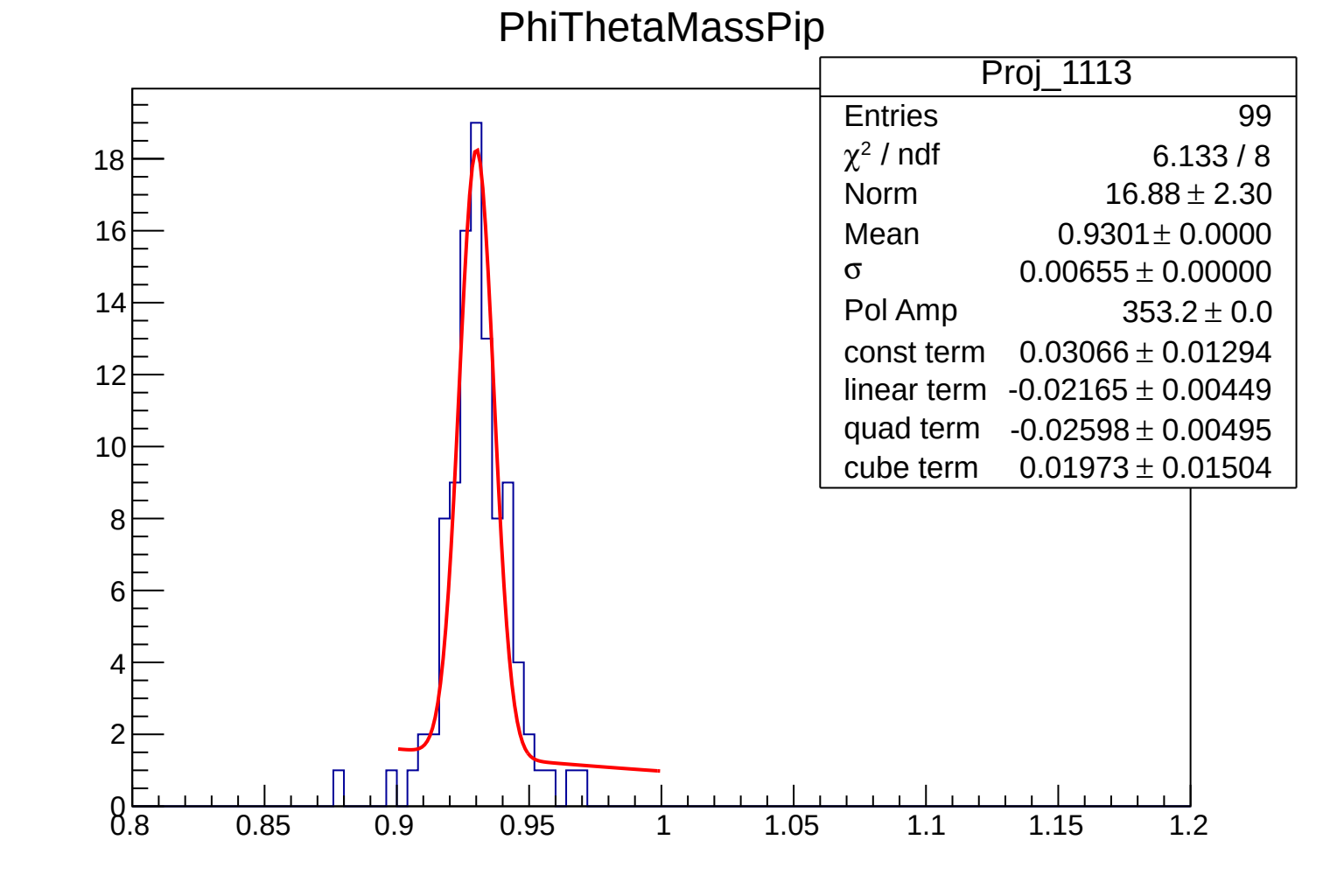

PhiThetaMassPip
Proj_118
Entries 181
χ² / ndf 6.547 / 11
Norm 23.13 ± 2.84
Mean 0.9319 ± 0.0010
σ 0.009024 ± 0.001111
Pol Amp 225.9 ± 209.2
const term -1.429 ± 0.021
linear term 1.58 ± 0.02
quad term 1.555 ± 0.023
cube term -1.708 ± 0.023
30
25
20
15
10
5
0
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

