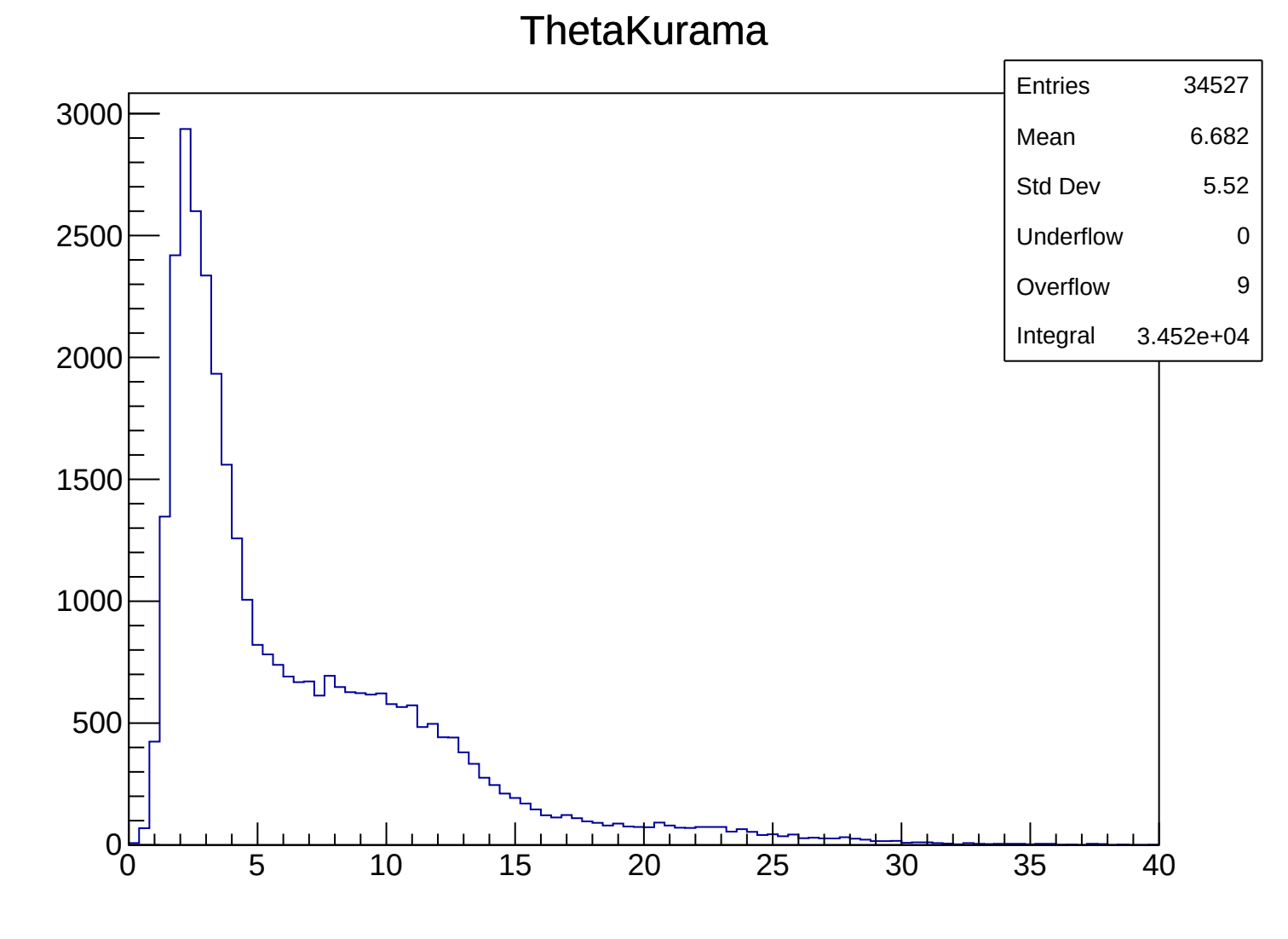
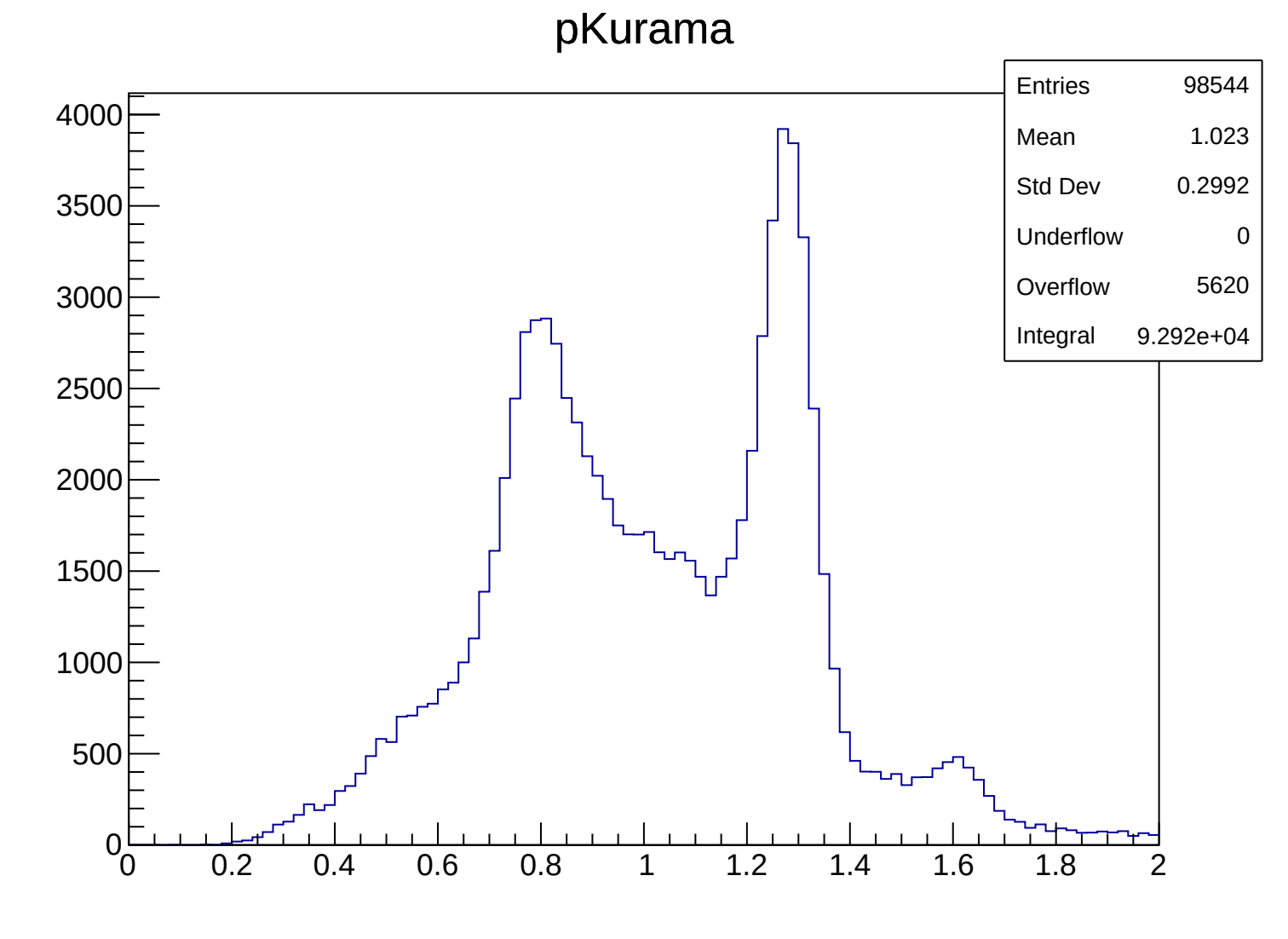
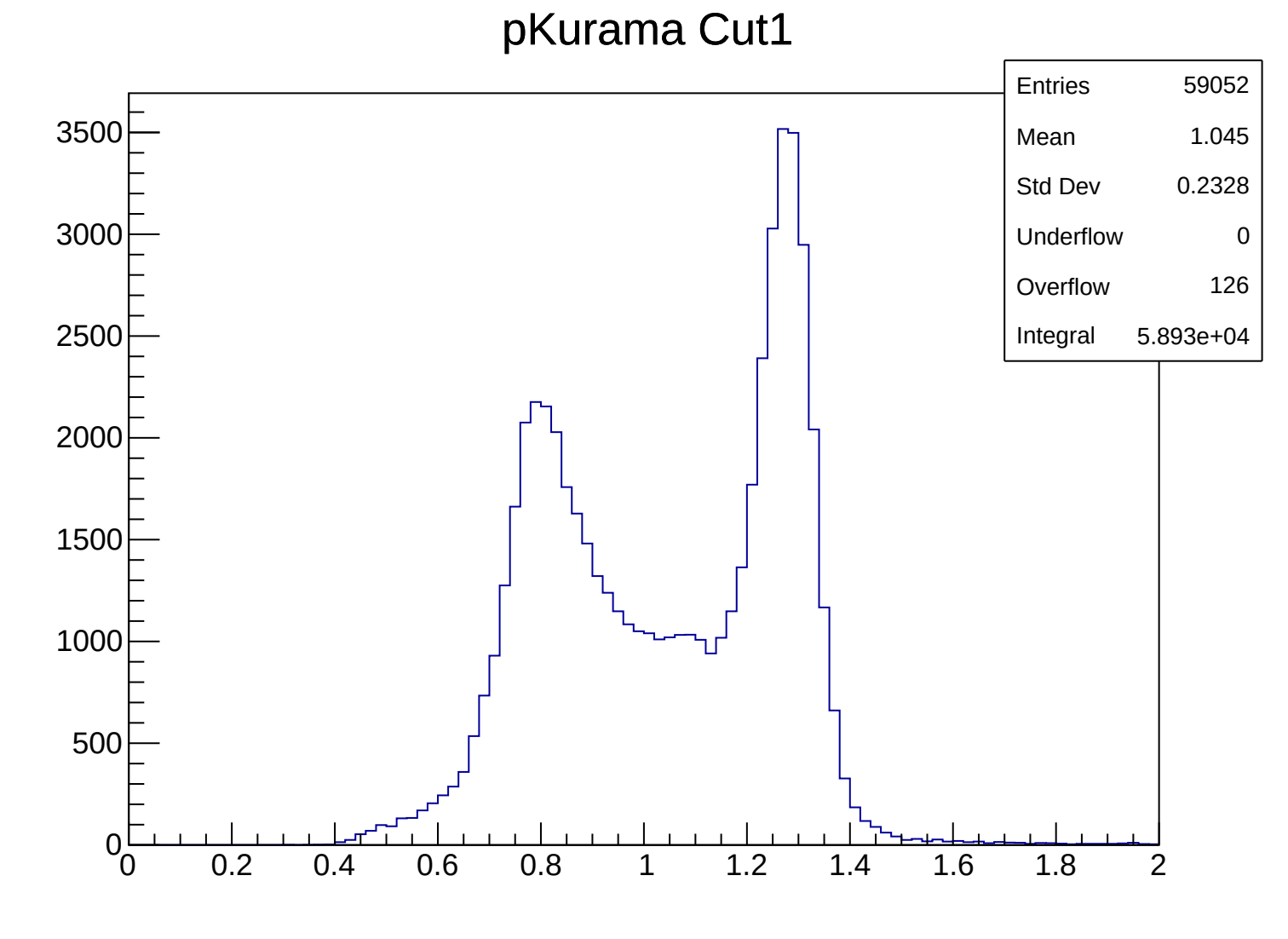
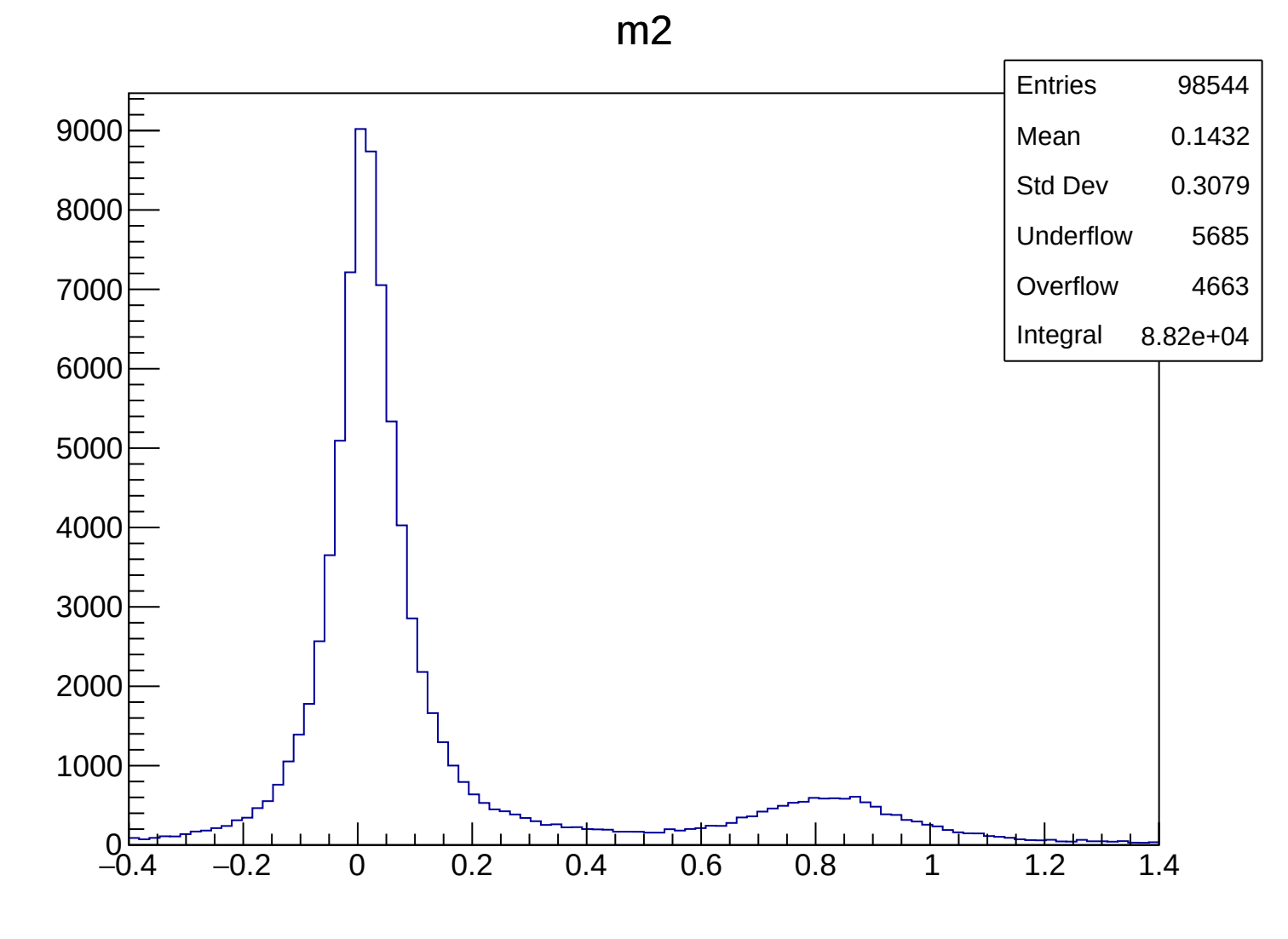
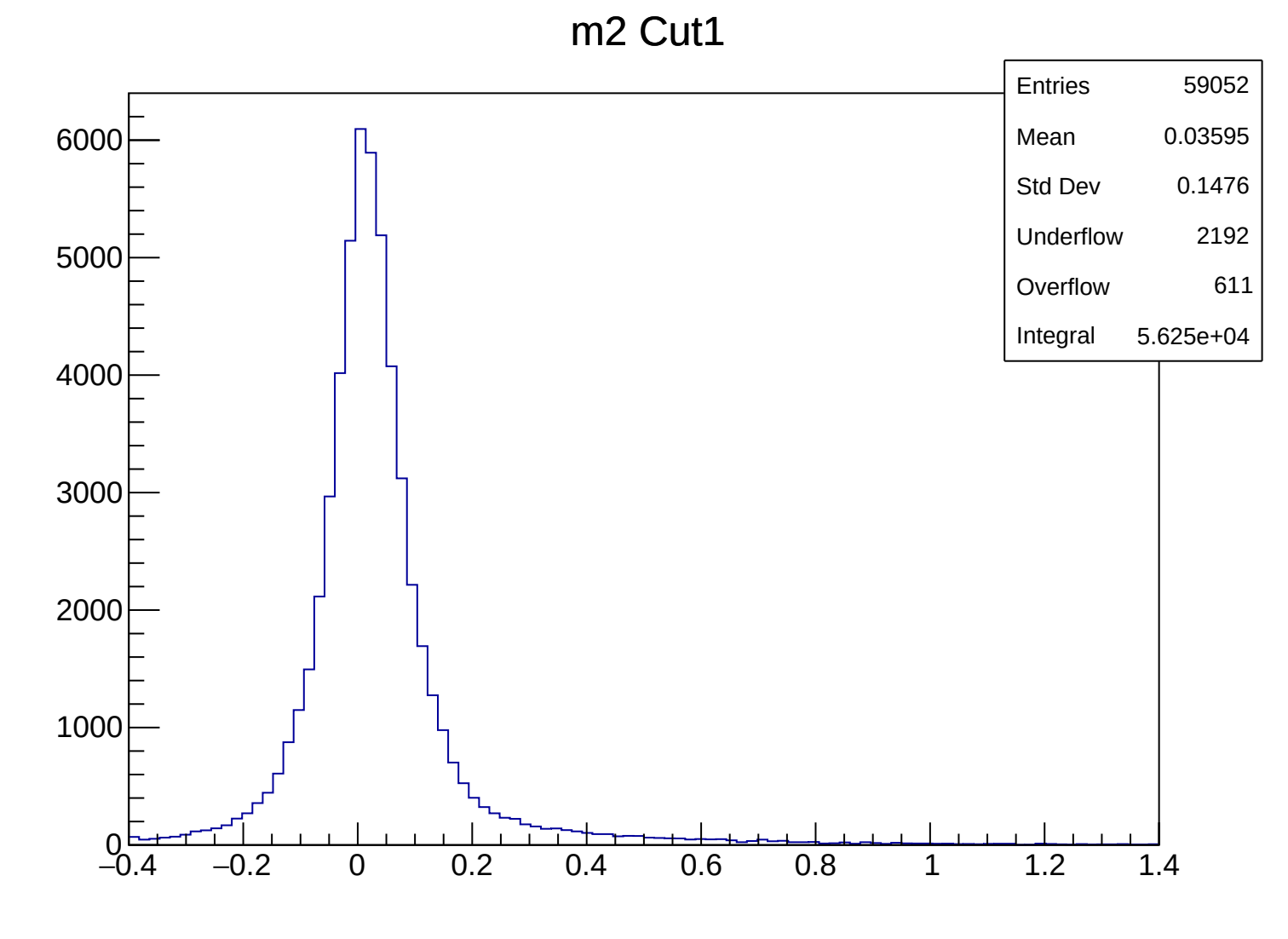
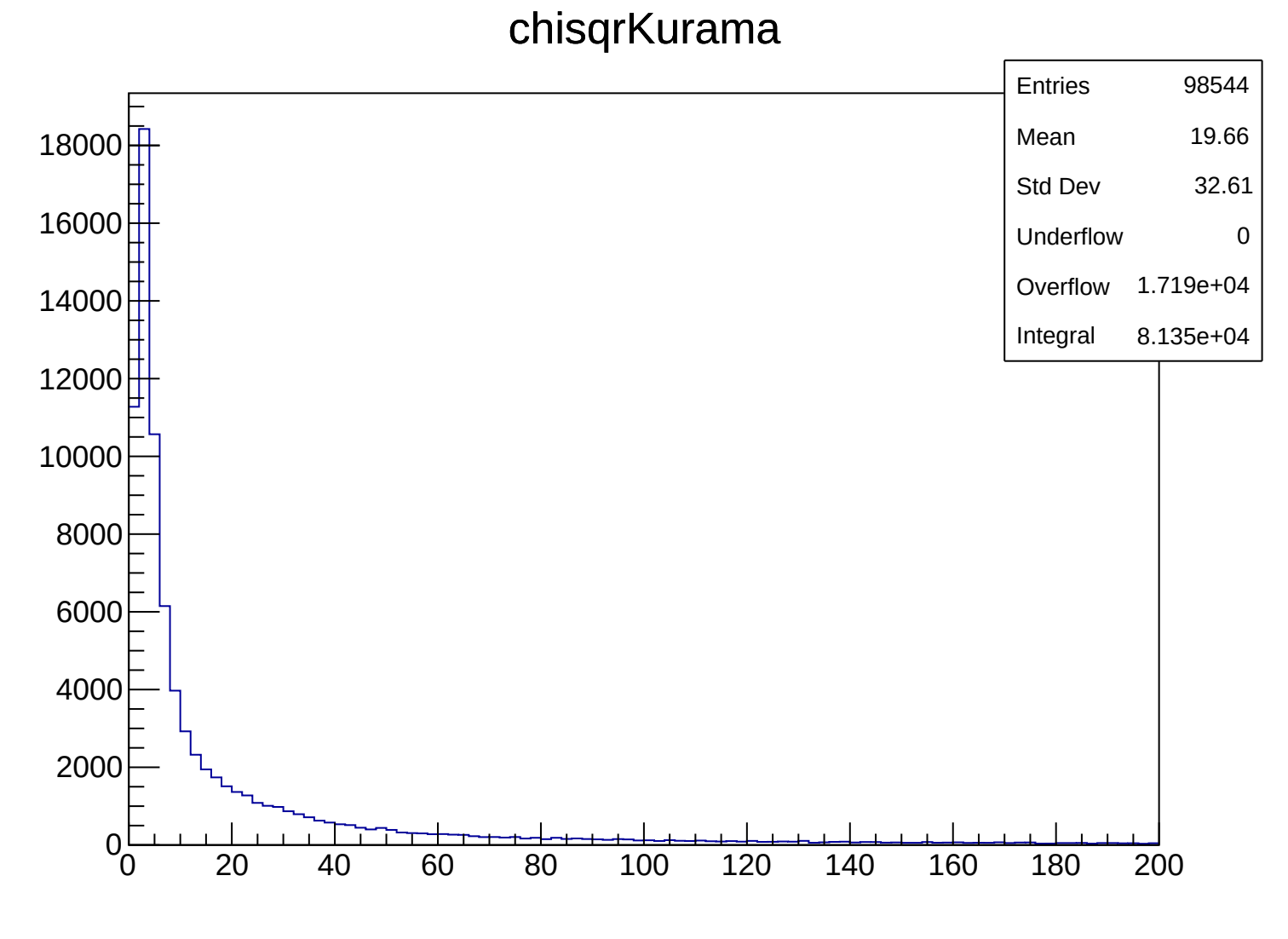

ThetaKurama
Entries 34527
Mean 6.682
Std Dev 5.52
Underflow 0
Overflow 9
Integral 3.452e+04
3000
2500
2000
1500
1000
500
0
0
5
10
15
20
25
30
35
40

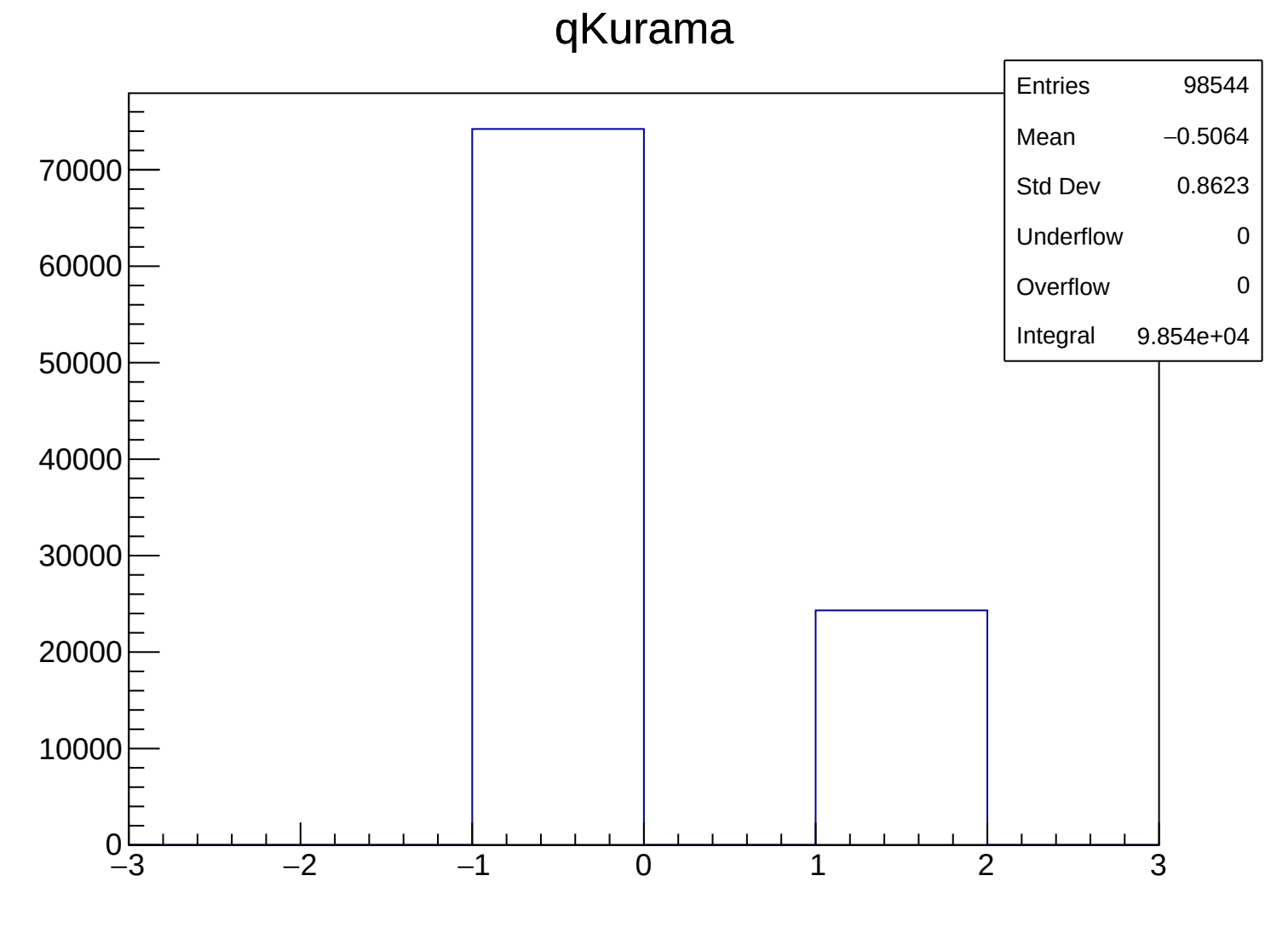

pKurama
Entries 98544
Mean 1.023
Std Dev 0.2992
Underflow 0
Overflow 5620
Integral 9.292e+04
4000
3500
3000
2500
2000
1500
1000
500
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

