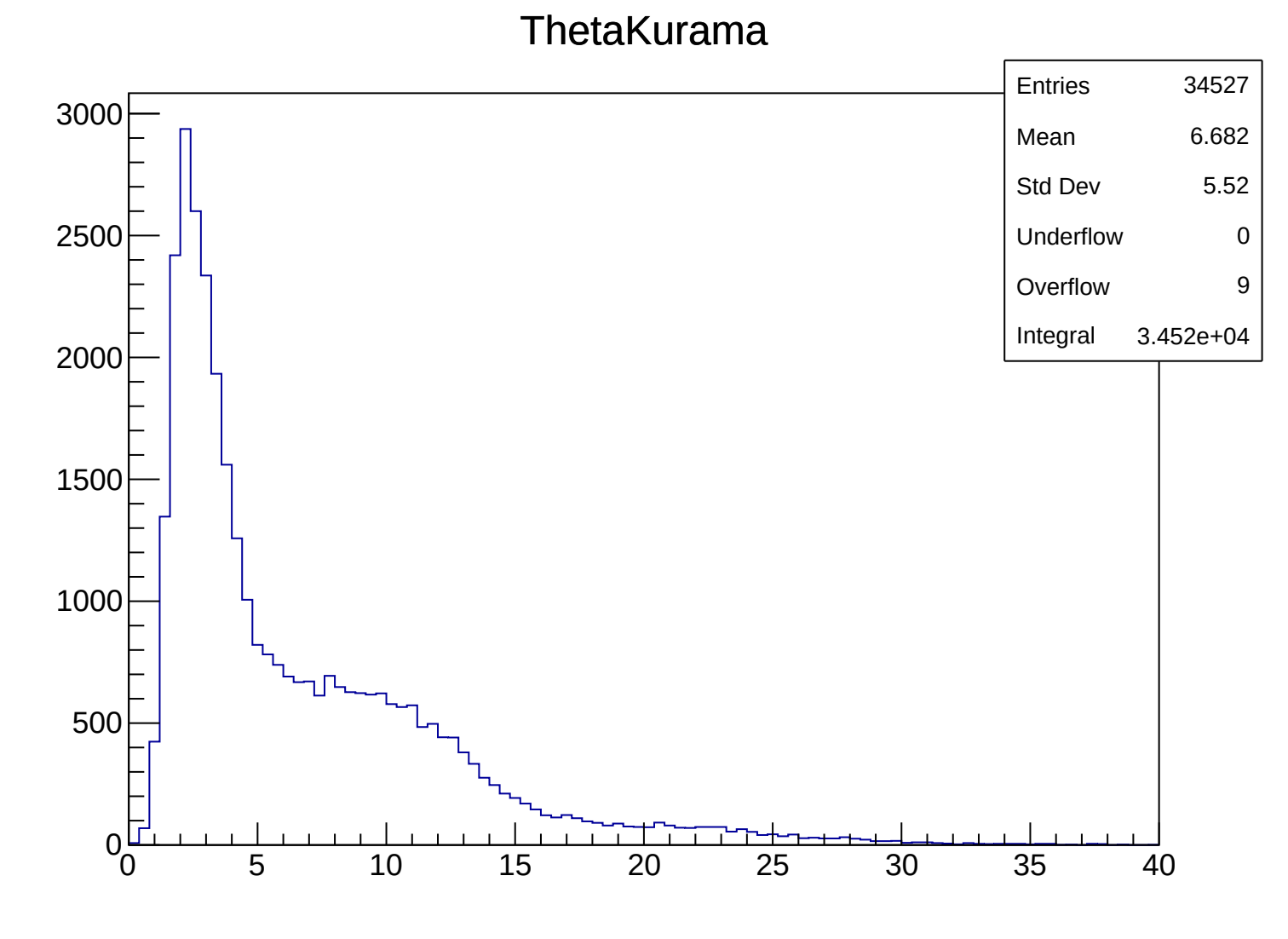
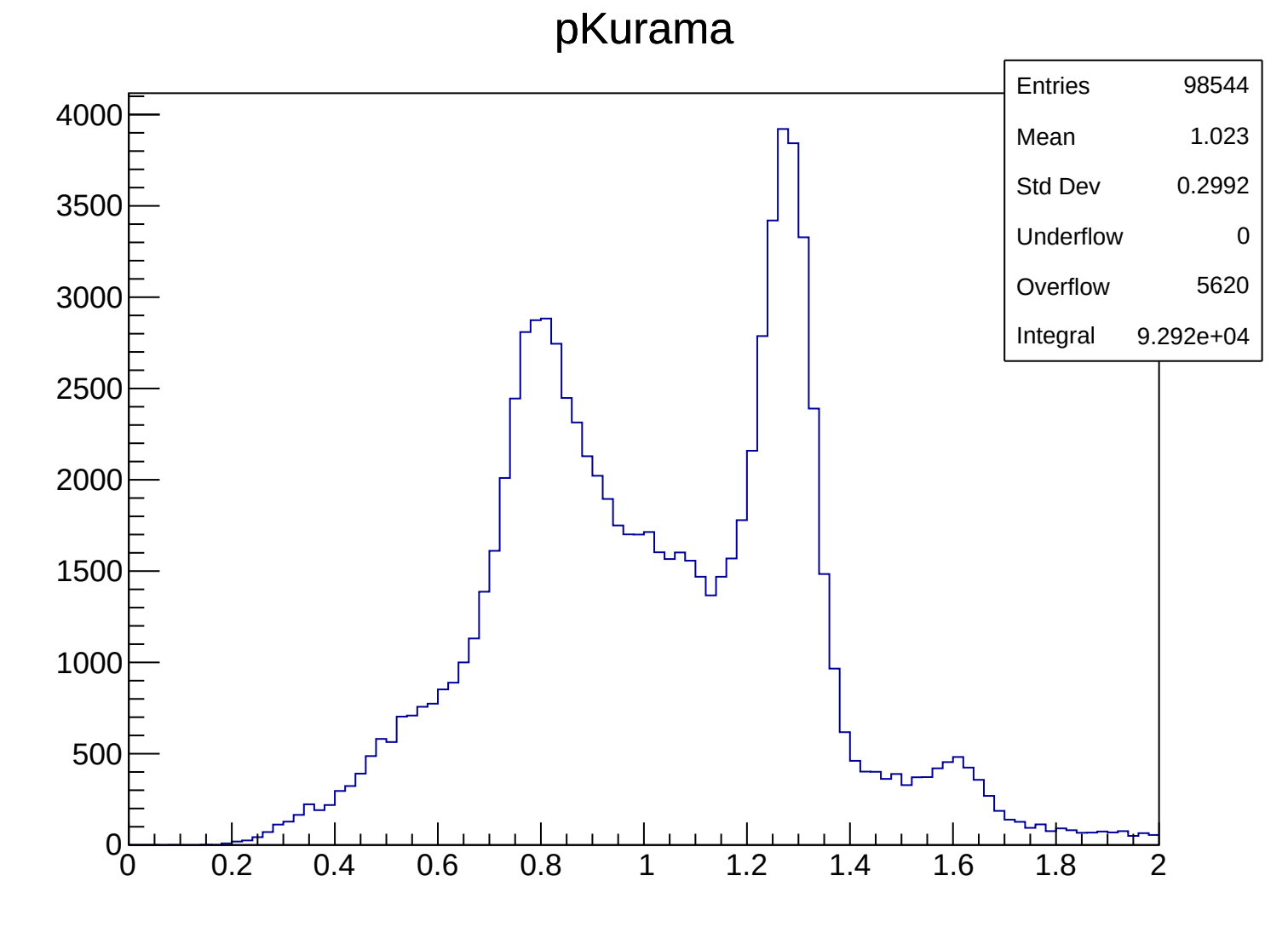
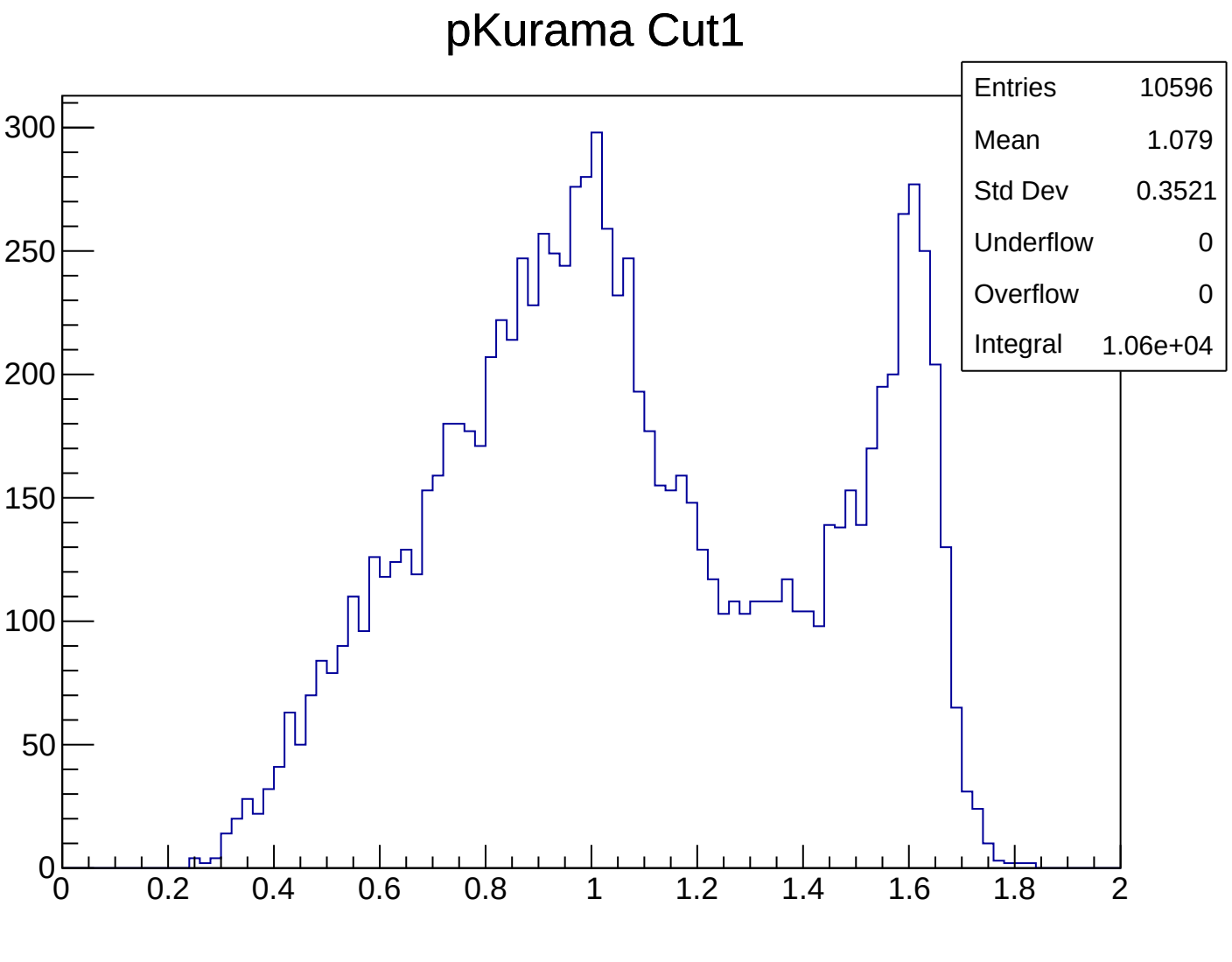
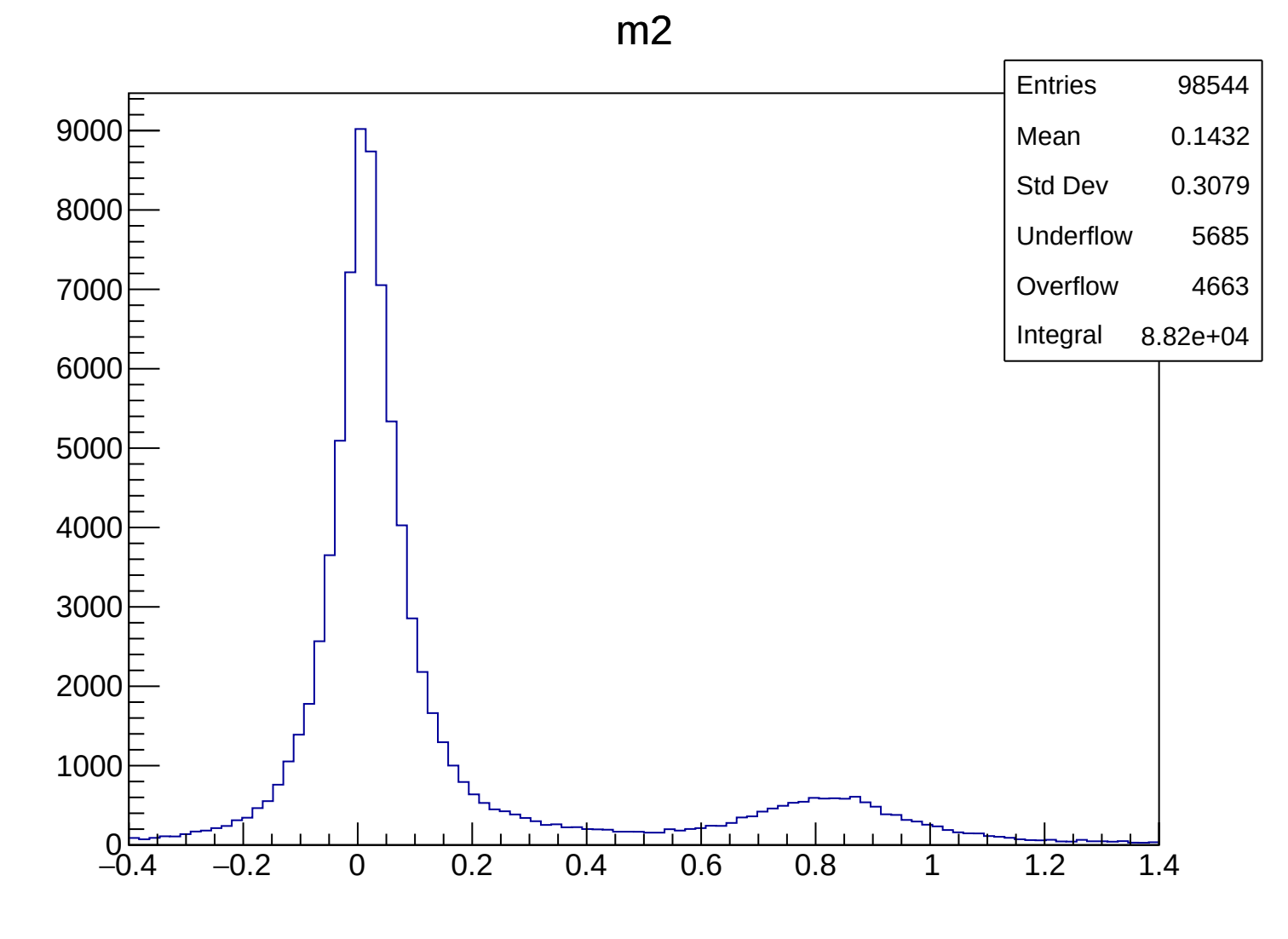
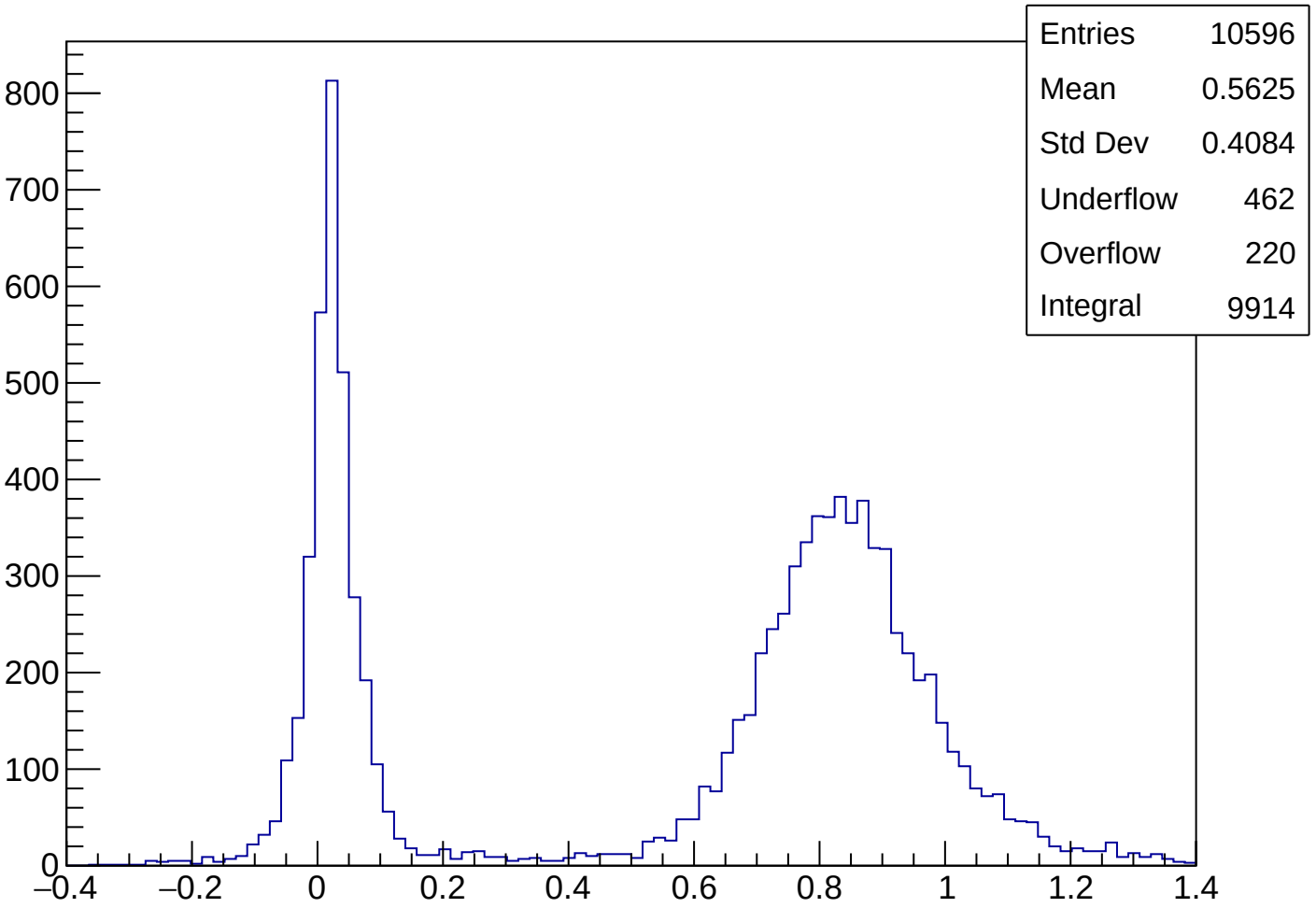
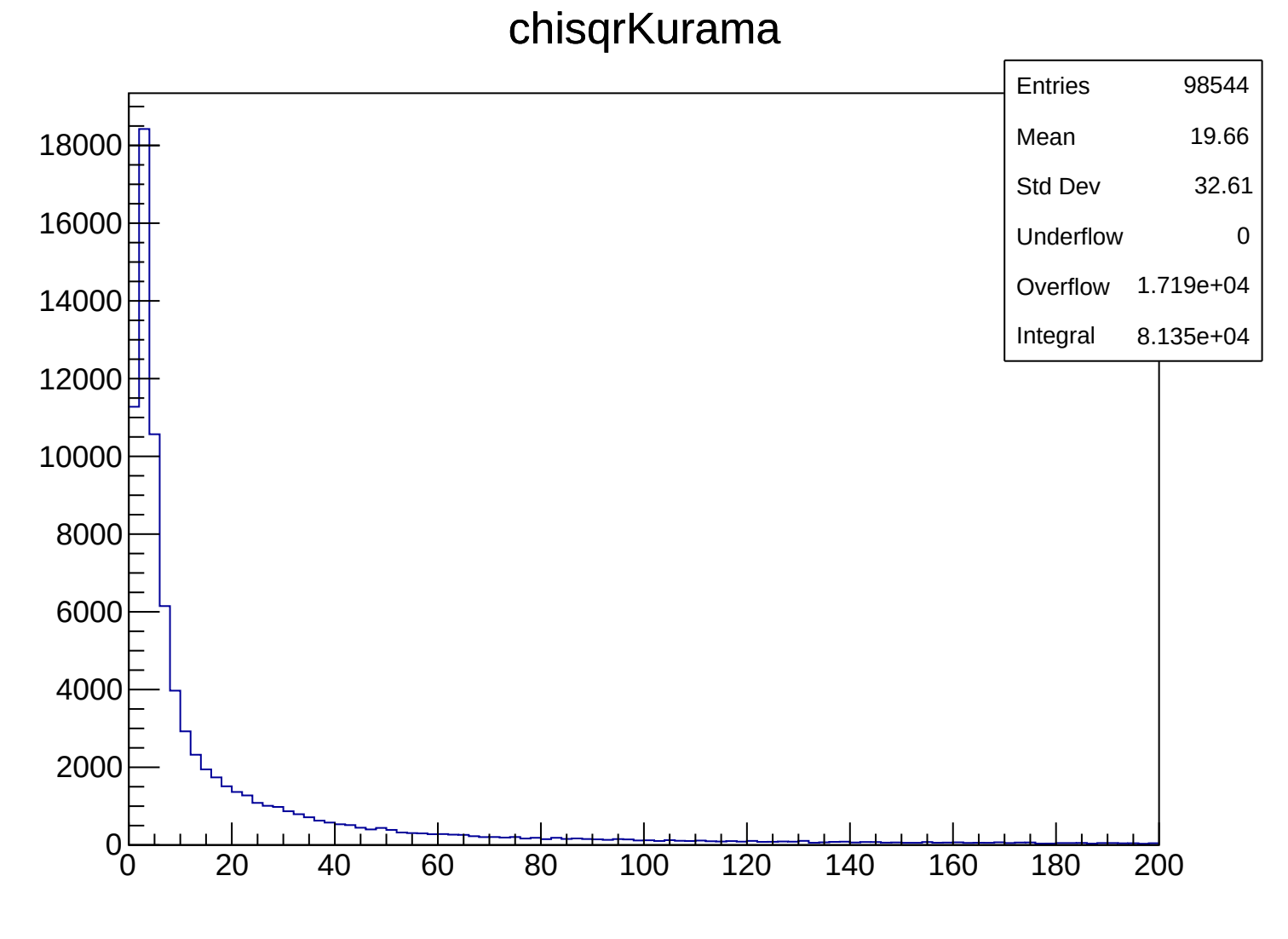

ThetaKurama
Entries 34527
Mean 6.682
Std Dev 5.52
Underflow 0
Overflow 9
Integral 3.452e+04
3000
2500
2000
1500
1000
500
0
0
5
10
15
20
25
30
35
40