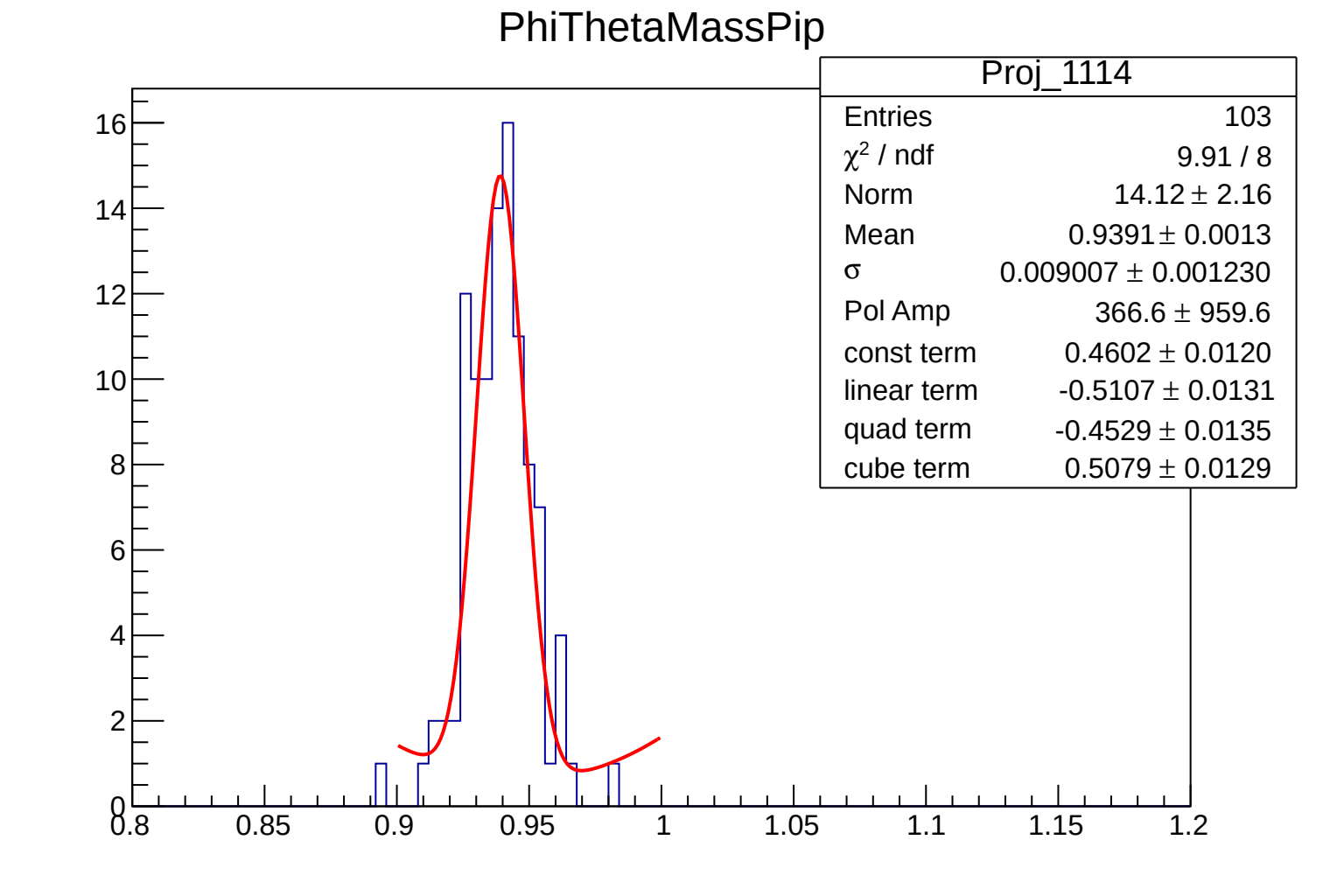

PhiThetaMassPip
Proj_119
Entries 152
χ² / ndf 12.84 / 10
Norm 20.98 ± 2.32
Mean 0.9305 ± 0.0007
σ 0.009146 ± 0.000563
Pol Amp 358.5 ± 1.3
const term -0.9361 ± 0.4286
linear term 0.9916 ± 0.4491
quad term 1.026 ± 0.466
cube term -1.082 ± 0.488
0 2 4 6 8 10 12 14 16 18 20 22 24
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

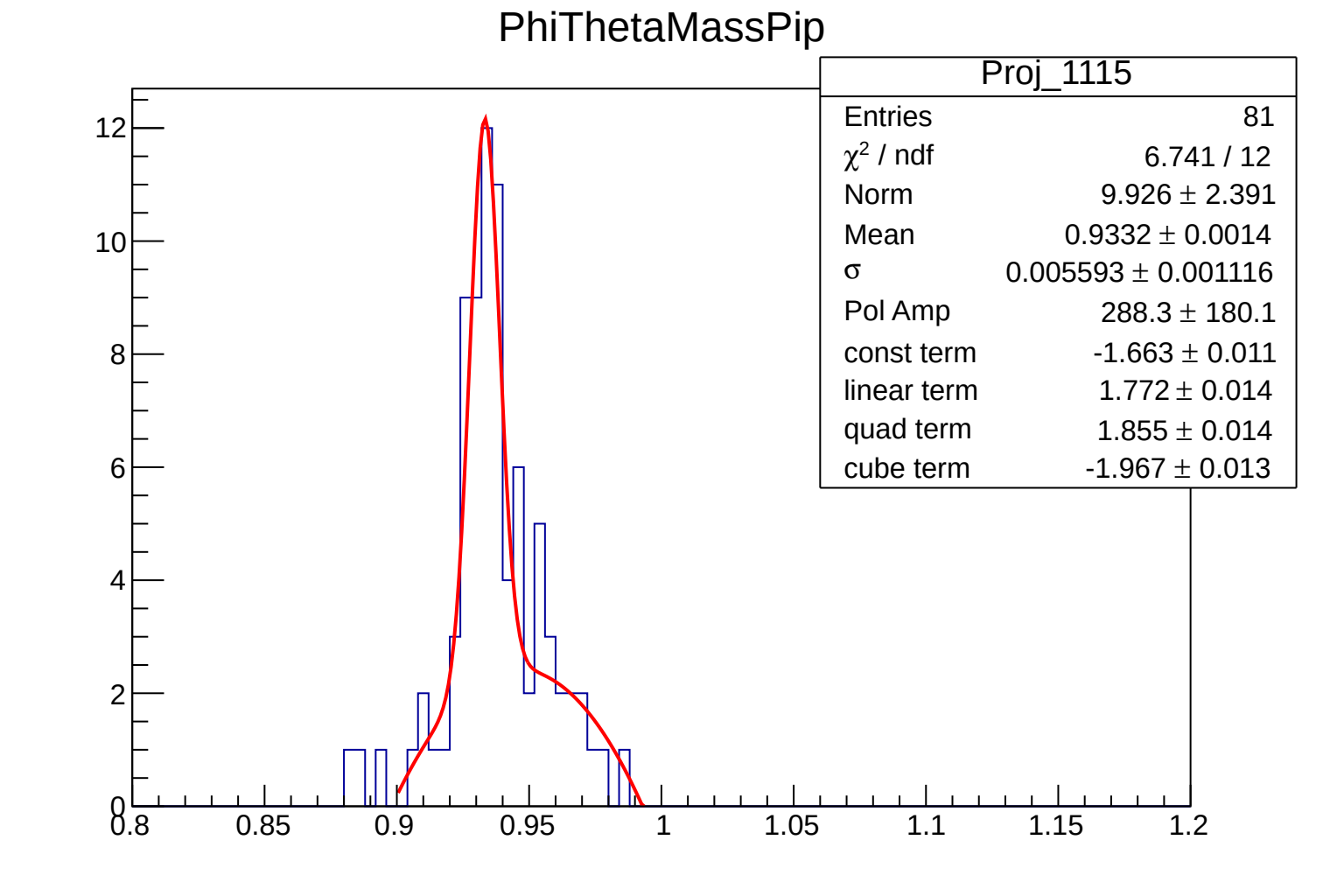

PhiThetaMassPip
Proj_1110
Entries 129
χ² / ndf 6.444 / 8
Norm 16.71 ± 2.56
Mean 0.9328 ± 0.0015
σ 0.009182 ± 0.001390
Pol Amp 1271 ± 679.9
const term -1.193 ± 0.004
linear term 1.269 ± 0.004
quad term 1.307 ± 0.004
cube term -1.387 ± 0.005
0 2 4 6 8 10 12 14 16 18 20
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2