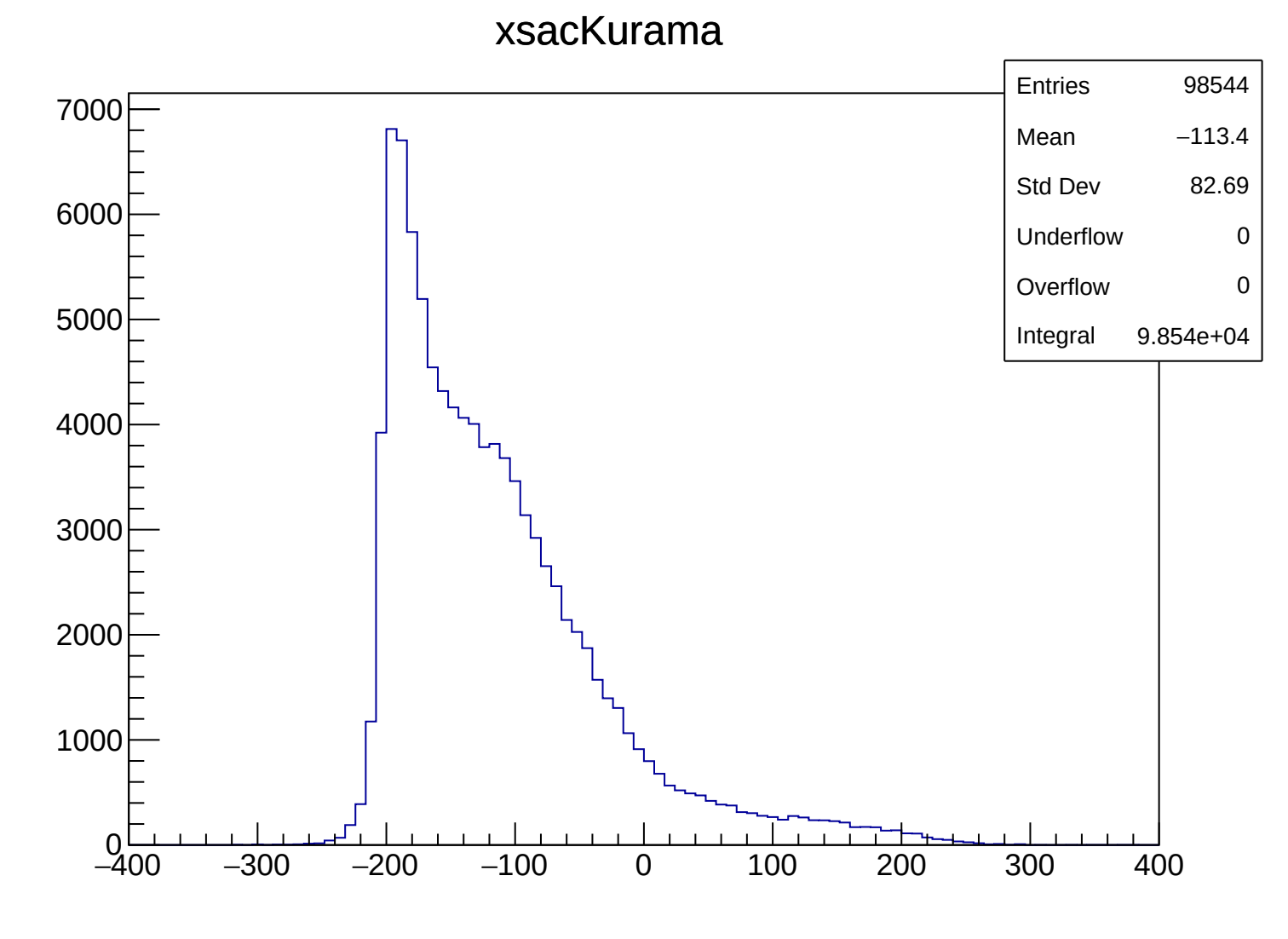

pKurama Cut1
Entries 59052
Mean 1.045
Std Dev 0.2328
Underflow 0
Overflow 126
Integral 5.893e+04
3500
3000
2500
2000
1500
1000
500
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

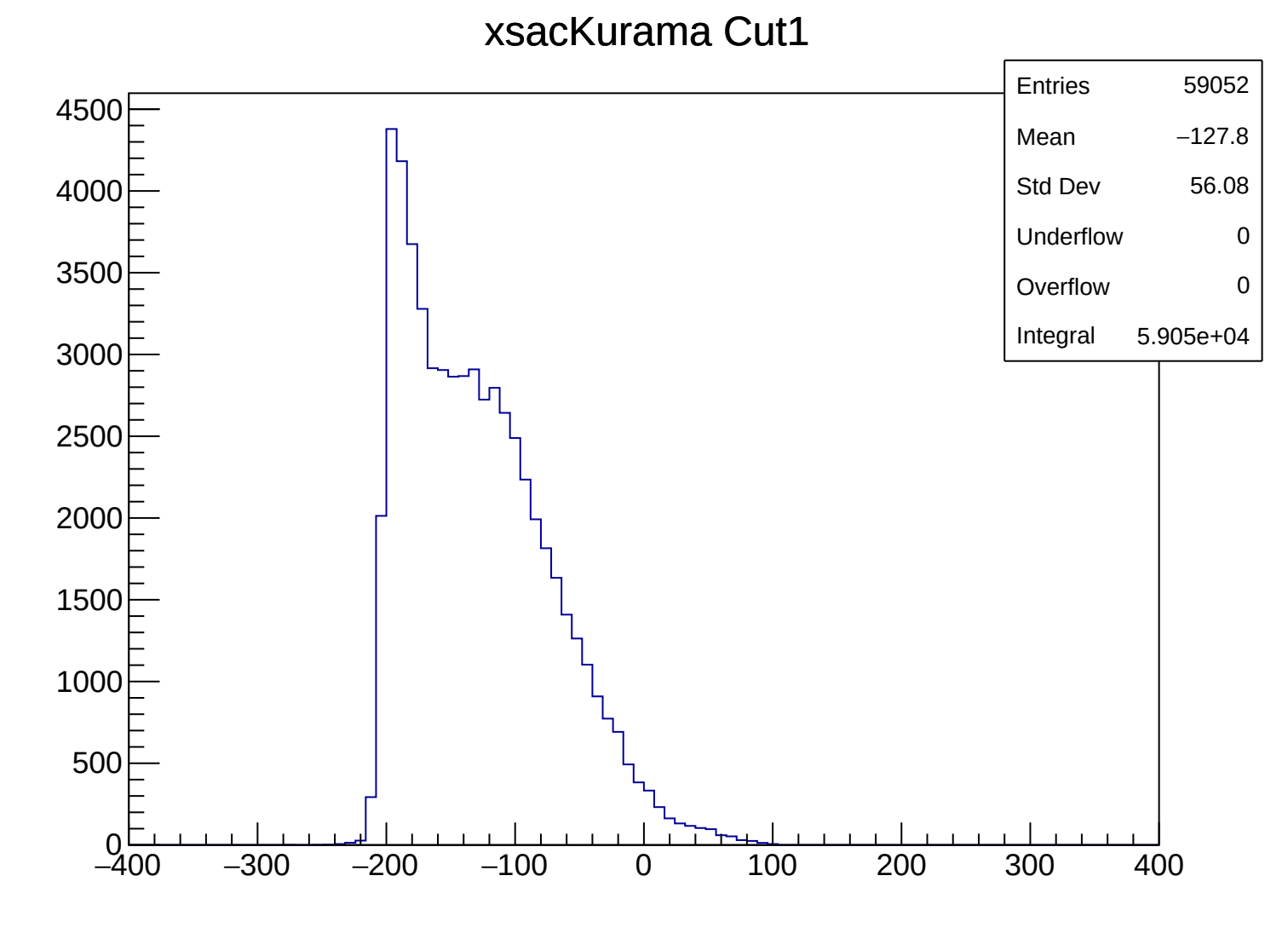

m2
Entries 98544
Mean 0.1432
Std Dev 0.3079
Underflow 5685
Overflow 4663
Integral 8.82e+04
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

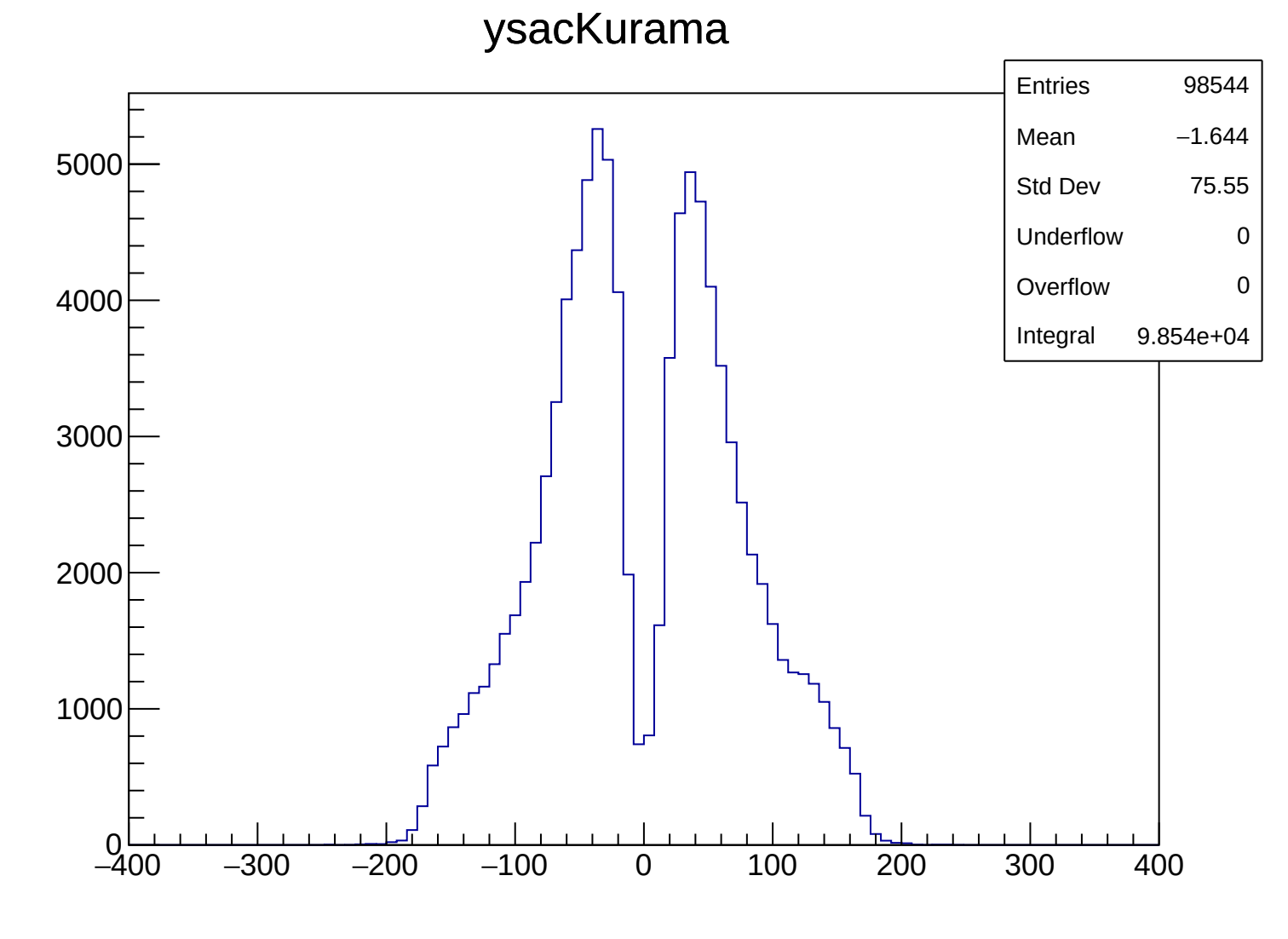

m2 Cut1
Entries 59052
Mean 0.03595
Std Dev 0.1476
Underflow 2192
Overflow 611
Integral 5.625e+04
6000
5000
4000
3000
2000
1000
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

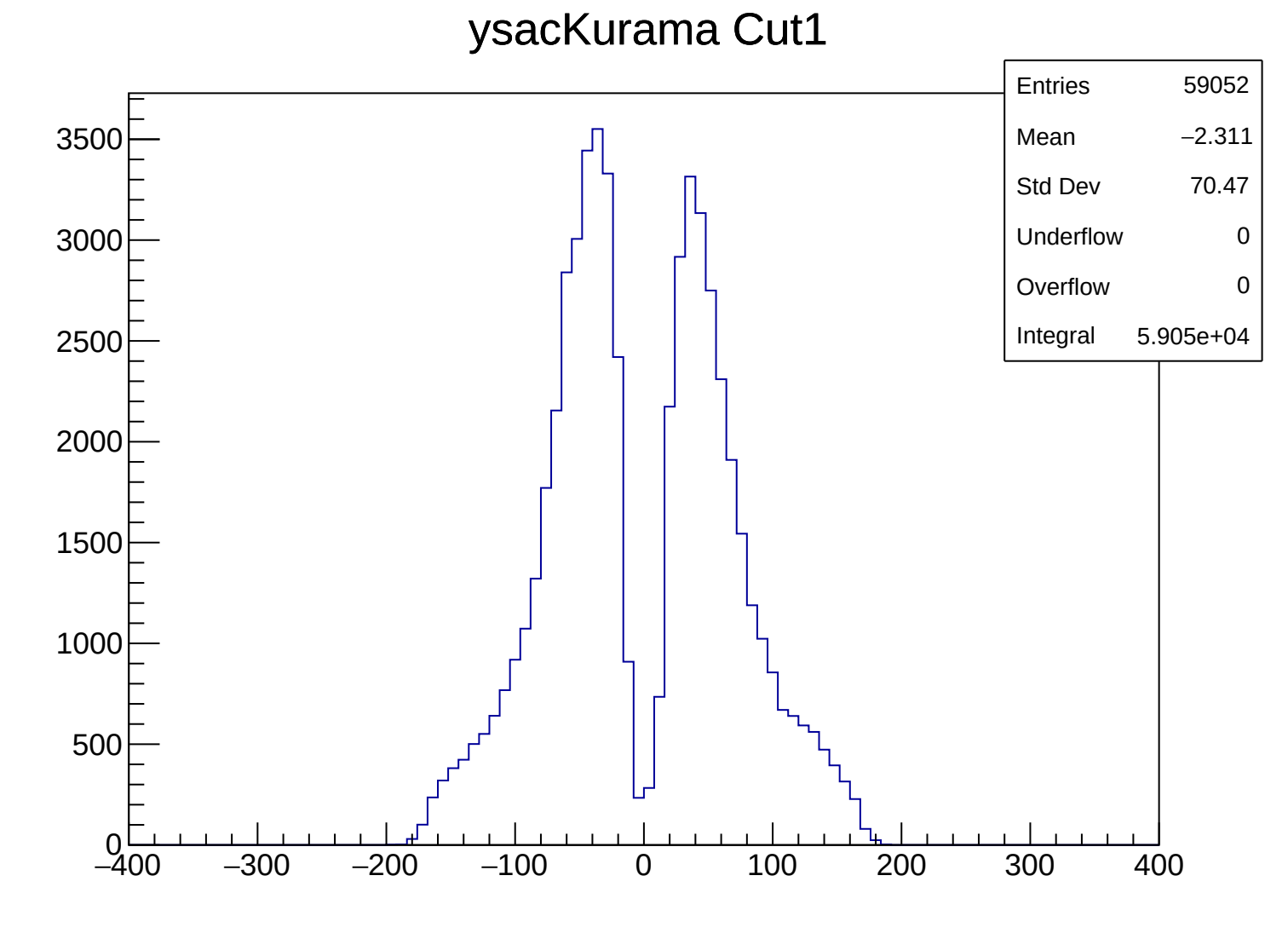

chisqrKurama
Entries 98544
Mean 19.66
Std Dev 32.61
Underflow 0
Overflow 1.719e+04
Integral 8.135e+04
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
20
40
60
80
100
120
140
160
180
200

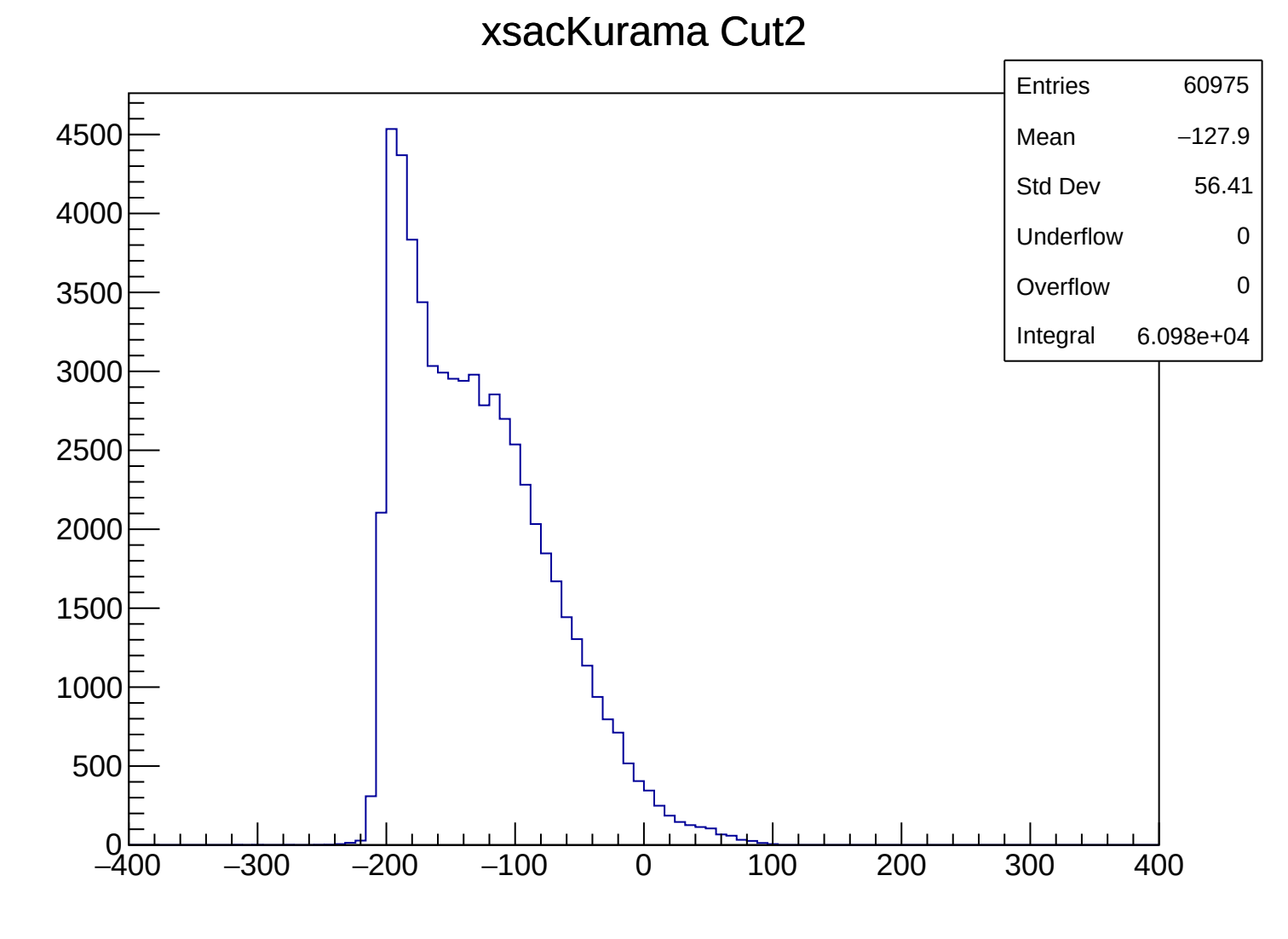

qKurama
Entries 98544
Mean −0.5064
Std Dev 0.8623
Underflow 0
Overflow 0
Integral 9.854e+04
70000
60000
50000
40000
30000
20000
10000
0
−3
−2
−1
0
1
2
3

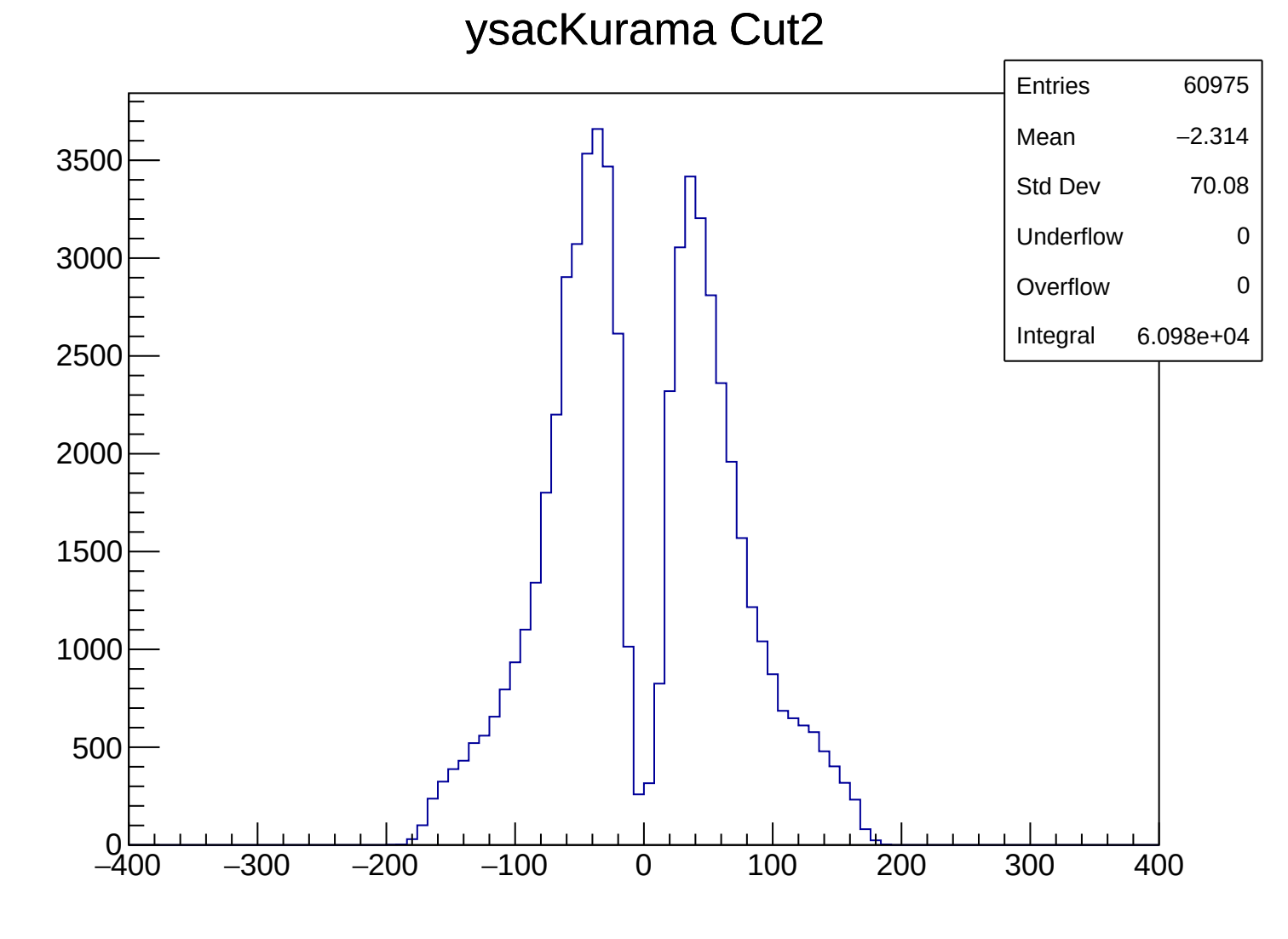

xsacKurama
Entries 98544
Mean −113.4
Std Dev 82.69
Underflow 0
Overflow 0
Integral 9.854e+04
7000
6000
5000
4000
3000
2000
1000
0
−400
−300
−200
−100
0
100
200
300
400

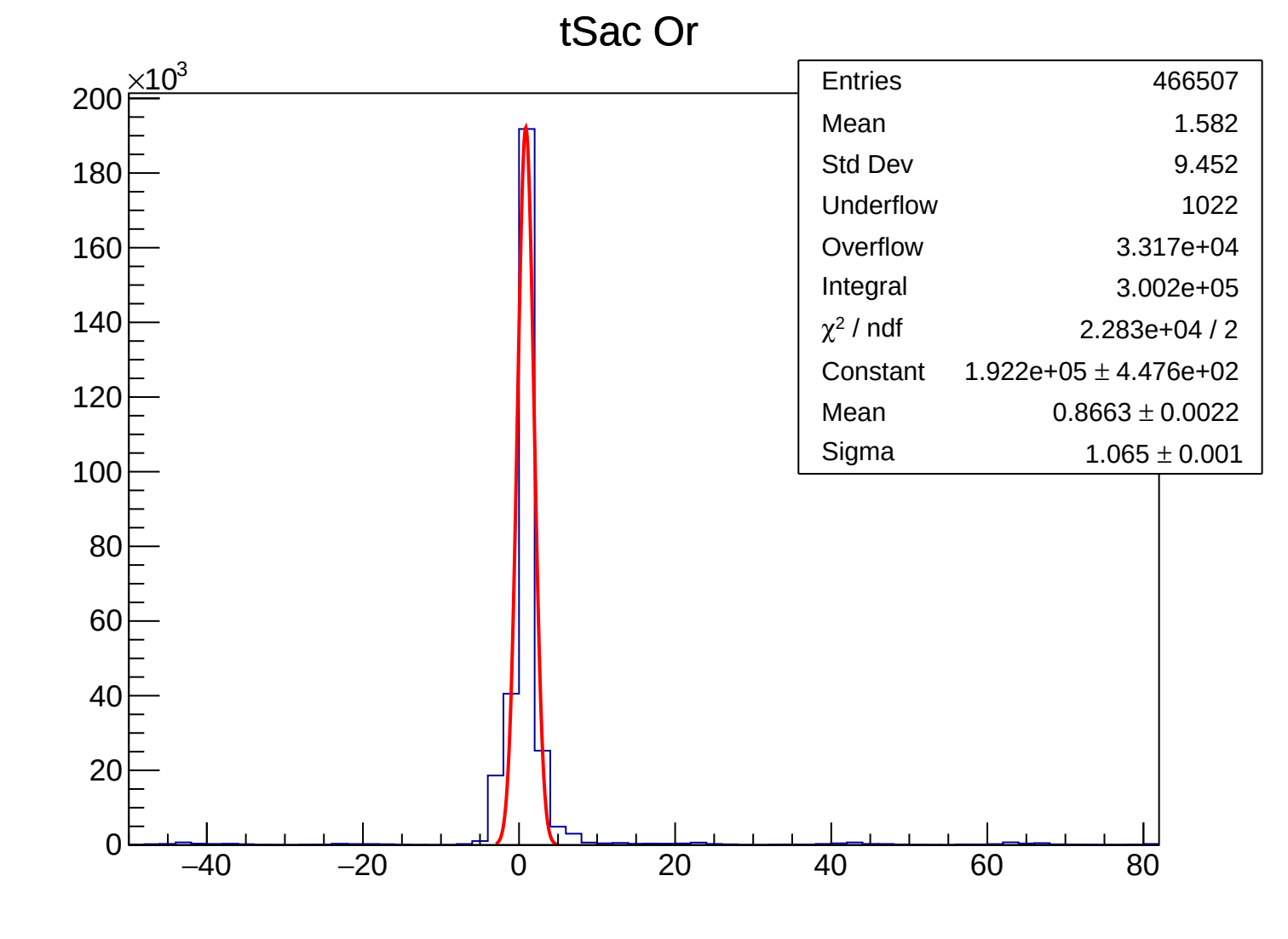

xsacKurama Cut1
Entries 59052
Mean −127.8
Std Dev 56.08
Underflow 0
Overflow 0
Integral 5.905e+04
4500
4000
3500
3000
2500
2000
1500
1000
500
0
−400
−300
−200
−100
0
100
200
300
400