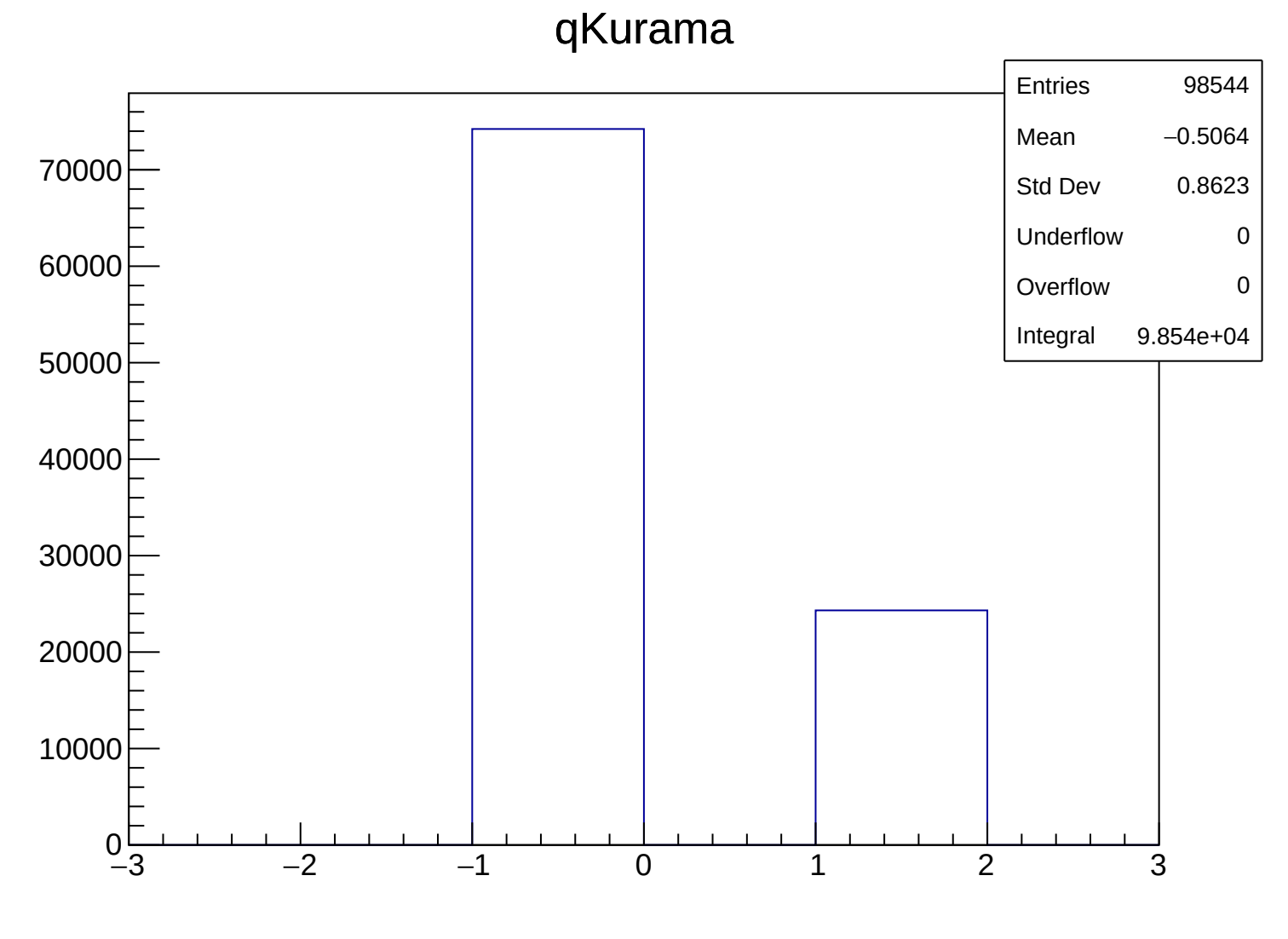

pKurama
Entries 98544
Mean 1.023
Std Dev 0.2992
Underflow 0
Overflow 5620
Integral 9.292e+04
4000
3500
3000
2500
2000
1500
1000
500
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

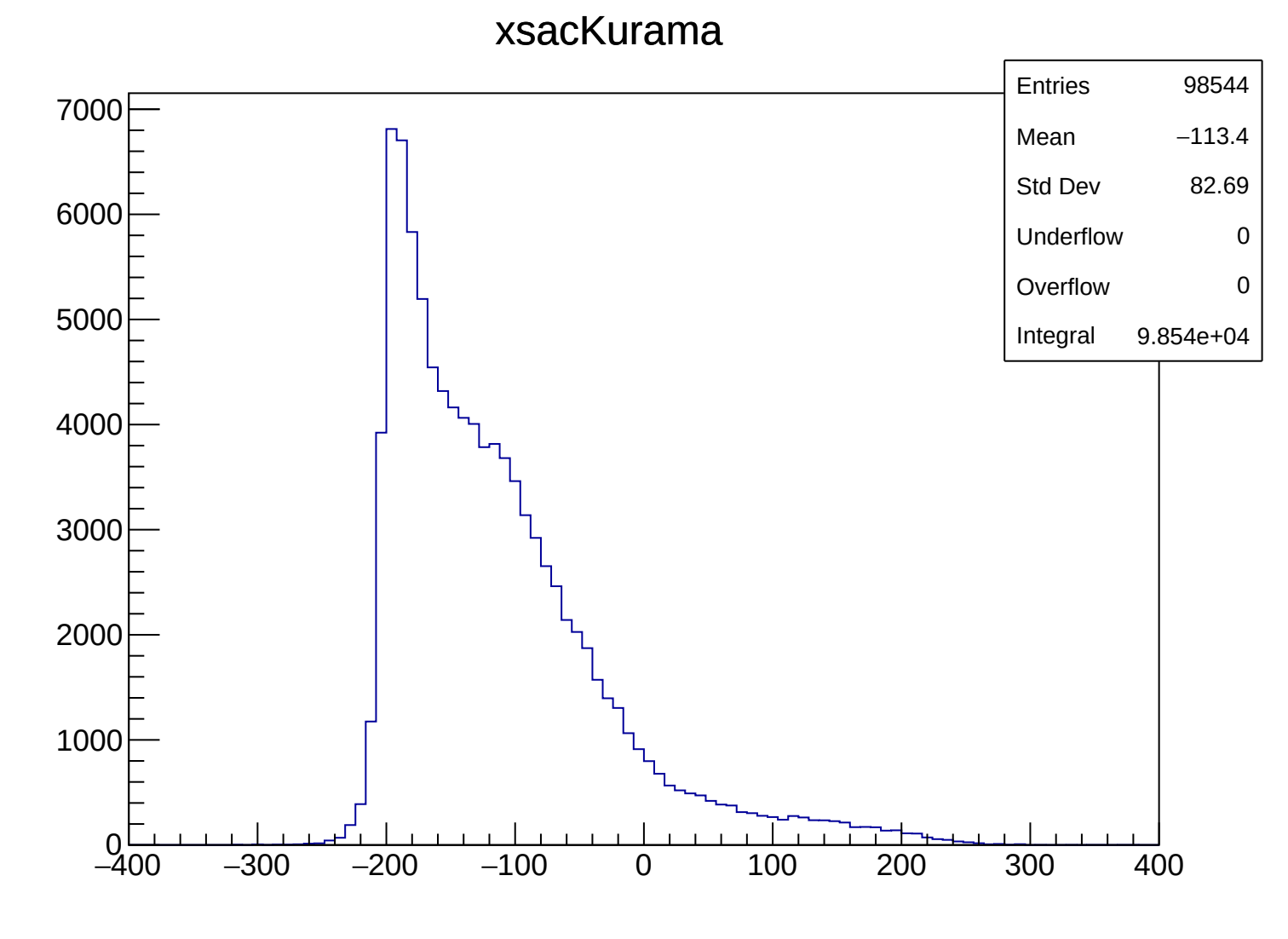

pKurama Cut1
Entries 10596
Mean 1.079
Std Dev 0.3521
Underflow 0
Overflow 0
Integral 1.06e+04
300
250
200
150
100
50
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

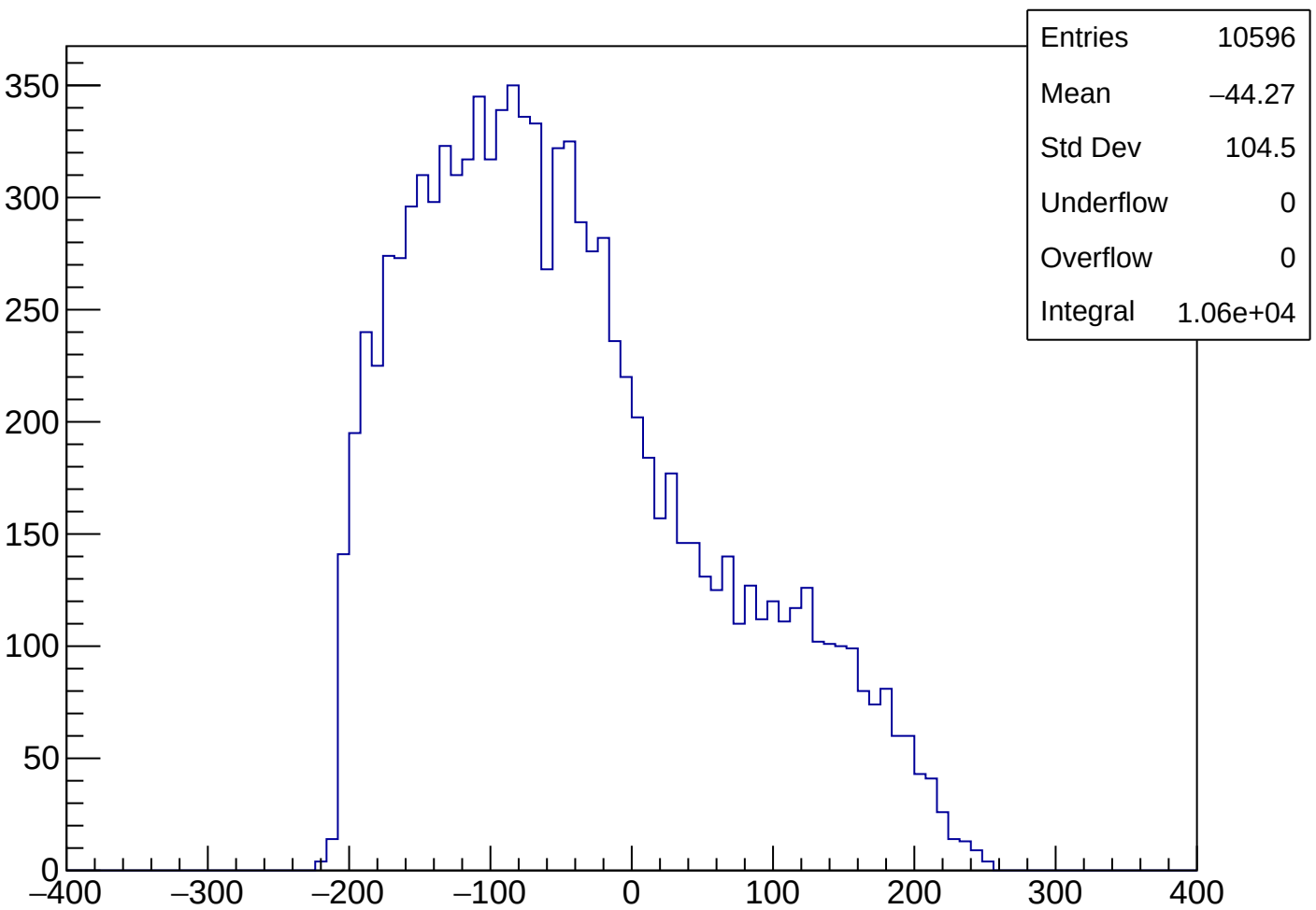

m2
Entries 98544
Mean 0.1432
Std Dev 0.3079
Underflow 5685
Overflow 4663
Integral 8.82e+04
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

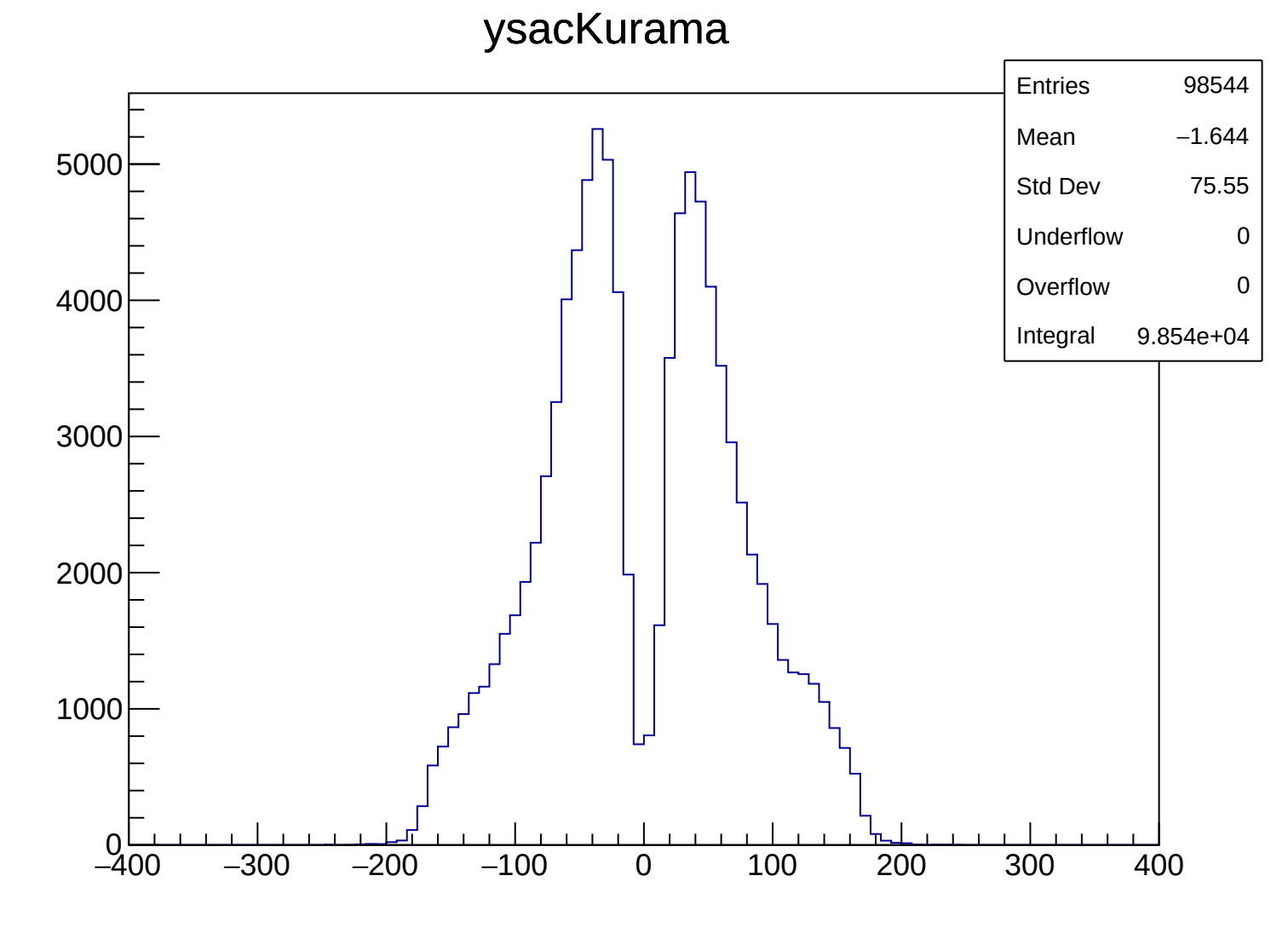

m2 Cut1
Entries 10596
Mean 0.5625
Std Dev 0.4084
Underflow 462
Overflow 220
Integral 9914
800
700
600
500
400
300
200
100
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

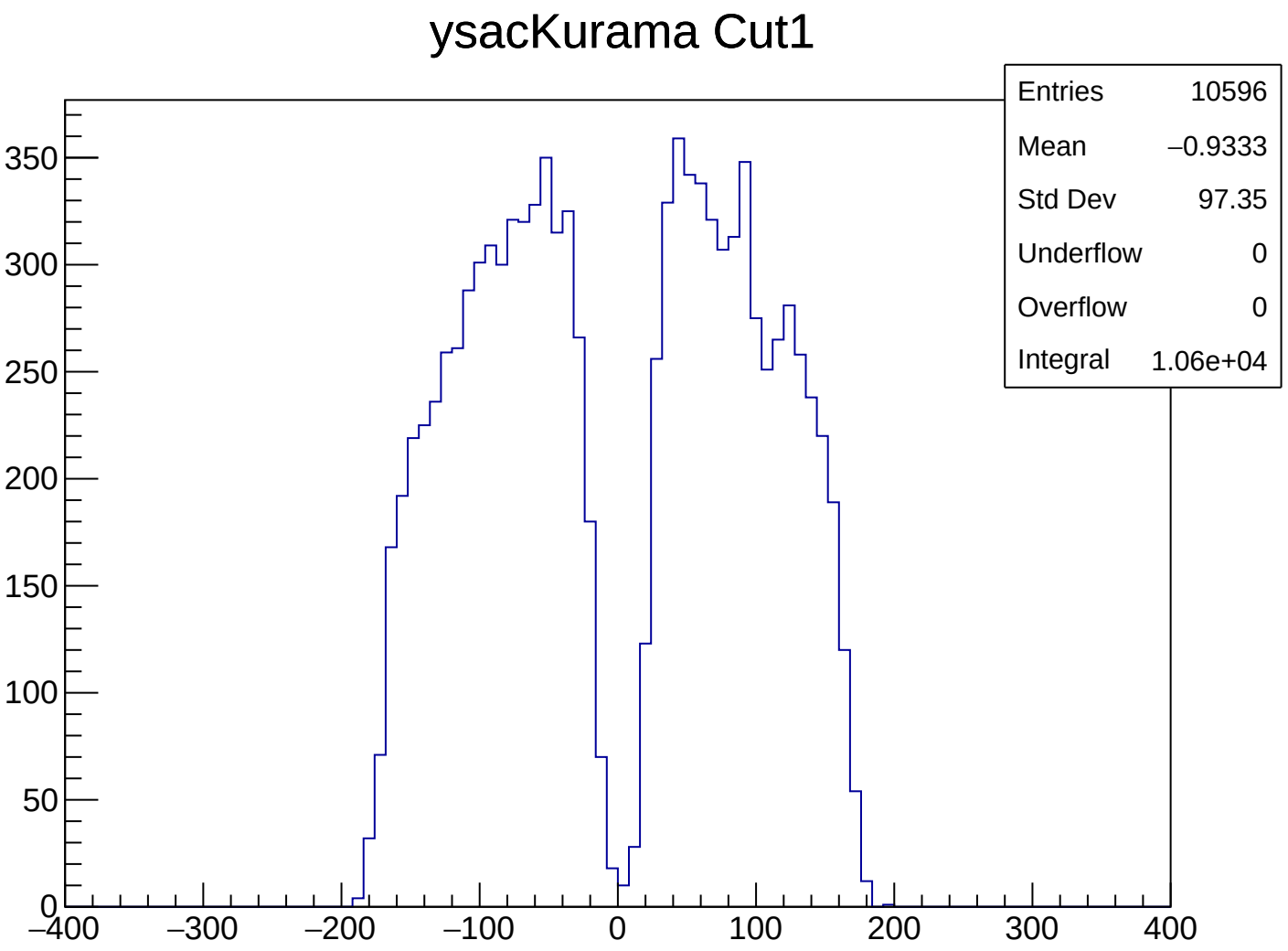

chisqrKurama
Entries 98544
Mean 19.66
Std Dev 32.61
Underflow 0
Overflow 1.719e+04
Integral 8.135e+04
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
20
40
60
80
100
120
140
160
180
200

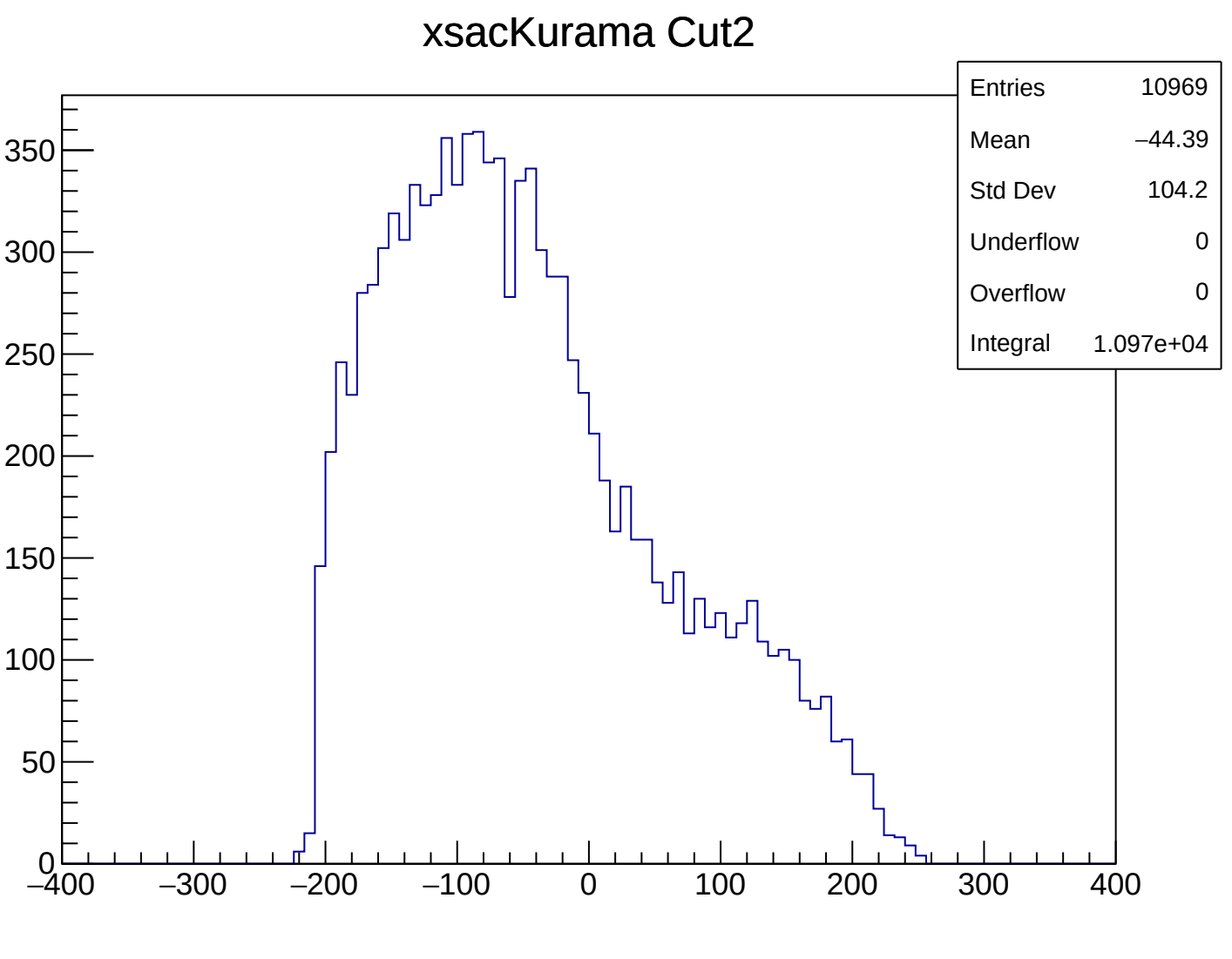

qKurama
Entries 98544
Mean −0.5064
Std Dev 0.8623
Underflow 0
Overflow 0
Integral 9.854e+04
70000
60000
50000
40000
30000
20000
10000
0
−3
−2
−1
0
1
2
3