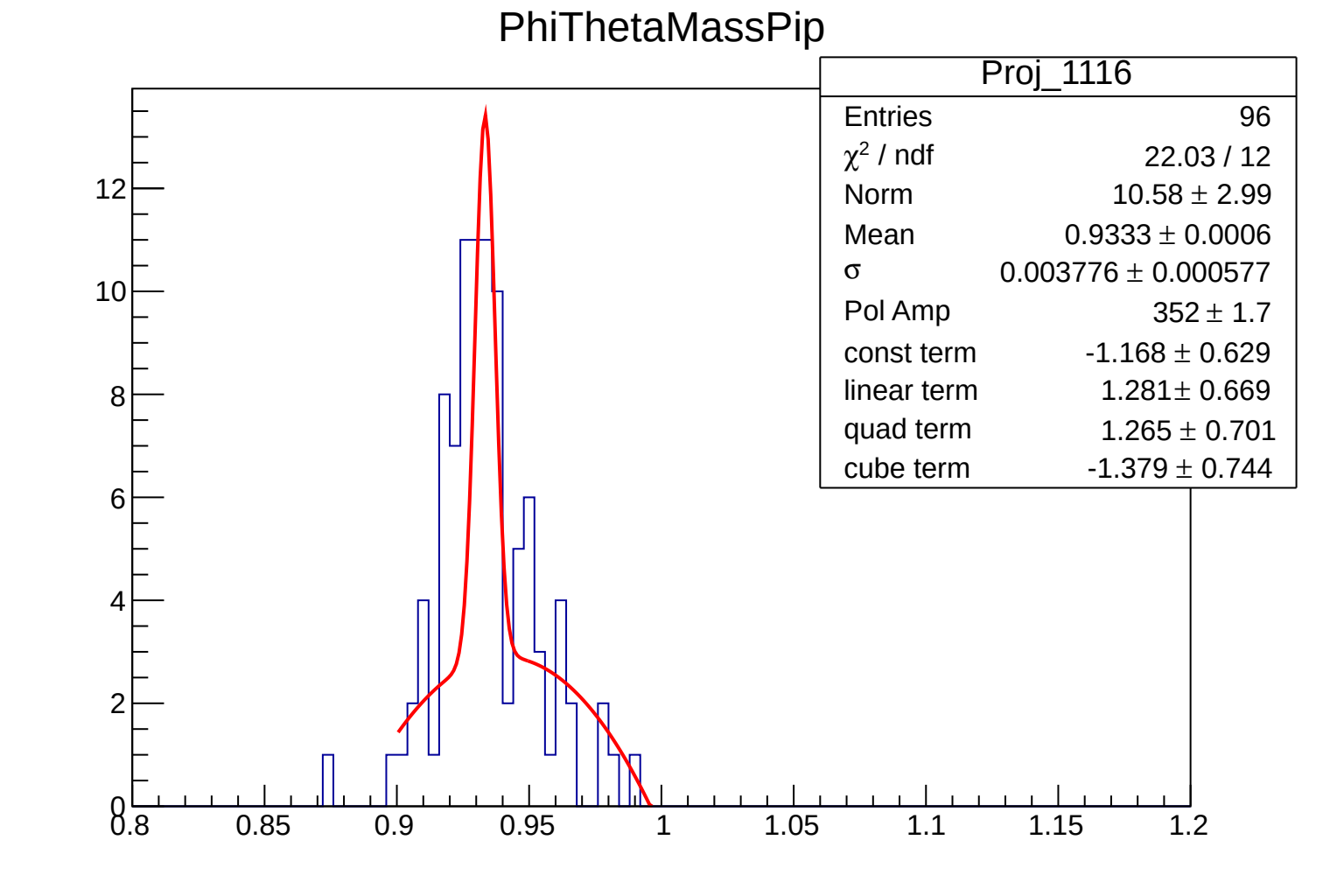

PhiThetaMassPip
Proj_1111
Entries 91
χ² / ndf 3.976 / 8
Norm 12.1 ± 1.8
Mean 0.9345 ± 0.0017
σ 0.01038 ± 0.00195
Pol Amp 72.28 ± 282.83
const term -0.005172 ± 0.056633
linear term -0.03002 ± 0.06174
quad term -0.009135 ± 0.066628
cube term 0.05894 ± 0.07118
0
2
4
6
8
10
12
14
16
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