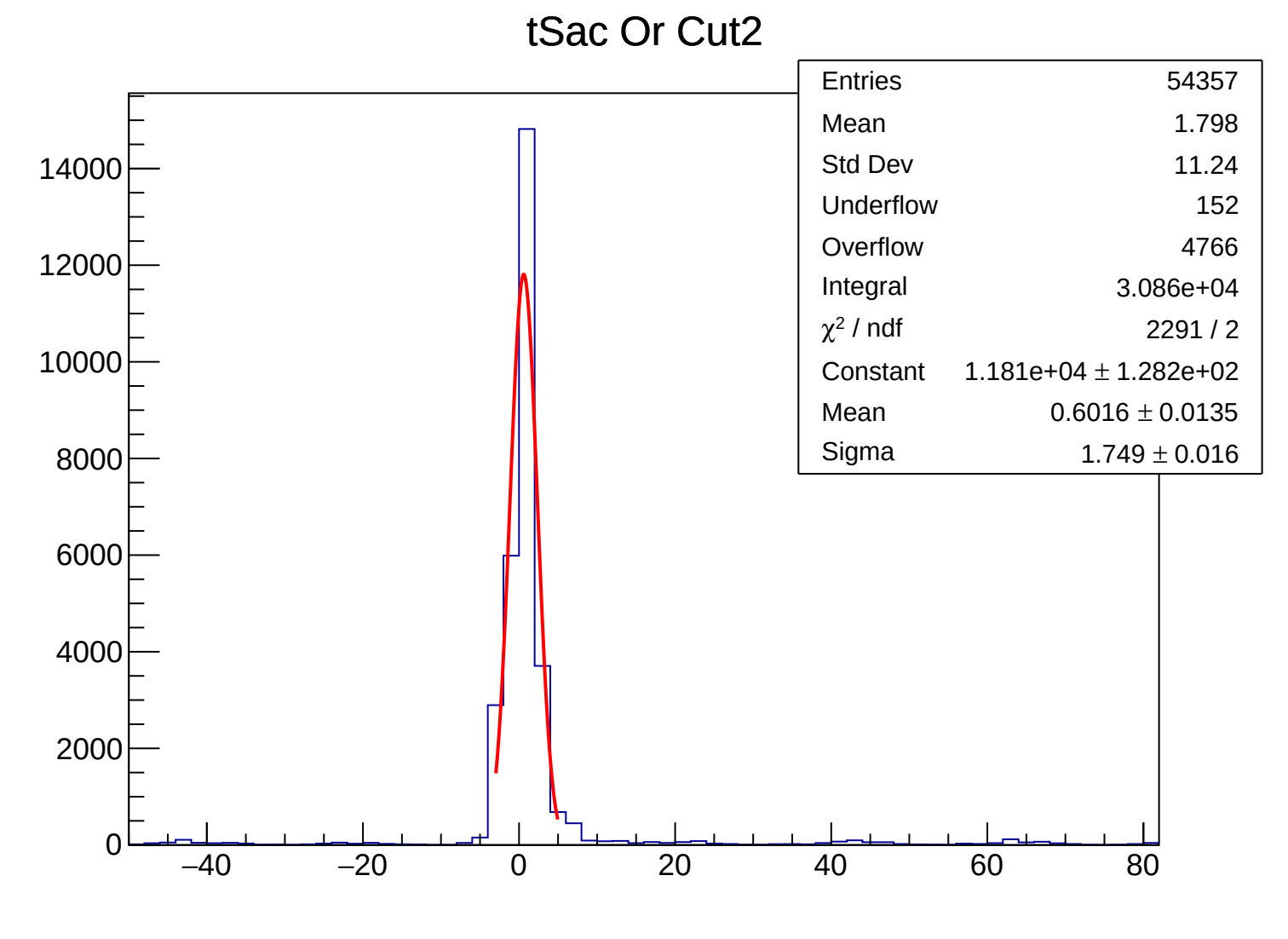

ysacKurama
Entries 98544
Mean –1.644
Std Dev 75.55
Underflow 0
Overflow 0
Integral 9.854e+04
5000
4000
3000
2000
1000
0
–400
–300
–200
–100
0
100
200
300
400

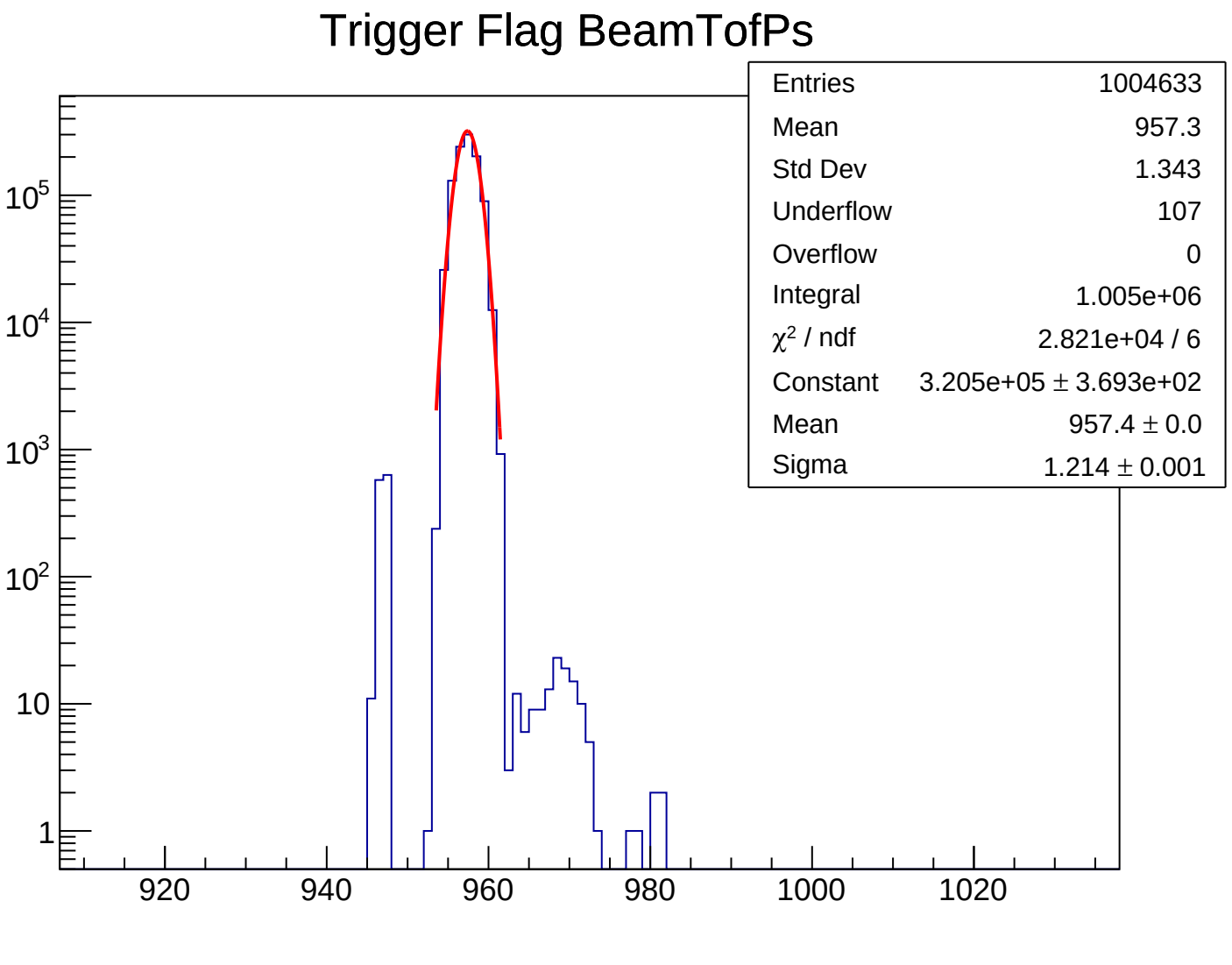

ysacKurama Cut1
Entries 59052
Mean –2.311
Std Dev 70.47
Underflow 0
Overflow 0
Integral 5.905e+04
3500
3000
2500
2000
1500
1000
500
0
–400
–300
–200
–100
0
100
200
300
400

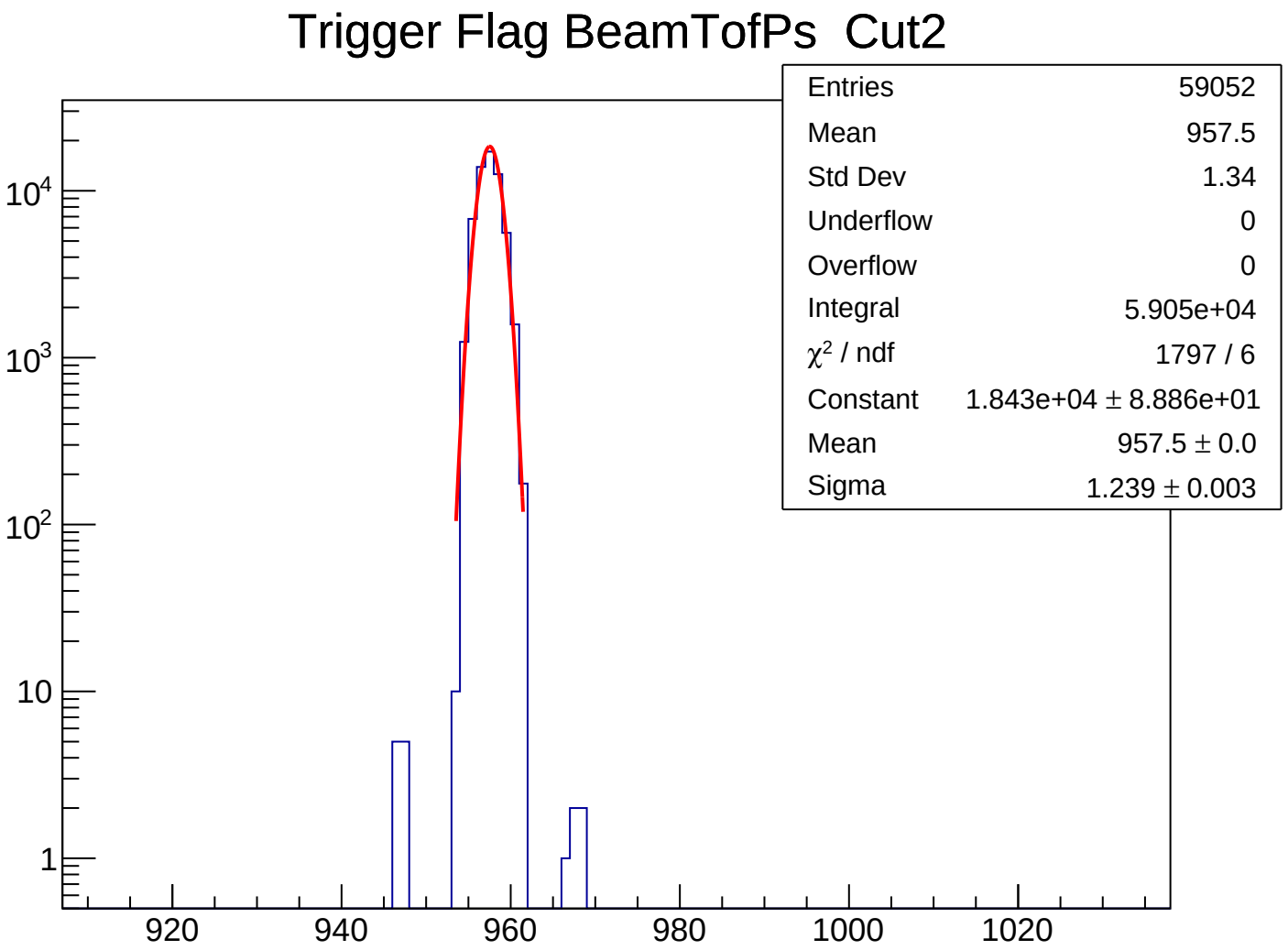

xsacKurama Cut2
Entries 60975
Mean −127.9
Std Dev 56.41
Underflow 0
Overflow 0
Integral 6.098e+04
4500
4000
3500
3000
2500
2000
1500
1000
500
0
−400
−300
−200
−100
0
100
200
300
400

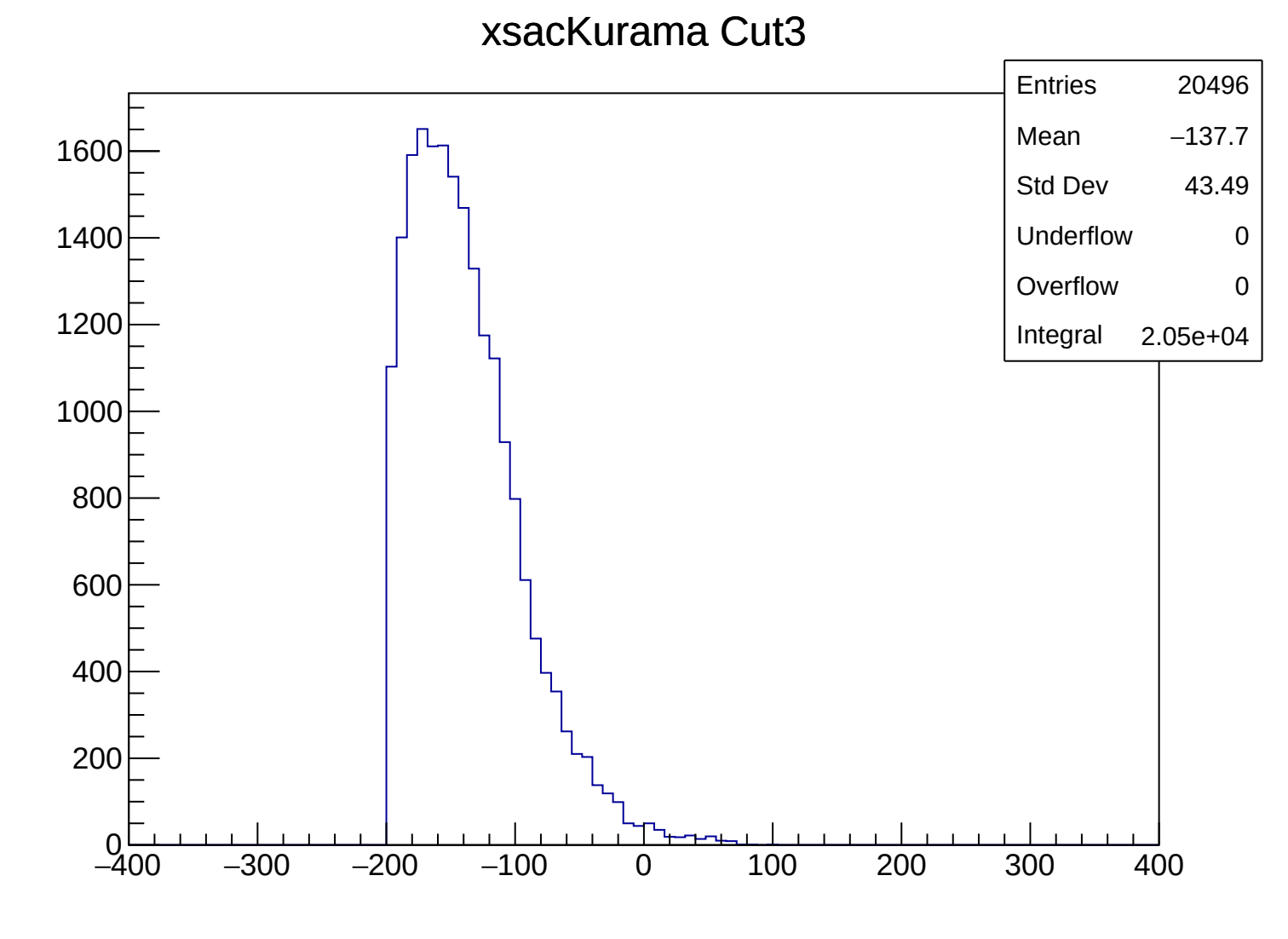

ysacKurama Cut2
Entries 60975
Mean −2.314
Std Dev 70.08
Underflow 0
Overflow 0
Integral 6.098e+04
3500
3000
2500
2000
1500
1000
500
0
−400
−300
−200
−100
0
100
200
300
400

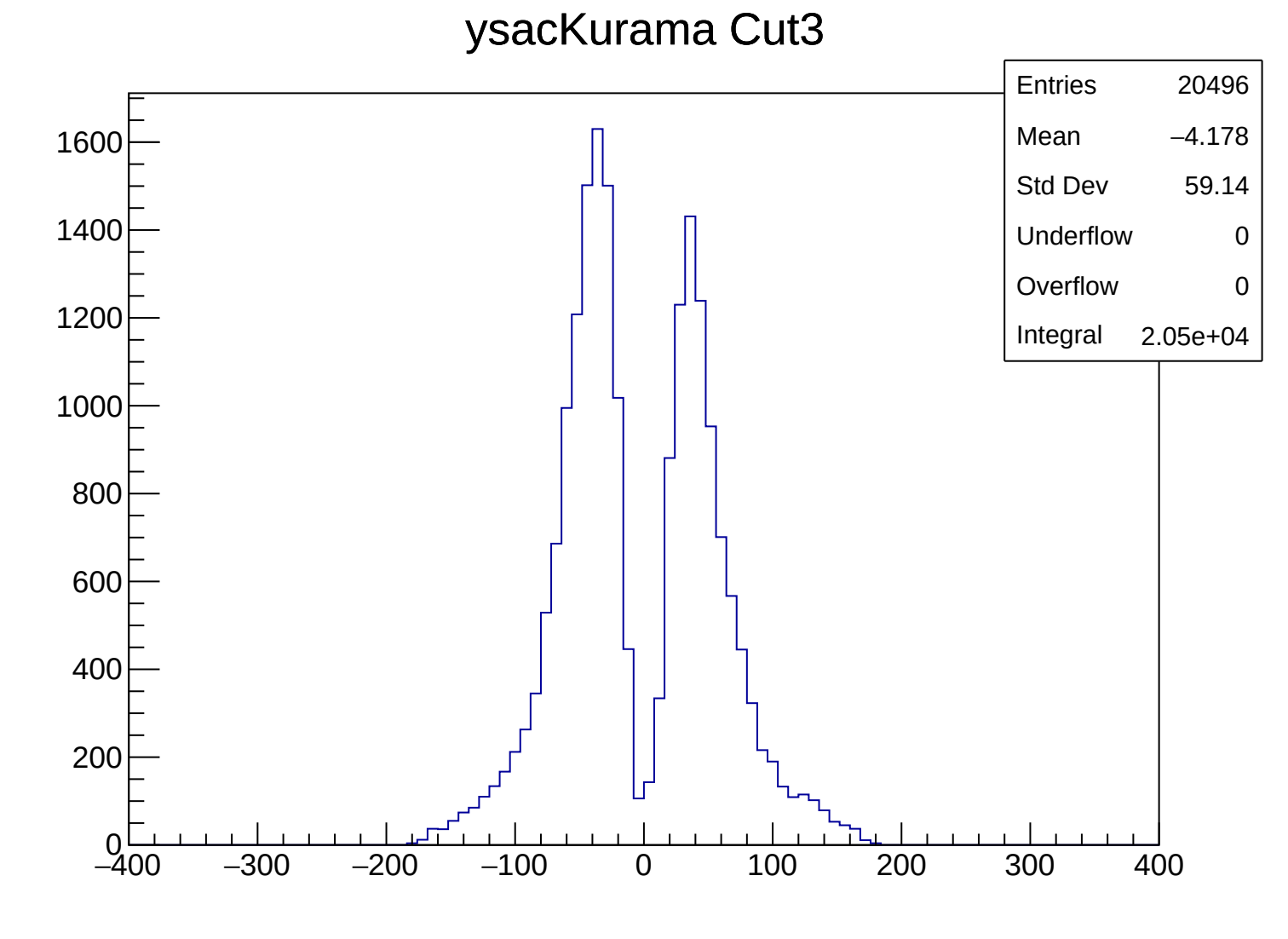

tSac Or
×10^3
200
180
160
140
120
100
80
60
40
20
0
−40
−20
0
20
40
60
80
Entries 466507
Mean 1.582
Std Dev 9.452
Underflow 1022
Overflow 3.317e+04
Integral 3.002e+05
χ² / ndf 2.283e+04 / 2
Constant 1.922e+05 ± 4.476e+02
Mean 0.8663 ± 0.0022
Sigma 1.065 ± 0.001

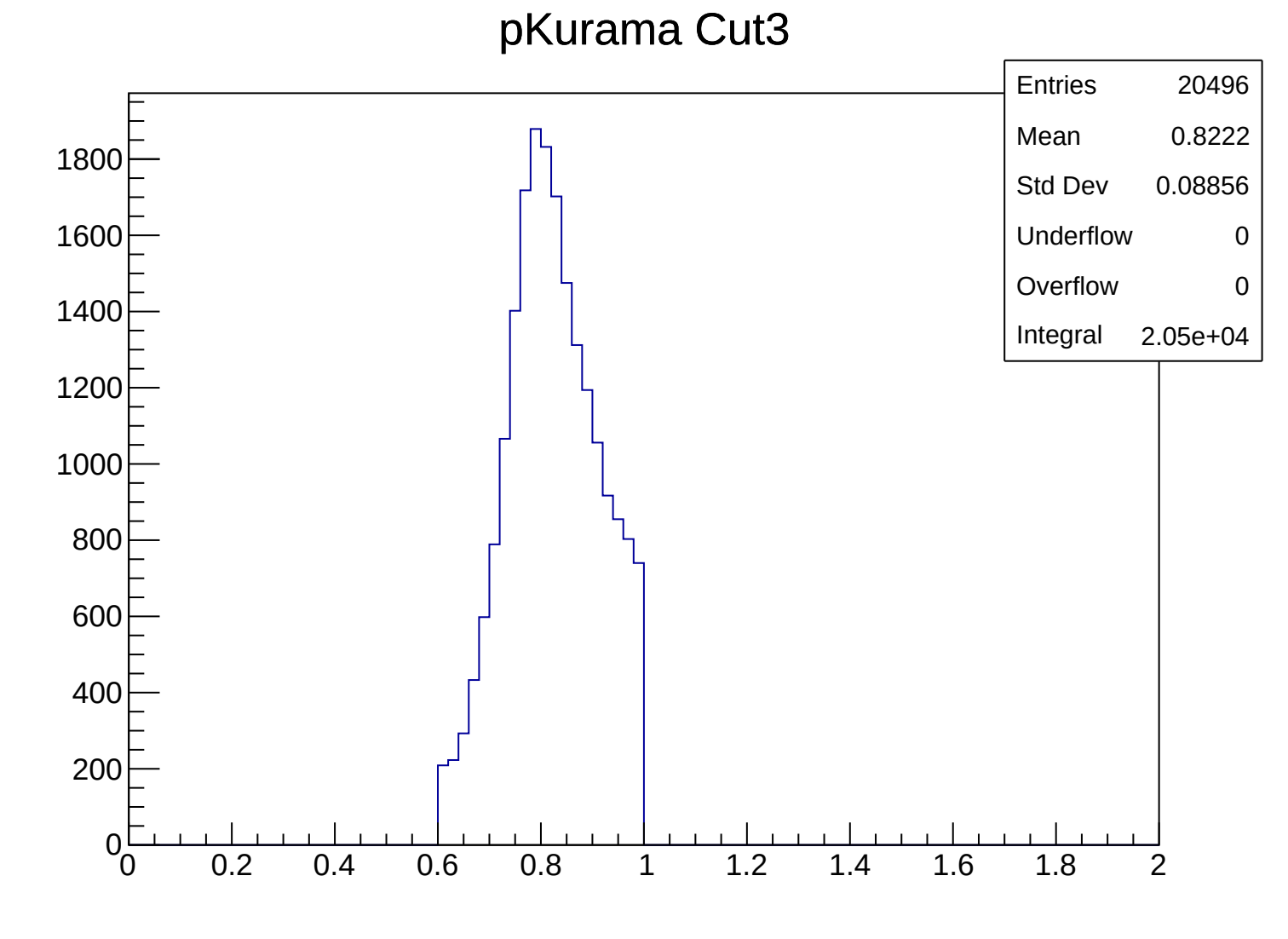

tSac Or Cut2
Entries 54357
Mean 1.798
Std Dev 11.24
Underflow 152
Overflow 4766
Integral 3.086e+04
χ² / ndf 2291 / 2
Constant 1.181e+04 ± 1.282e+02
Mean 0.6016 ± 0.0135
Sigma 1.749 ± 0.016
14000
12000
10000
8000
6000
4000
2000
0
−40
−20
0
20
40
60
80

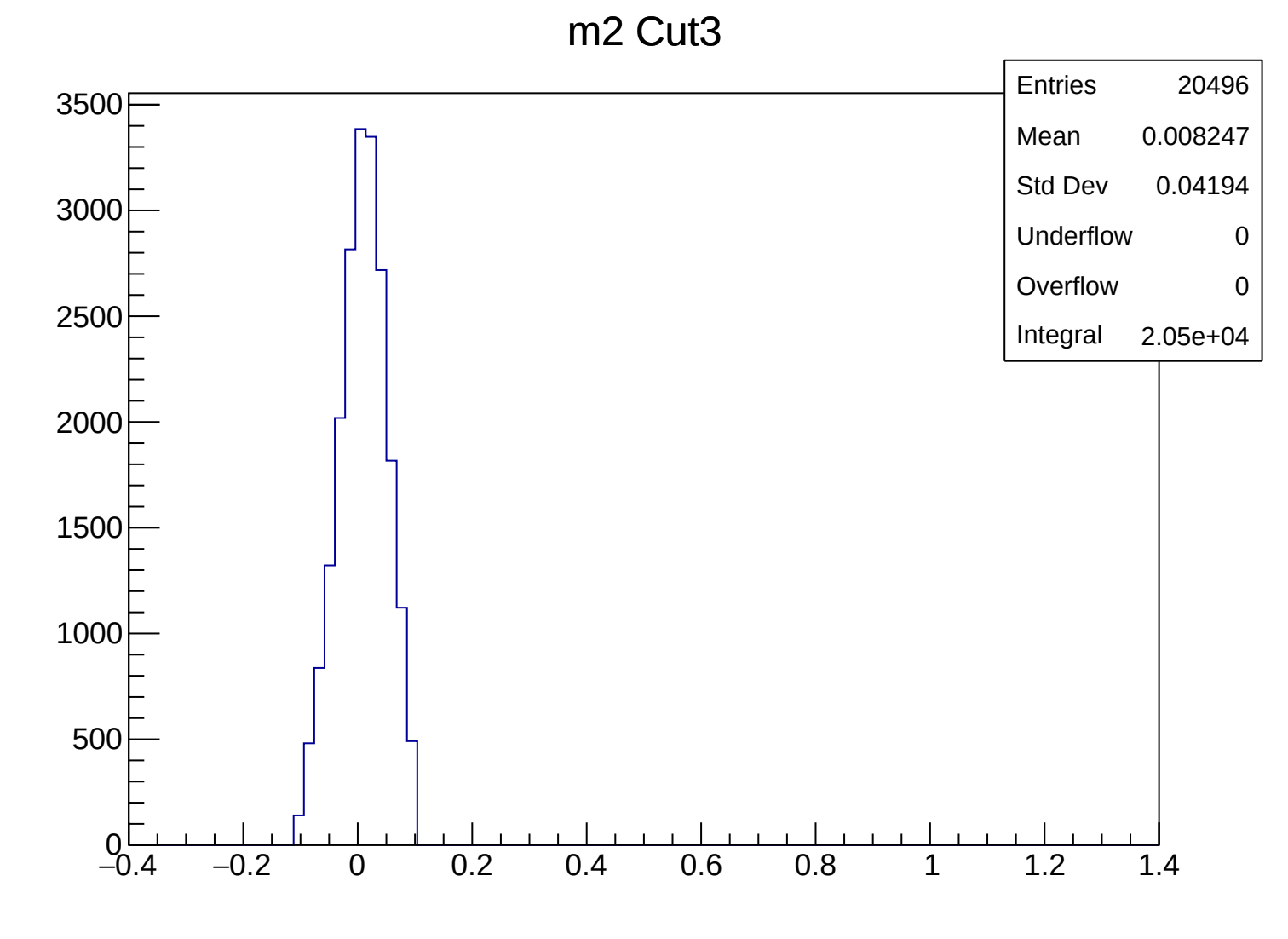

Trigger Flag BeamTofPs
Entries 1004633
Mean 957.3
Std Dev 1.343
Underflow 107
Overflow 0
Integral 1.005e+06
χ² / ndf 2.821e+04 / 6
Constant 3.205e+05 ± 3.693e+02
Mean 957.4 ± 0.0
Sigma 1.214 ± 0.001
10⁵
10⁴
10³
10²
10
1
920
940
960
980
1000
1020