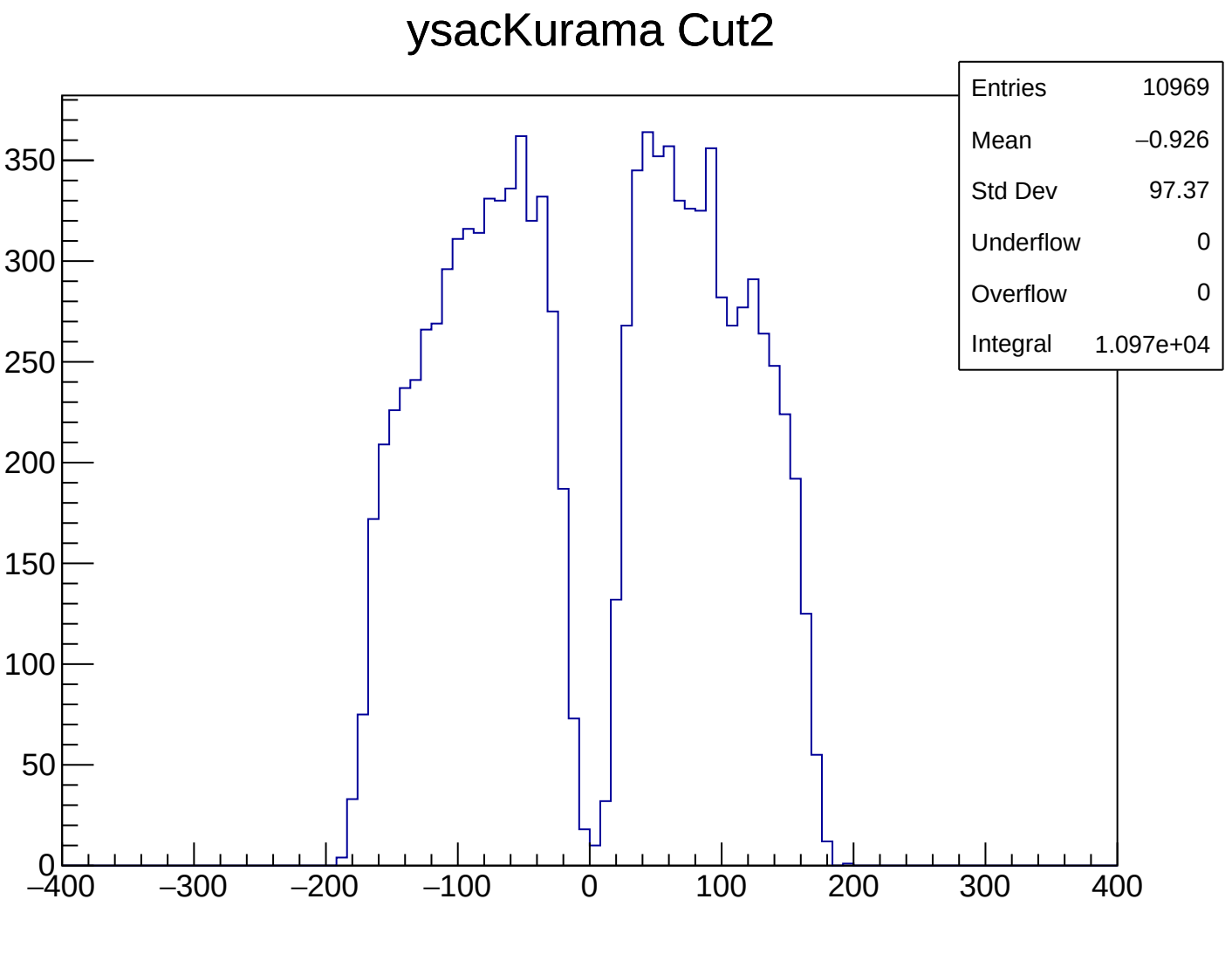

xsacKurama
Entries 98544
Mean −113.4
Std Dev 82.69
Underflow 0
Overflow 0
Integral 9.854e+04
7000
6000
5000
4000
3000
2000
1000
0
−400
−300
−200
−100
0
100
200
300
400

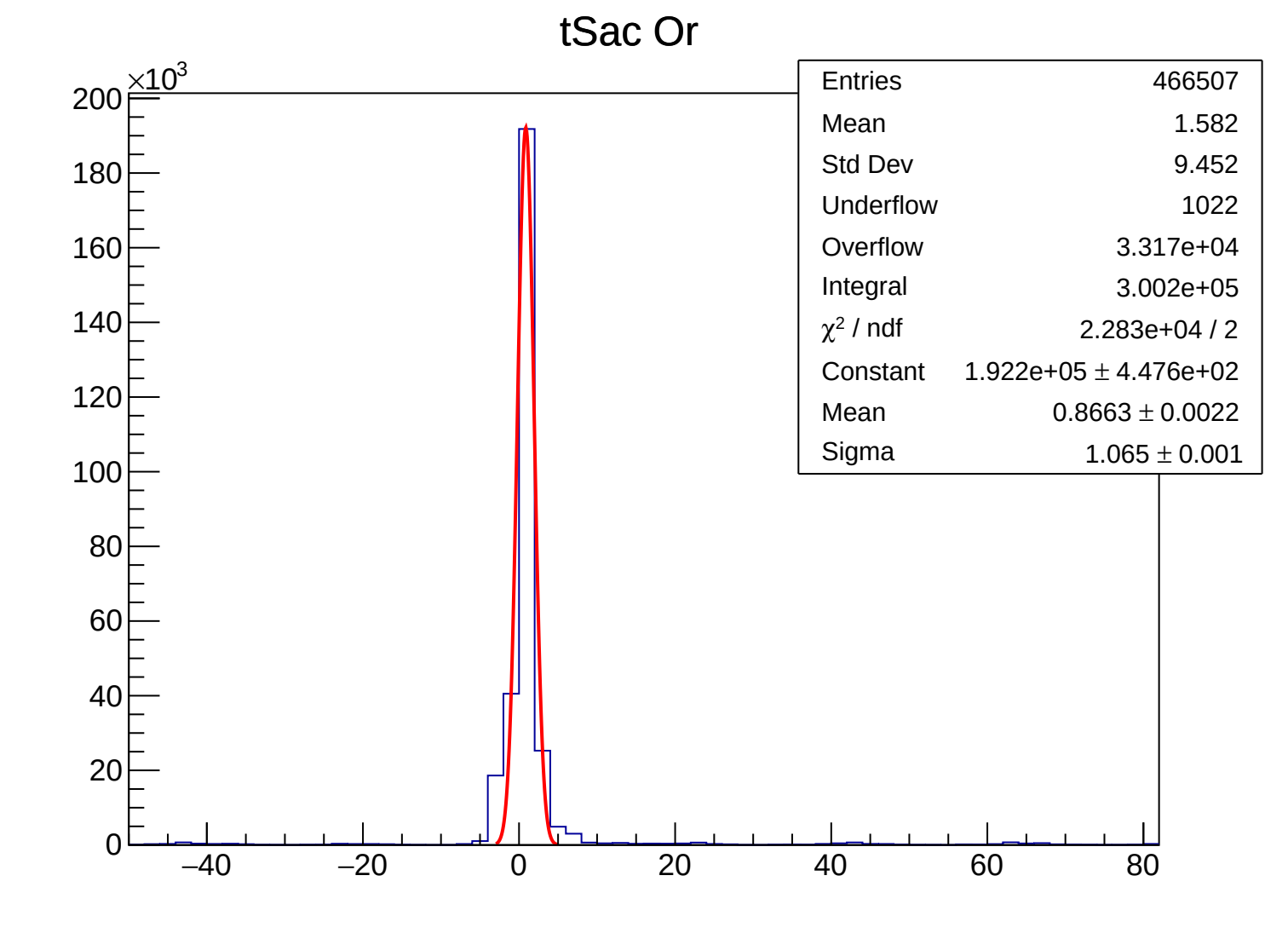

xsacKurama Cut1
Entries 10596
Mean –44.27
Std Dev 104.5
Underflow 0
Overflow 0
Integral 1.06e+04
350
300
250
200
150
100
50
0
–400
–300
–200
–100
0
100
200
300
400

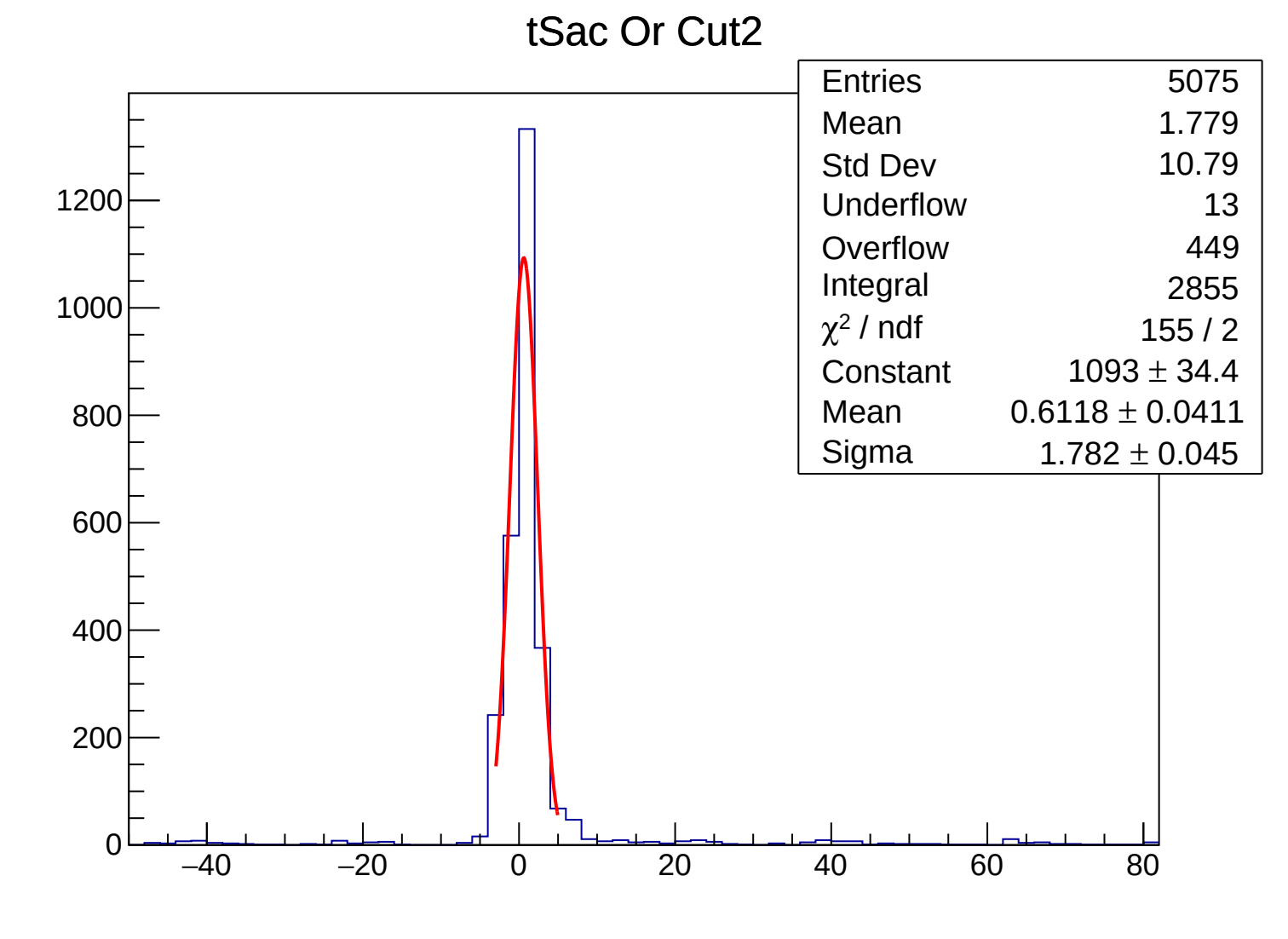

ysacKurama
Entries 98544
Mean –1.644
Std Dev 75.55
Underflow 0
Overflow 0
Integral 9.854e+04
5000
4000
3000
2000
1000
0
–400
–300
–200
–100
0
100
200
300
400

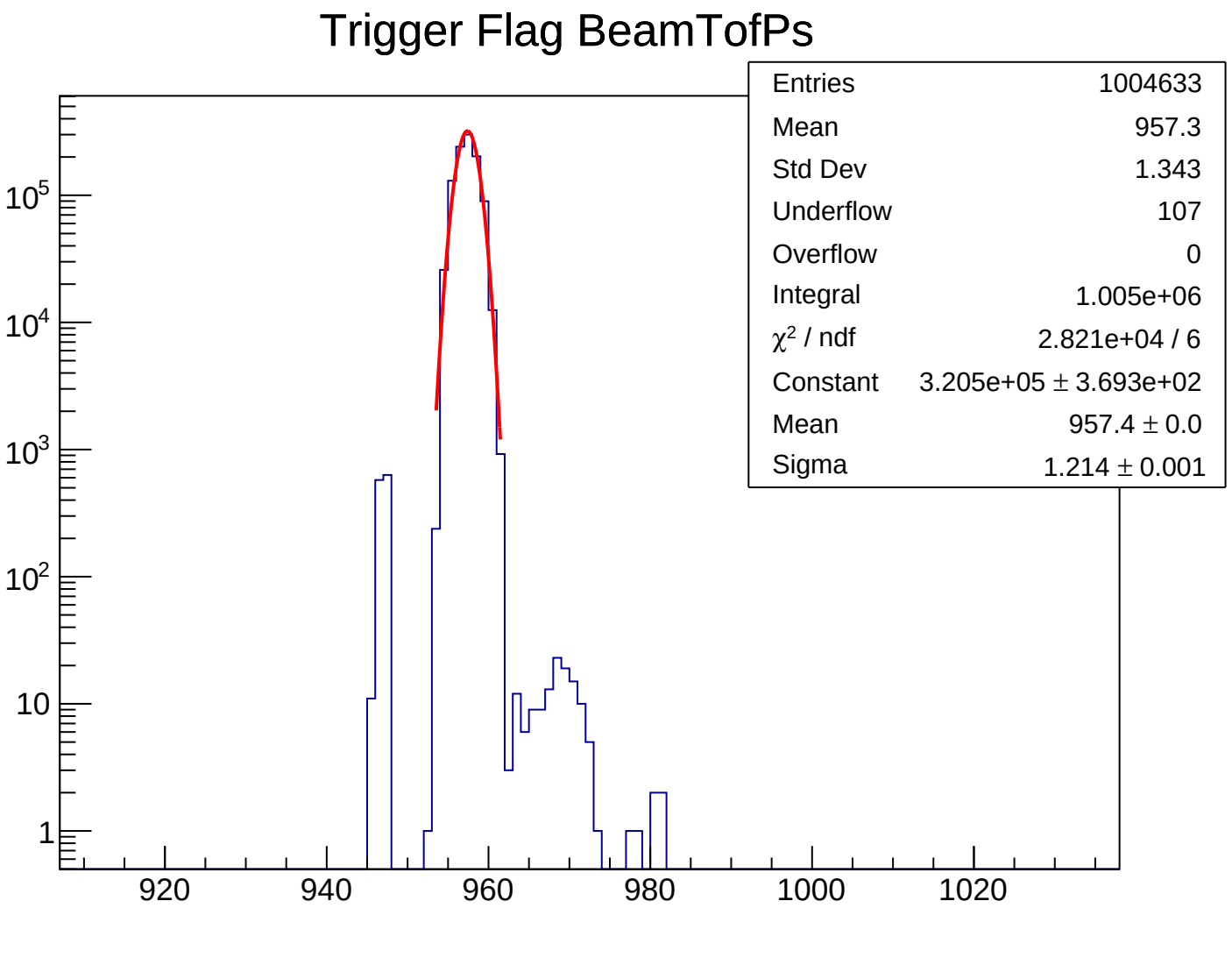

ysacKurama Cut1
Entries 10596
Mean –0.9333
Std Dev 97.35
Underflow 0
Overflow 0
Integral 1.06e+04
350
300
250
200
150
100
50
0
–400
–300
–200
–100
0
100
200
300
400

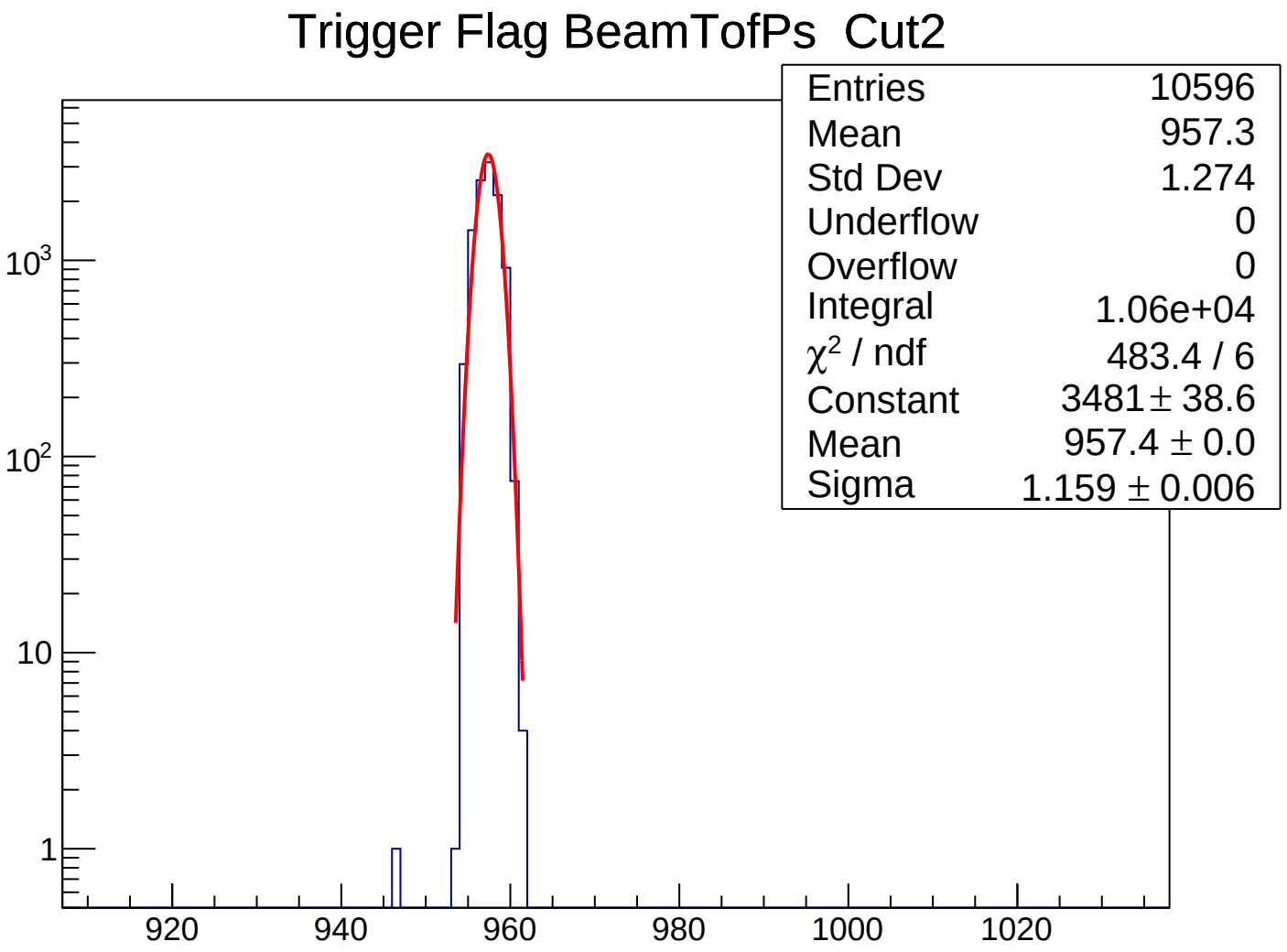

xsacKurama Cut2
Entries 10969
Mean −44.39
Std Dev 104.2
Underflow 0
Overflow 0
Integral 1.097e+04
350
300
250
200
150
100
50
0
−400
−300
−200
−100
0
100
200
300
400

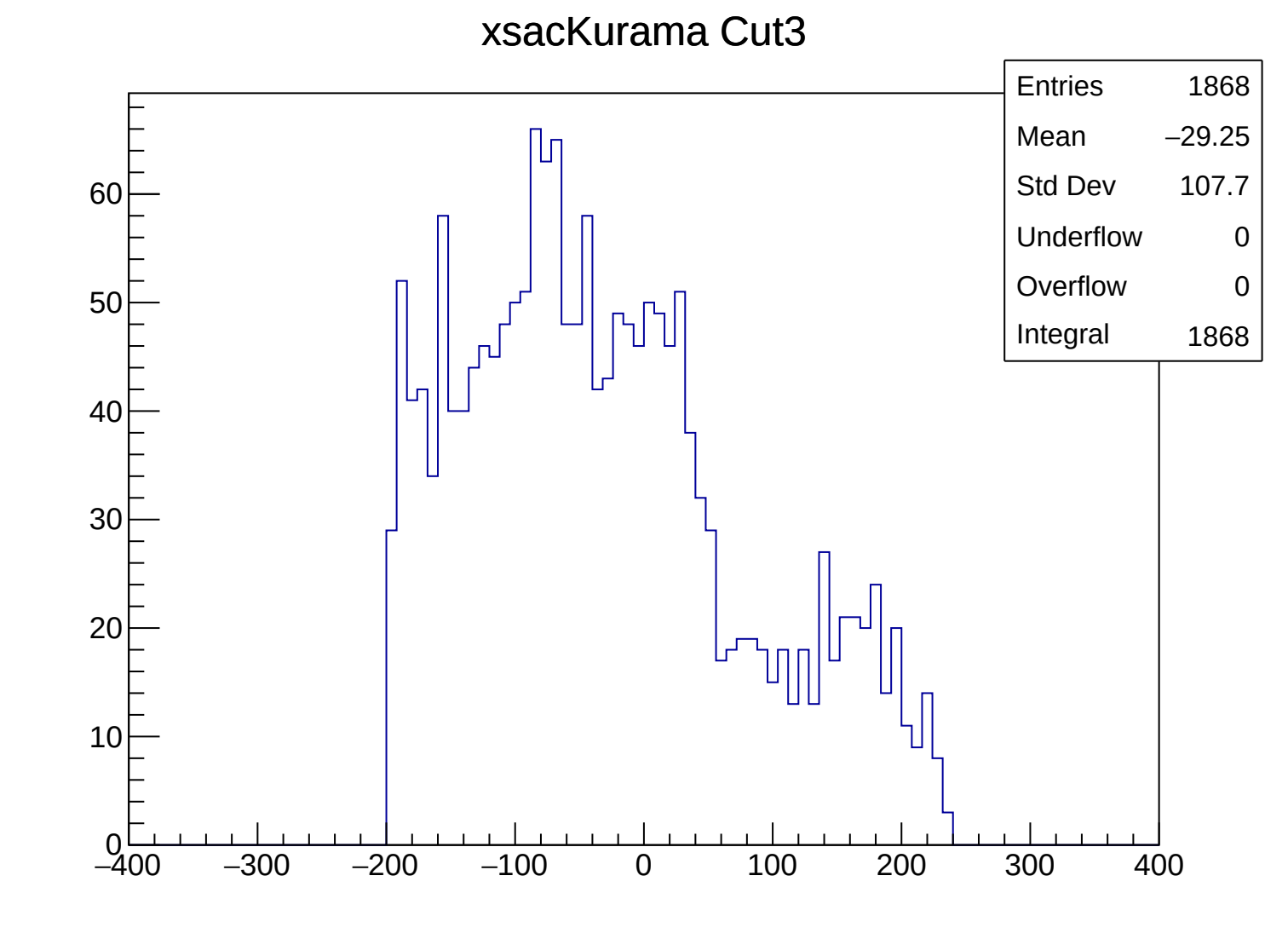

ysacKurama Cut2
Entries 10969
Mean −0.926
Std Dev 97.37
Underflow 0
Overflow 0
Integral 1.097e+04
350
300
250
200
150
100
50
0
−400
−300
−200
−100
0
100
200
300
400