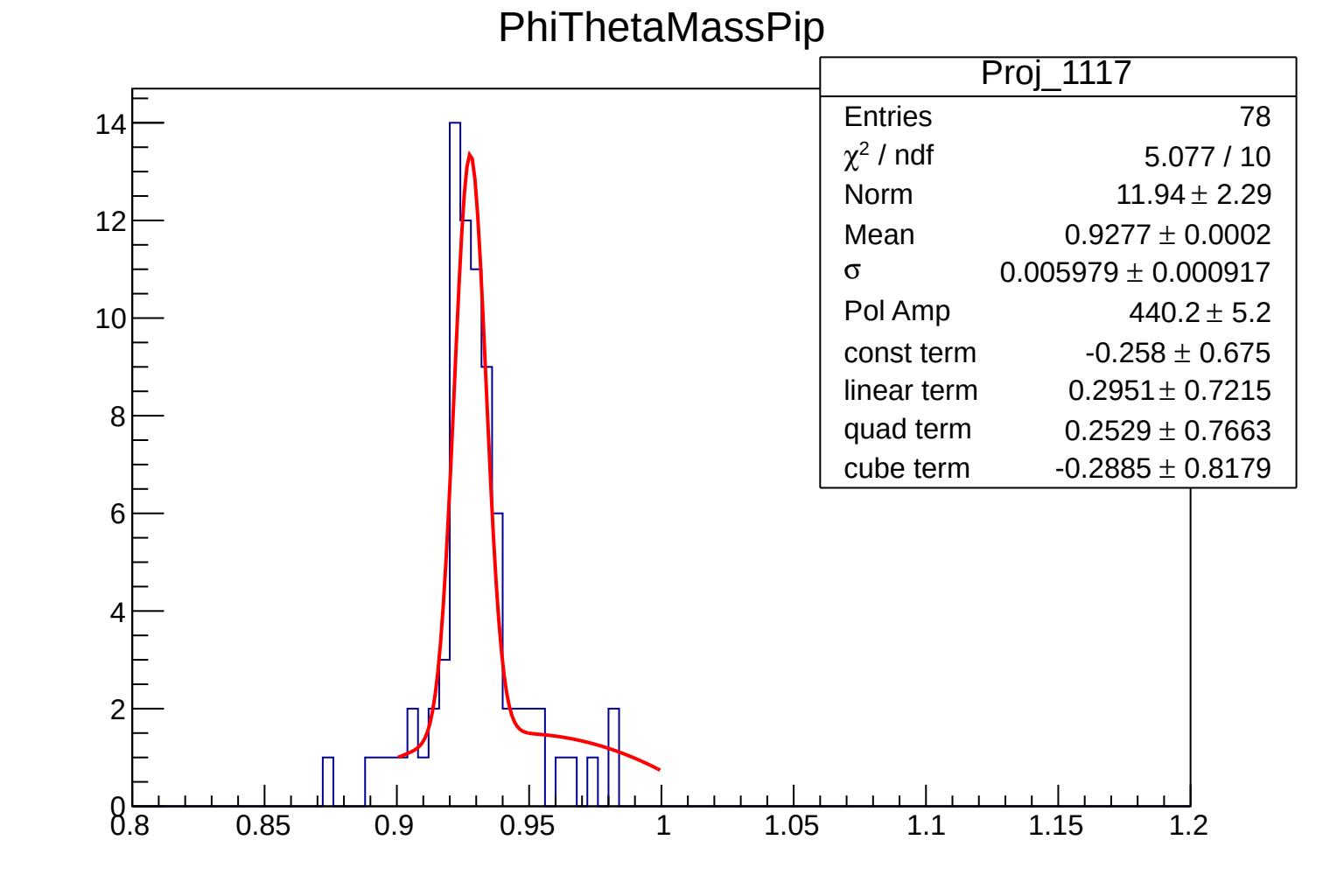

PhiThetaMassPip
Proj_1112
Entries 100
χ² / ndf 10.91 / 9
Norm 12.85 ± 2.32
Mean 0.9283 ± 0.0010
σ 0.008048 ± 0.001593
Pol Amp 437.3 ± 6.4
const term -0.8732 ± 0.9400
linear term 0.9607 ± 1.0007
quad term 0.9089 ± 1.0139
cube term -0.9979 ± 1.0797
0
2
4
6
8
10
12
14
16
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