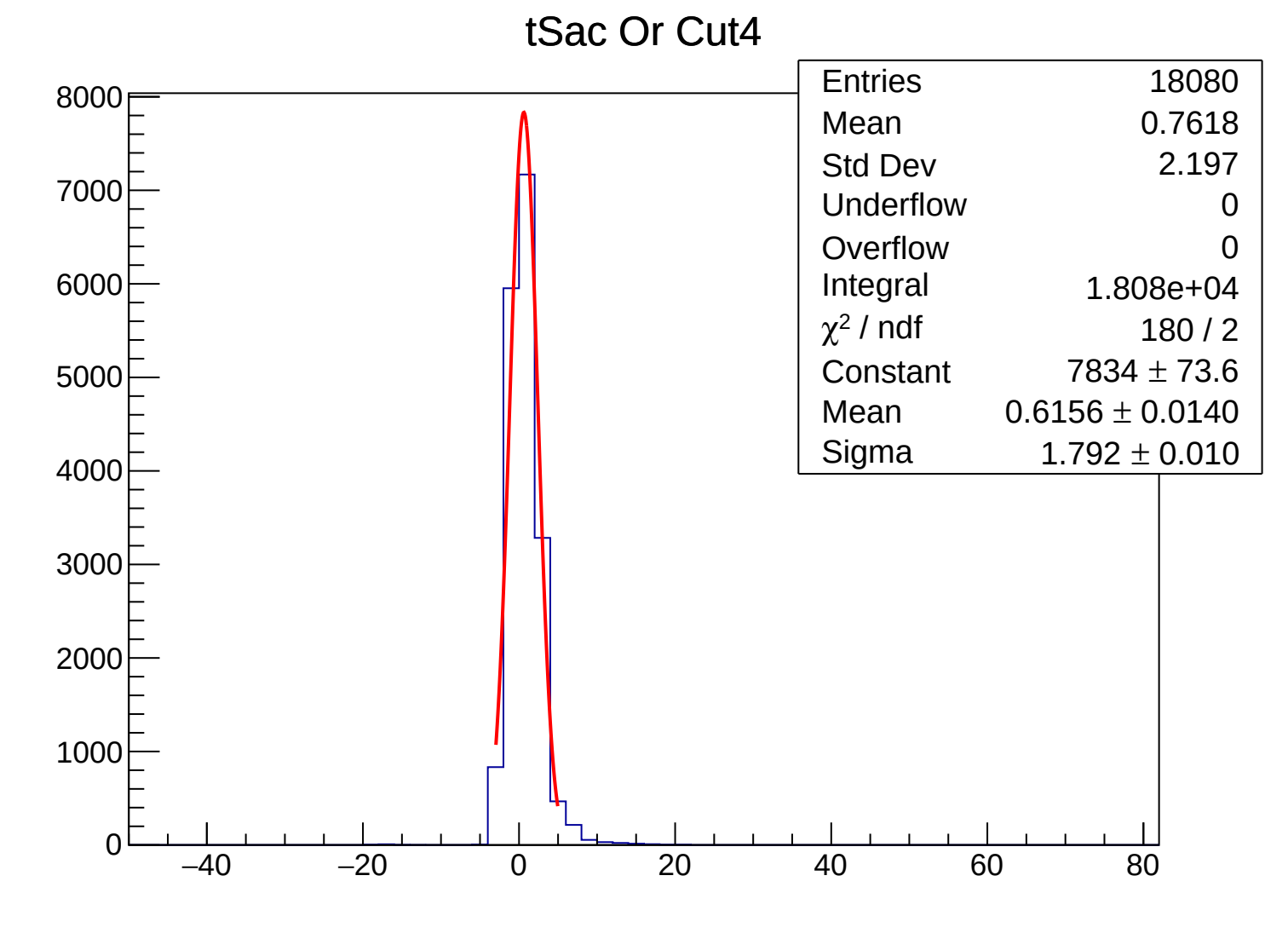

Trigger Flag BeamTofPs Cut2
Entries 59052
Mean 957.5
Std Dev 1.34
Underflow 0
Overflow 0
Integral 5.905e+04
χ² / ndf 1797 / 6
Constant 1.843e+04 ± 8.886e+01
Mean 957.5 ± 0.0
Sigma 1.239 ± 0.003
10⁴
10³
10²
10
1
920
940
960
980
1000
1020

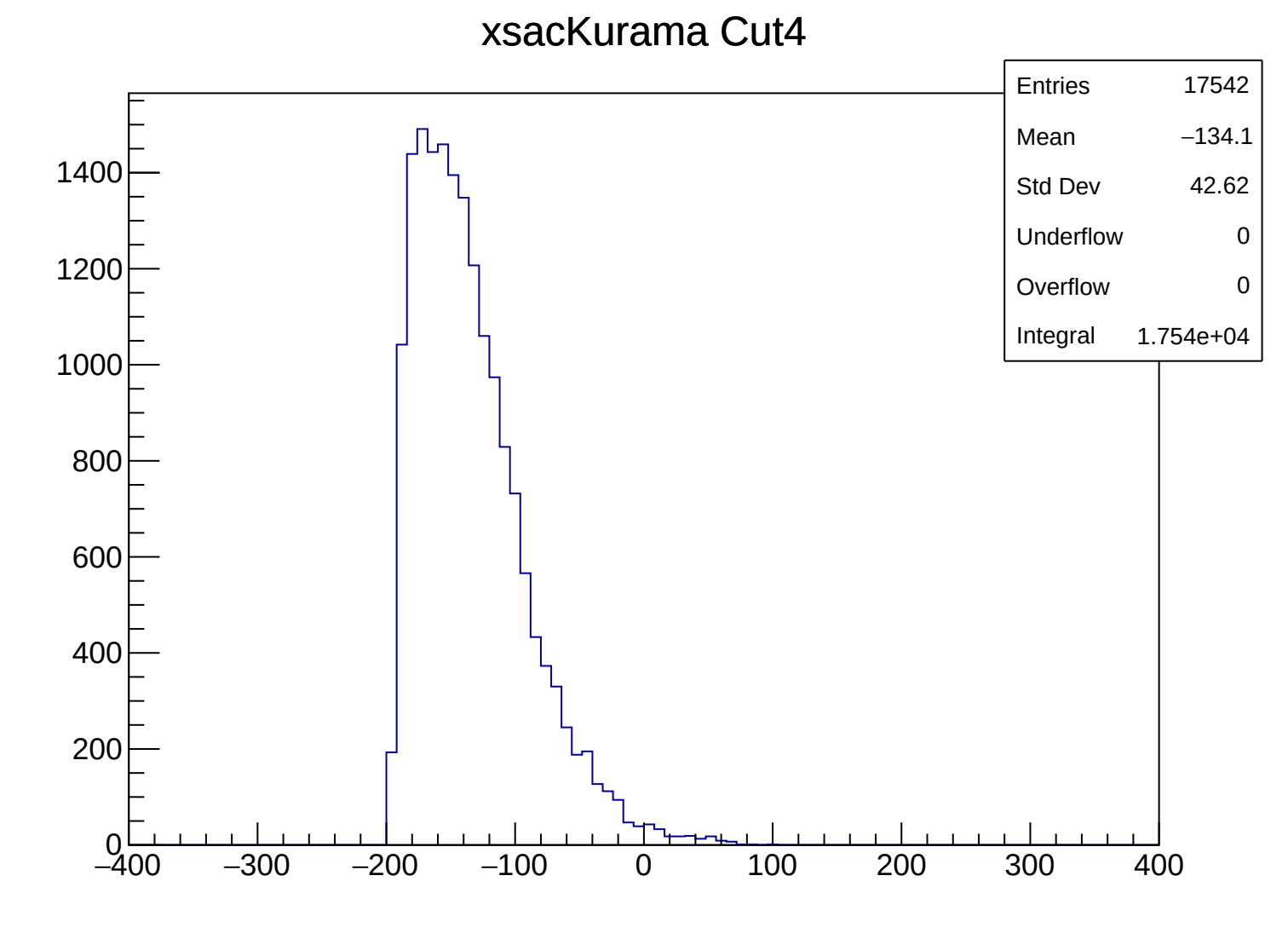

xsacKurama Cut3
Entries 20496
Mean –137.7
Std Dev 43.49
Underflow 0
Overflow 0
Integral 2.05e+04
1600
1400
1200
1000
800
600
400
200
0
–400
–300
–200
–100
0
100
200
300
400

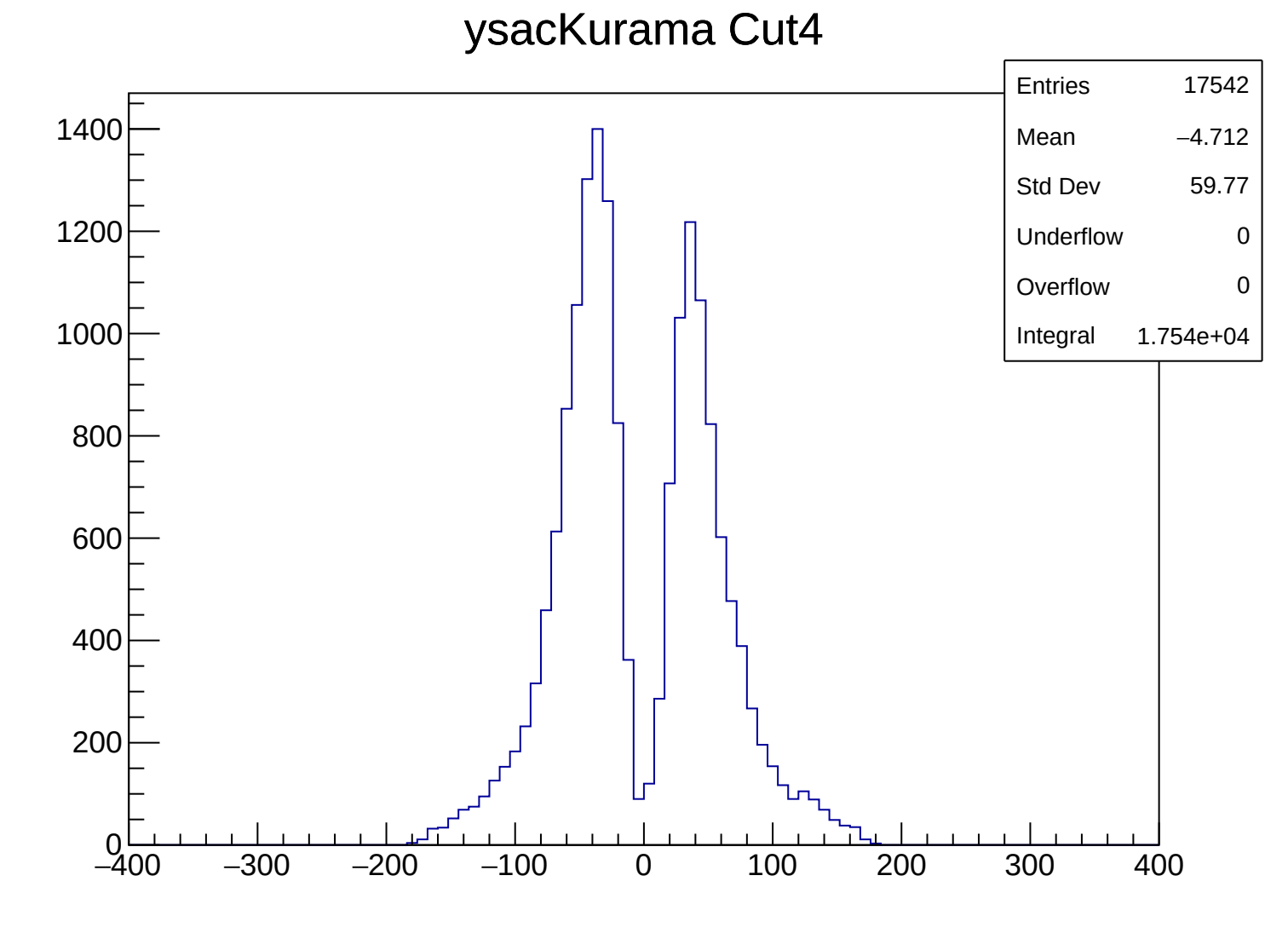

ysacKurama Cut3
Entries 20496
Mean –4.178
Std Dev 59.14
Underflow 0
Overflow 0
Integral 2.05e+04
1600
1400
1200
1000
800
600
400
200
0
–400
–300
–200
–100
0
100
200
300
400

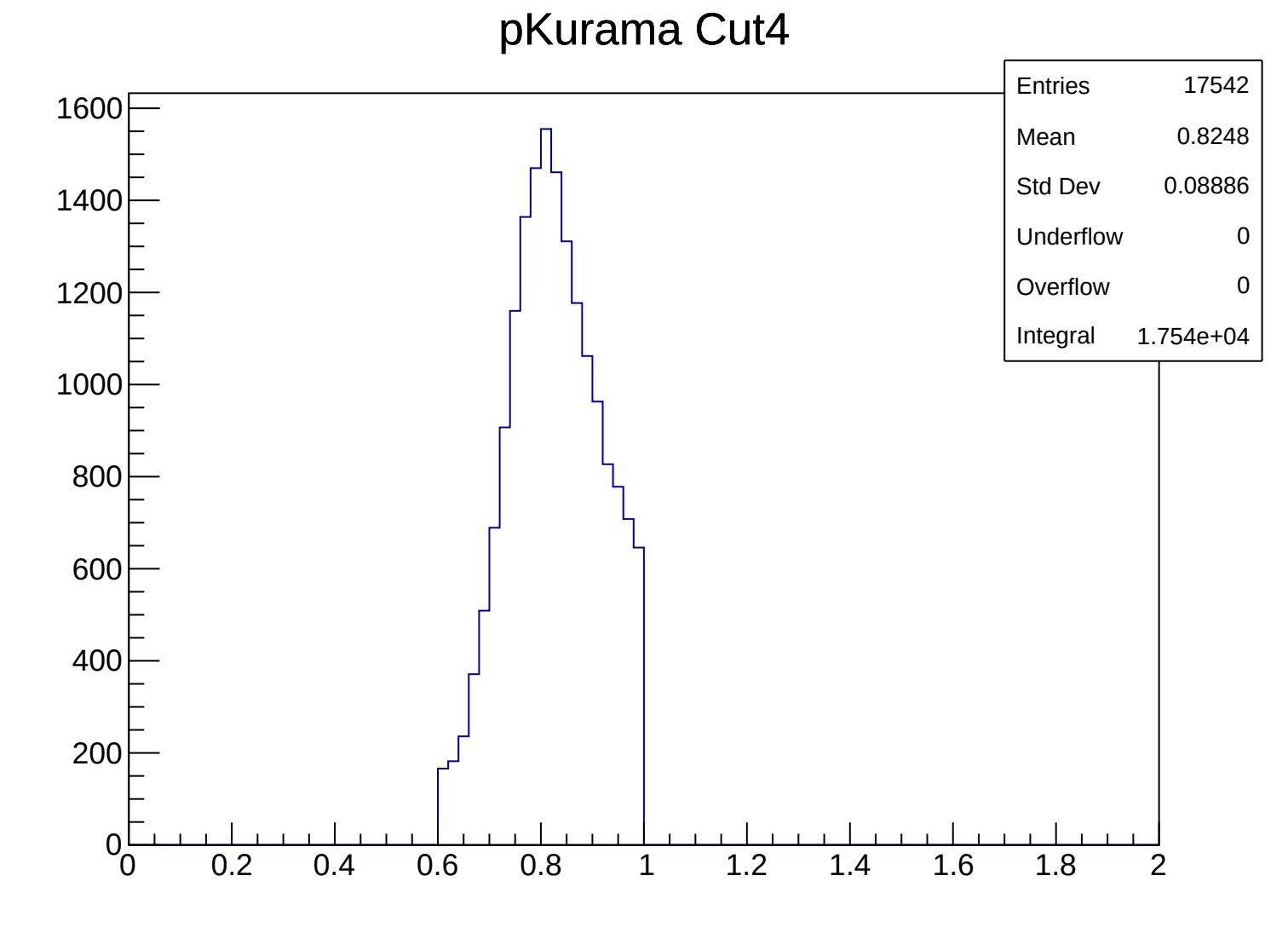

pKurama Cut3
Entries 20496
Mean 0.8222
Std Dev 0.08856
Underflow 0
Overflow 0
Integral 2.05e+04
1800
1600
1400
1200
1000
800
600
400
200
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

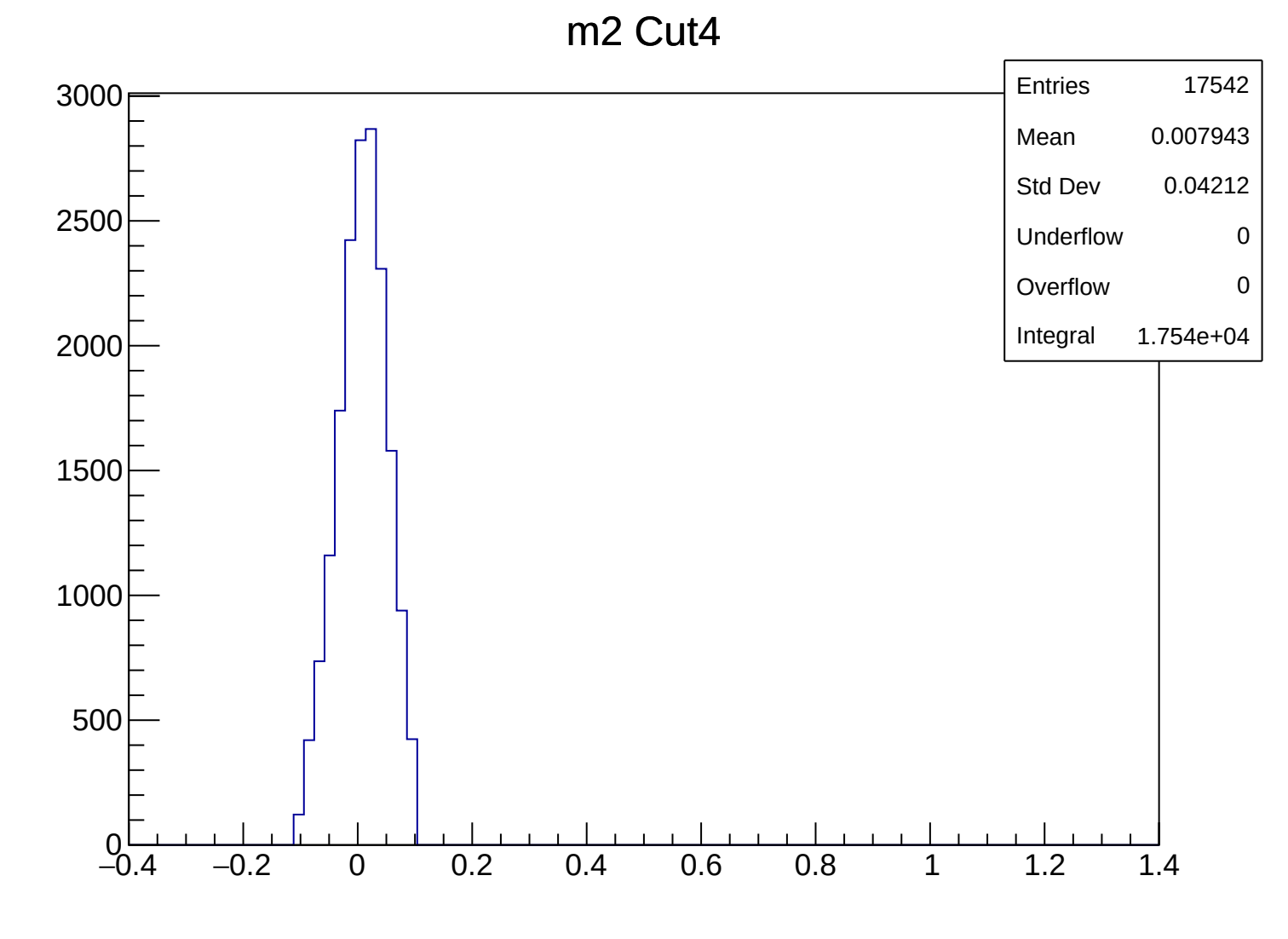

m2 Cut3
Entries 20496
Mean 0.008247
Std Dev 0.04194
Underflow 0
Overflow 0
Integral 2.05e+04
3500
3000
2500
2000
1500
1000
500
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

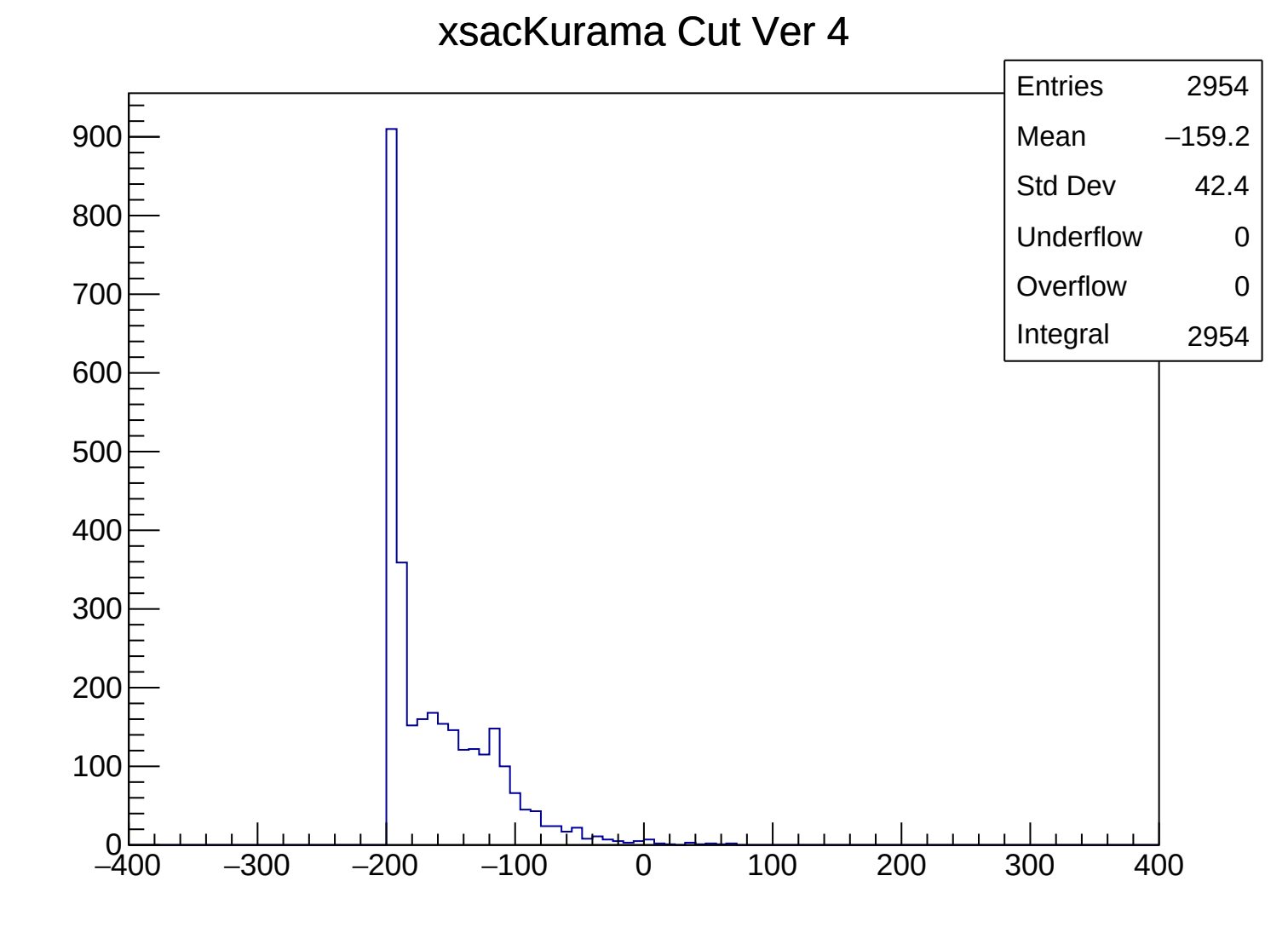

tSac Or Cut4
Entries 18080
Mean 0.7618
Std Dev 2.197
Underflow 0
Overflow 0
Integral 1.808e+04
χ² / ndf 180 / 2
Constant 7834 ± 73.6
Mean 0.6156 ± 0.0140
Sigma 1.792 ± 0.010
8000
7000
6000
5000
4000
3000
2000
1000
0
–40
–20
0
20
40
60
80

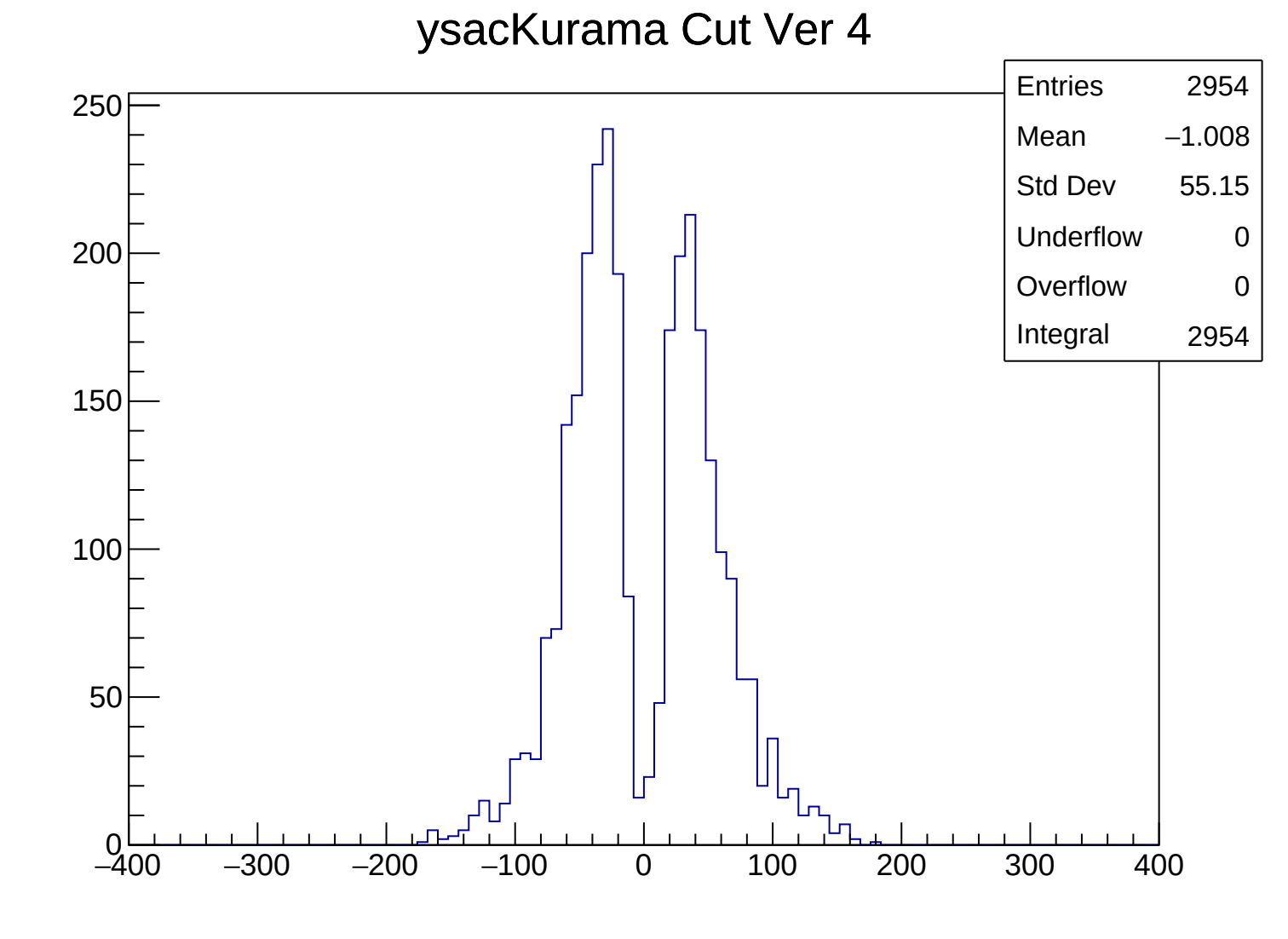

xsacKurama Cut4
Entries 17542
Mean –134.1
Std Dev 42.62
Underflow 0
Overflow 0
Integral 1.754e+04
1400
1200
1000
800
600
400
200
0
–400
–300
–200
–100
0
100
200
300
400