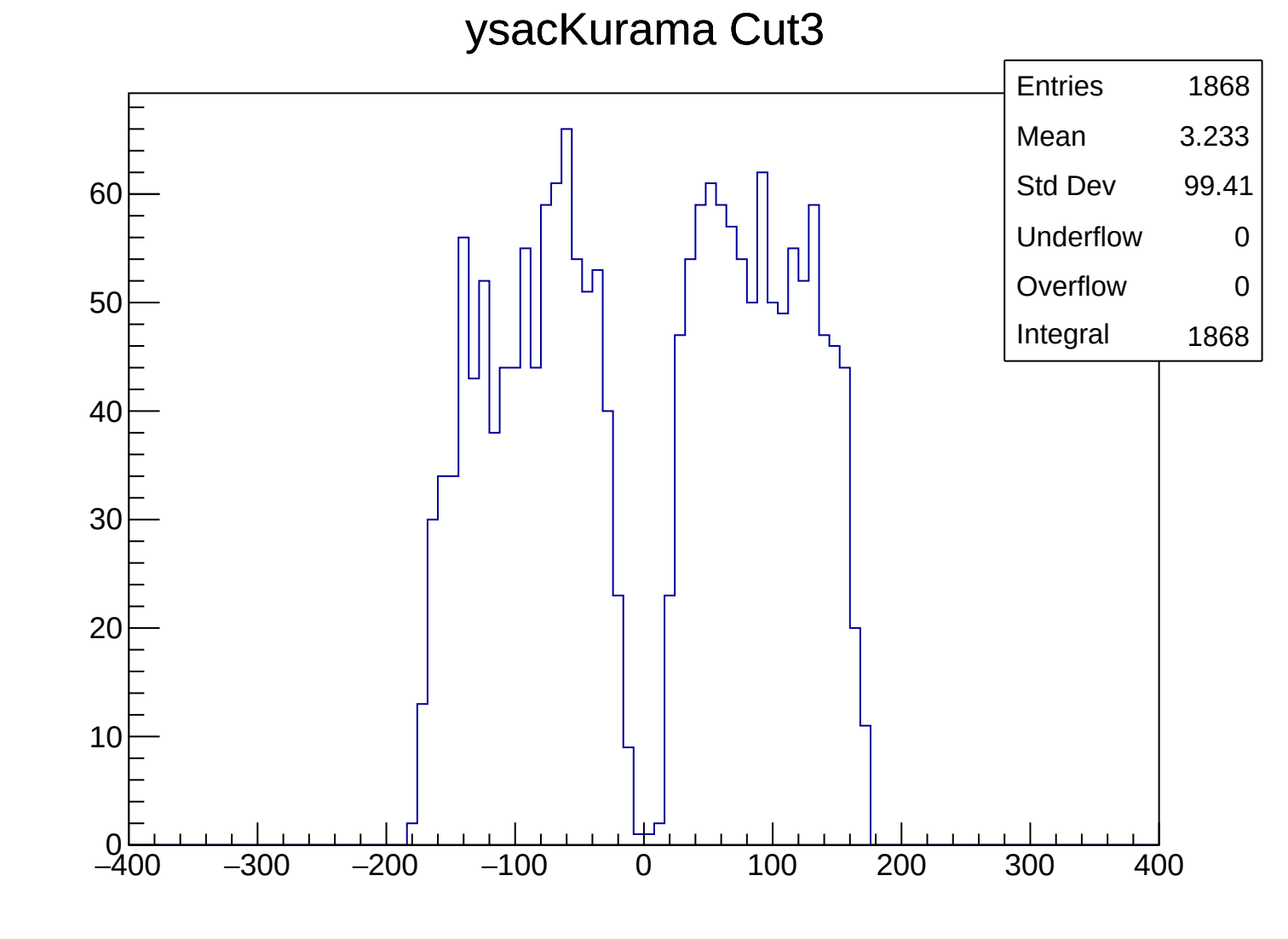

tSac Or
×10^3
200
180
160
140
120
100
80
60
40
20
0
−40
−20
0
20
40
60
80
Entries 466507
Mean 1.582
Std Dev 9.452
Underflow 1022
Overflow 3.317e+04
Integral 3.002e+05
χ² / ndf 2.283e+04 / 2
Constant 1.922e+05 ± 4.476e+02
Mean 0.8663 ± 0.0022
Sigma 1.065 ± 0.001

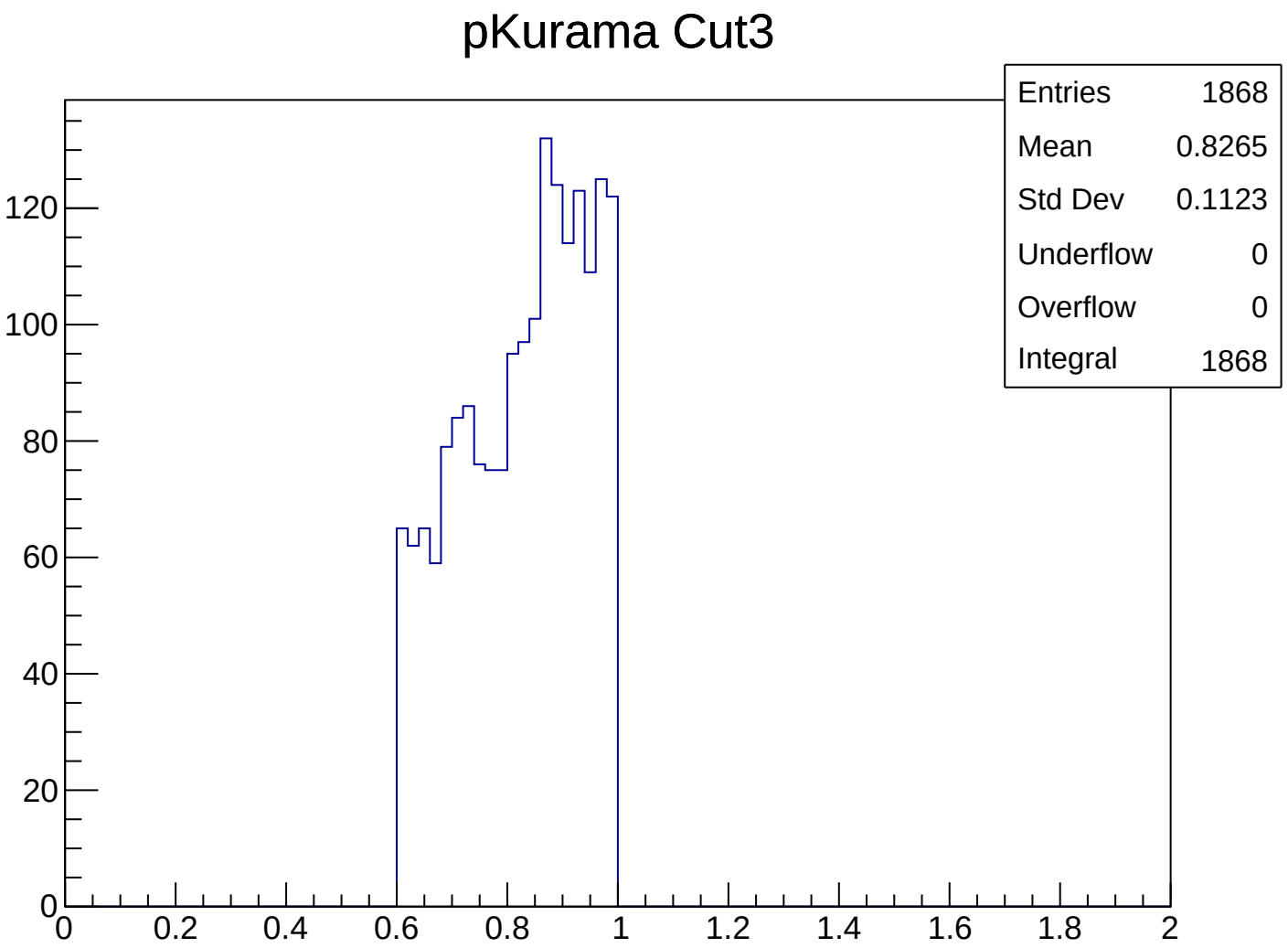

tSac Or Cut2
Entries 5075
Mean 1.779
Std Dev 10.79
Underflow 13
Overflow 449
Integral 2855
χ² / ndf 155 / 2
Constant 1093 ± 34.4
Mean 0.6118 ± 0.0411
Sigma 1.782 ± 0.045
1200
1000
800
600
400
200
0
–40
–20
0
20
40
60
80

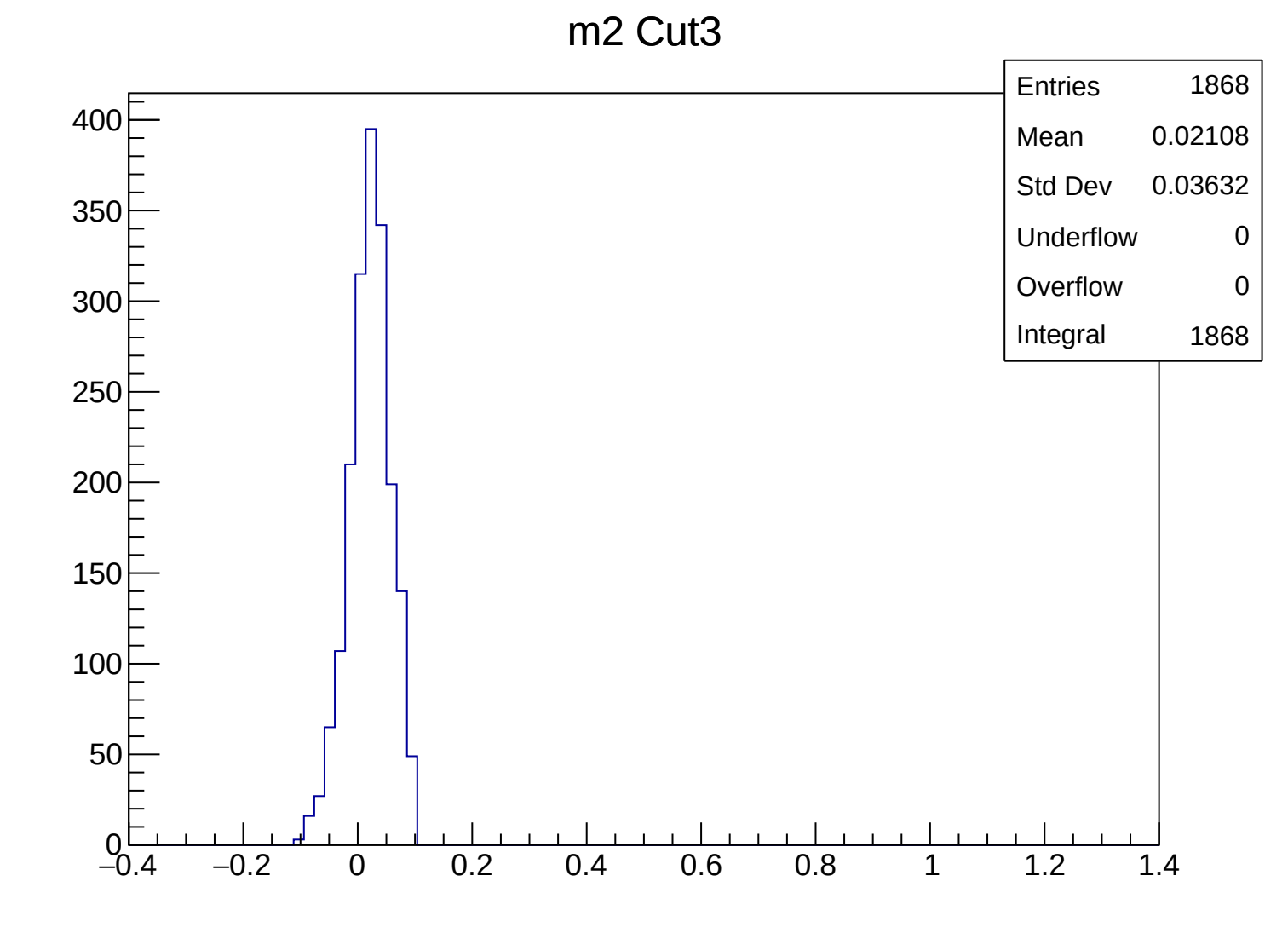

Trigger Flag BeamTofPs
Entries 1004633
Mean 957.3
Std Dev 1.343
Underflow 107
Overflow 0
Integral 1.005e+06
χ² / ndf 2.821e+04 / 6
Constant 3.205e+05 ± 3.693e+02
Mean 957.4 ± 0.0
Sigma 1.214 ± 0.001
10⁵
10⁴
10³
10²
10
1
920
940
960
980
1000
1020

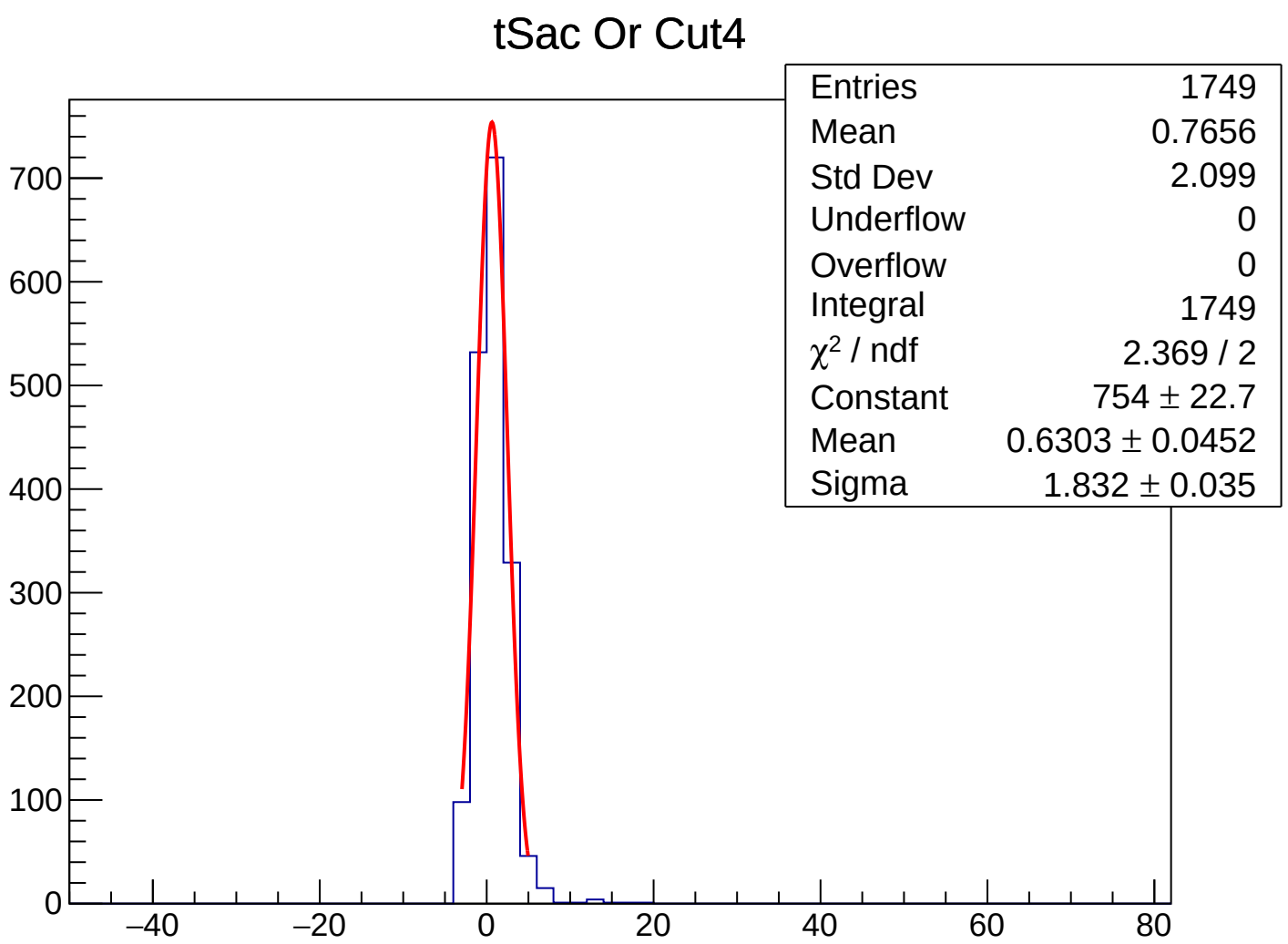

Trigger Flag BeamTofPs Cut2
Entries 10596
Mean 957.3
Std Dev 1.274
Underflow 0
Overflow 0
Integral 1.06e+04
χ² / ndf 483.4 / 6
Constant 3481 ± 38.6
Mean 957.4 ± 0.0
Sigma 1.159 ± 0.006
10³
10²
10
1
920
940
960
980
1000
1020

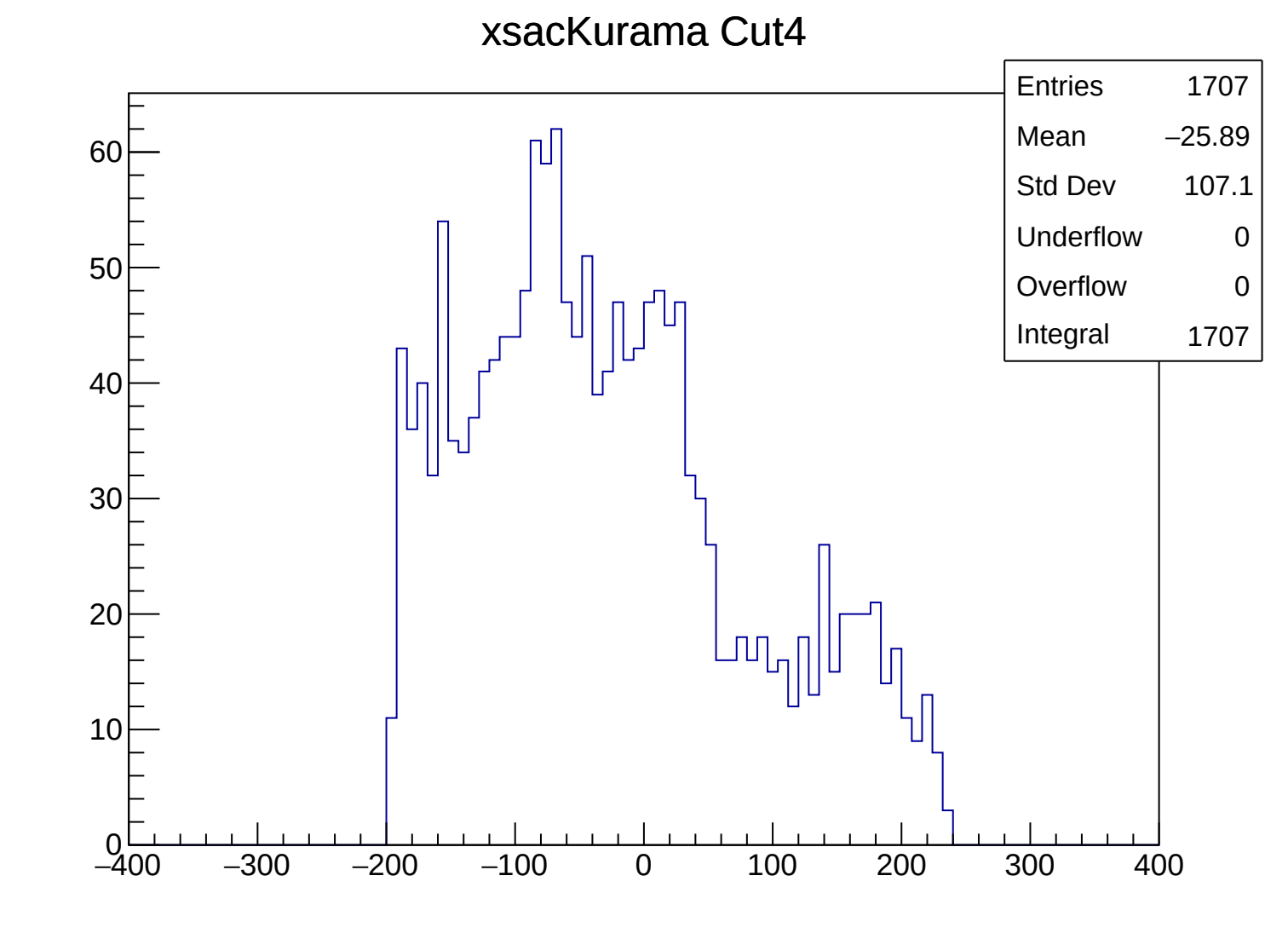

xsacKurama Cut3
Entries 1868
Mean −29.25
Std Dev 107.7
Underflow 0
Overflow 0
Integral 1868
60
50
40
30
20
10
0
−400
−300
−200
−100
0
100
200
300
400