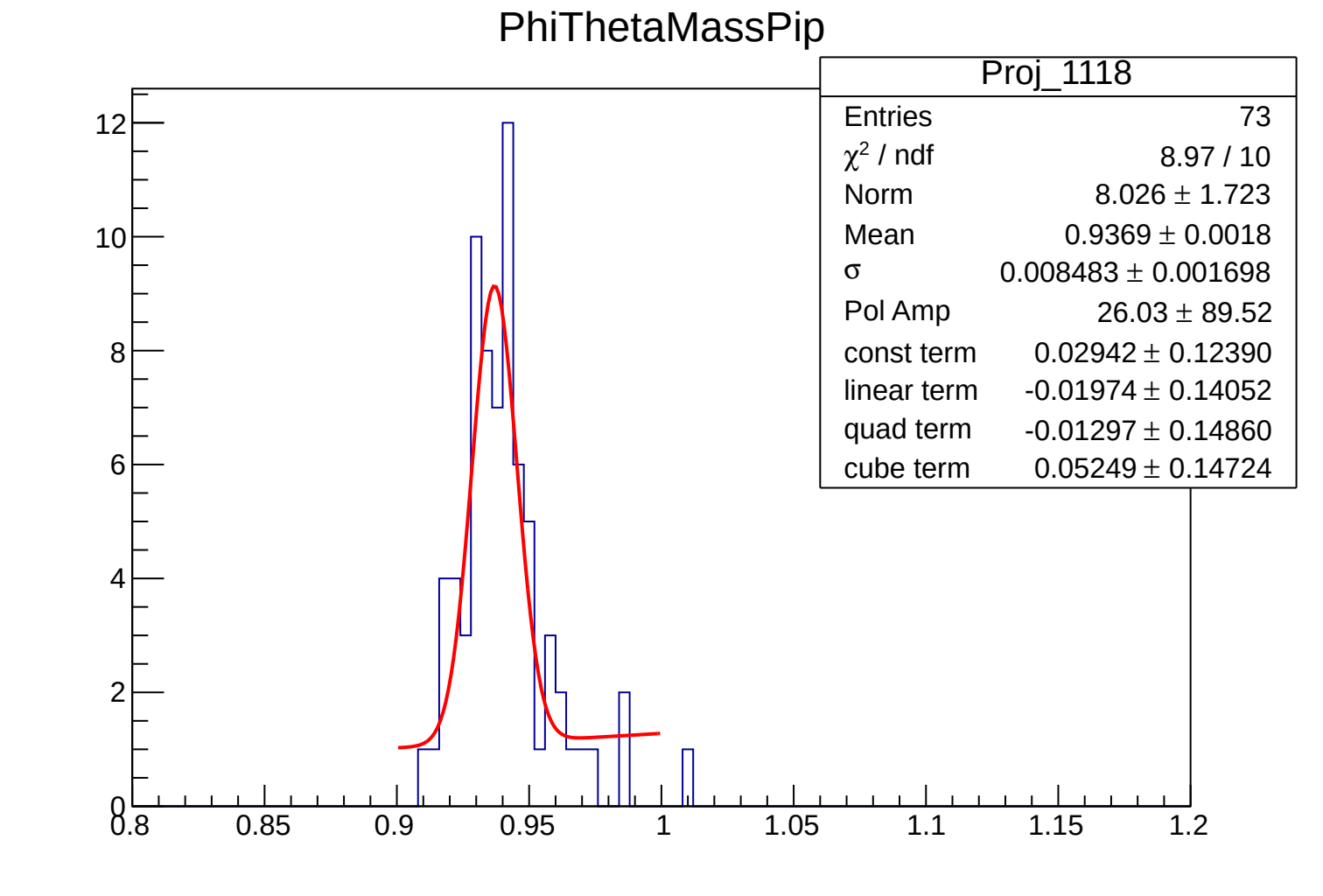

PhiThetaMassPip
Proj_1113
Entries 99
χ² / ndf 6.133 / 8
Norm 16.88 ± 2.30
Mean 0.9301 ± 0.0000
σ 0.00655 ± 0.00000
Pol Amp 353.2 ± 0.0
const term 0.03066 ± 0.01294
linear term -0.02165 ± 0.00449
quad term -0.02598 ± 0.00495
cube term 0.01973 ± 0.01504
0
2
4
6
8
10
12
14
16
18
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

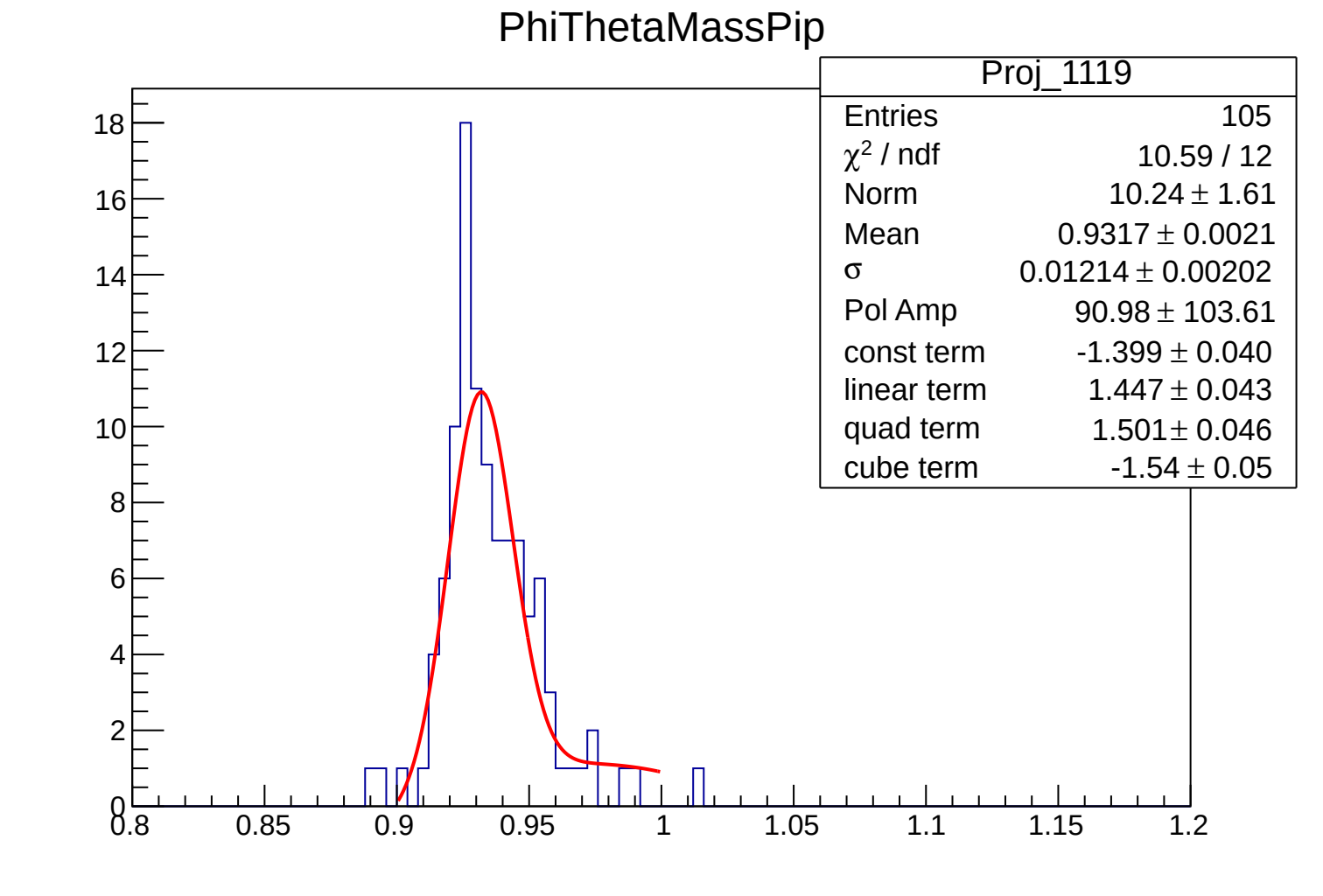

PhiThetaMassPip
Proj_1114
Entries 103
χ² / ndf 9.91 / 8
Norm 14.12 ± 2.16
Mean 0.9391 ± 0.0013
σ 0.009007 ± 0.001230
Pol Amp 366.6 ± 959.6
const term 0.4602 ± 0.0120
linear term -0.5107 ± 0.0131
quad term -0.4529 ± 0.0135
cube term 0.5079 ± 0.0129
0
2
4
6
8
10
12
14
16
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2