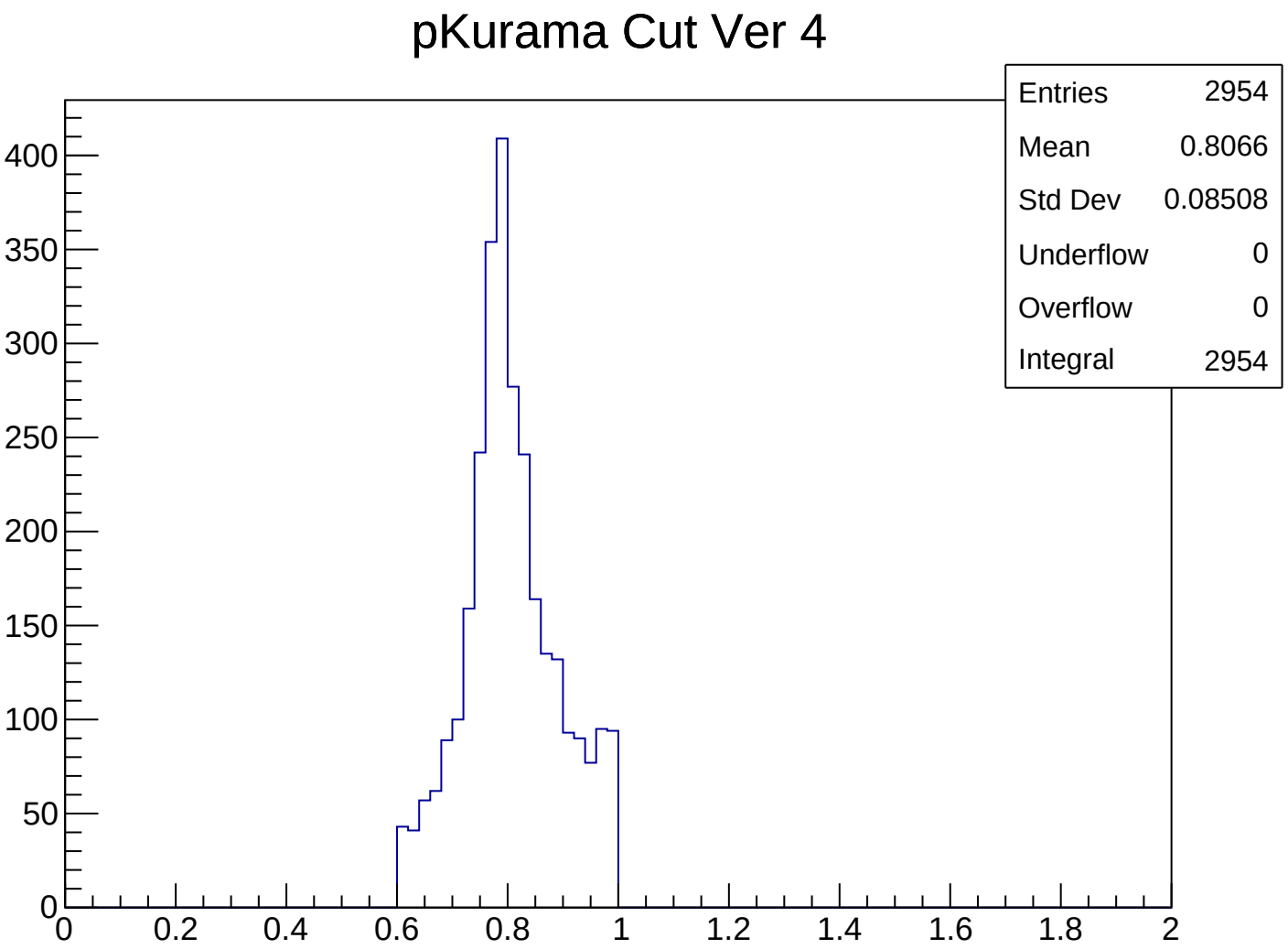

ysacKurama Cut4
Entries 17542
Mean −4.712
Std Dev 59.77
Underflow 0
Overflow 0
Integral 1.754e+04
1400
1200
1000
800
600
400
200
0
−400
−300
−200
−100
0
100
200
300
400

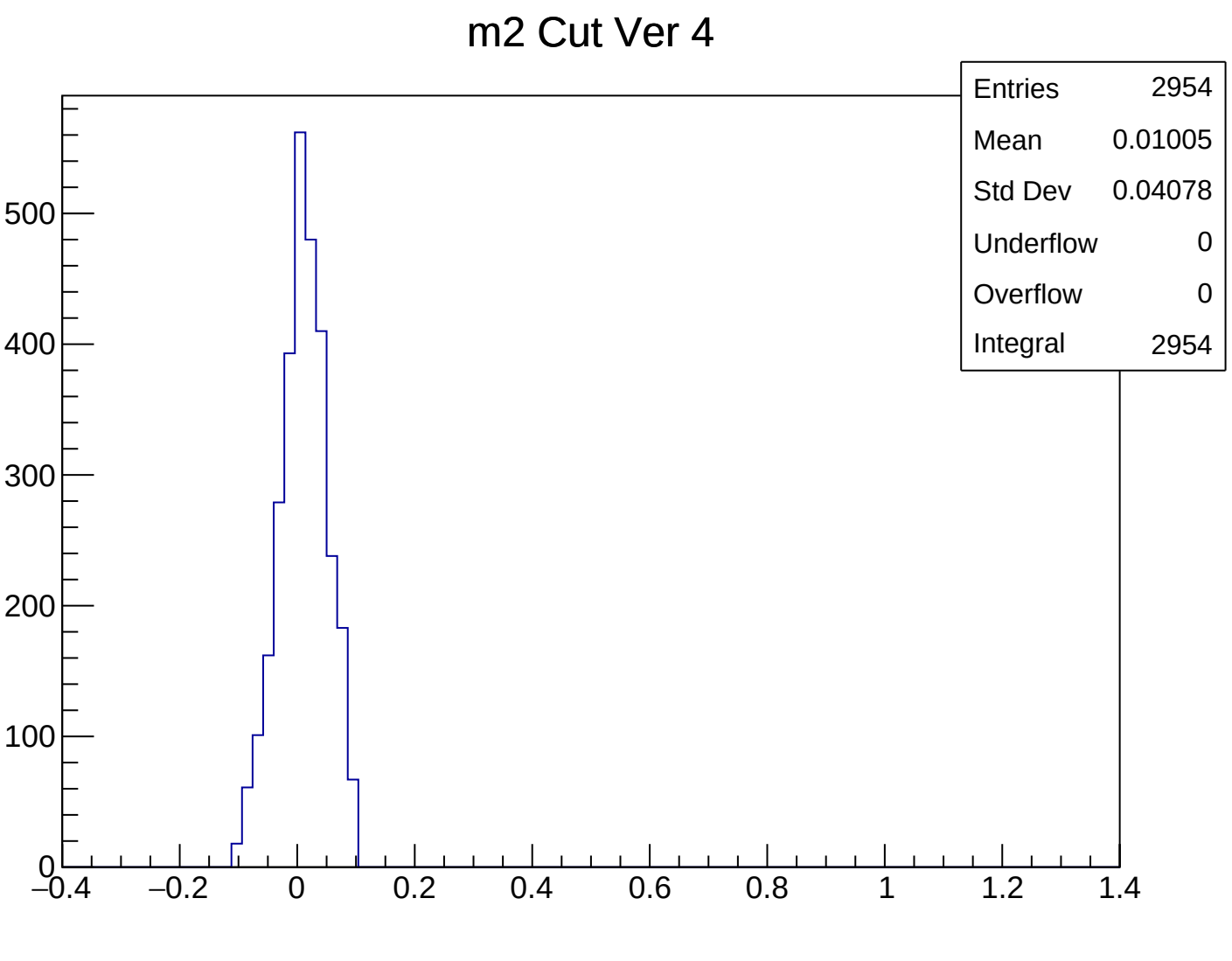

pKurama Cut4
Entries 17542
Mean 0.8248
Std Dev 0.08886
Underflow 0
Overflow 0
Integral 1.754e+04
1600
1400
1200
1000
800
600
400
200
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

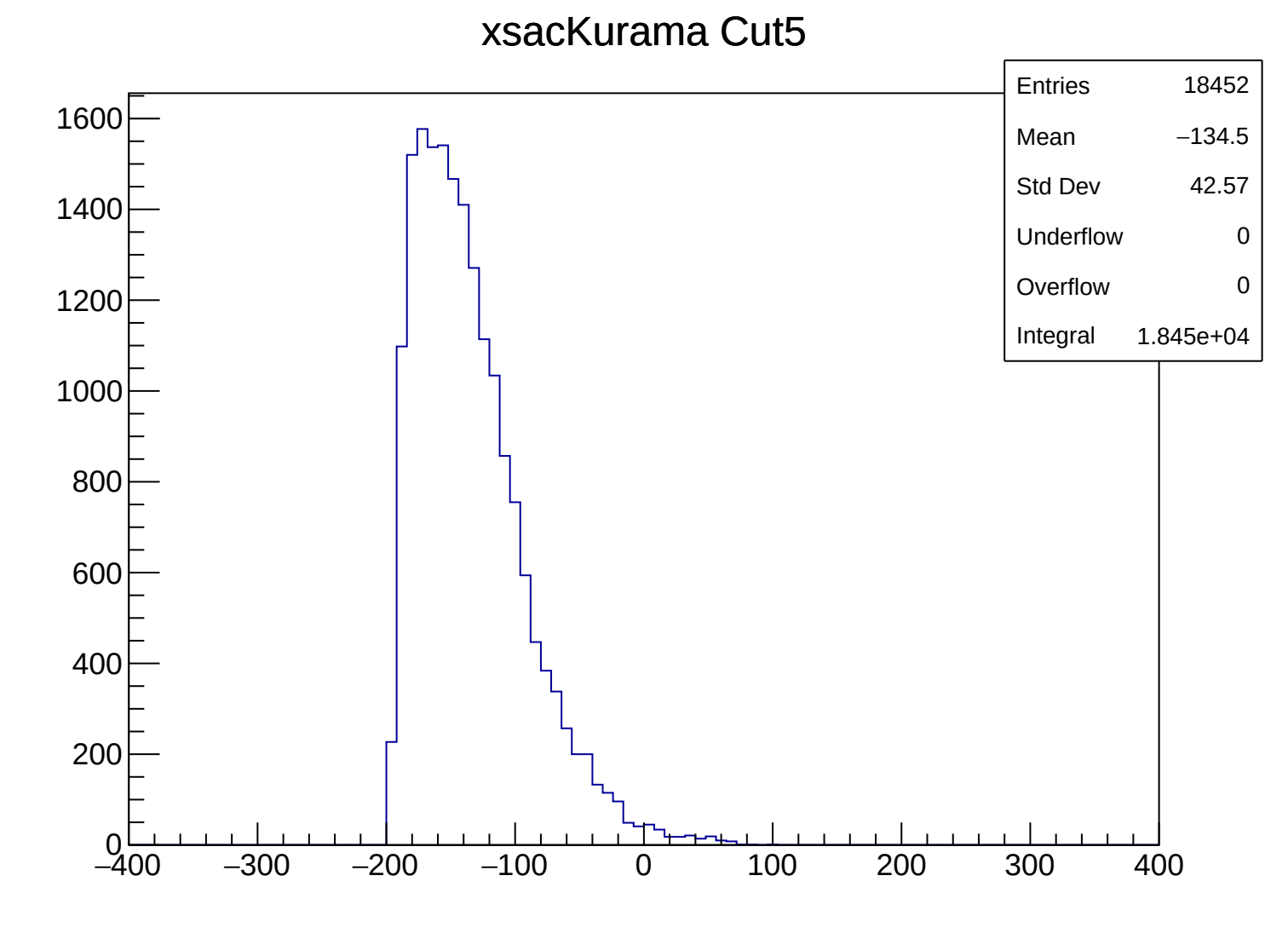

m2 Cut4
Entries 17542
Mean 0.007943
Std Dev 0.04212
Underflow 0
Overflow 0
Integral 1.754e+04
3000
2500
2000
1500
1000
500
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

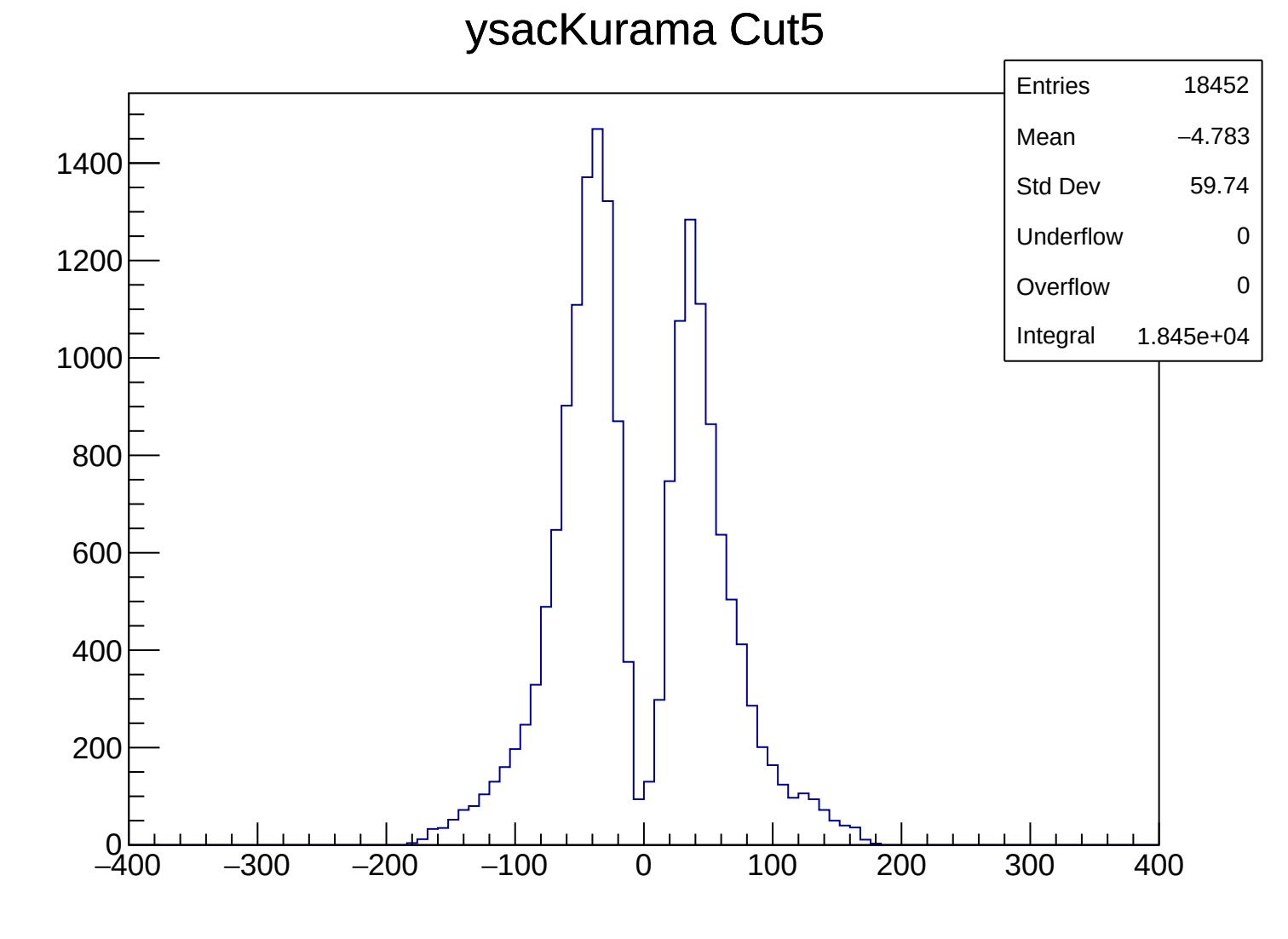

xsacKurama Cut Ver 4
Entries 2954
Mean –159.2
Std Dev 42.4
Underflow 0
Overflow 0
Integral 2954
900
800
700
600
500
400
300
200
100
0
–400
–300
–200
–100
0
100
200
300
400

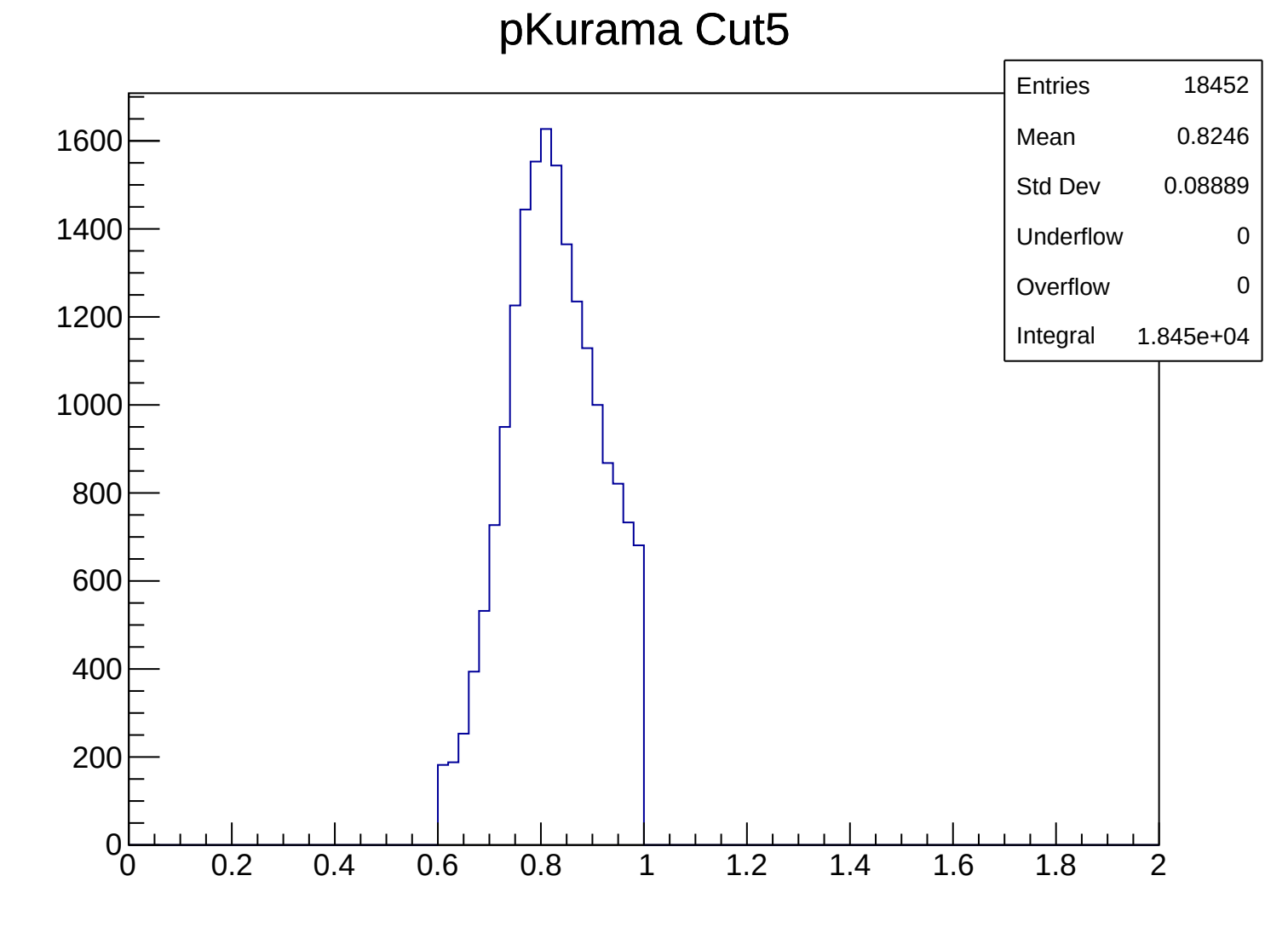

ysacKurama Cut Ver 4
Entries 2954
Mean –1.008
Std Dev 55.15
Underflow 0
Overflow 0
Integral 2954
250
200
150
100
50
0
–400
–300
–200
–100
0
100
200
300
400

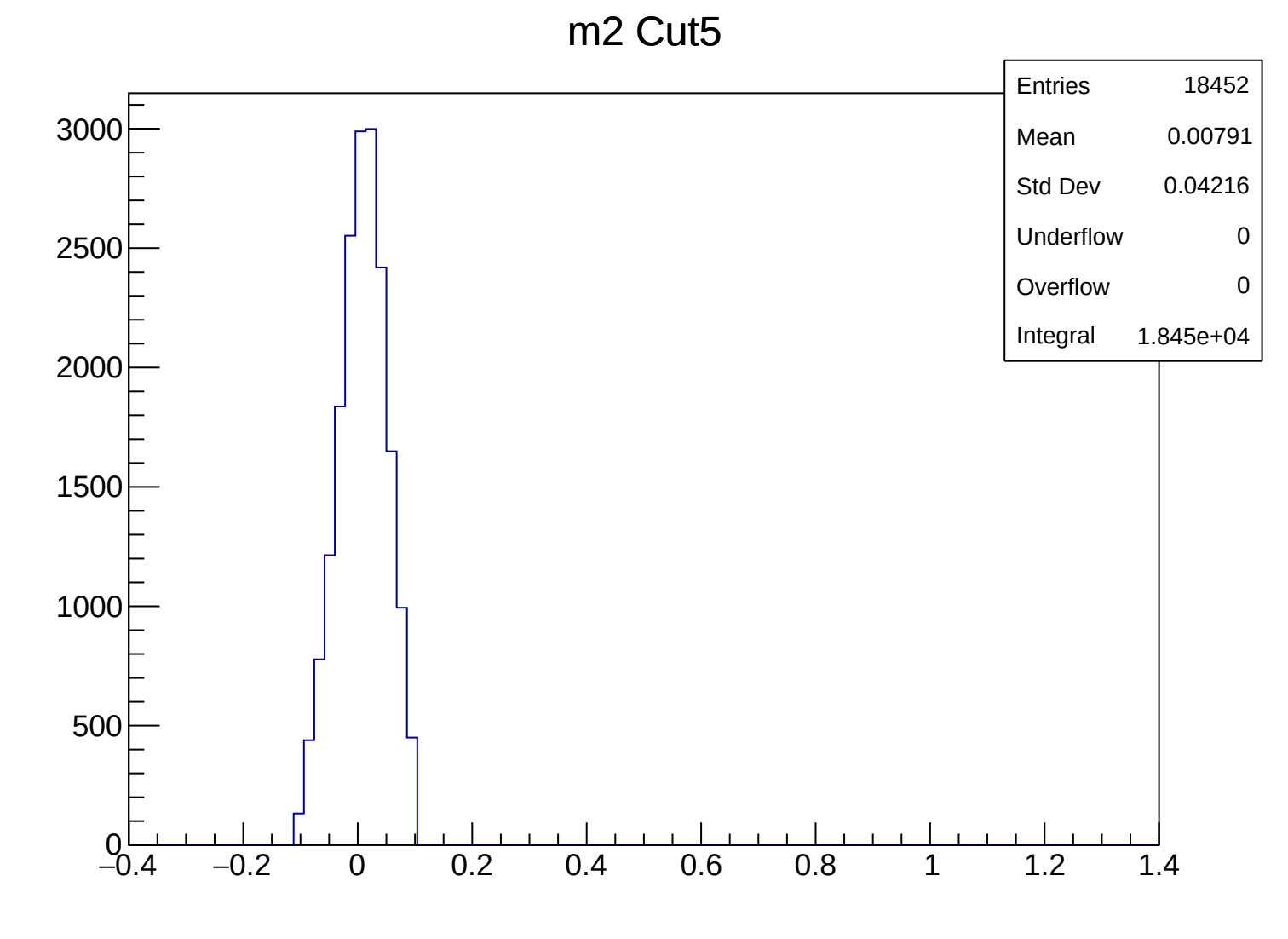

pKurama Cut Ver 4
Entries 2954
Mean 0.8066
Std Dev 0.08508
Underflow 0
Overflow 0
Integral 2954
400
350
300
250
200
150
100
50
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

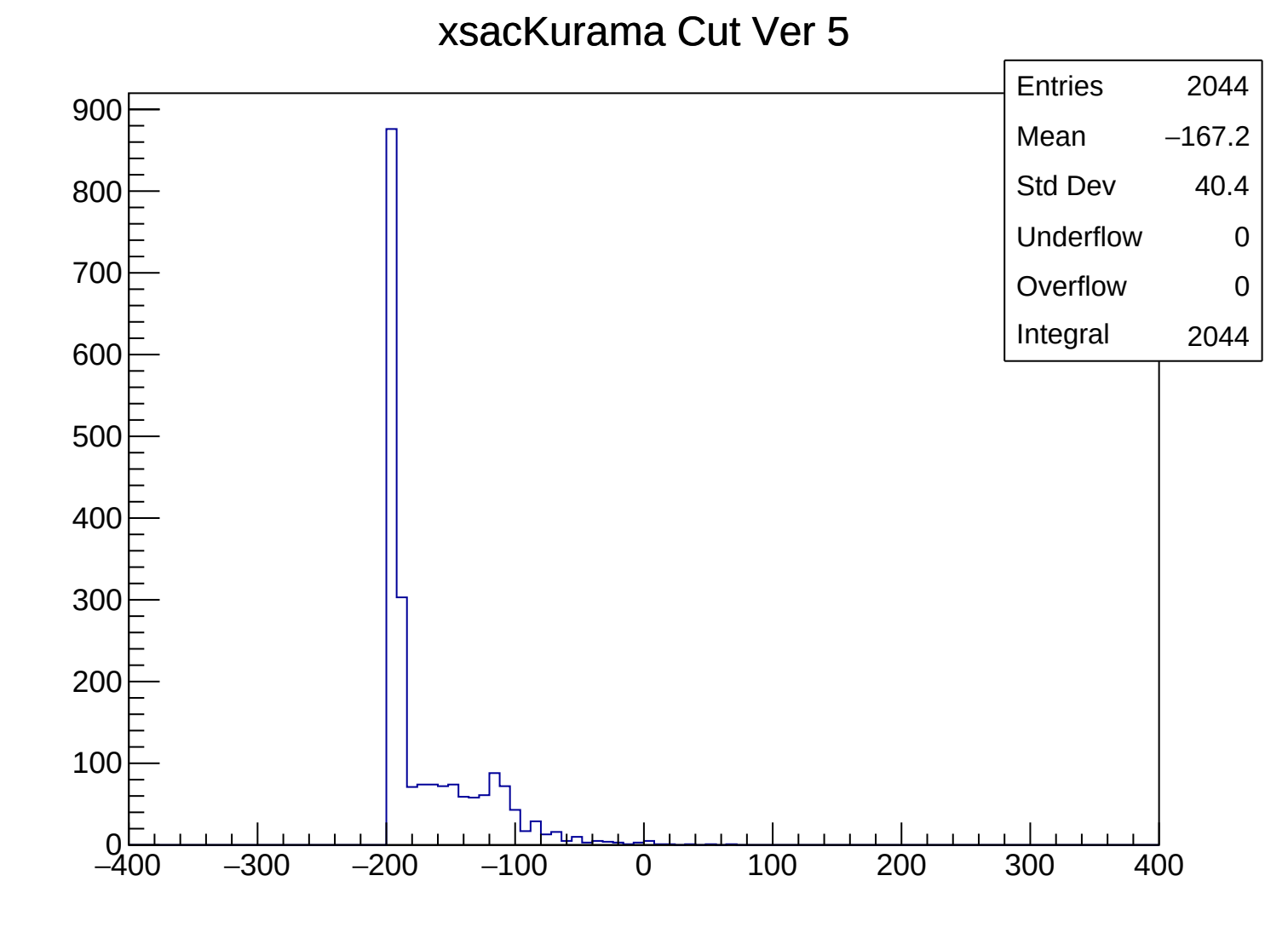

m2 Cut Ver 4
Entries 2954
Mean 0.01005
Std Dev 0.04078
Underflow 0
Overflow 0
Integral 2954
500
400
300
200
100
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