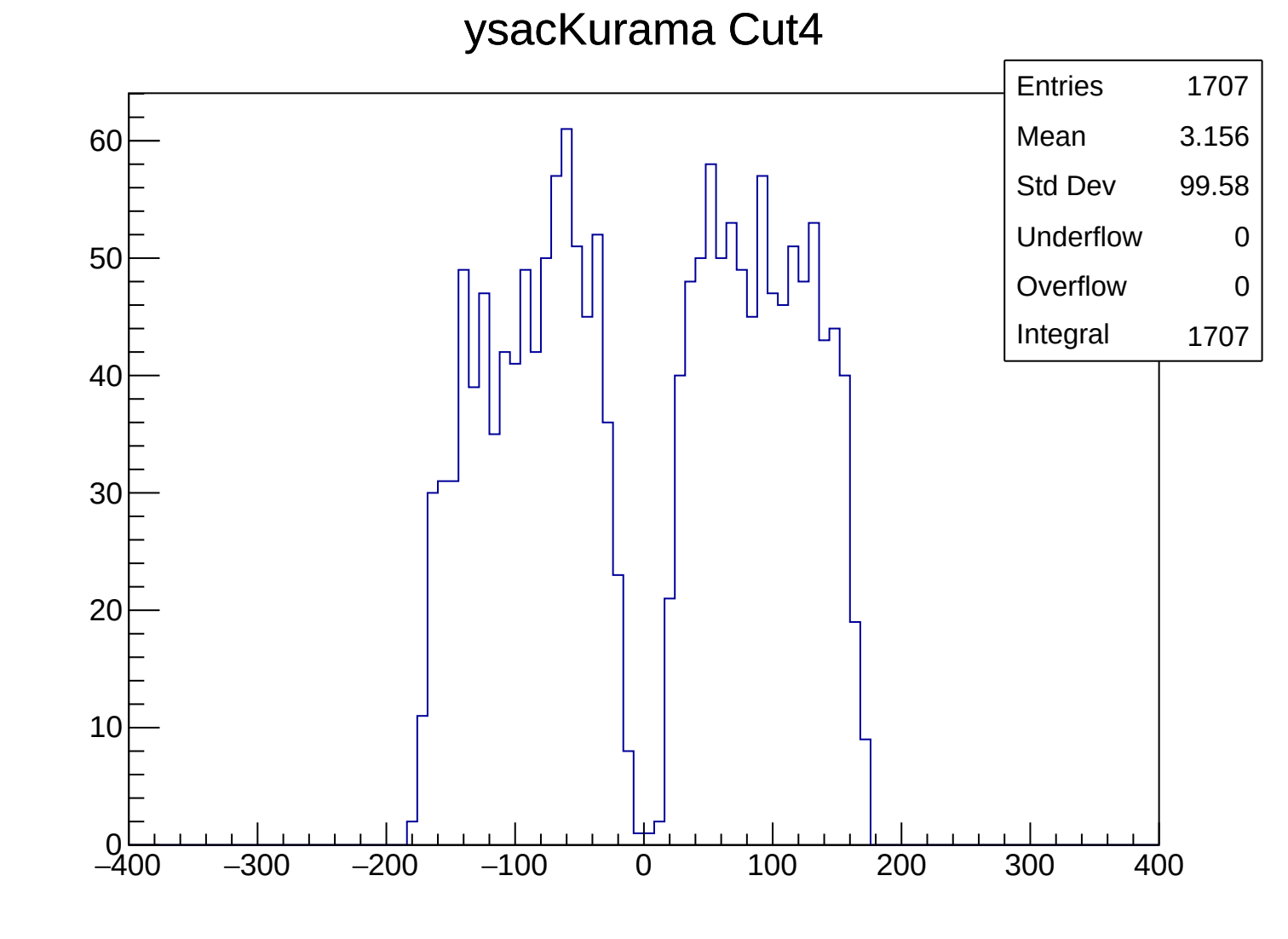

ysacKurama Cut3
Entries 1868
Mean 3.233
Std Dev 99.41
Underflow 0
Overflow 0
Integral 1868
60
50
40
30
20
10
0
–400
–300
–200
–100
0
100
200
300
400

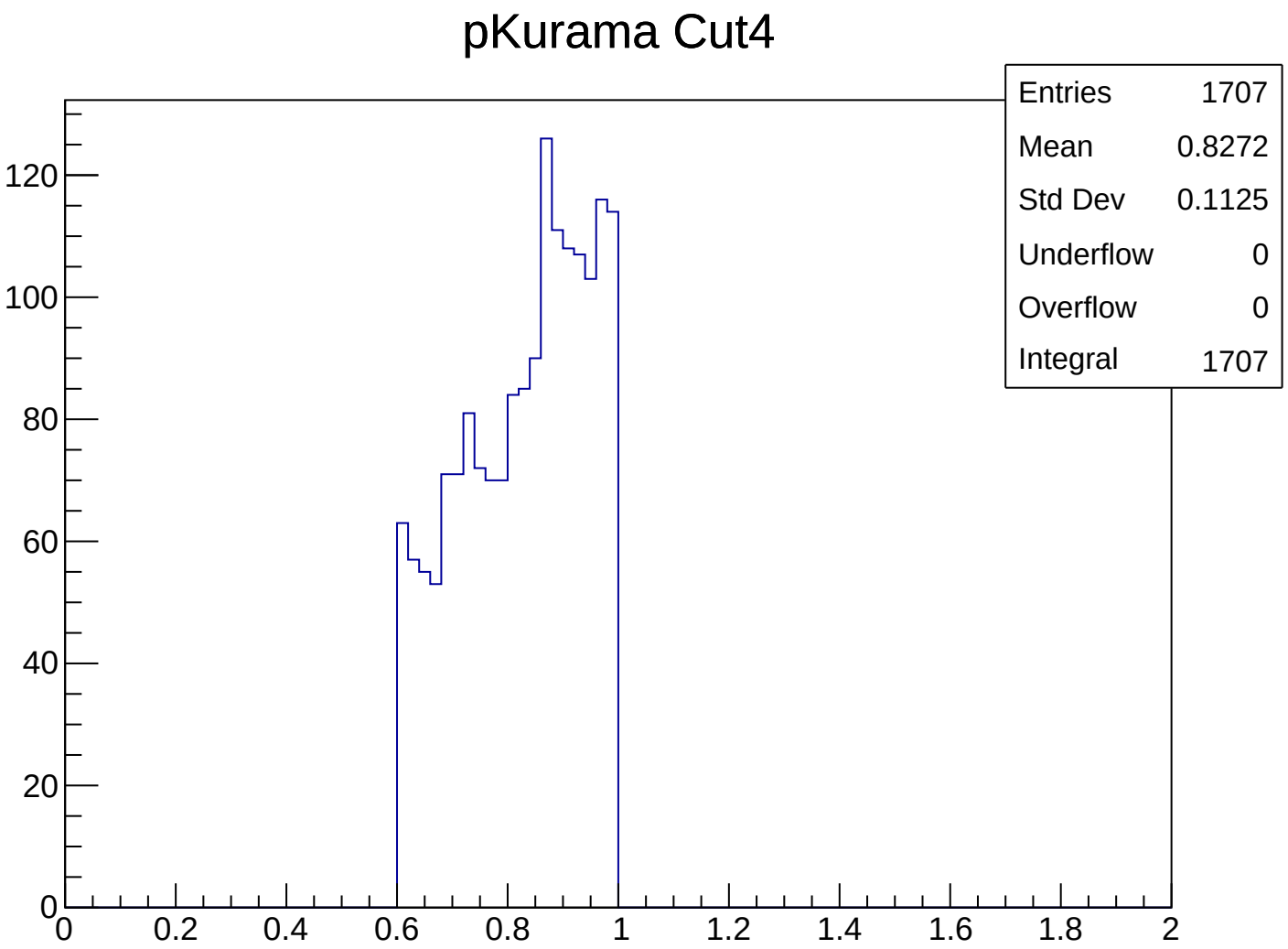

pKurama Cut3
Entries 1868
Mean 0.8265
Std Dev 0.1123
Underflow 0
Overflow 0
Integral 1868
120
100
80
60
40
20
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

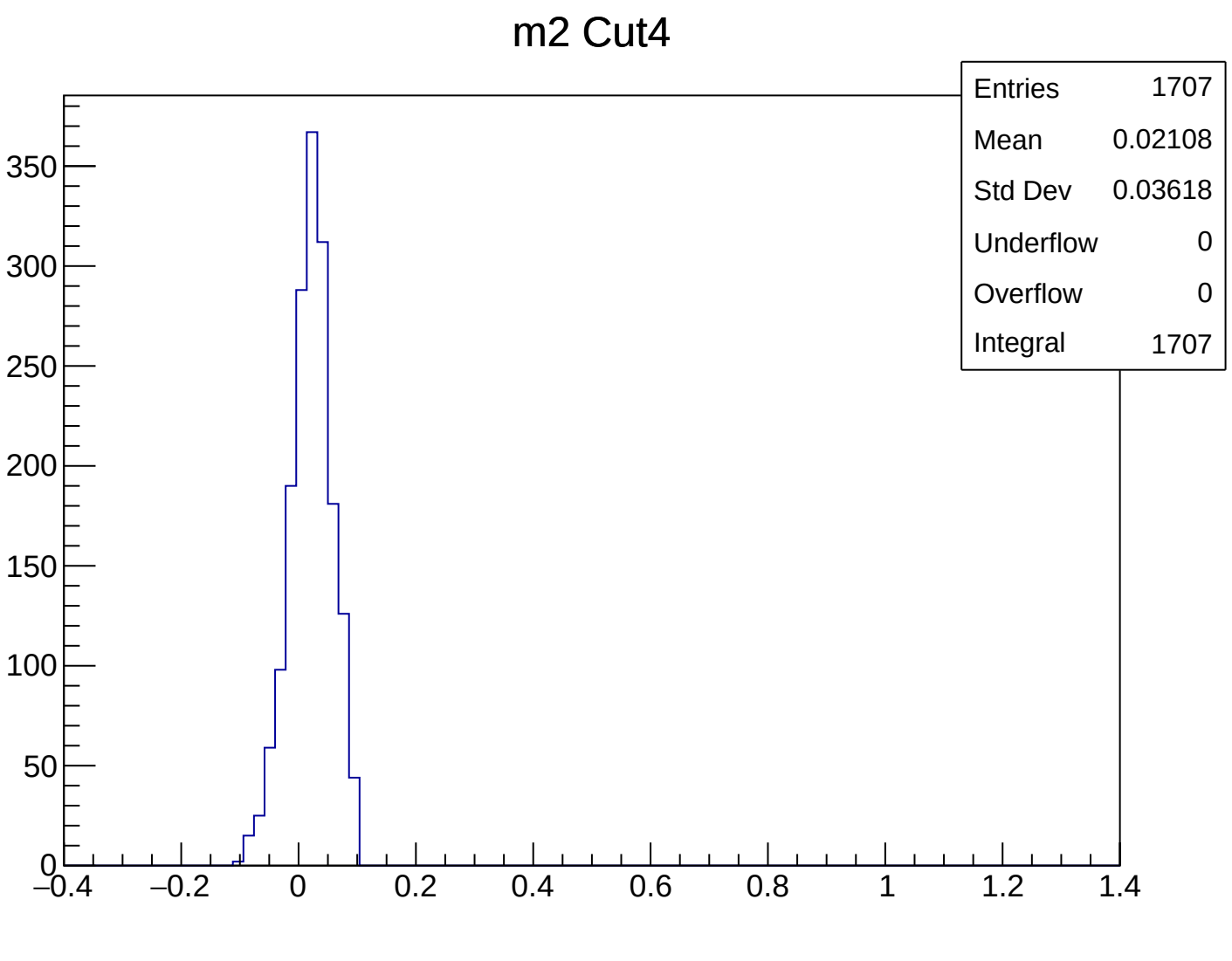

m2 Cut3
Entries 1868
Mean 0.02108
Std Dev 0.03632
Underflow 0
Overflow 0
Integral 1868
400
350
300
250
200
150
100
50
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

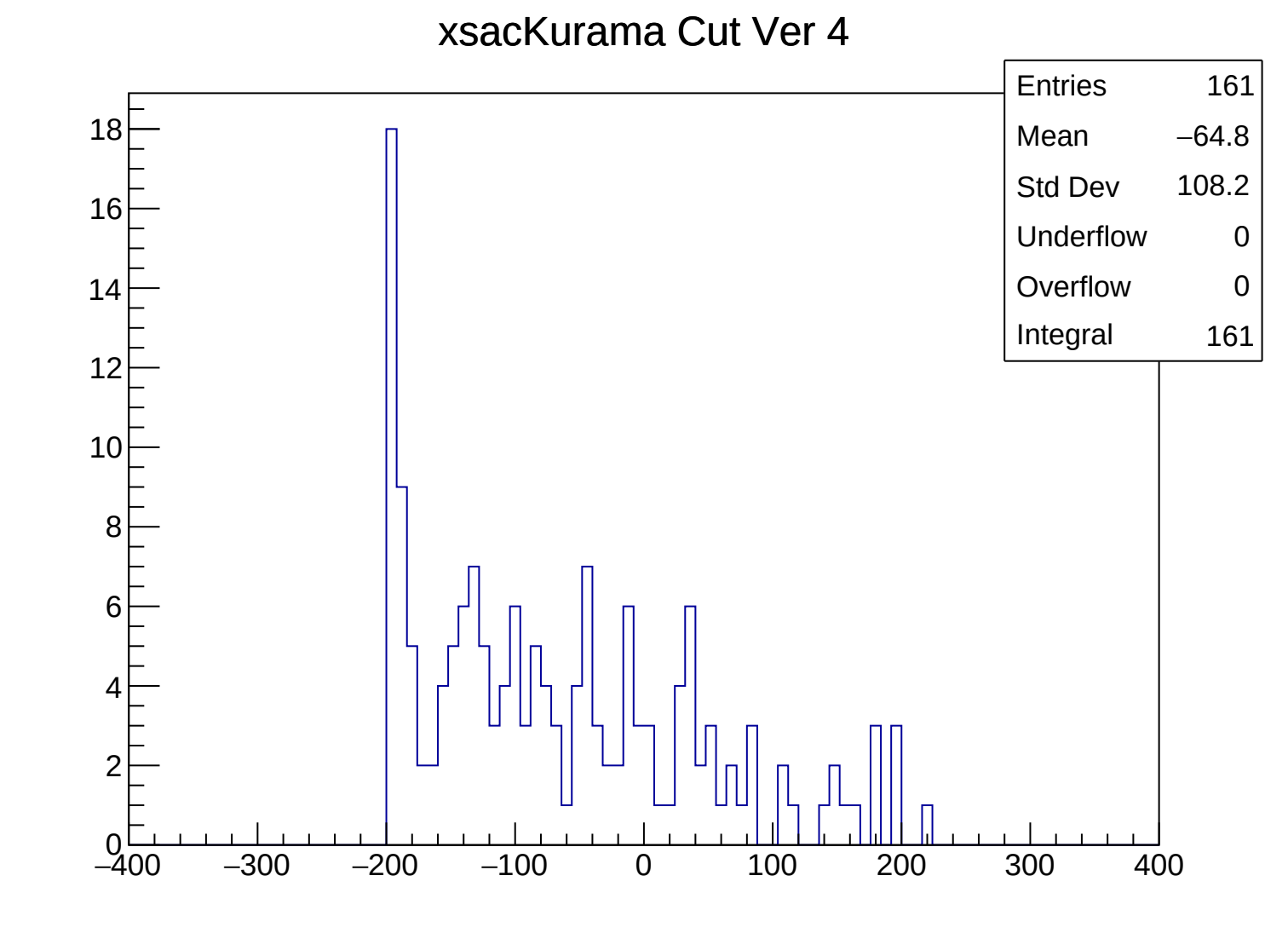

tSac Or Cut4
Entries 1749
Mean 0.7656
Std Dev 2.099
Underflow 0
Overflow 0
Integral 1749
χ² / ndf 2.369 / 2
Constant 754 ± 22.7
Mean 0.6303 ± 0.0452
Sigma 1.832 ± 0.035
700
600
500
400
300
200
100
0
–40
–20
0
20
40
60
80

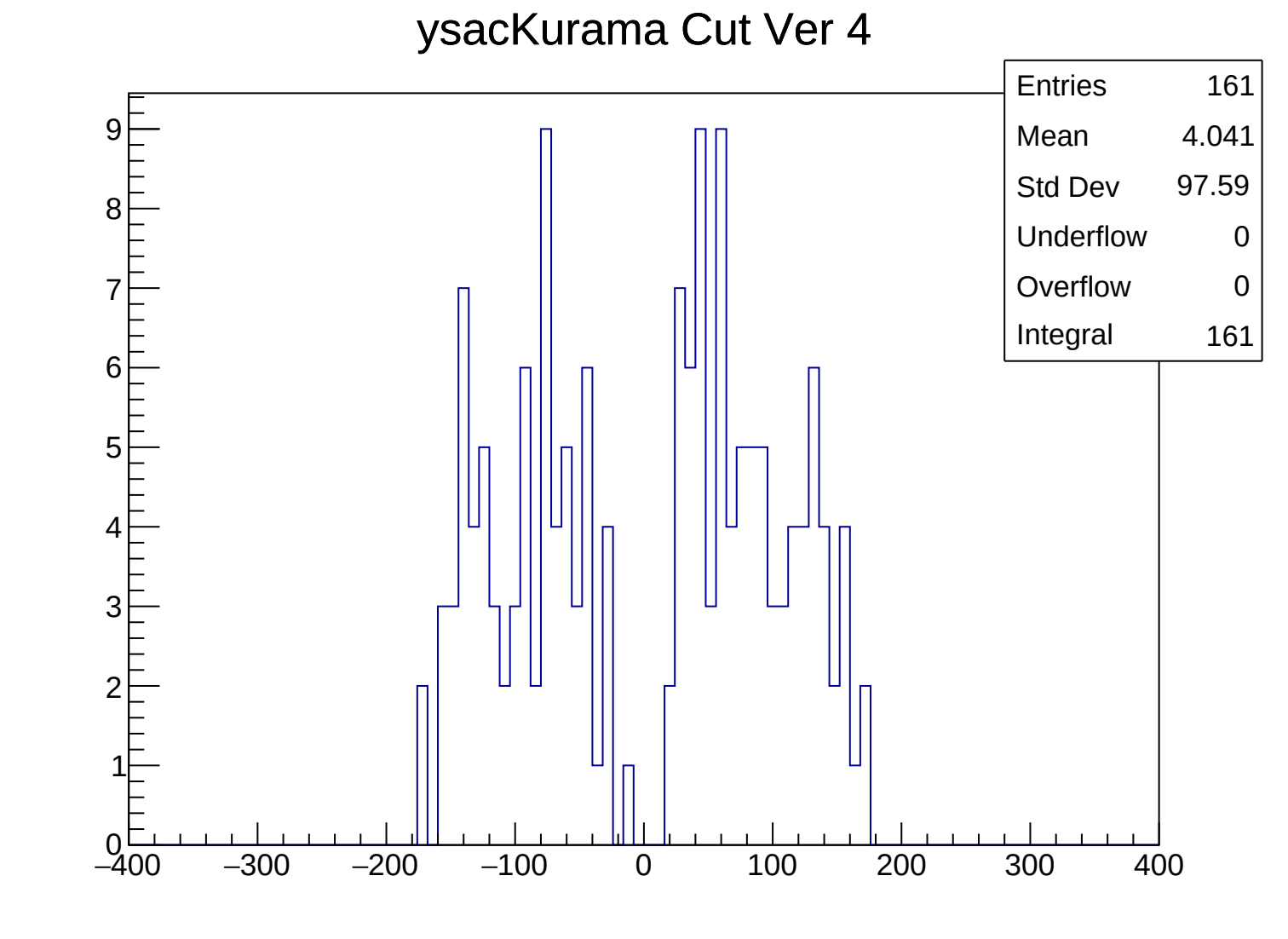

xsacKurama Cut4
Entries 1707
Mean −25.89
Std Dev 107.1
Underflow 0
Overflow 0
Integral 1707
60
50
40
30
20
10
0
−400
−300
−200
−100
0
100
200
300
400

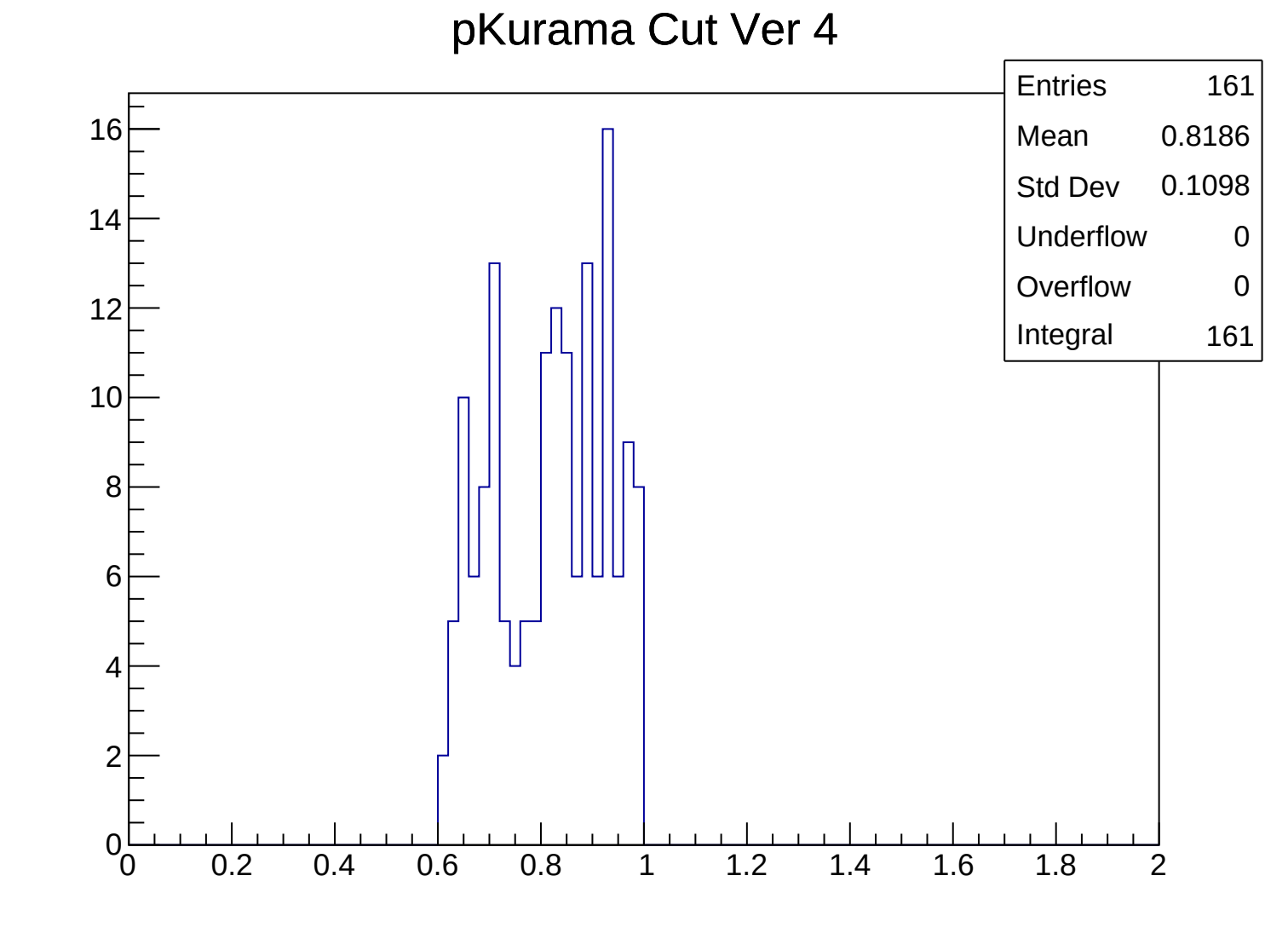

ysacKurama Cut4
Entries 1707
Mean 3.156
Std Dev 99.58
Underflow 0
Overflow 0
Integral 1707
60
50
40
30
20
10
0
–400
–300
–200
–100
0
100
200
300
400