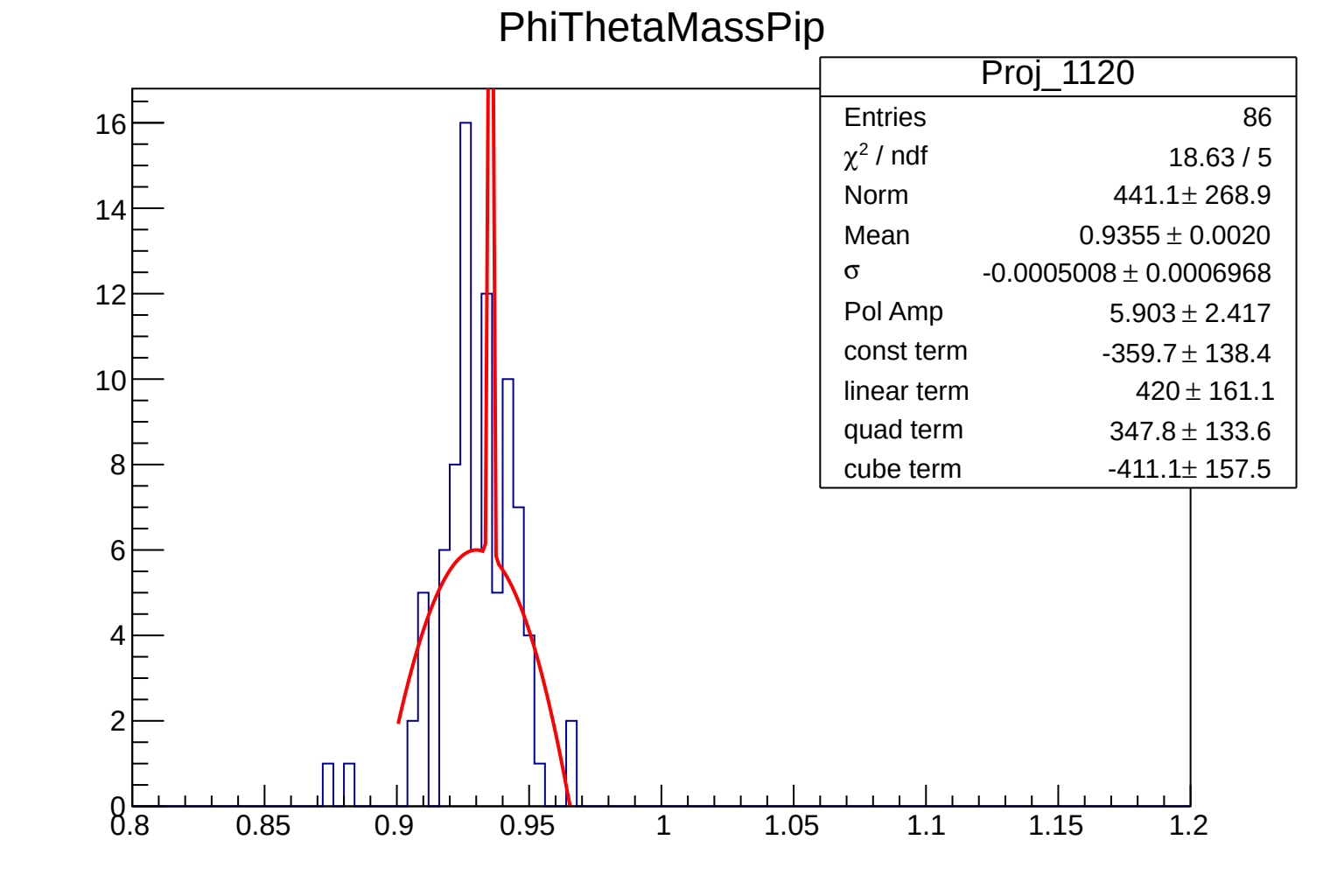

PhiThetaMassPip
Proj_1115
Entries 81
χ² / ndf 6.741 / 12
Norm 9.926 ± 2.391
Mean 0.9332 ± 0.0014
σ 0.005593 ± 0.001116
Pol Amp 288.3 ± 180.1
const term -1.663 ± 0.011
linear term 1.772 ± 0.014
quad term 1.855 ± 0.014
cube term -1.967 ± 0.013
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_1116
Entries 96
χ² / ndf 22.03 / 12
Norm 10.58 ± 2.99
Mean 0.9333 ± 0.0006
σ 0.003776 ± 0.000577
Pol Amp 352 ± 1.7
const term -1.168 ± 0.629
linear term 1.281± 0.669
quad term 1.265 ± 0.701
cube term -1.379 ± 0.744
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_1117
Entries 78
χ² / ndf 5.077 / 10
Norm 11.94 ± 2.29
Mean 0.9277 ± 0.0002
σ 0.005979 ± 0.000917
Pol Amp 440.2 ± 5.2
const term -0.258 ± 0.675
linear term 0.2951 ± 0.7215
quad term 0.2529 ± 0.7663
cube term -0.2885 ± 0.8179
0
2
4
6
8
10
12
14
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_1118
Entries 73
χ² / ndf 8.97 / 10
Norm 8.026 ± 1.723
Mean 0.9369 ± 0.0018
σ 0.008483 ± 0.001698
Pol Amp 26.03 ± 89.52
const term 0.02942 ± 0.12390
linear term -0.01974 ± 0.14052
quad term -0.01297 ± 0.14860
cube term 0.05249 ± 0.14724
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_1119
Entries 105
χ² / ndf 10.59 / 12
Norm 10.24 ± 1.61
Mean 0.9317 ± 0.0021
σ 0.01214 ± 0.00202
Pol Amp 90.98 ± 103.61
const term -1.399 ± 0.040
linear term 1.447 ± 0.043
quad term 1.501 ± 0.046
cube term -1.54 ± 0.05
0 2 4 6 8 10 12 14 16 18
0.8 0.85 0.9 0.95 1 1.05 1.1 1.15 1.2