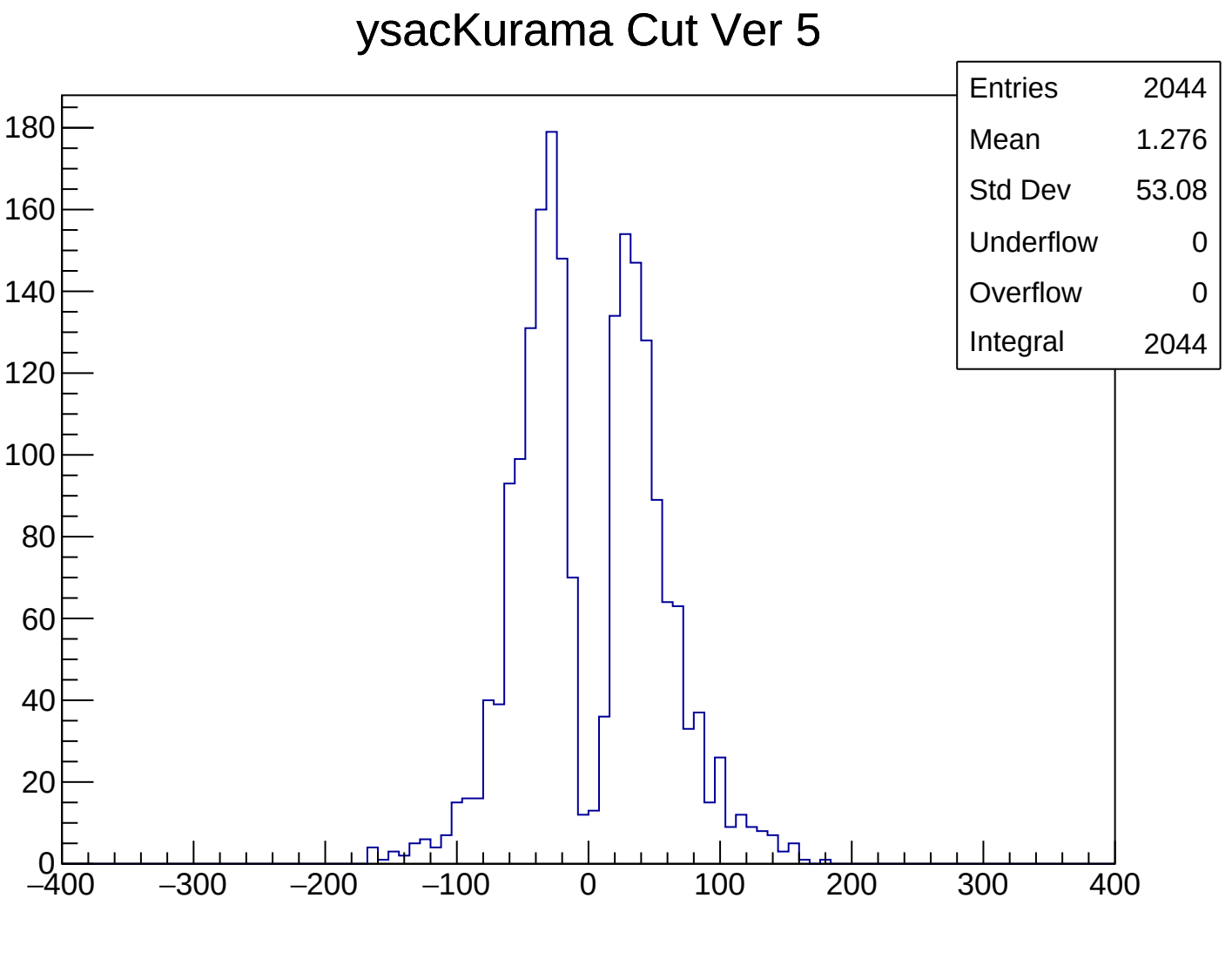

xsacKurama Cut5
Entries 18452
Mean –134.5
Std Dev 42.57
Underflow 0
Overflow 0
Integral 1.845e+04
1600
1400
1200
1000
800
600
400
200
0
–400
–300
–200
–100
0
100
200
300
400

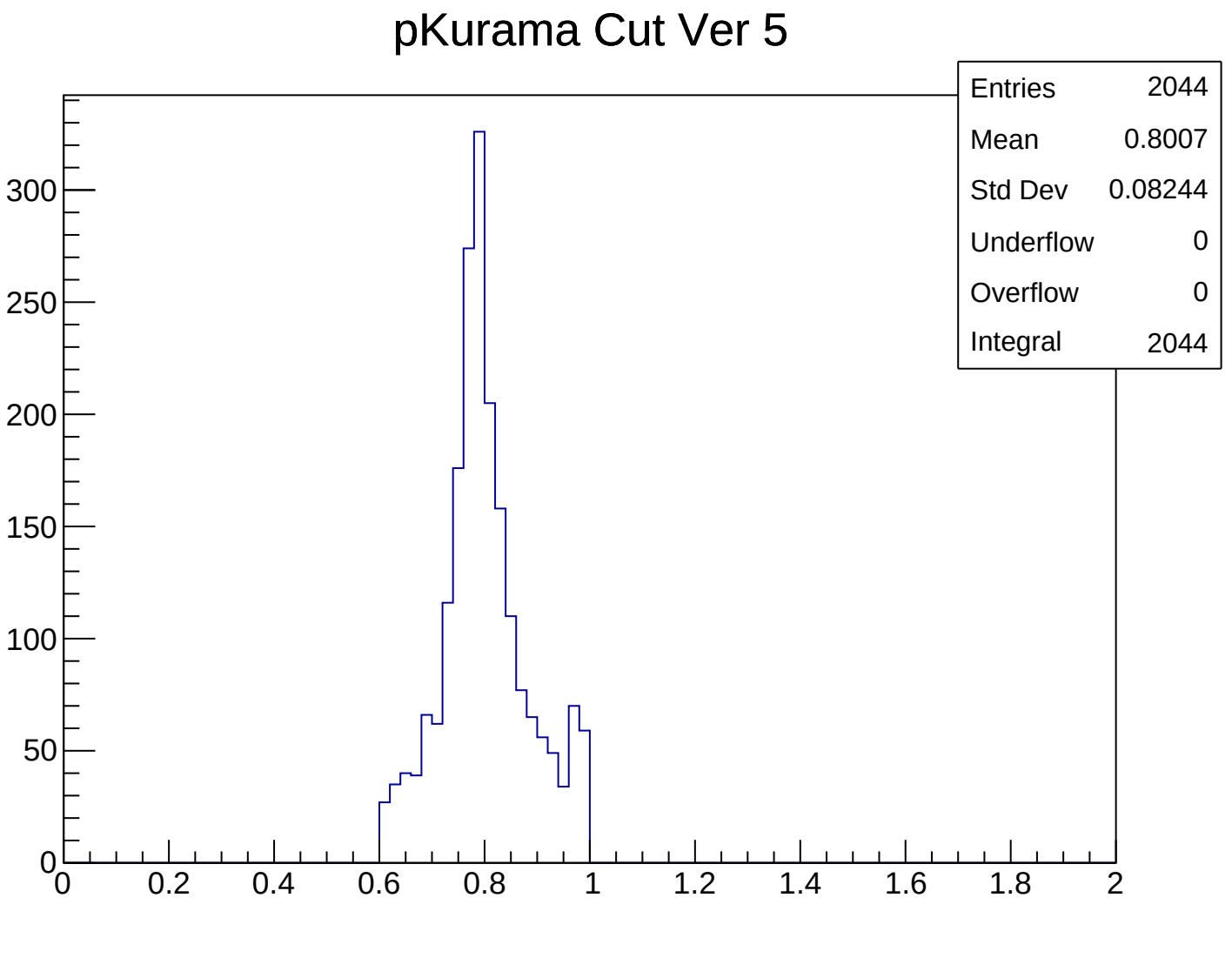

ysacKurama Cut5
Entries 18452
Mean –4.783
Std Dev 59.74
Underflow 0
Overflow 0
Integral 1.845e+04
1400
1200
1000
800
600
400
200
0
–400
–300
–200
–100
0
100
200
300
400

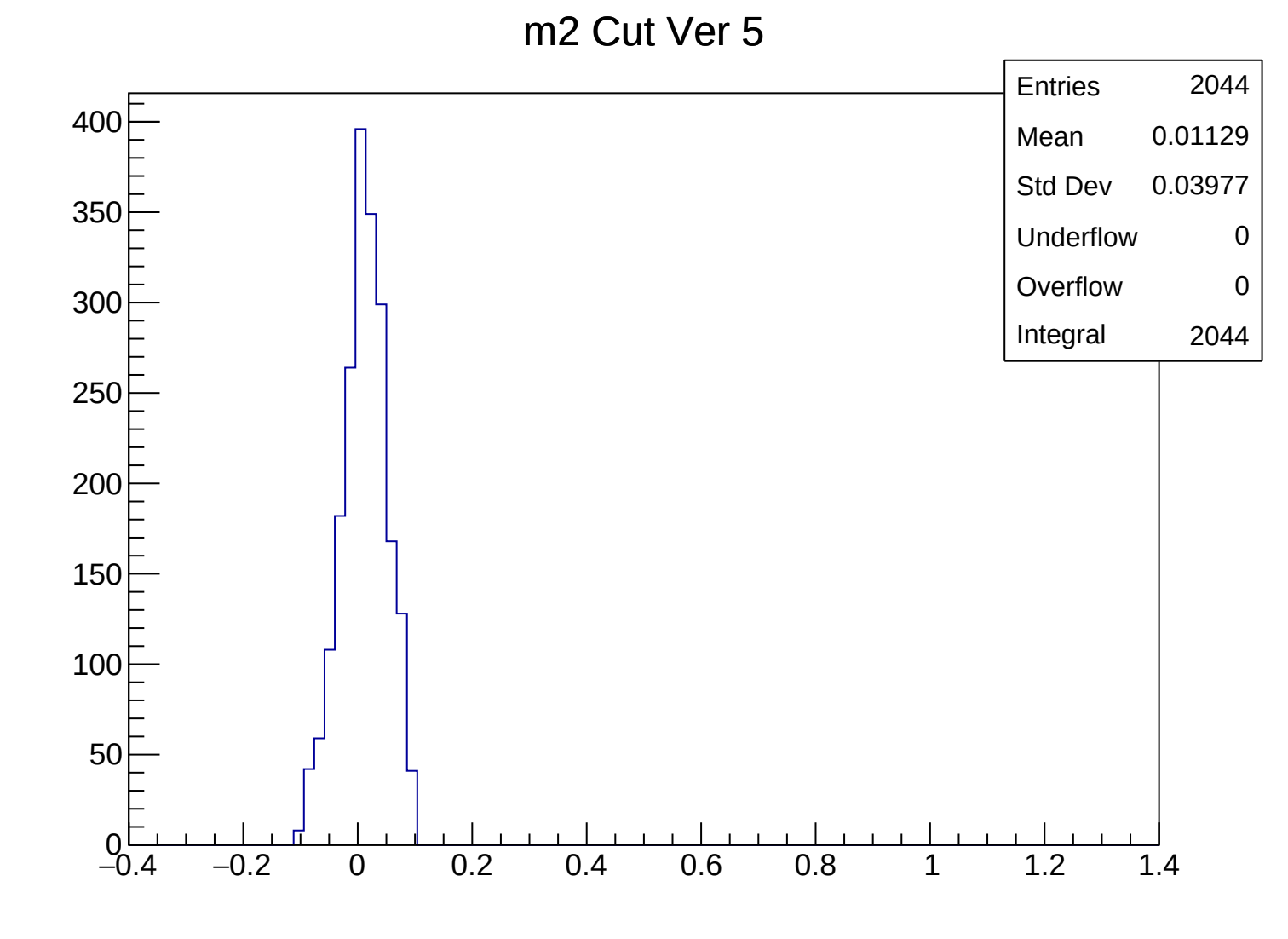

pKurama Cut5
Entries 18452
Mean 0.8246
Std Dev 0.08889
Underflow 0
Overflow 0
Integral 1.845e+04
1600
1400
1200
1000
800
600
400
200
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

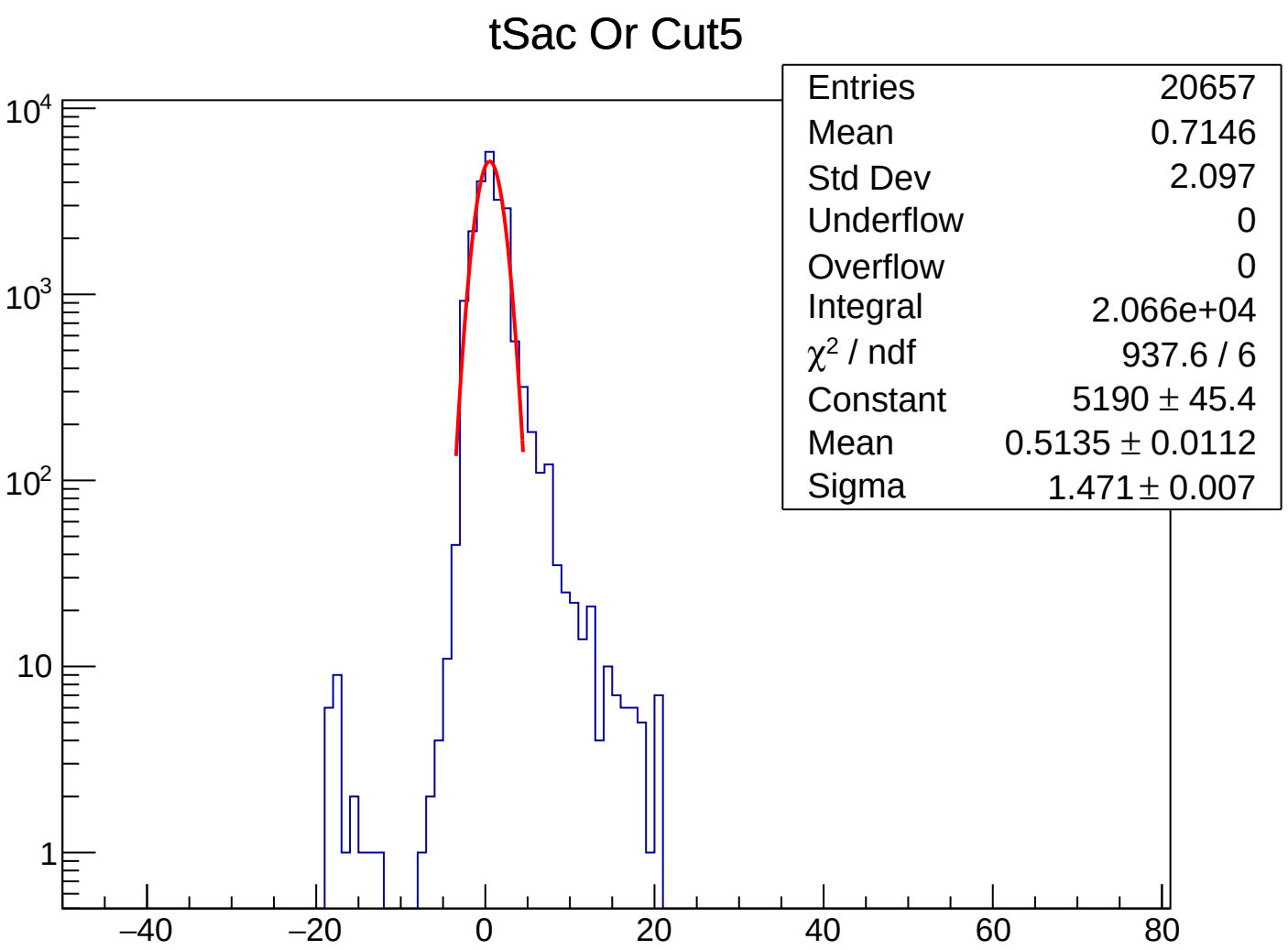

m2 Cut5
Entries 18452
Mean 0.00791
Std Dev 0.04216
Underflow 0
Overflow 0
Integral 1.845e+04
3000
2500
2000
1500
1000
500
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

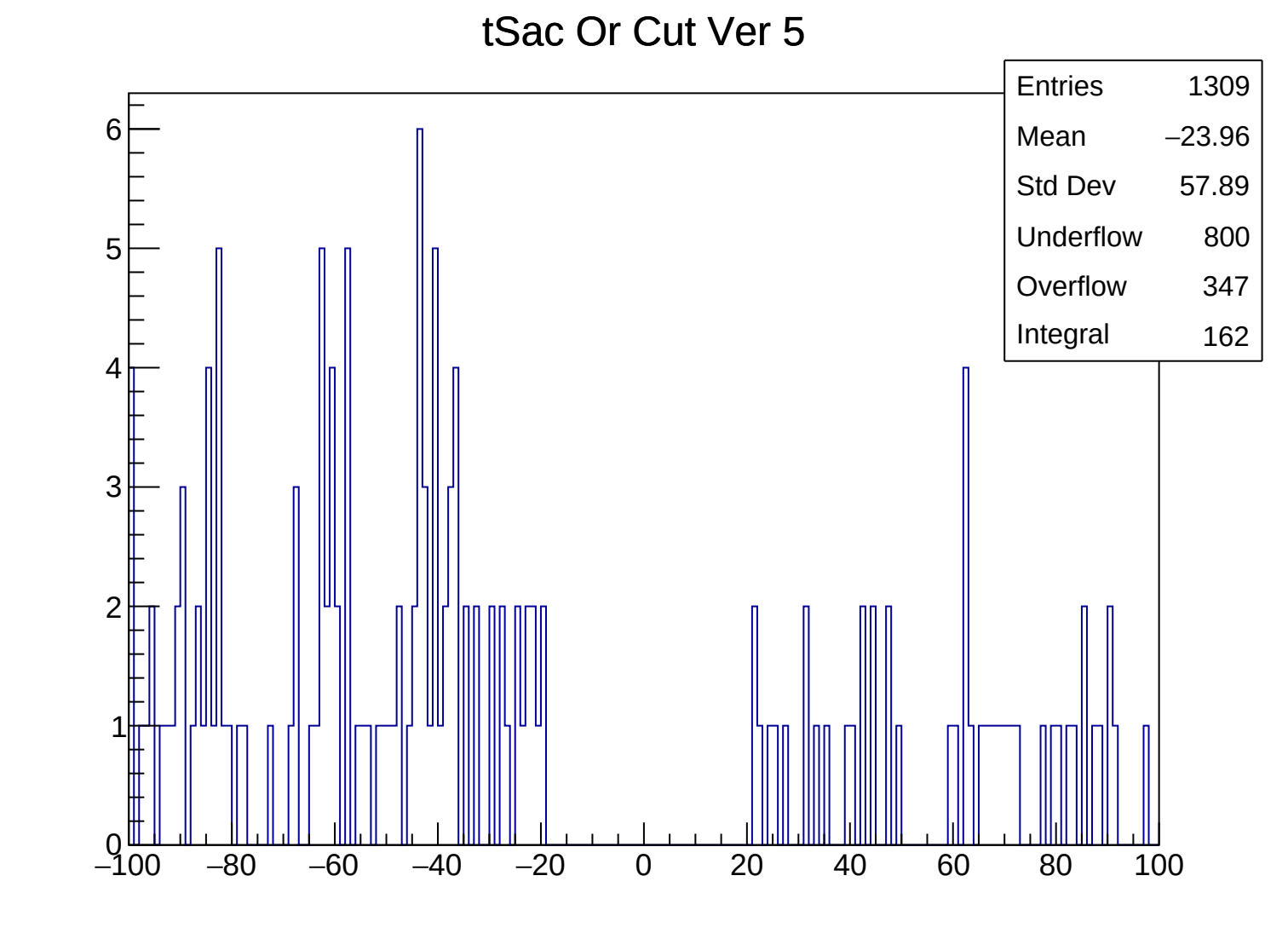

xsacKurama Cut Ver 5
Entries 2044
Mean −167.2
Std Dev 40.4
Underflow 0
Overflow 0
Integral 2044
900
800
700
600
500
400
300
200
100
0
−400
−300
−200
−100
0
100
200
300
400

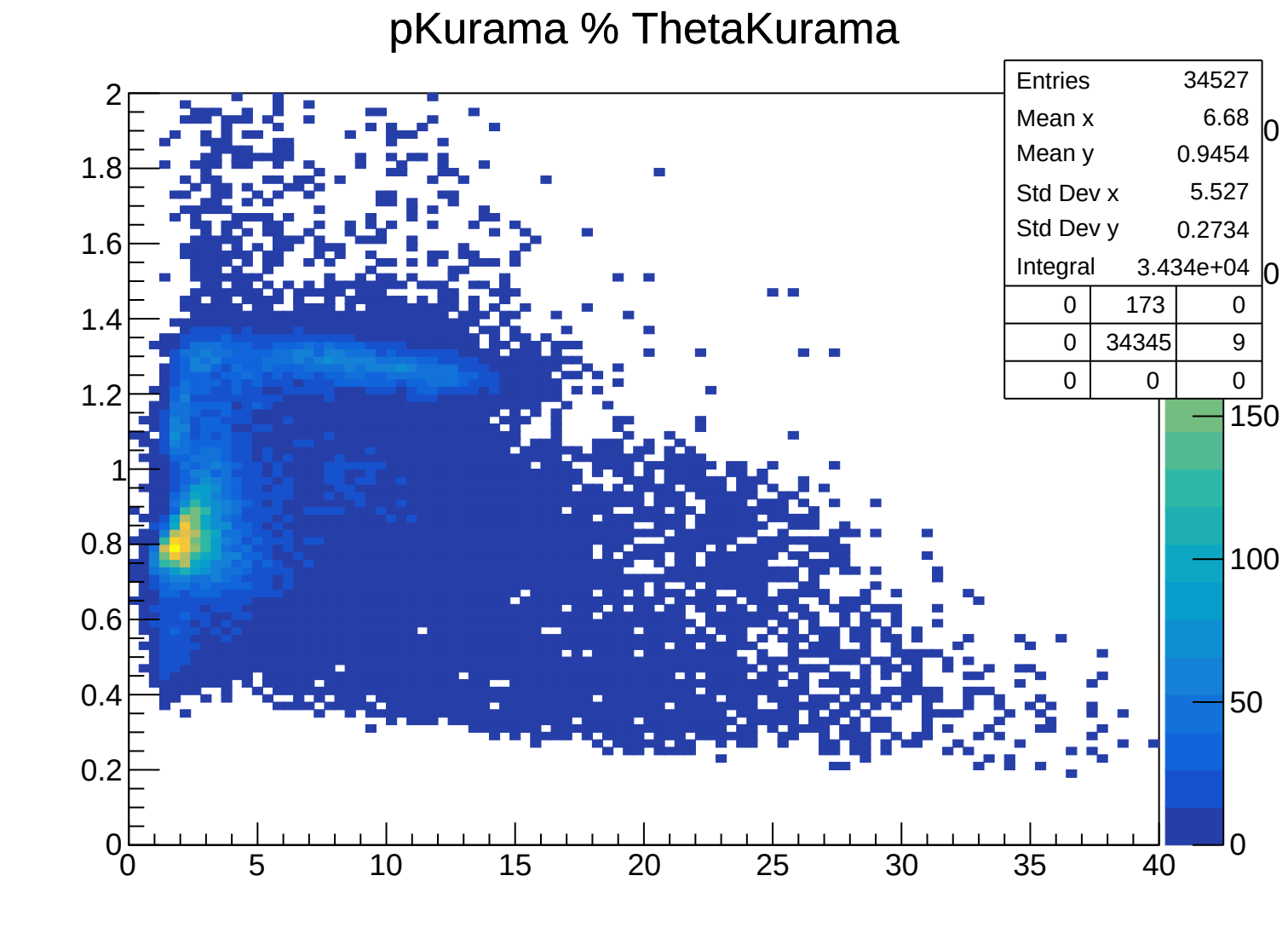

ysacKurama Cut Ver 5
Entries 2044
Mean 1.276
Std Dev 53.08
Underflow 0
Overflow 0
Integral 2044
180
160
140
120
100
80
60
40
20
0
–400
–300
–200
–100
0
100
200
300
400

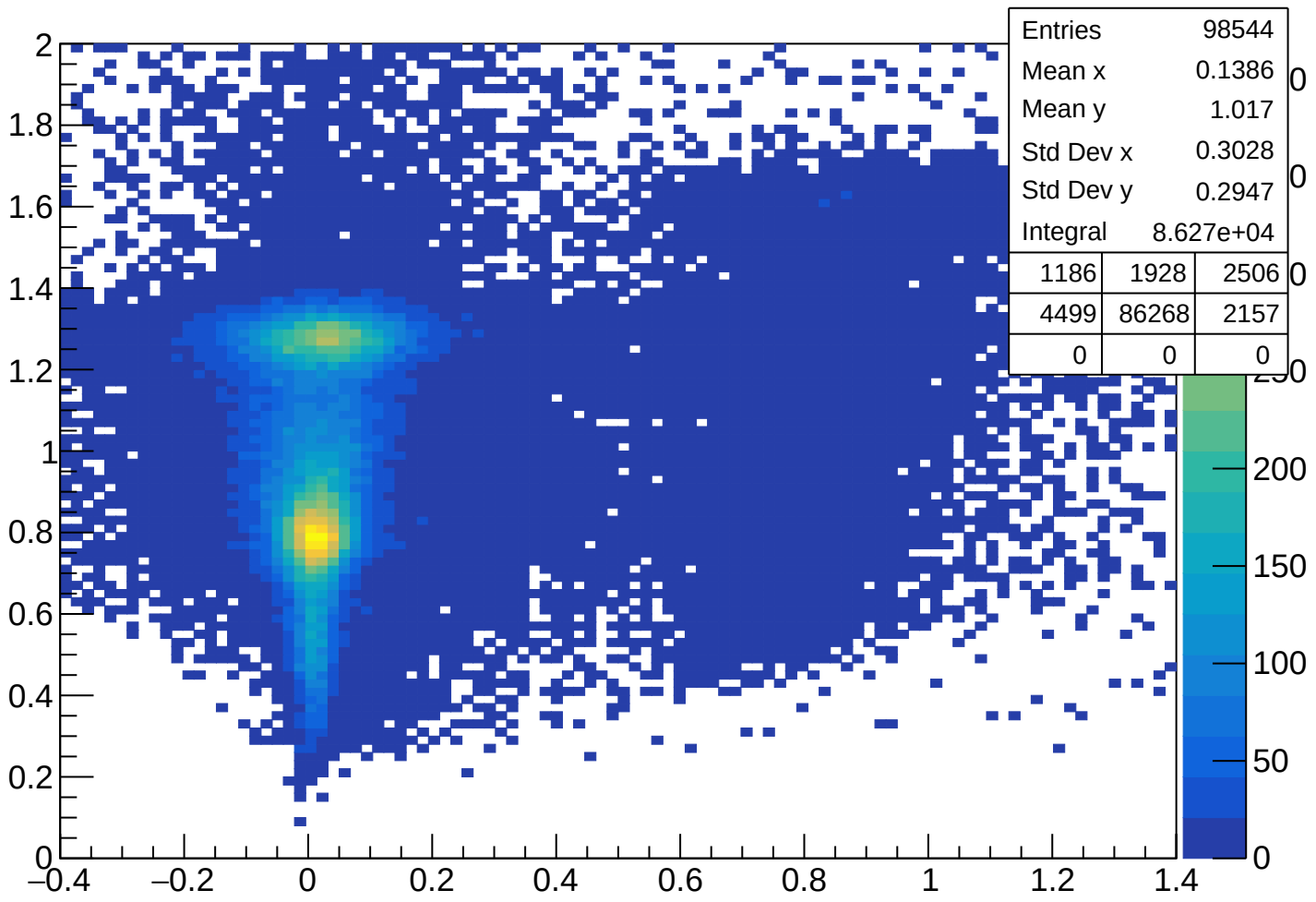

pKurama Cut Ver 5
Entries 2044
Mean 0.8007
Std Dev 0.08244
Underflow 0
Overflow 0
Integral 2044
300
250
200
150
100
50
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