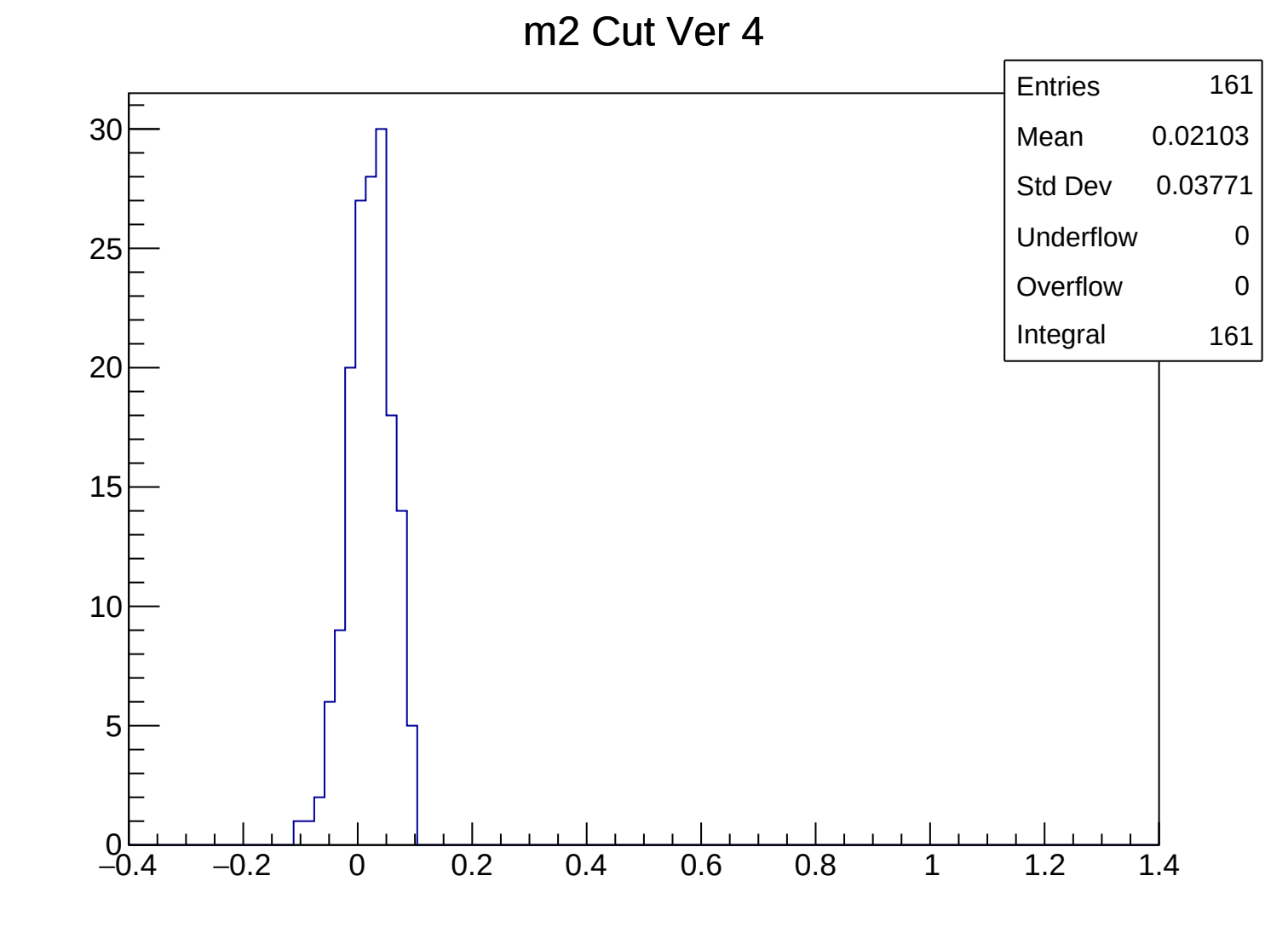

pKurama Cut4
Entries 1707
Mean 0.8272
Std Dev 0.1125
Underflow 0
Overflow 0
Integral 1707
120
100
80
60
40
20
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

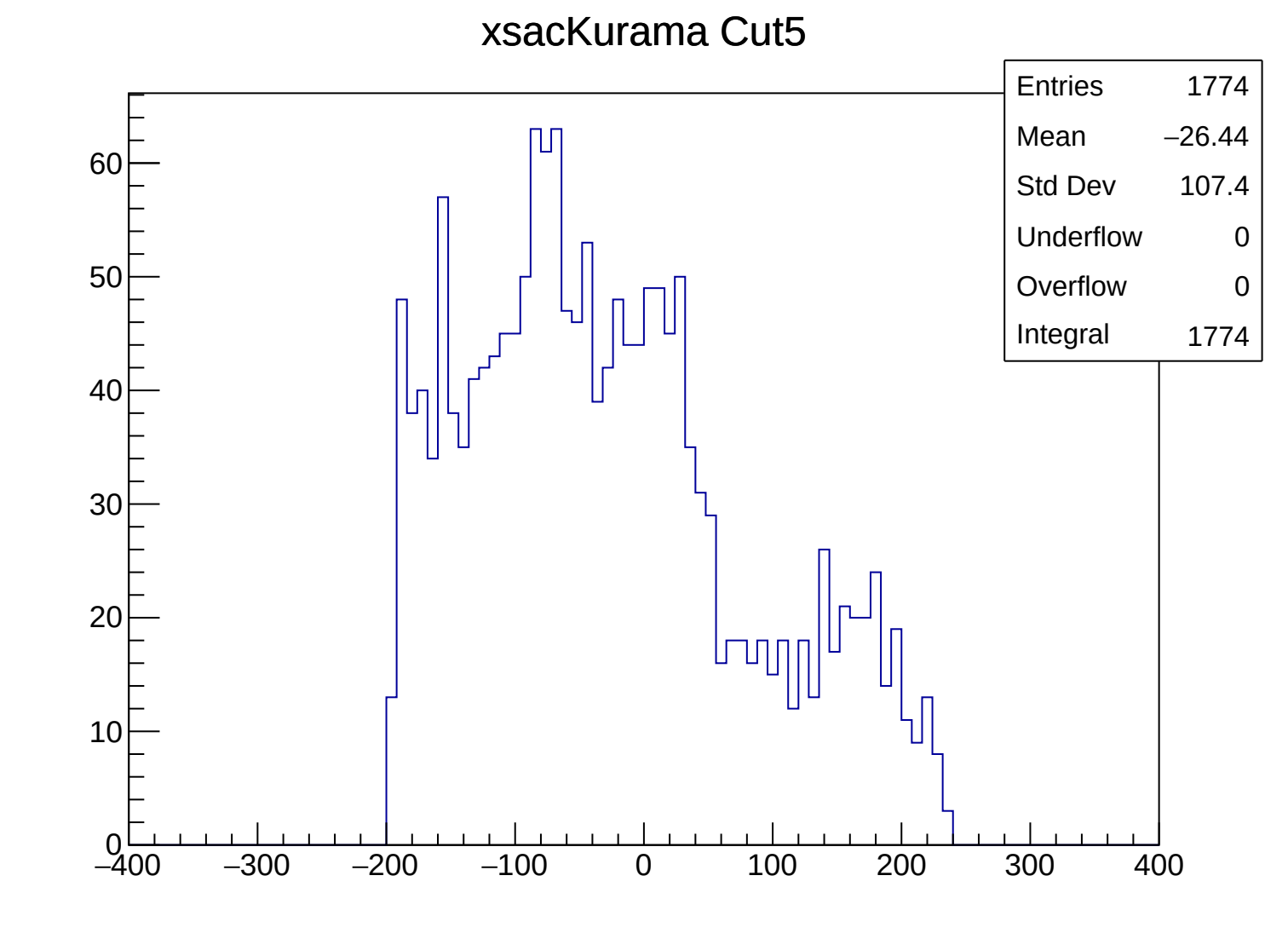

m2 Cut4
Entries 1707
Mean 0.02108
Std Dev 0.03618
Underflow 0
Overflow 0
Integral 1707
350
300
250
200
150
100
50
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

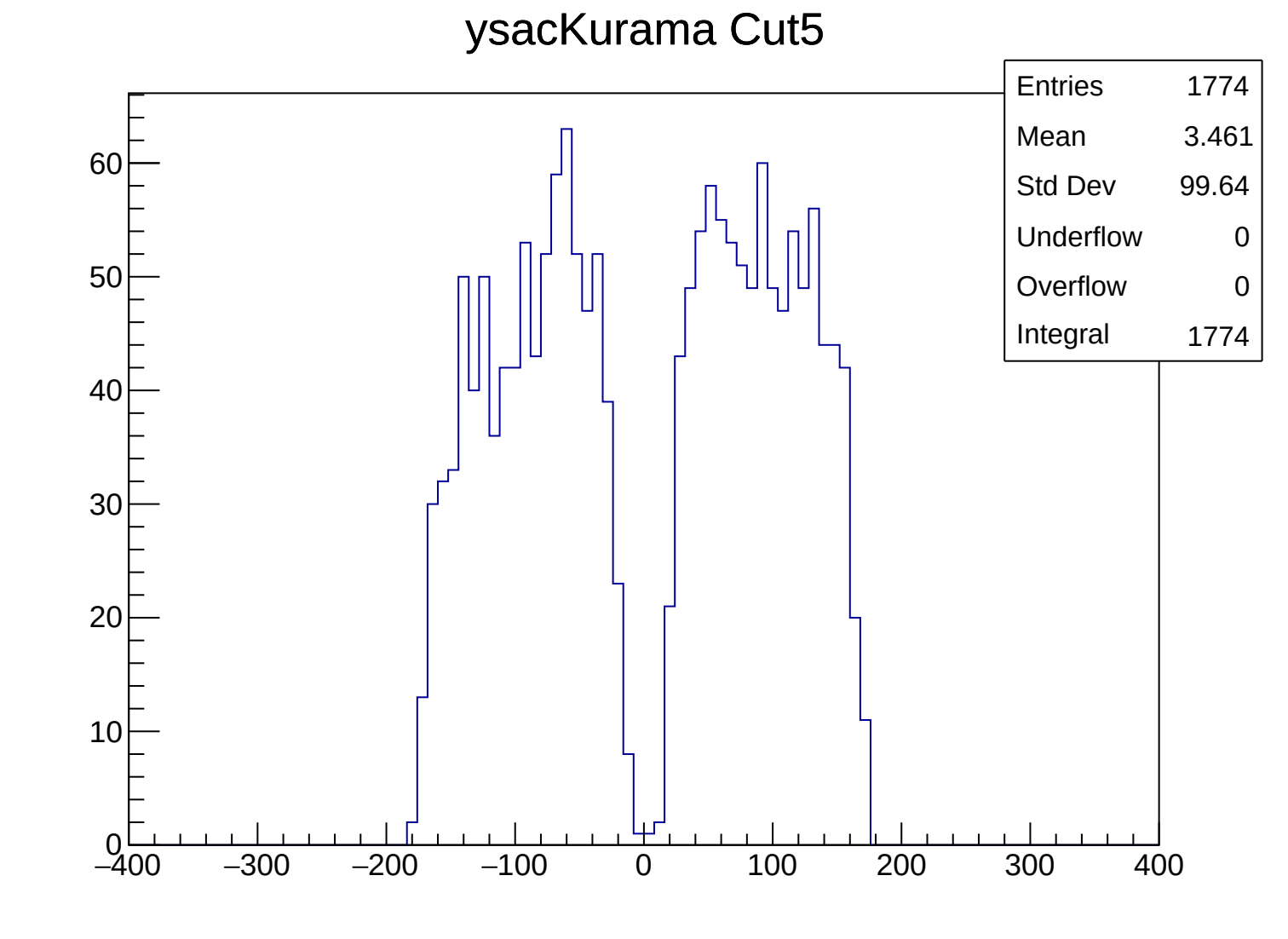

xsacKurama Cut Ver 4
Entries 161
Mean −64.8
Std Dev 108.2
Underflow 0
Overflow 0
Integral 161
18
16
14
12
10
8
6
4
2
0
−400
−300
−200
−100
0
100
200
300
400

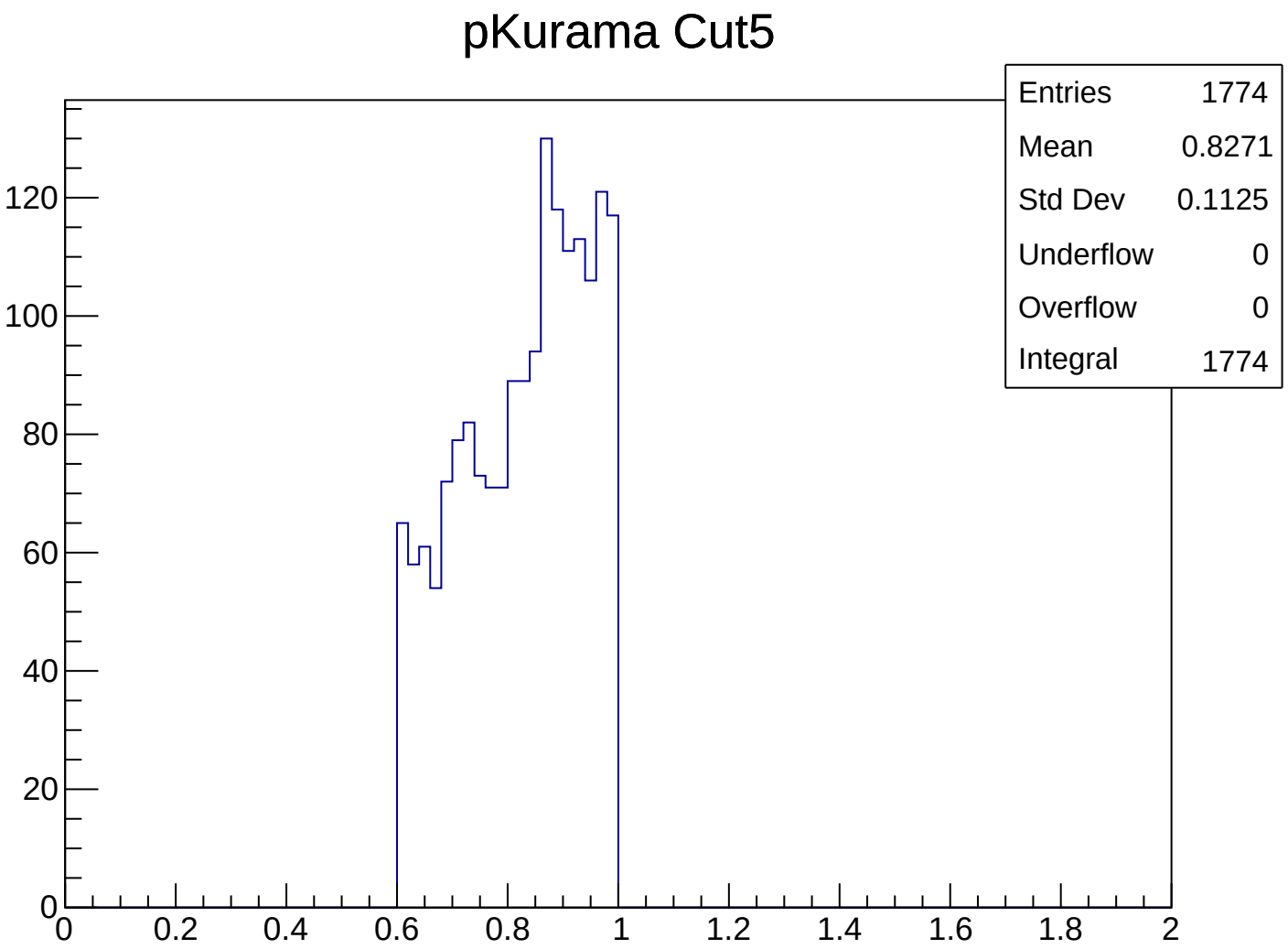

ysacKurama Cut Ver 4
Entries 161
Mean 4.041
Std Dev 97.59
Underflow 0
Overflow 0
Integral 161
0
1
2
3
4
5
6
7
8
9
–400
–300
–200
–100
0
100
200
300
400

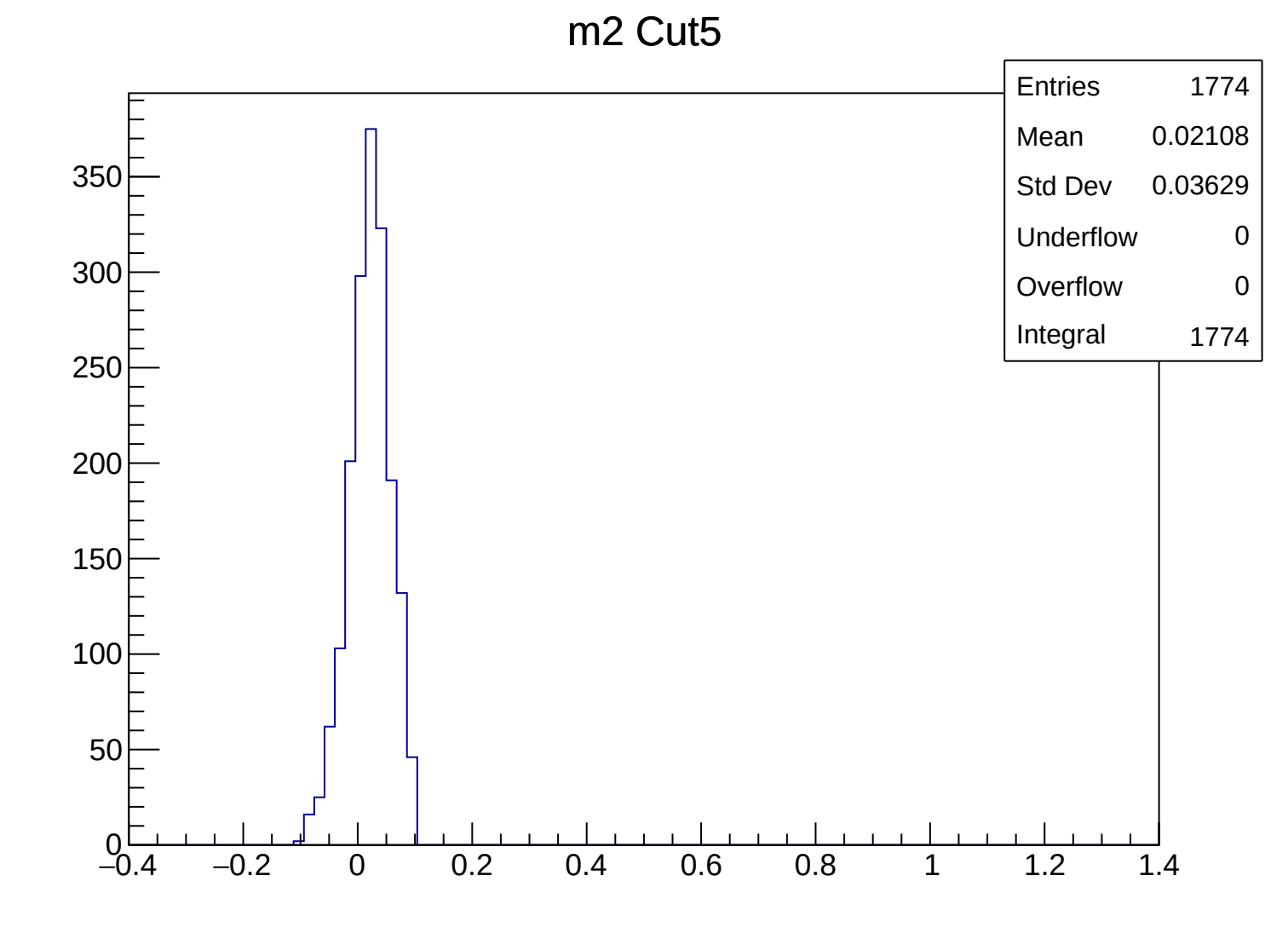

pKurama Cut Ver 4
Entries 161
Mean 0.8186
Std Dev 0.1098
Underflow 0
Overflow 0
Integral 161
0
2
4
6
8
10
12
14
16
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

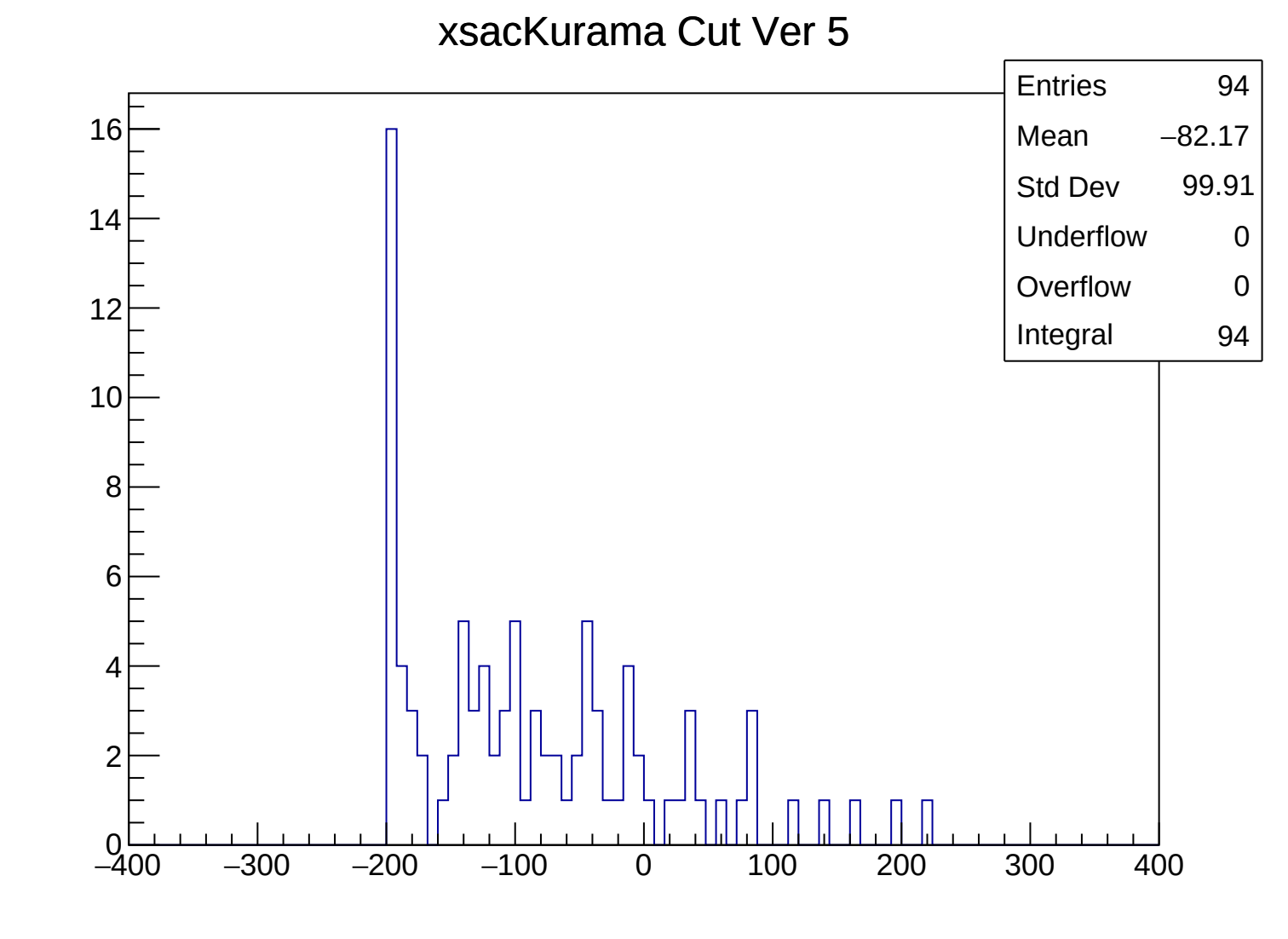

m2 Cut Ver 4
Entries 161
Mean 0.02103
Std Dev 0.03771
Underflow 0
Overflow 0
Integral 161
30
25
20
15
10
5
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