PhiThetaMassPip
Proj_1120
Entries 86
χ² / ndf 18.63 / 5
Norm 441.1 ± 268.9
Mean 0.9355 ± 0.0020
σ -0.0005008 ± 0.0006968
Pol Amp 5.903 ± 2.417
const term -359.7 ± 138.4
linear term 420 ± 161.1
quad term 347.8 ± 133.6
cube term -411.1 ± 157.5
0
2
4
6
8
10
12
14
16
0.8
0.85
0.9
0.95
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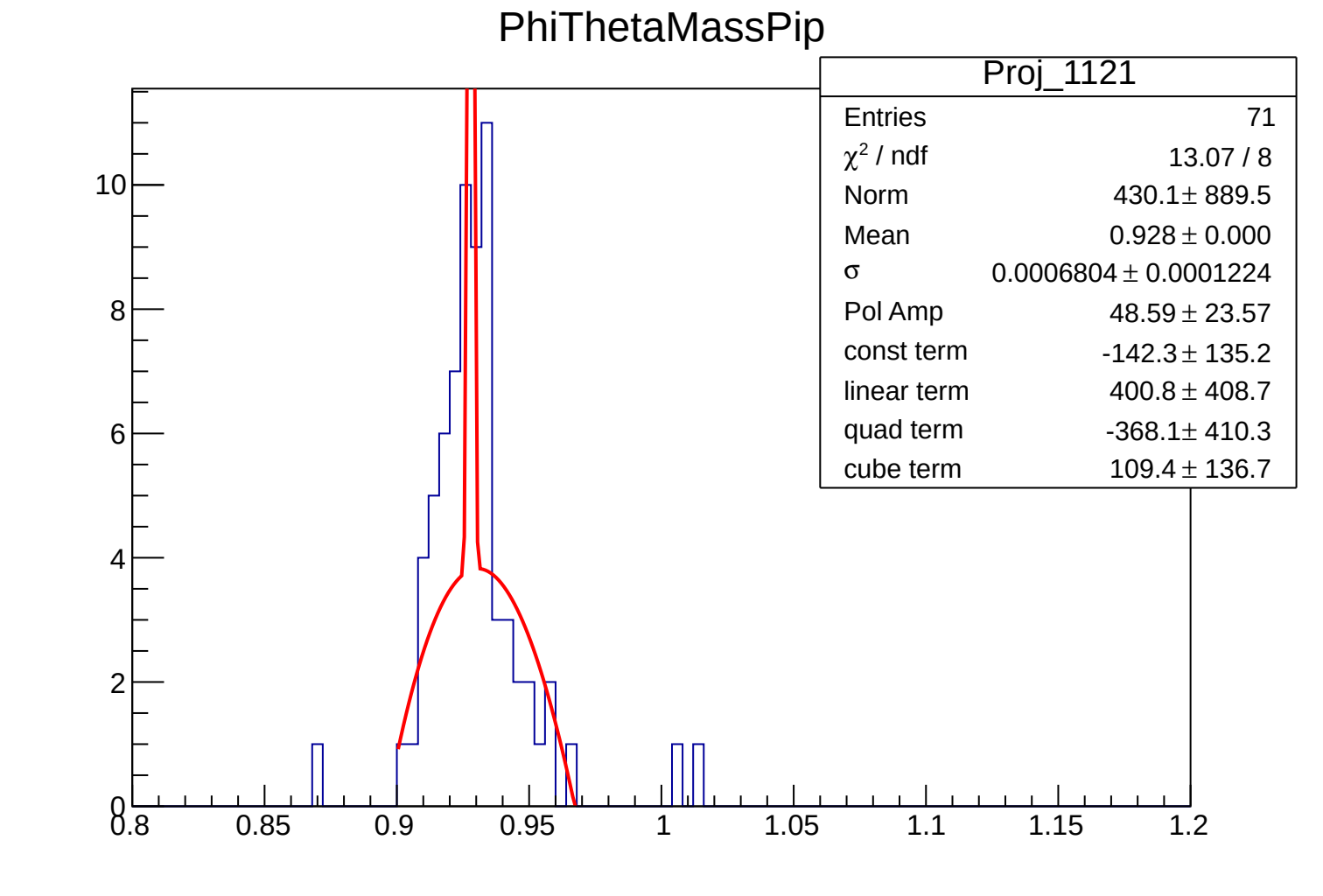
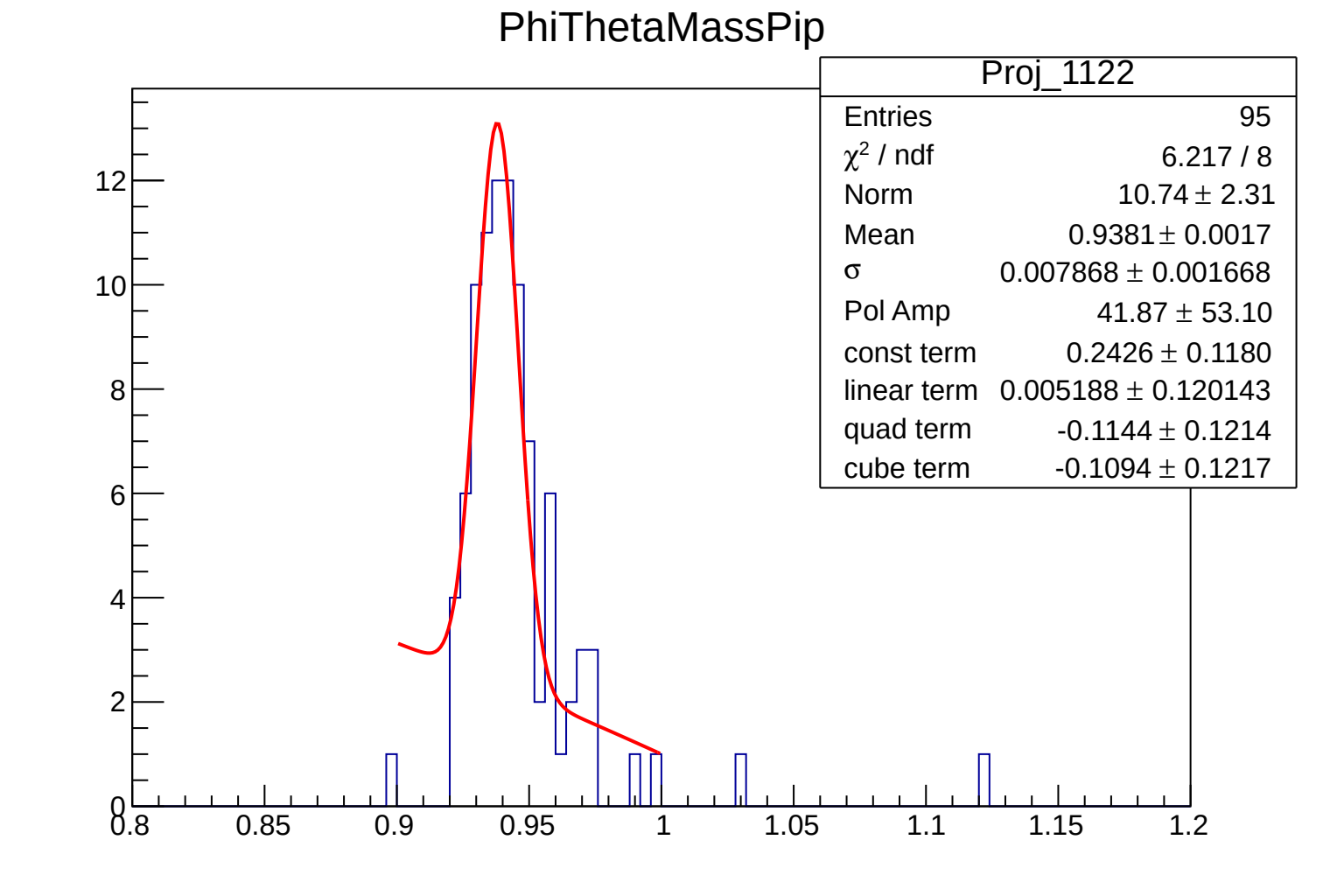
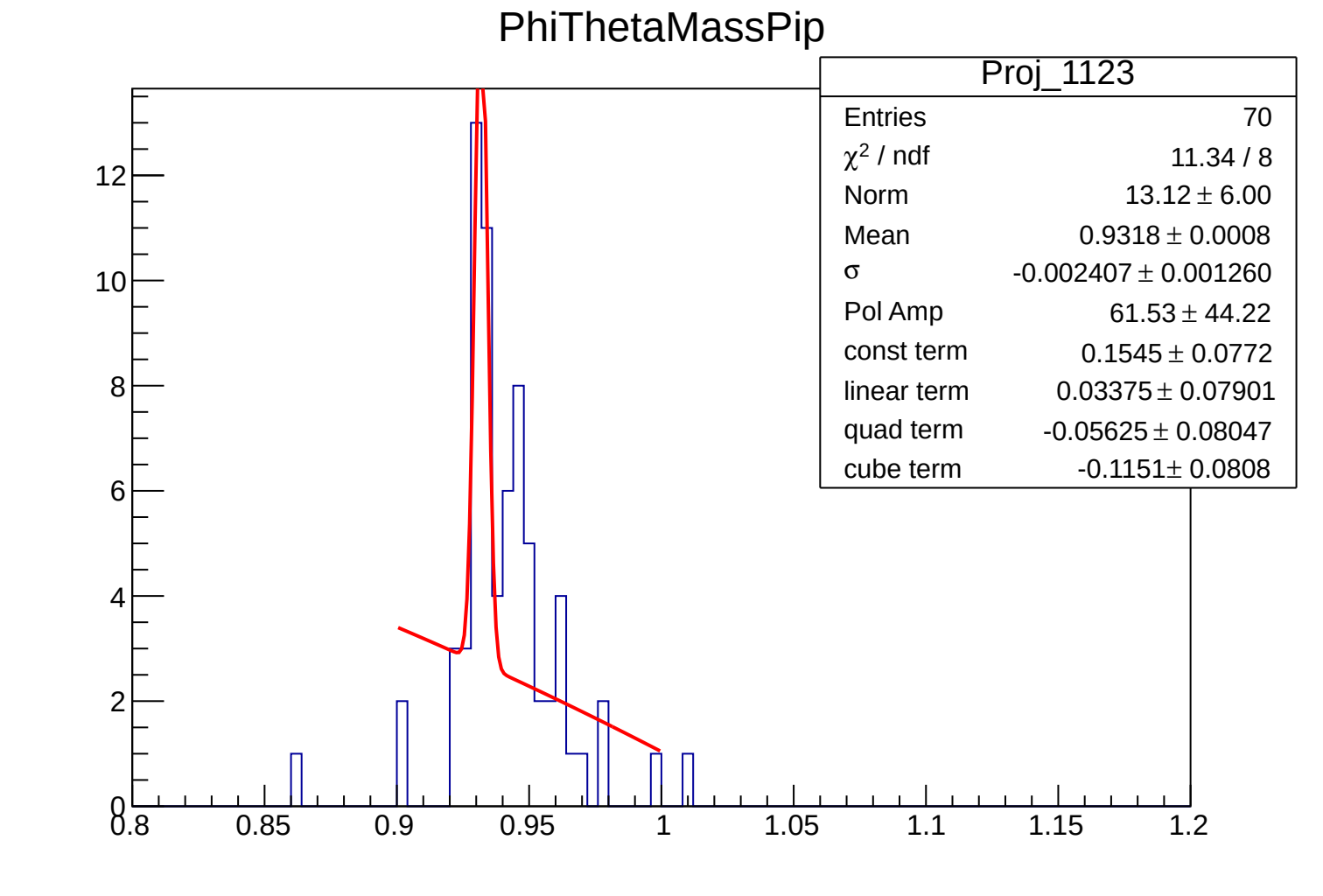
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_1121
Entries 71
χ² / ndf 13.07 / 8
Norm 430.1 ± 889.5
Mean 0.928 ± 0.000
σ 0.0006804 ± 0.0001224
Pol Amp 48.59 ± 23.57
const term -142.3 ± 135.2
linear term 400.8 ± 408.7
quad term -368.1 ± 410.3
cube term 109.4 ± 136.7
0
2
4
6
8
10
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_1122
Entries 95
χ² / ndf 6.217 / 8
Norm 10.74 ± 2.31
Mean 0.9381 ± 0.0017
σ 0.007868 ± 0.001668
Pol Amp 41.87 ± 53.10
const term 0.2426 ± 0.1180
linear term 0.005188 ± 0.120143
quad term -0.1144 ± 0.1214
cube term -0.1094 ± 0.1217
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2


PhiThetaMassPip
Proj_1123
Entries 70
χ² / ndf 11.34 / 8
Norm 13.12 ± 6.00
Mean 0.9318 ± 0.0008
σ -0.002407 ± 0.001260
Pol Amp 61.53 ± 44.22
const term 0.1545 ± 0.0772
linear term 0.03375 ± 0.07901
quad term -0.05625 ± 0.08047
cube term -0.1151 ± 0.0808
0
2
4
6
8
10
12
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2