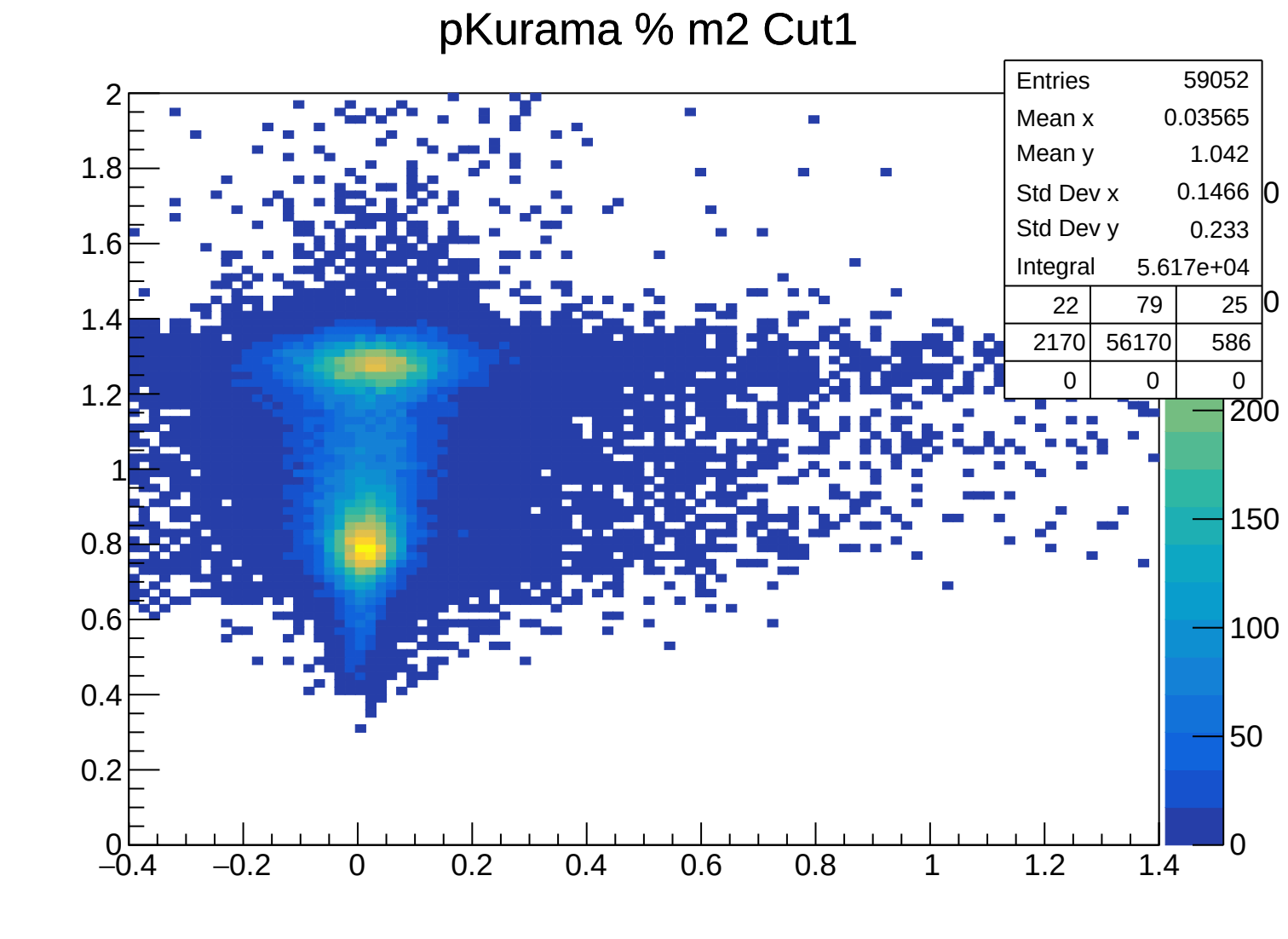

m2 Cut Ver 5
Entries 2044
Mean 0.01129
Std Dev 0.03977
Underflow 0
Overflow 0
Integral 2044
400
350
300
250
200
150
100
50
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

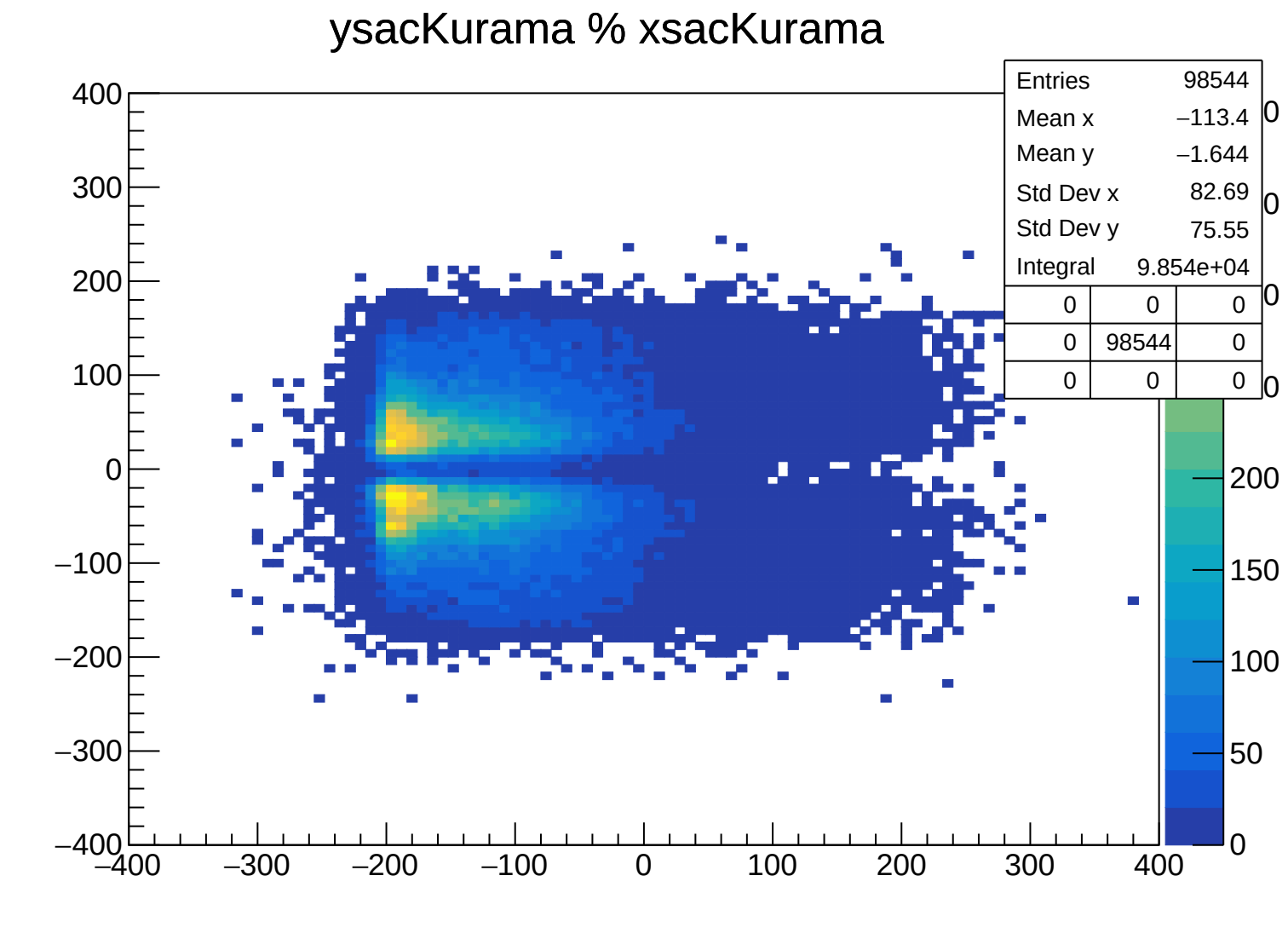

tSac Or Cut5
Entries 20657
Mean 0.7146
Std Dev 2.097
Underflow 0
Overflow 0
Integral 2.066e+04
χ² / ndf 937.6 / 6
Constant 5190 ± 45.4
Mean 0.5135 ± 0.0112
Sigma 1.471 ± 0.007
10⁴
10³
10²
10
1
–40
–20
0
20
40
60
80

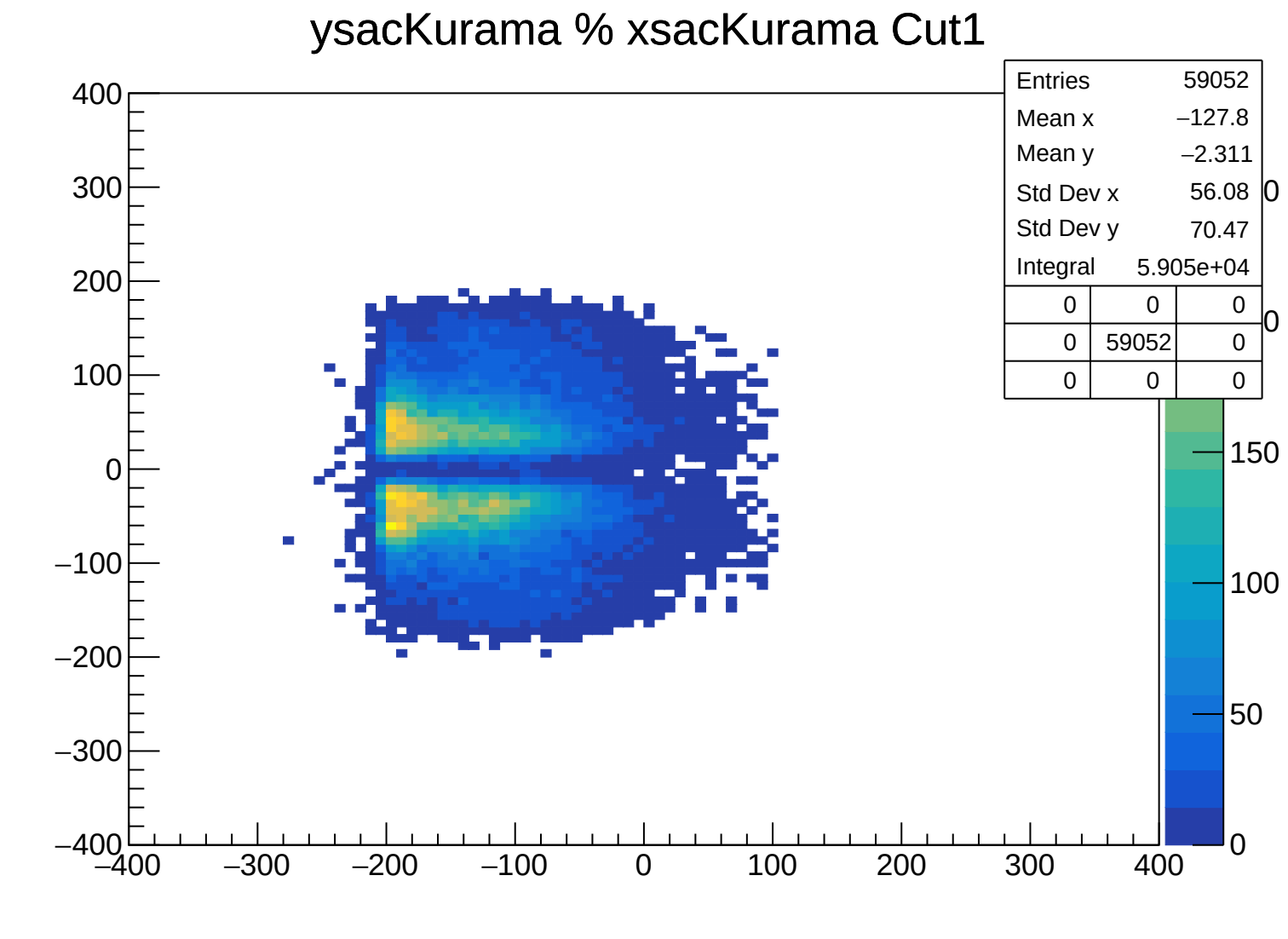

tSac Or Cut Ver 5
Entries 1309
Mean −23.96
Std Dev 57.89
Underflow 800
Overflow 347
Integral 162
0
1
2
3
4
5
6
−100
−80
−60
−40
−20
0
20
40
60
80
100

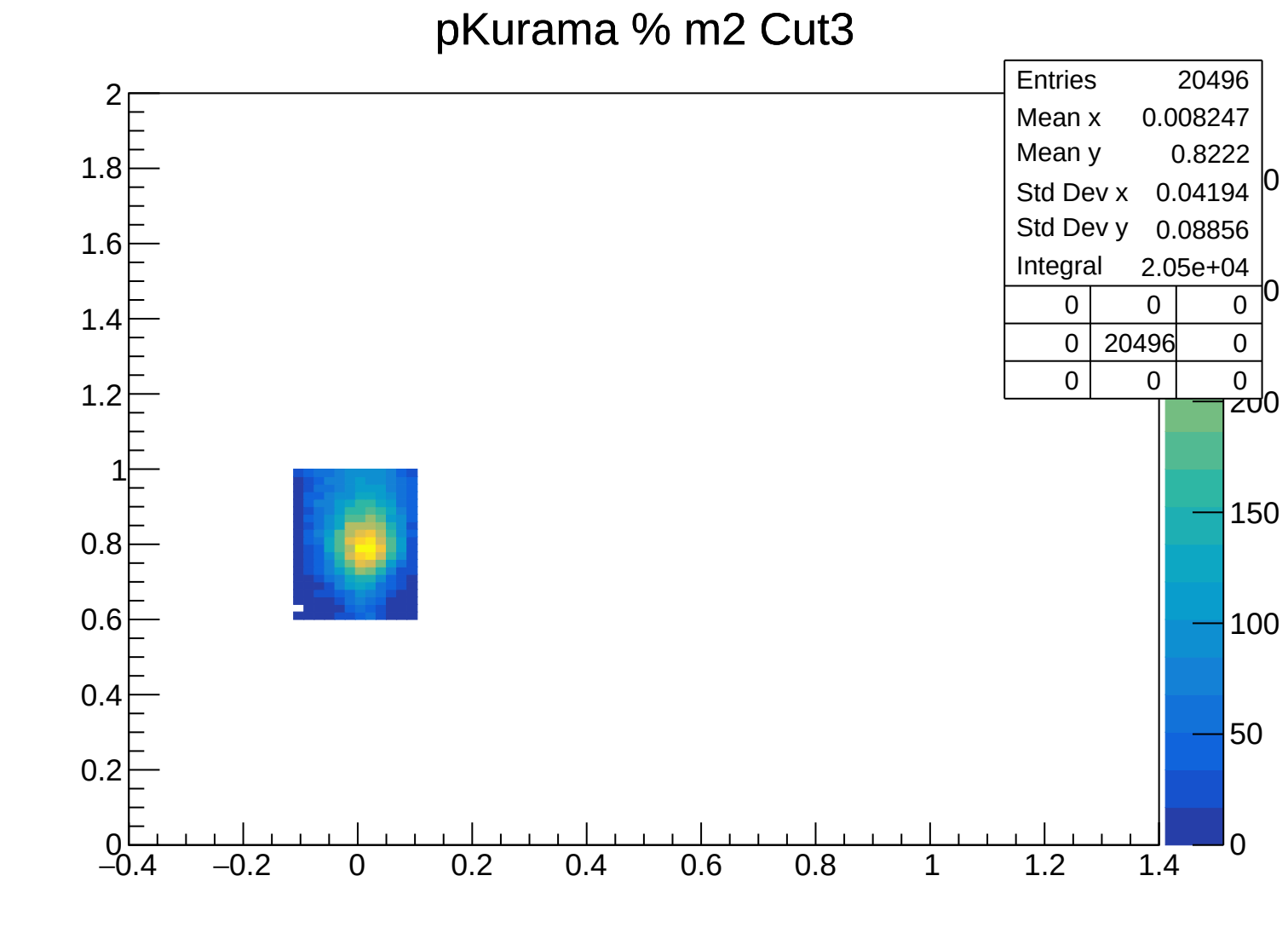

pKurama % ThetaKurama
Entries 34527
Mean x 6.68
Mean y 0.9454
Std Dev x 5.527
Std Dev y 0.2734
Integral 3.434e+04
0 173 0
0 34345 9
0 0 0
0
0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35 40
150
100
50
0

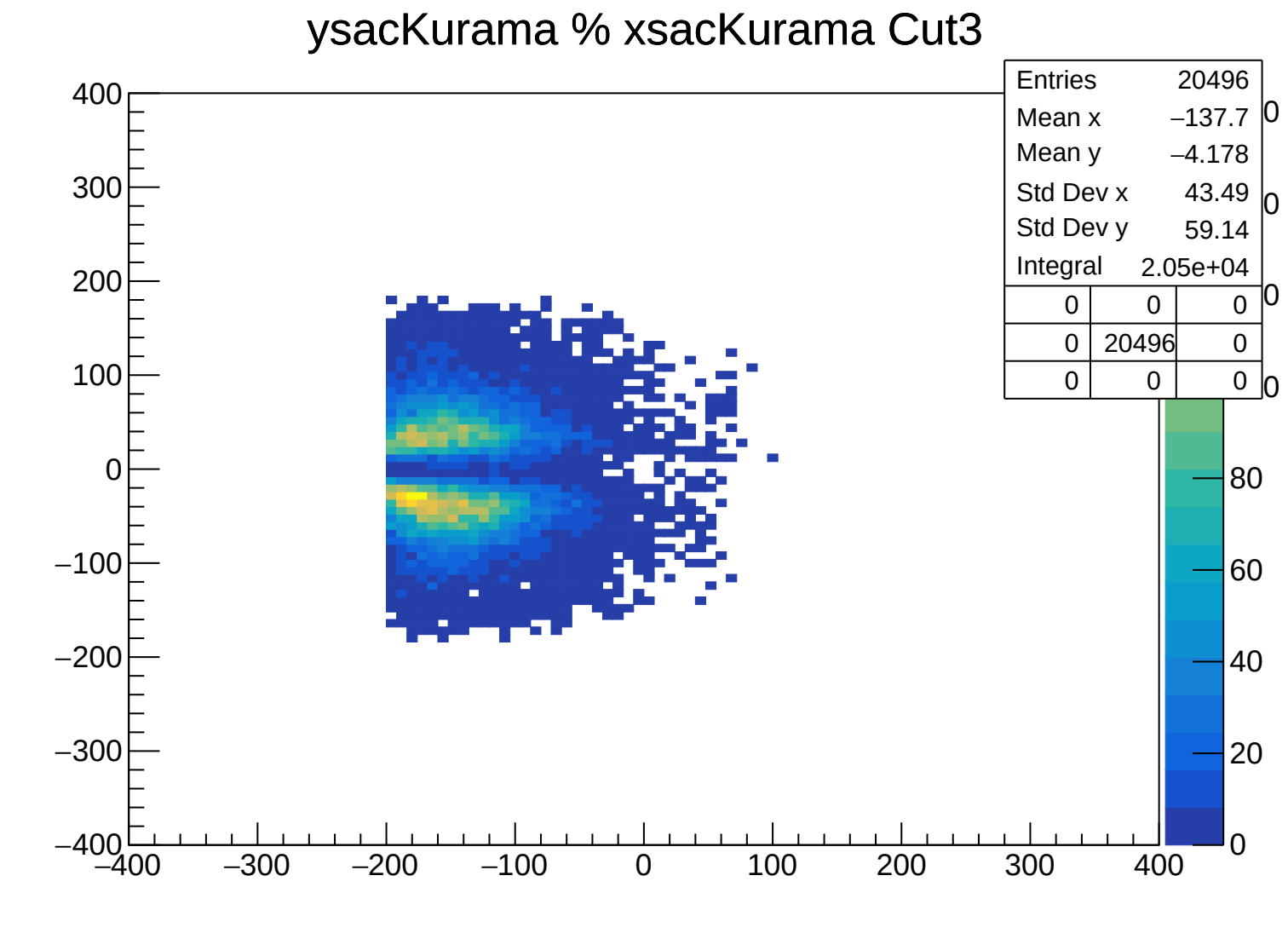

pKurama % m2
Entries 98544
Mean x 0.1386
Mean y 1.017
Std Dev x 0.3028
Std Dev y 0.2947
Integral 8.627e+04
1186 1928 2506
4499 86268 2157
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
200
150
100
50
0

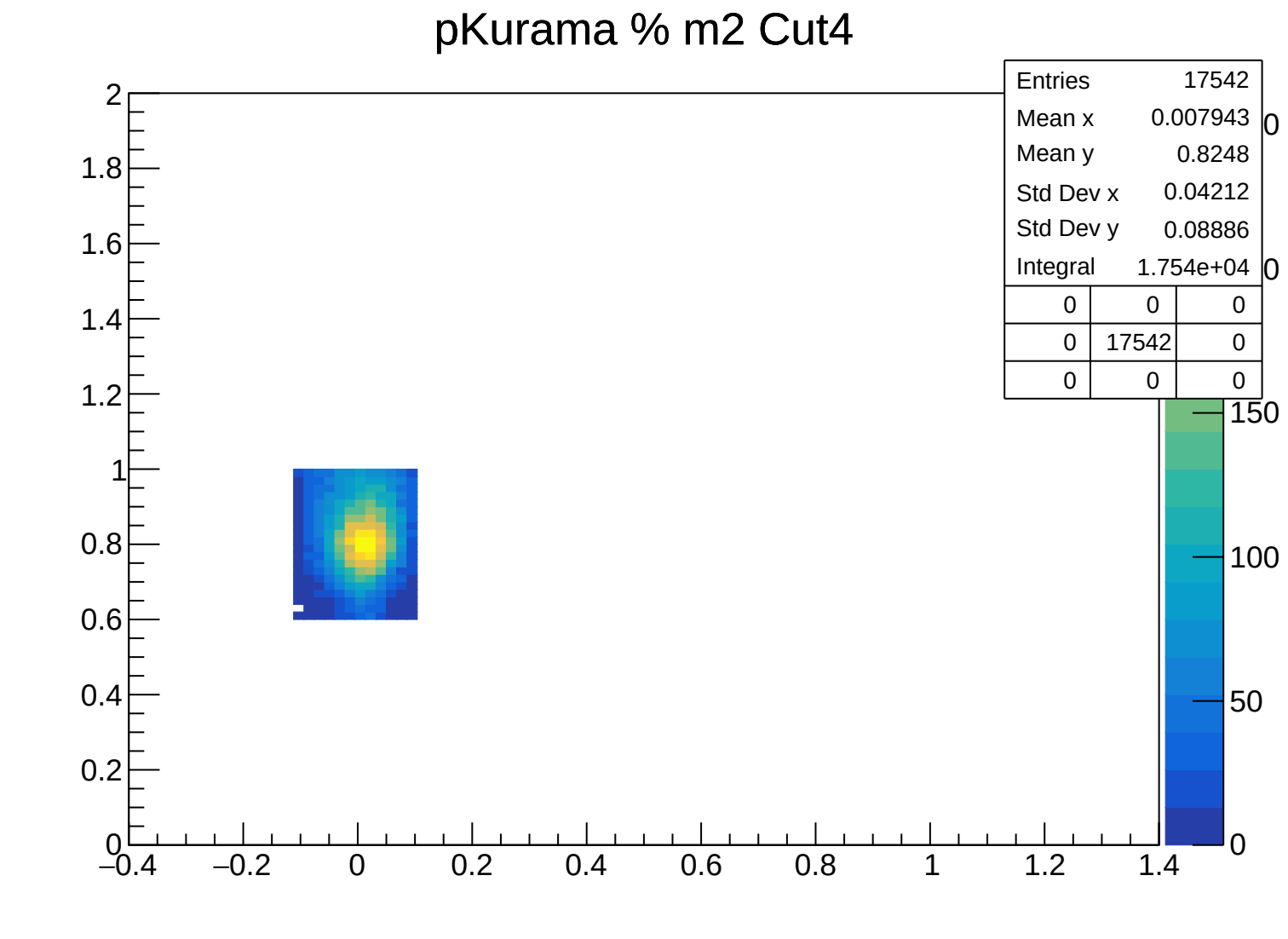

pKurama % m2 Cut1
Entries 59052
Mean x 0.03565
Mean y 1.042
Std Dev x 0.1466
Std Dev y 0.233
Integral 5.617e+04
22 79 25
2170 56170 586
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
200
150
100
50
0

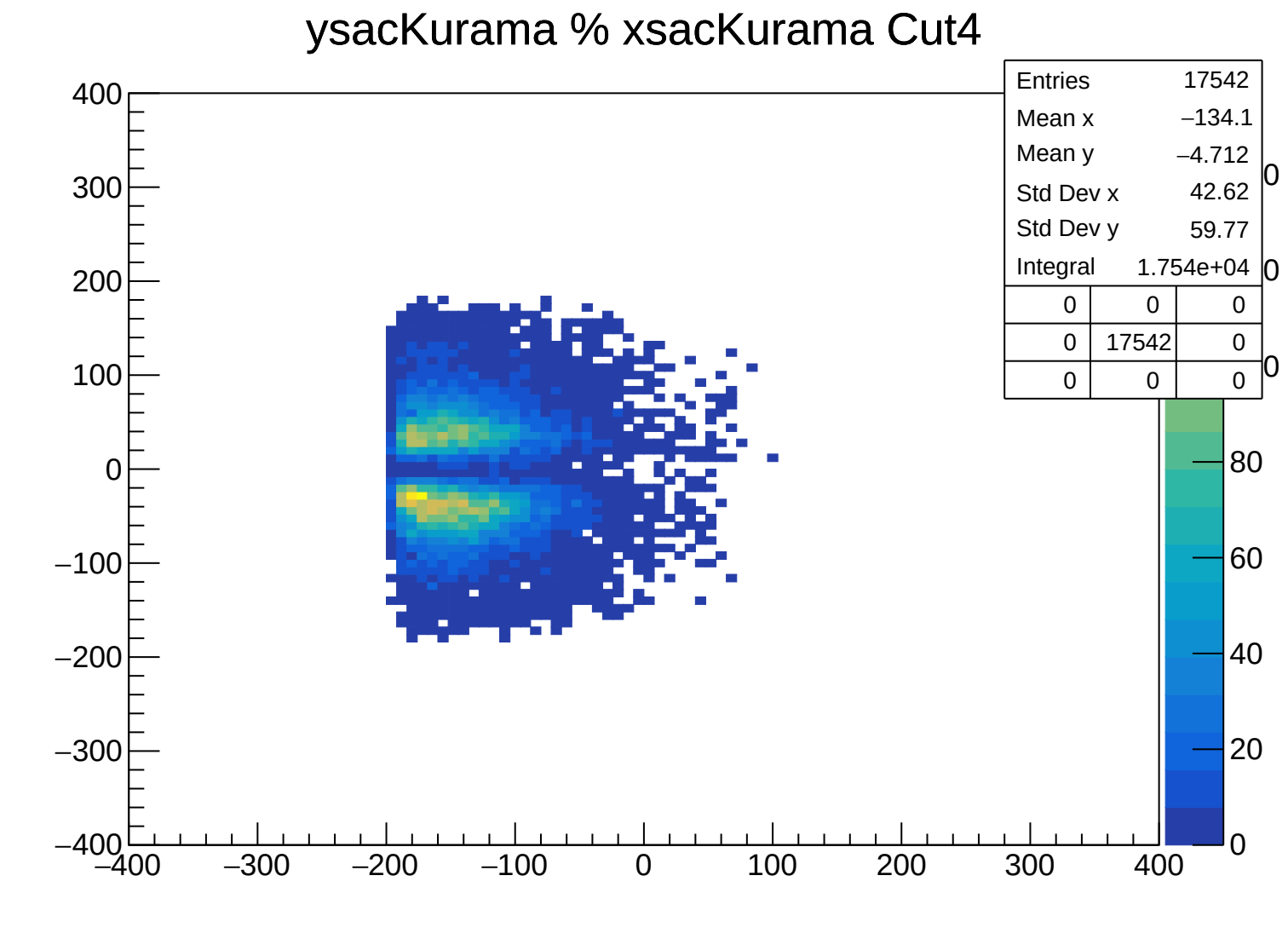

ysacKurama % xsacKurama
Entries 98544
Mean x −113.4
Mean y −1.644
Std Dev x 82.69
Std Dev y 75.55
Integral 9.854e+04
0 0 0
0 98544 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
200
150
100
50
0