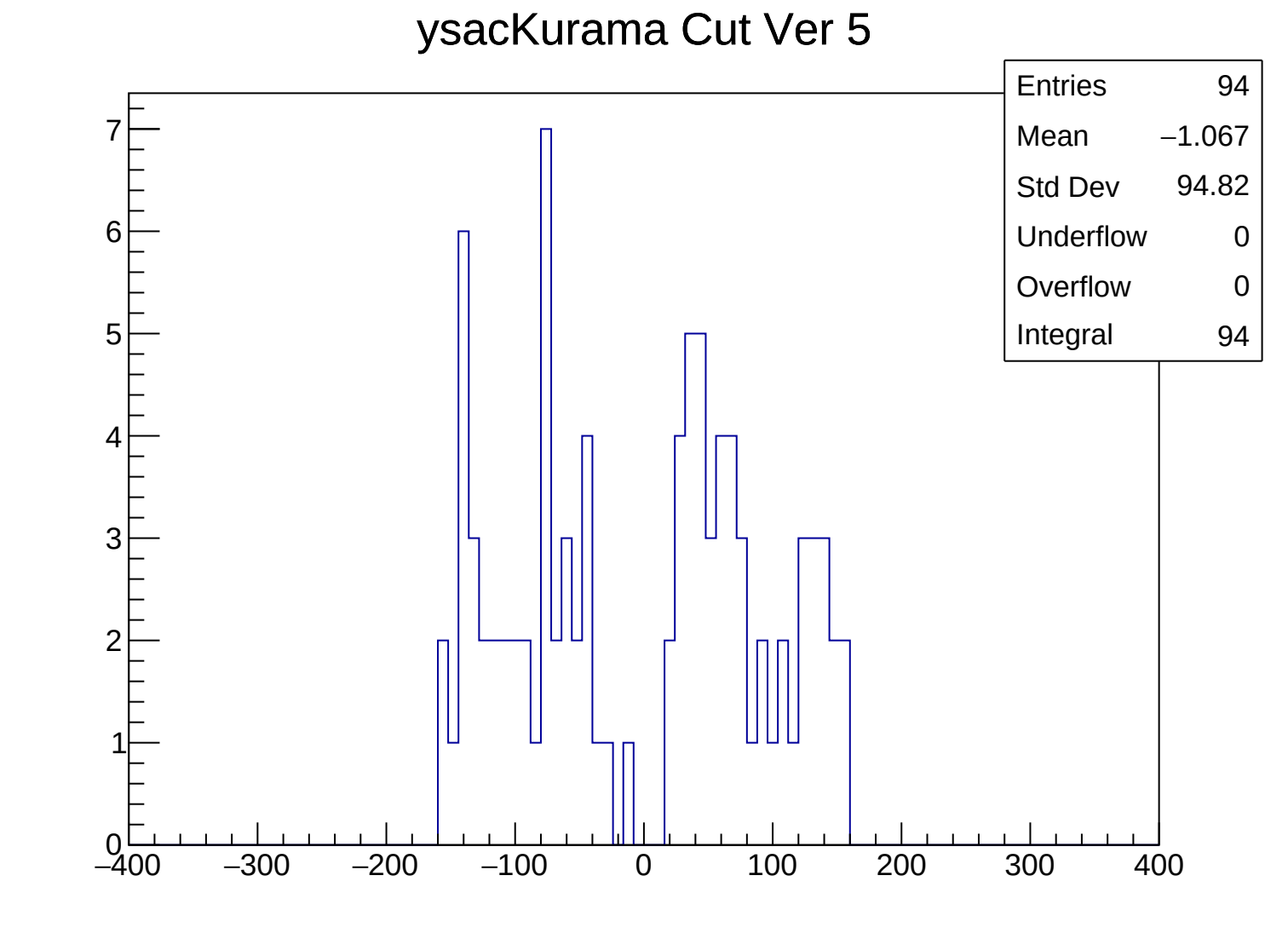

xsacKurama Cut5
Entries 1774
Mean −26.44
Std Dev 107.4
Underflow 0
Overflow 0
Integral 1774
60
50
40
30
20
10
0
−400
−300
−200
−100
0
100
200
300
400

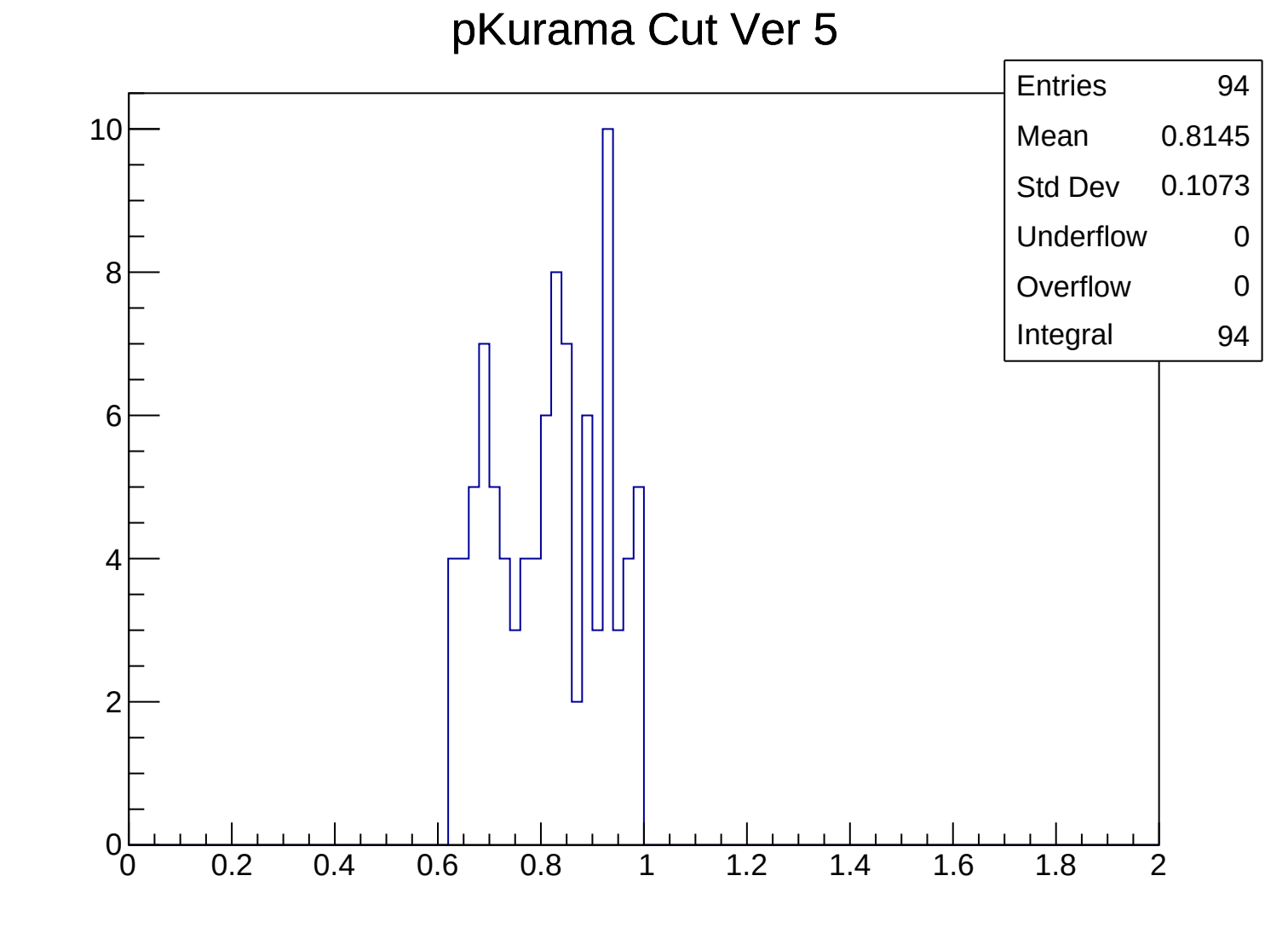

ysacKurama Cut5
Entries 1774
Mean 3.461
Std Dev 99.64
Underflow 0
Overflow 0
Integral 1774
60
50
40
30
20
10
0
–400
–300
–200
–100
0
100
200
300
400

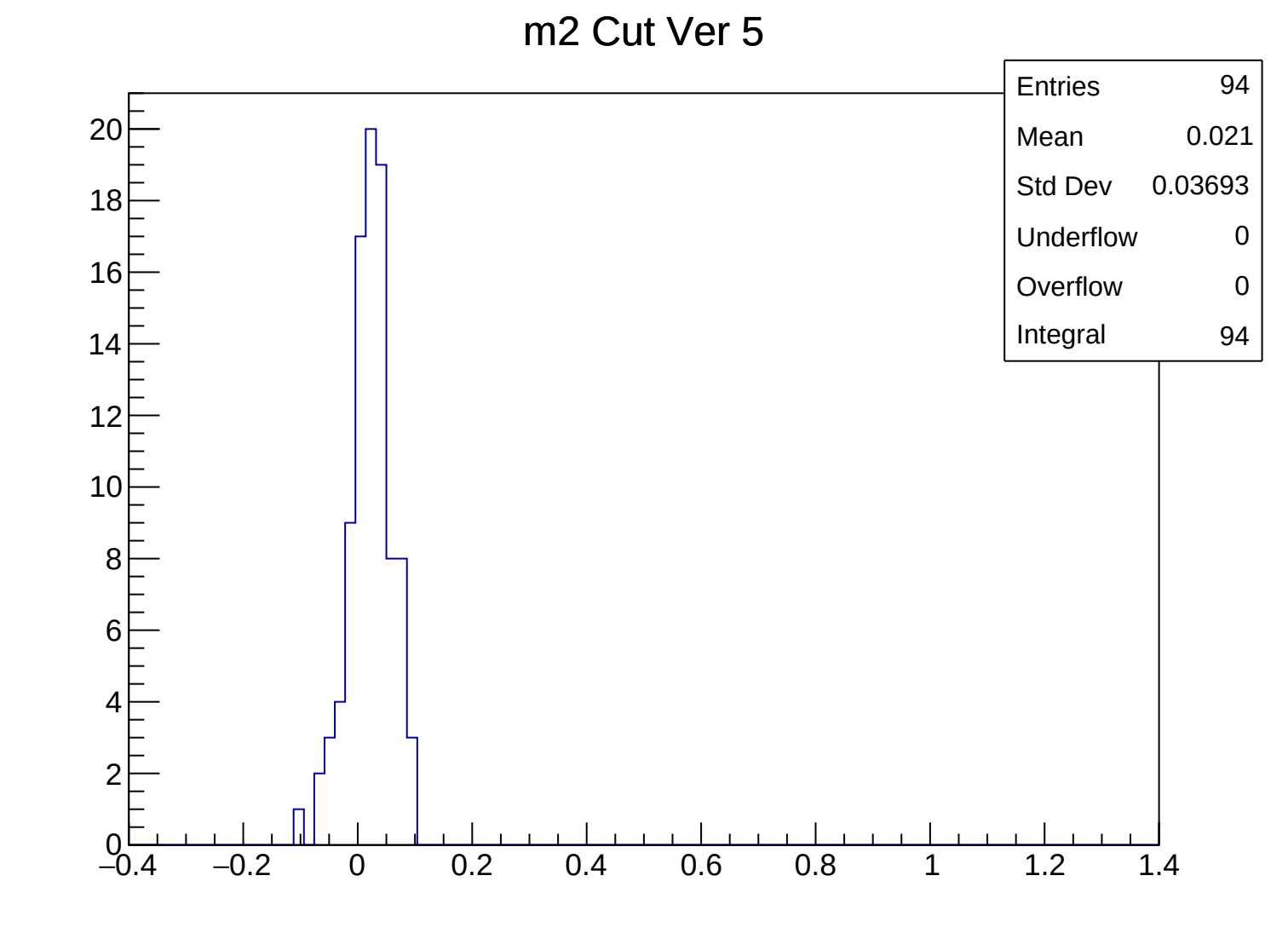

pKurama Cut5
Entries 1774
Mean 0.8271
Std Dev 0.1125
Underflow 0
Overflow 0
Integral 1774
120
100
80
60
40
20
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

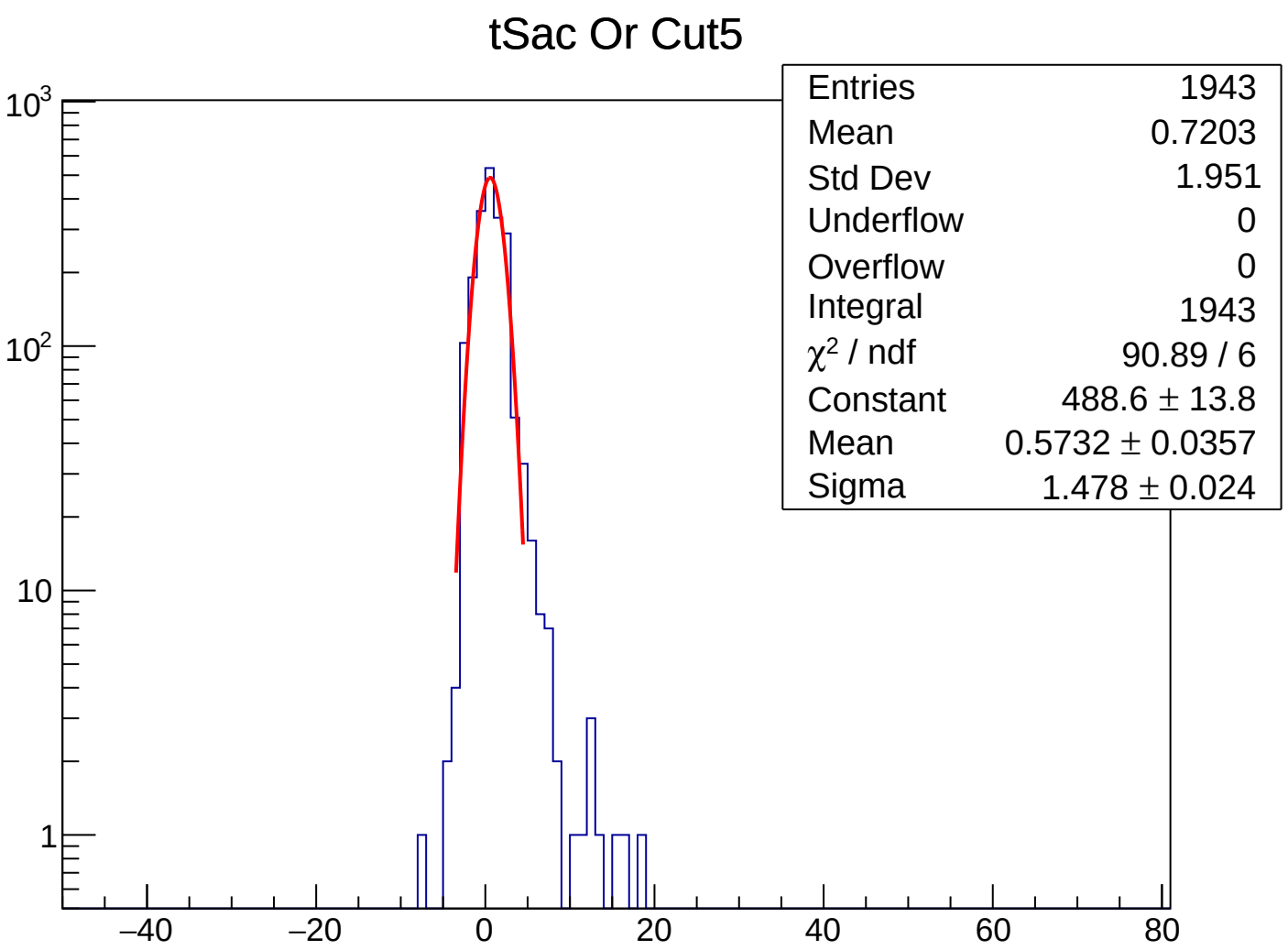

m2 Cut5
Entries 1774
Mean 0.02108
Std Dev 0.03629
Underflow 0
Overflow 0
Integral 1774
350
300
250
200
150
100
50
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

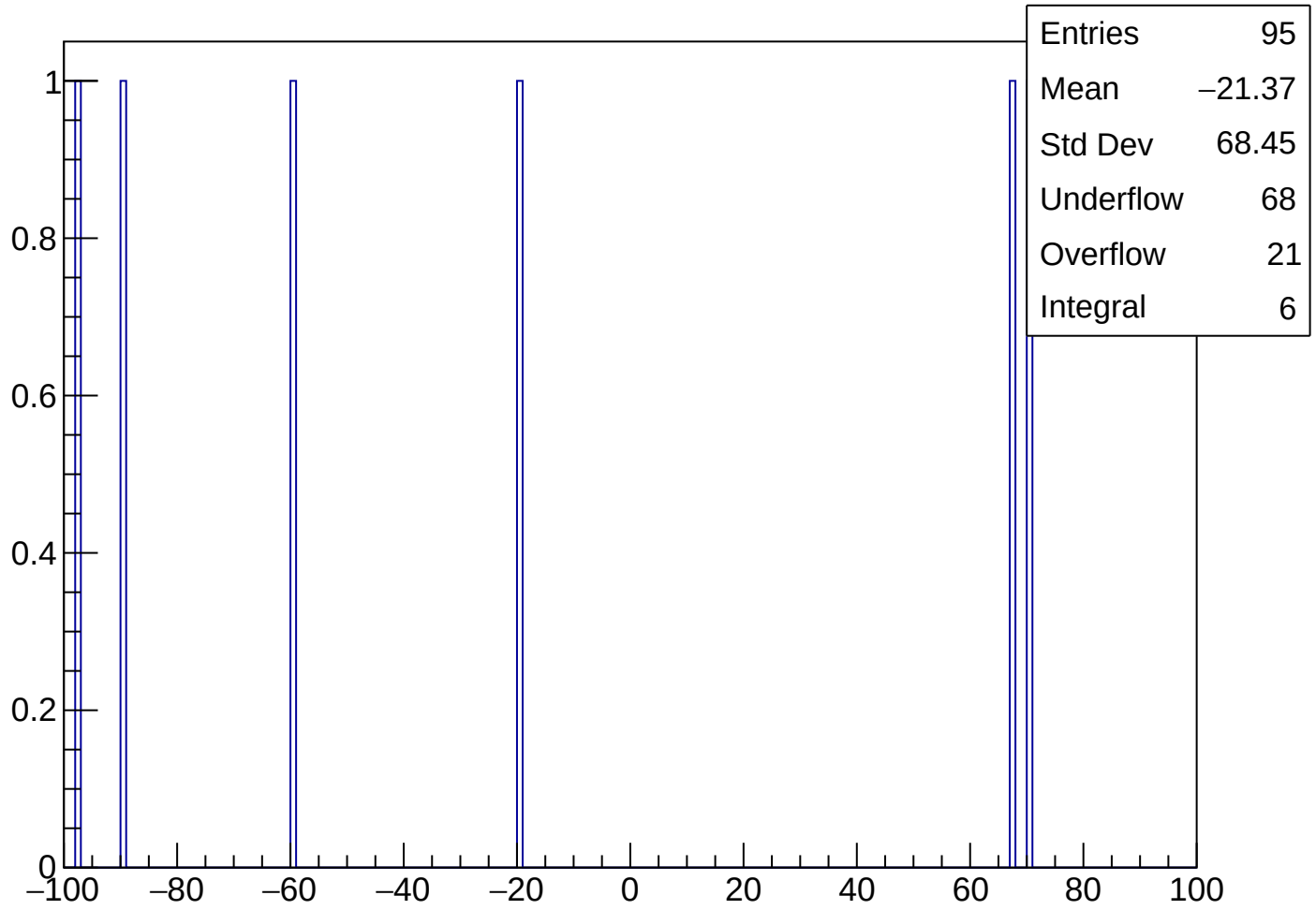

xsacKurama Cut Ver 5
Entries 94
Mean −82.17
Std Dev 99.91
Underflow 0
Overflow 0
Integral 94
16
14
12
10
8
6
4
2
0
−400
−300
−200
−100
0
100
200
300
400