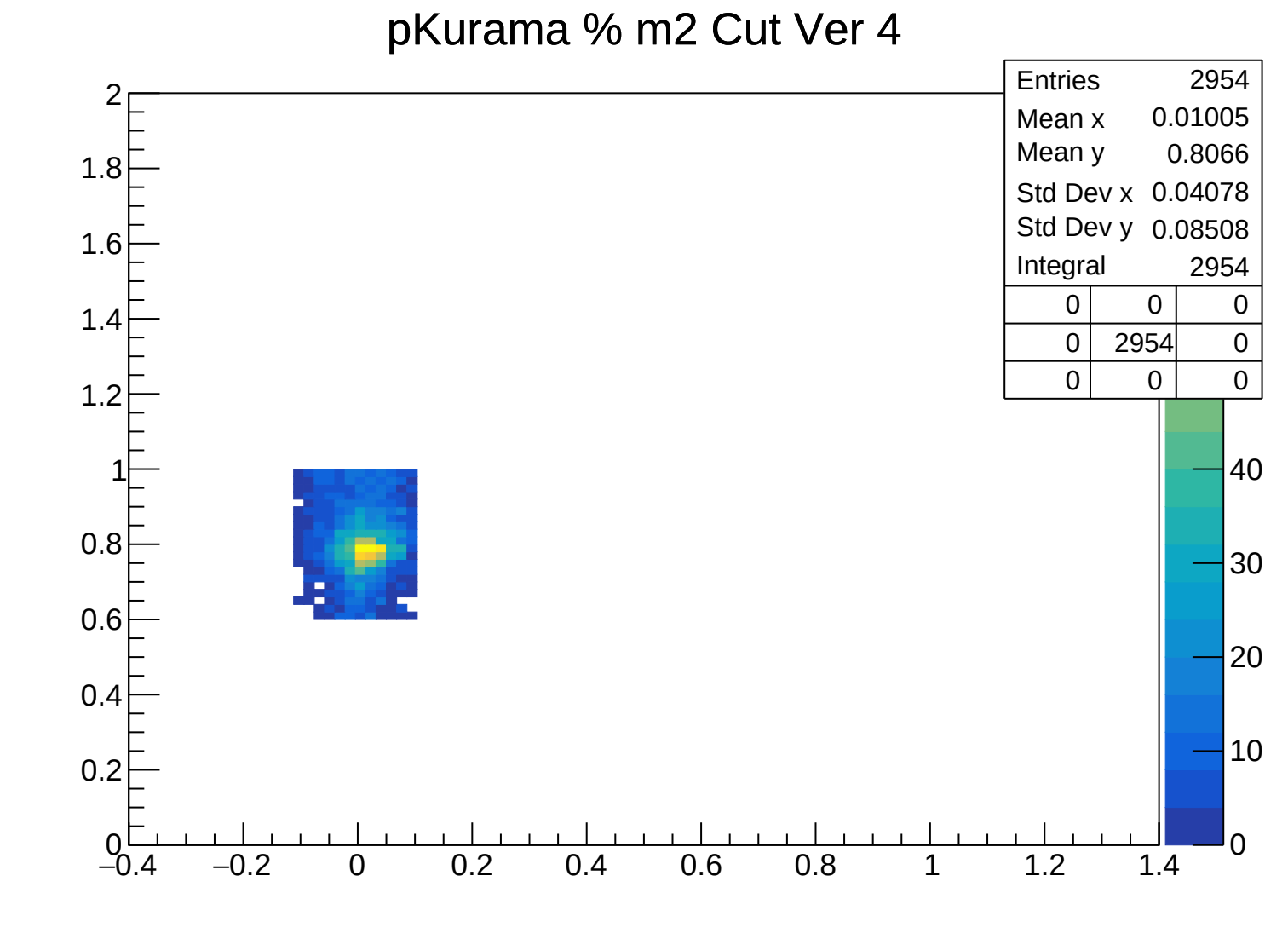

ysacKurama % xsacKurama Cut1
Entries 59052
Mean x –127.8
Mean y –2.311
Std Dev x 56.08
Std Dev y 70.47
Integral 5.905e+04
0 0 0
0 59052 0
0 0 0
400
300
200
100
0
–100
–200
–300
–400
–400 –300 –200 –100 0 100 200 300 400
150
100
50
0

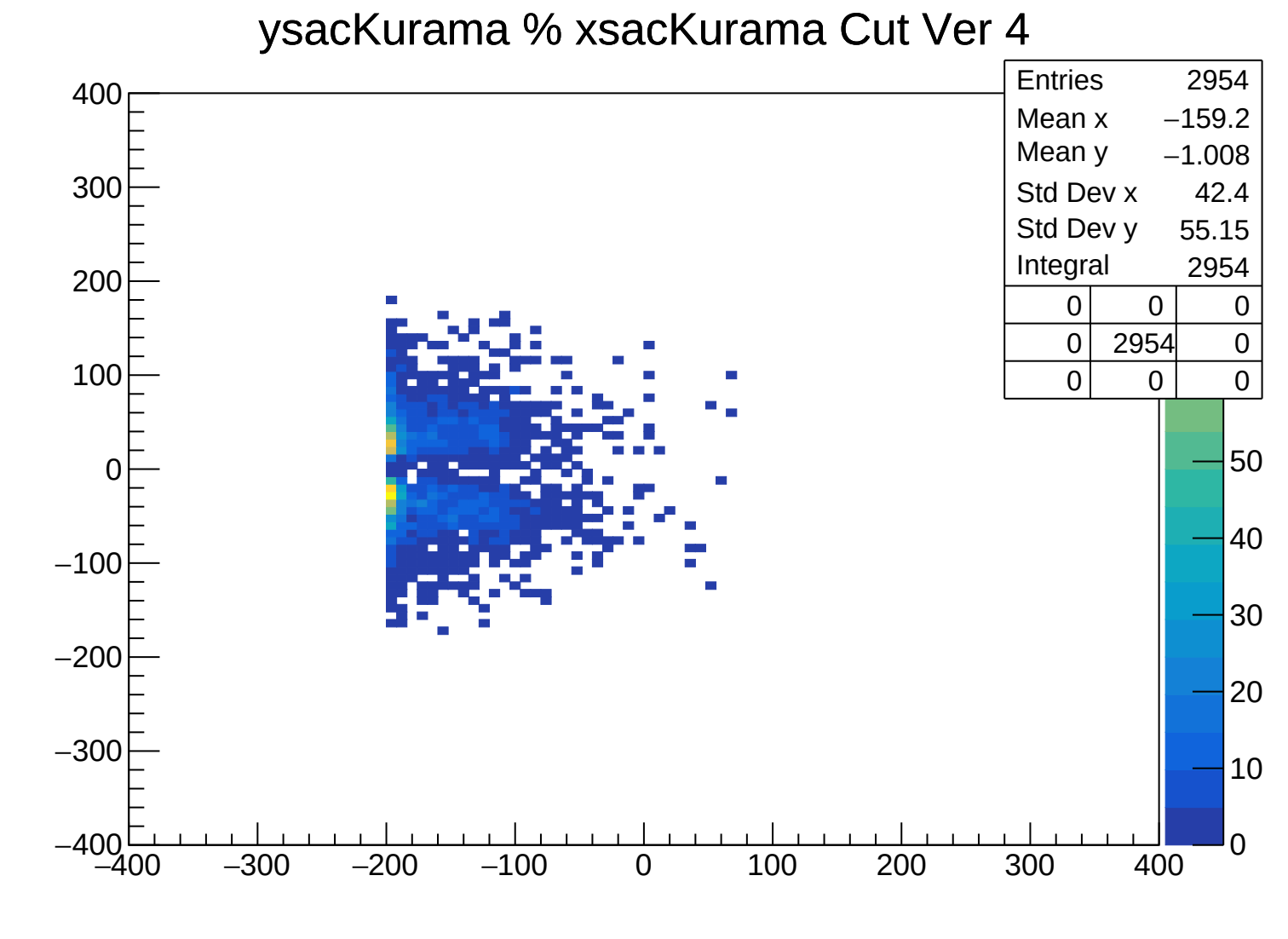

pKurama % m2 Cut3
Entries 20496
Mean x 0.008247
Mean y 0.8222
Std Dev x 0.04194
Std Dev y 0.08856
Integral 2.05e+04
0 0 0
0 20496 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
200
150
100
50
0

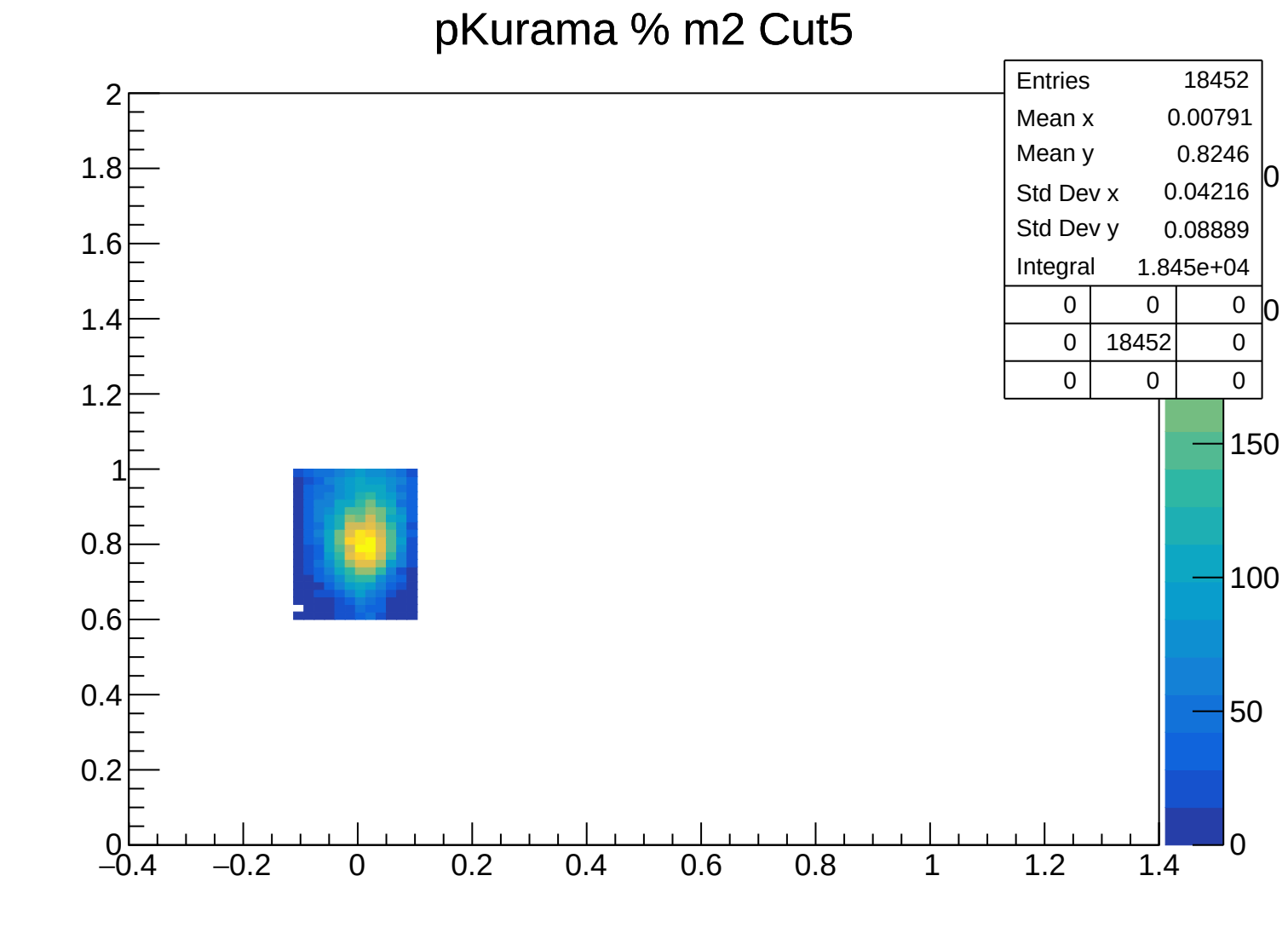

ysacKurama % xsacKurama Cut3
Entries 20496
Mean x –137.7
Mean y –4.178
Std Dev x 43.49
Std Dev y 59.14
Integral 2.05e+04
0 0 0
0 20496 0
0 0 0
400
300
200
100
0
–100
–200
–300
–400
–400 –300 –200 –100 0 100 200 300 400
80
60
40
20
0

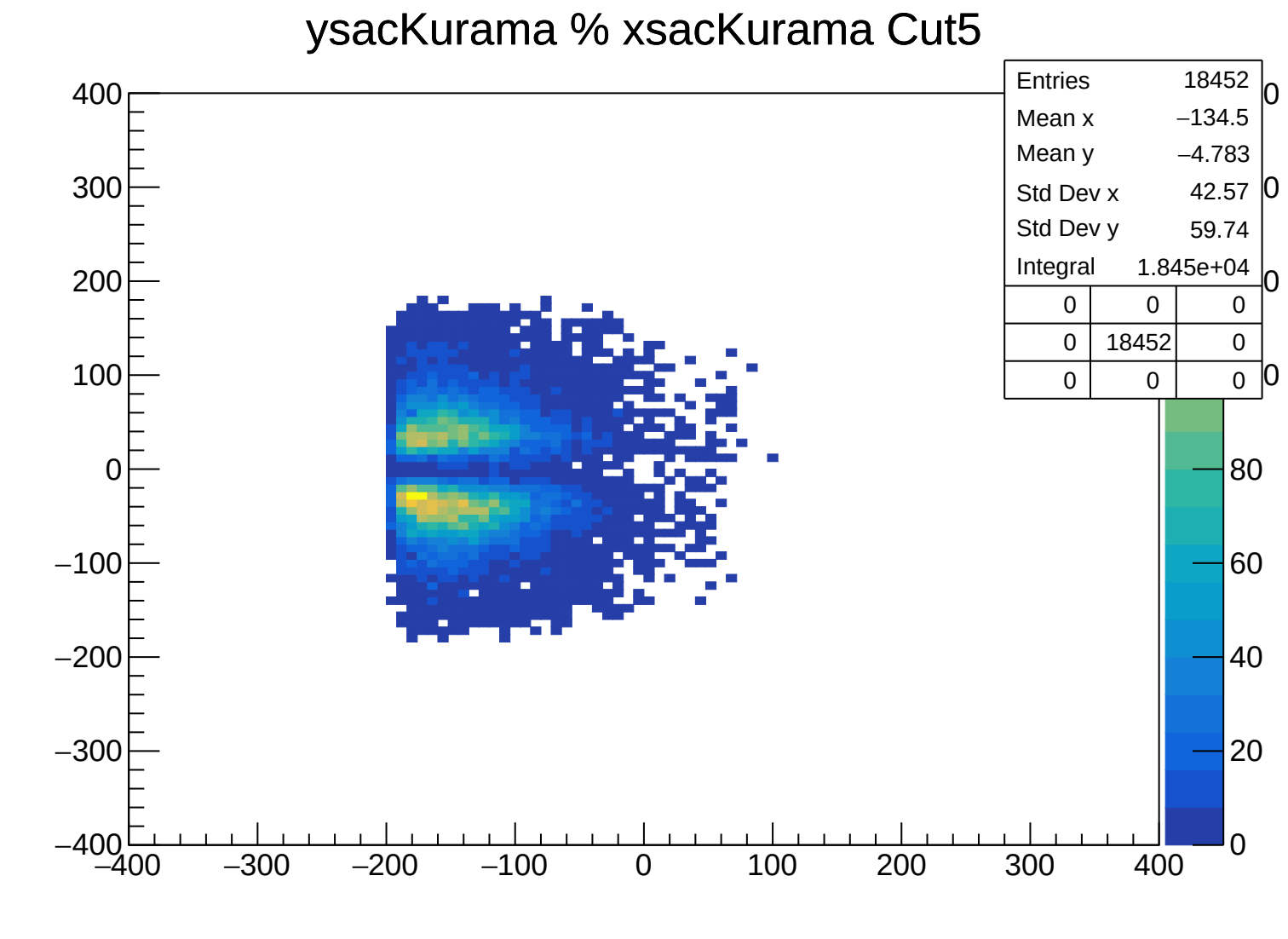

pKurama % m2 Cut4
Entries 17542
Mean x 0.007943
Mean y 0.8248
Std Dev x 0.04212
Std Dev y 0.08886
Integral 1.754e+04
0 0 0
0 17542 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
150
100
50
0

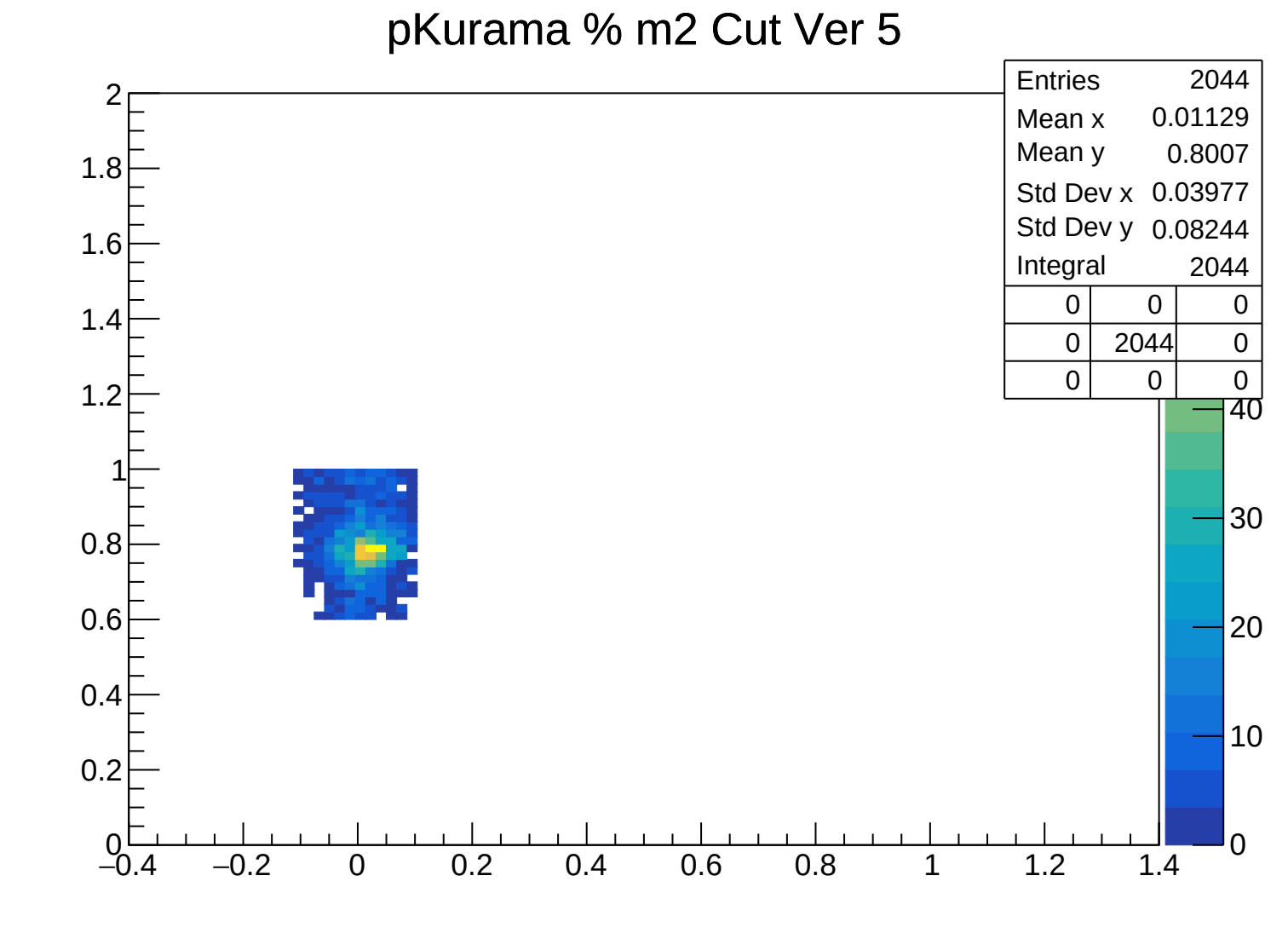

ysacKurama % xsacKurama Cut4
Entries 17542
Mean x –134.1
Mean y –4.712
Std Dev x 42.62
Std Dev y 59.77
Integral 1.754e+04
0 0 0
0 17542 0
0 0 0
400
300
200
100
0
–100
–200
–300
–400
–400 –300 –200 –100 0 100 200 300 400
80
60
40
20
0

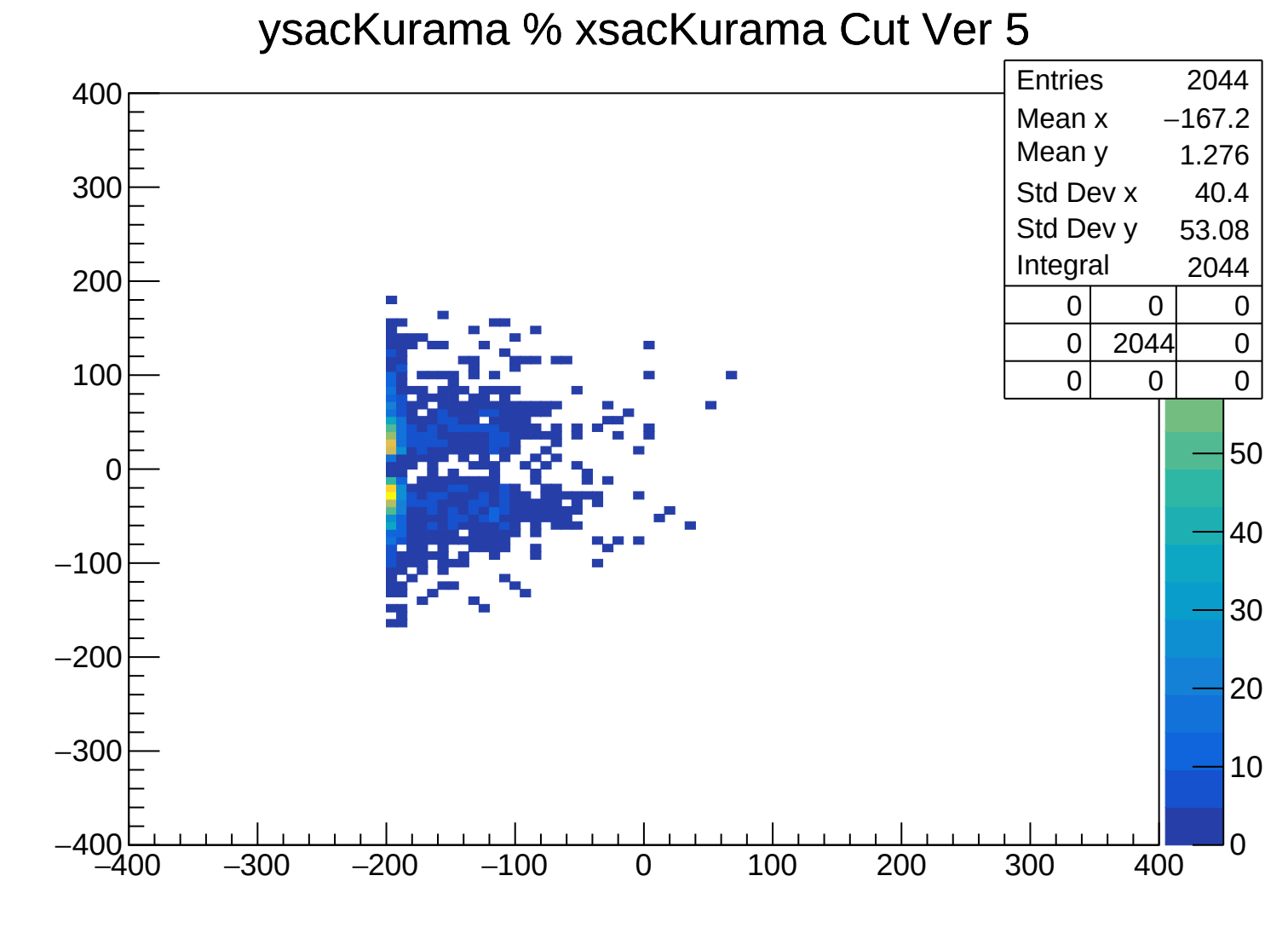

pKurama % m2 Cut Ver 4
Entries 2954
Mean x 0.01005
Mean y 0.8066
Std Dev x 0.04078
Std Dev y 0.08508
Integral 2954
0 0 0
0 2954 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
40
30
20
10
0


ysacKurama % xsacKurama Cut Ver 4
Entries 2954
Mean x −159.2
Mean y −1.008
Std Dev x 42.4
Std Dev y 55.15
Integral 2954
0 0 0
0 2954 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
50
40
30
20
10
0


pKurama % m2 Cut5
Entries 18452
Mean x 0.00791
Mean y 0.8246
Std Dev x 0.04216
Std Dev y 0.08889
Integral 1.845e+04
0 0 0
0 18452 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
150
100
50
0


ysacKurama % xsacKurama Cut5
Entries 18452
Mean x −134.5
Mean y −4.783
Std Dev x 42.57
Std Dev y 59.74
Integral 1.845e+04
0 0 0
0 18452 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
80
60
40
20
0


pKurama % m2 Cut Ver 5
Entries 2044
Mean x 0.01129
Mean y 0.8007
Std Dev x 0.03977
Std Dev y 0.08244
Integral 2044
0 0 0
0 2044 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
40
30
20
10
0


ysacKurama % xsacKurama Cut Ver 5
Entries 2044
Mean x −167.2
Mean y 1.276
Std Dev x 40.4
Std Dev y 53.08
Integral 2044
0 0 0
0 2044 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400
−300
−200
−100
0
100
200
300
400
50
40
30
20
10
0