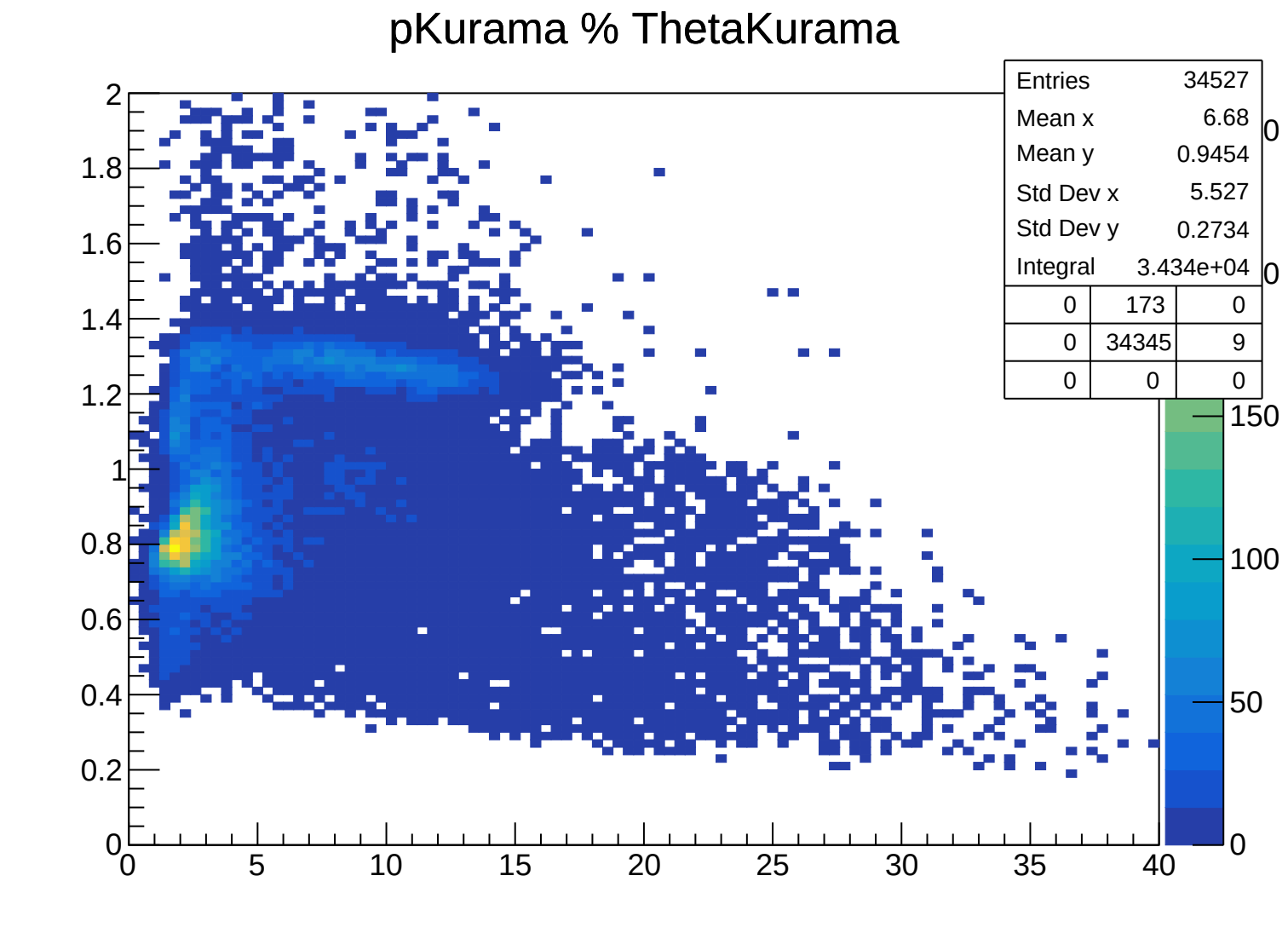

ysacKurama Cut Ver 5
Entries 94
Mean −1.067
Std Dev 94.82
Underflow 0
Overflow 0
Integral 94
0
1
2
3
4
5
6
7
−400
−300
−200
−100
0
100
200
300
400

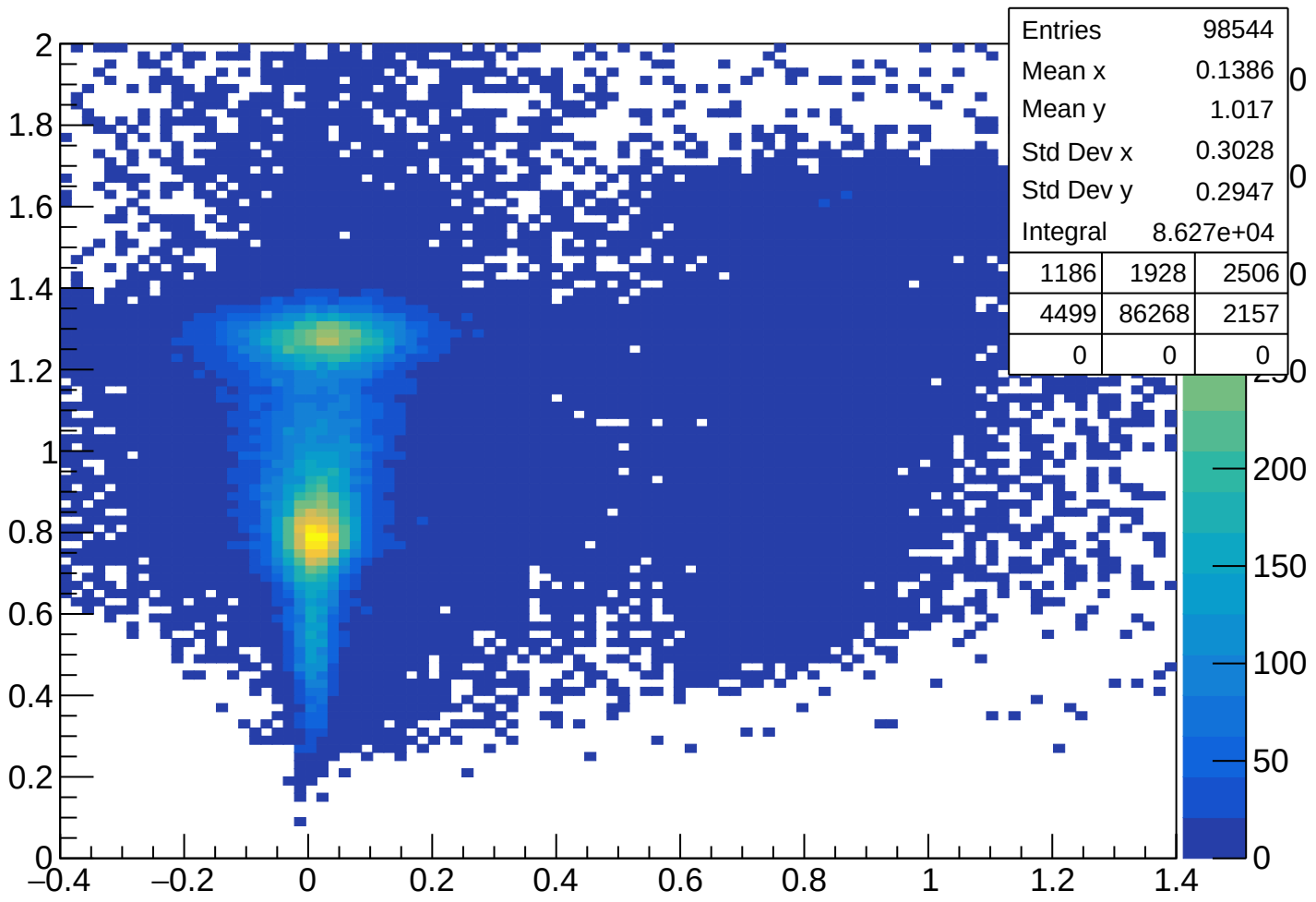

pKurama Cut Ver 5
Entries 94
Mean 0.8145
Std Dev 0.1073
Underflow 0
Overflow 0
Integral 94
10
8
6
4
2
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

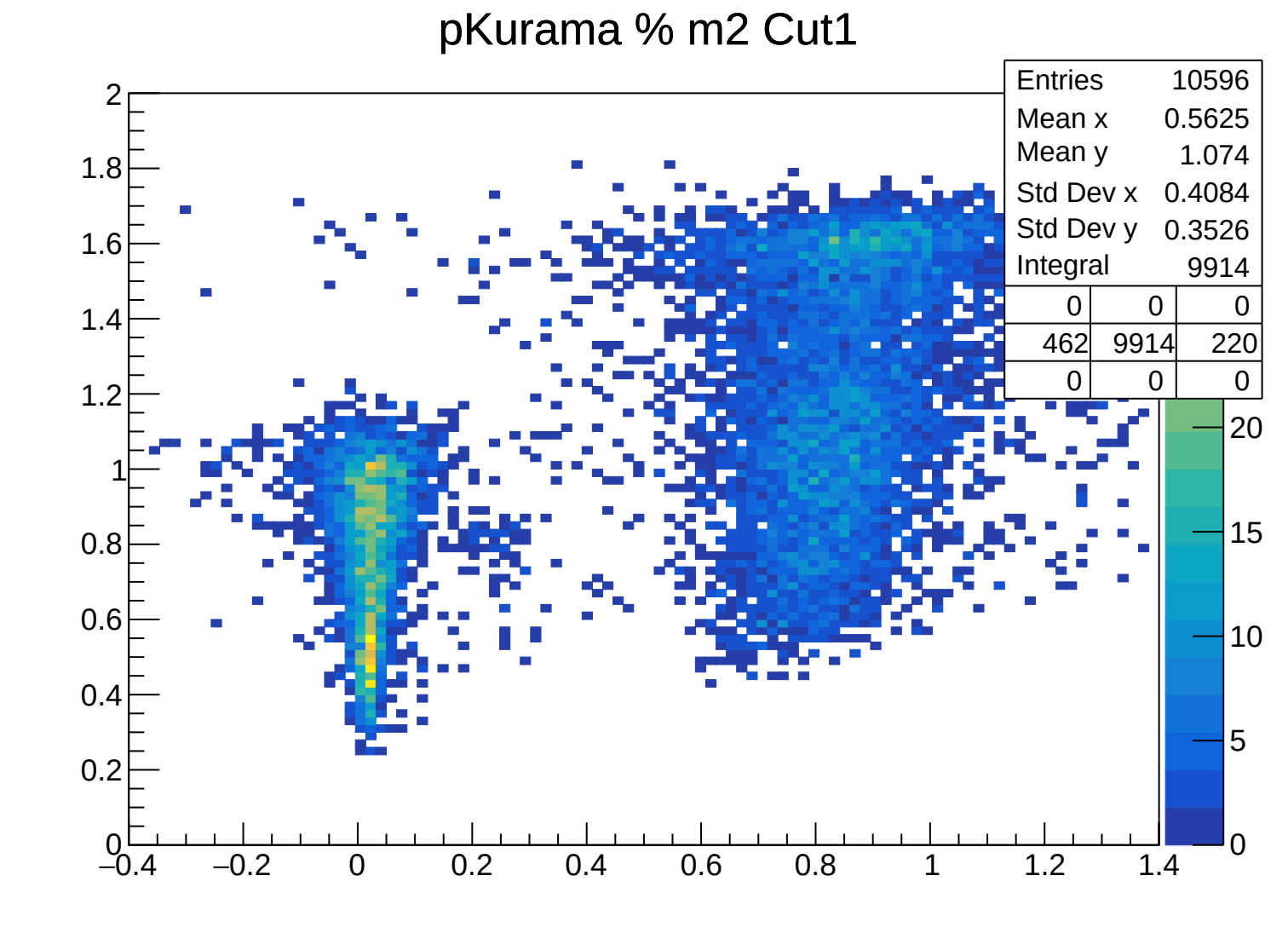

m2 Cut Ver 5
Entries 94
Mean 0.021
Std Dev 0.03693
Underflow 0
Overflow 0
Integral 94
20
18
16
14
12
10
8
6
4
2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

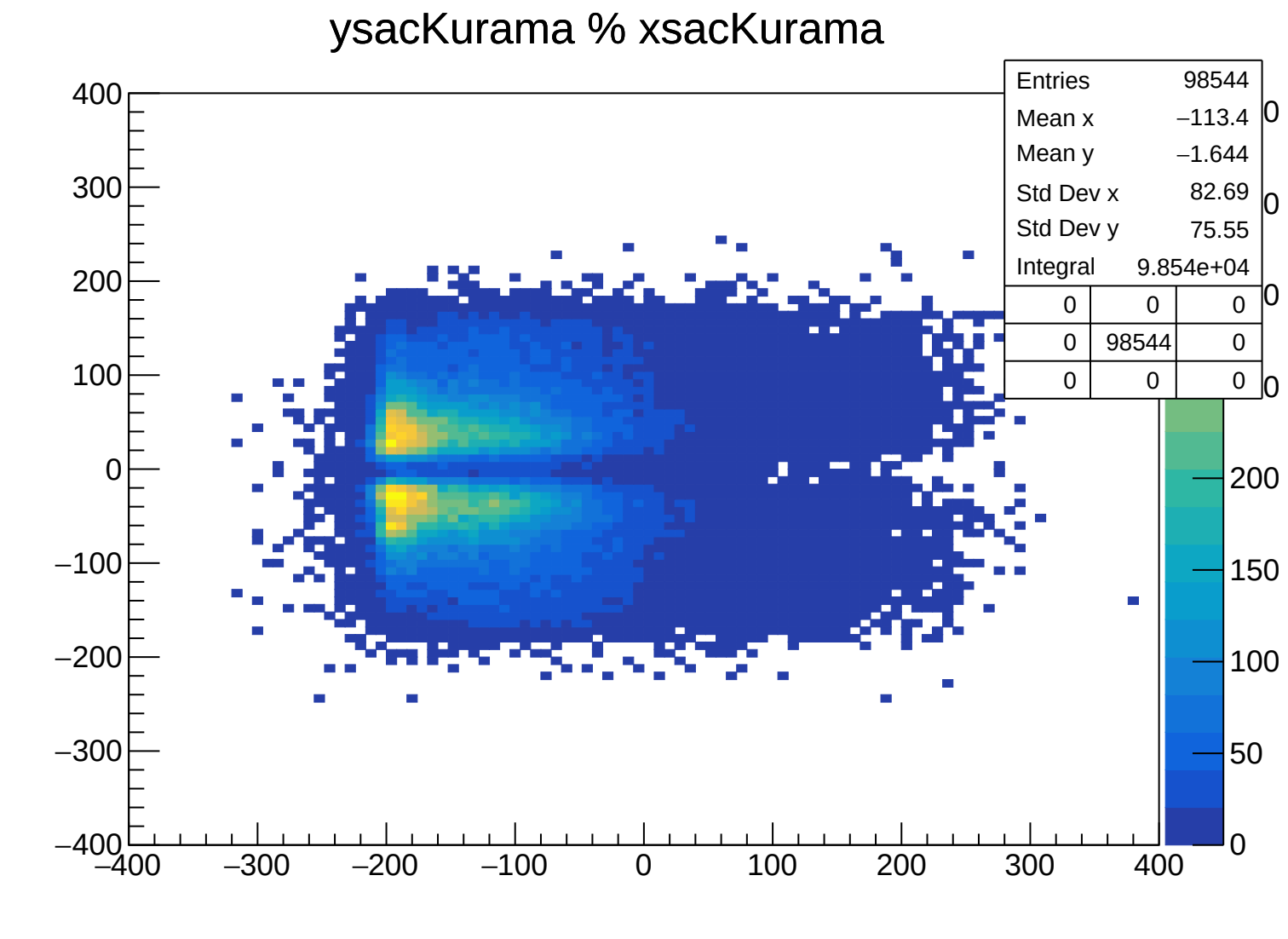

tSac Or Cut5
Entries 1943
Mean 0.7203
Std Dev 1.951
Underflow 0
Overflow 0
Integral 1943
χ² / ndf 90.89 / 6
Constant 488.6 ± 13.8
Mean 0.5732 ± 0.0357
Sigma 1.478 ± 0.024
10³
10²
10
1
–40
–20
0
20
40
60
80

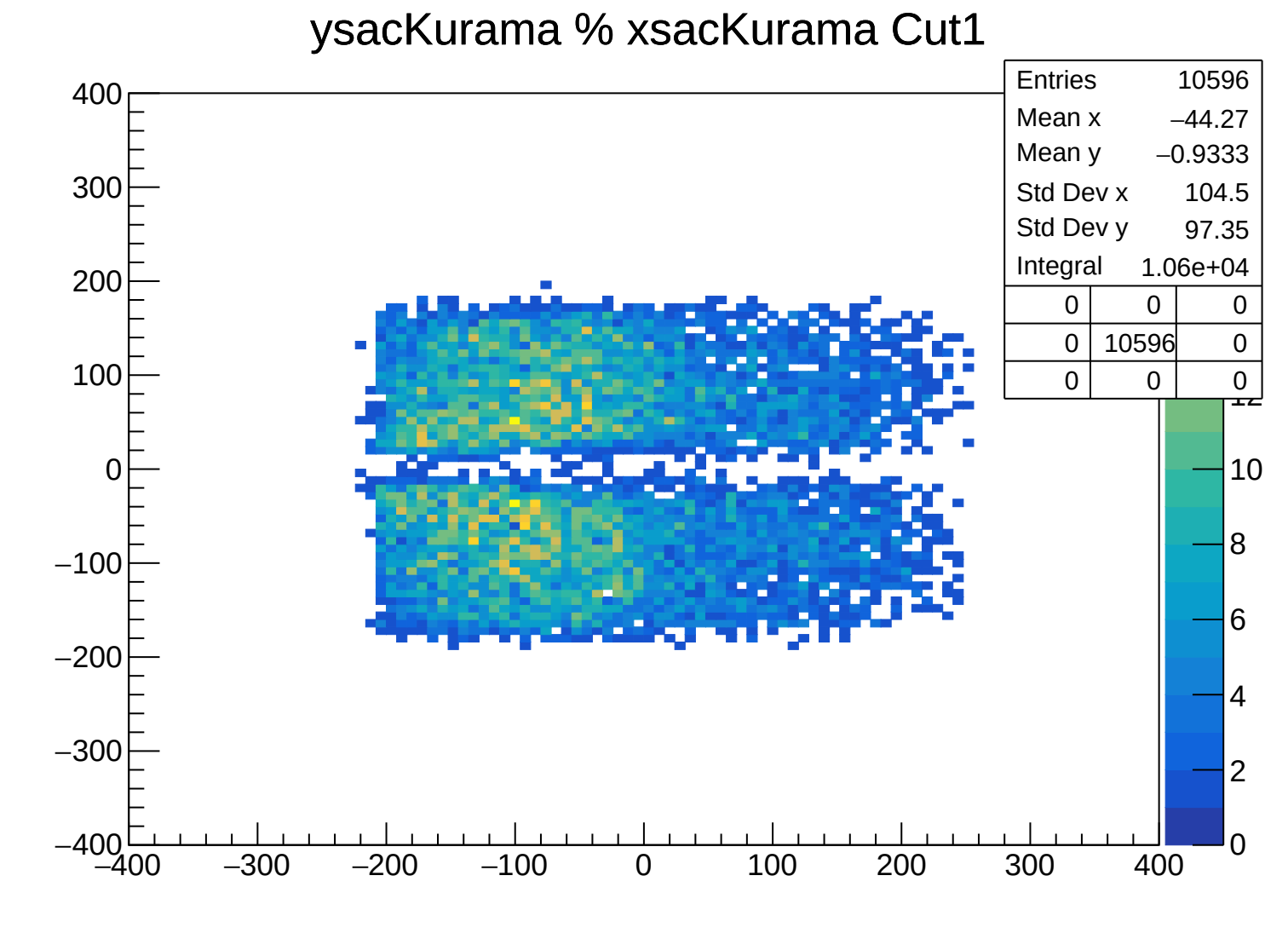

tSac Or Cut Ver 5
Entries 95
Mean −21.37
Std Dev 68.45
Underflow 68
Overflow 21
Integral 6
1
0.8
0.6
0.4
0.2
0
−100
−80
−60
−40
−20
0
20
40
60
80
100

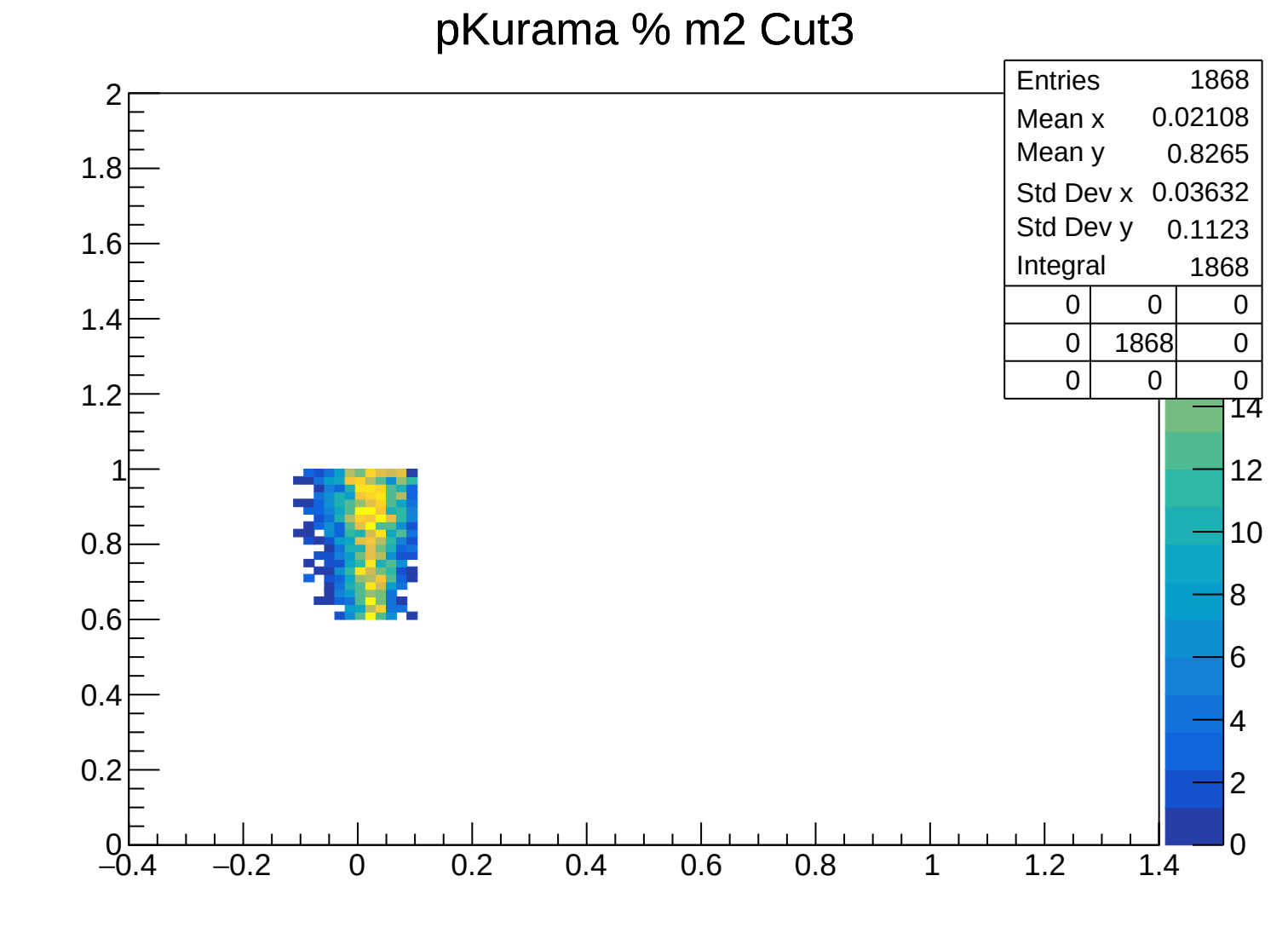

pKurama % ThetaKurama
Entries 34527
Mean x 6.68
Mean y 0.9454
Std Dev x 5.527
Std Dev y 0.2734
Integral 3.434e+04
0 173 0
0 34345 9
0 0 0
0
0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35 40
150
100
50
0

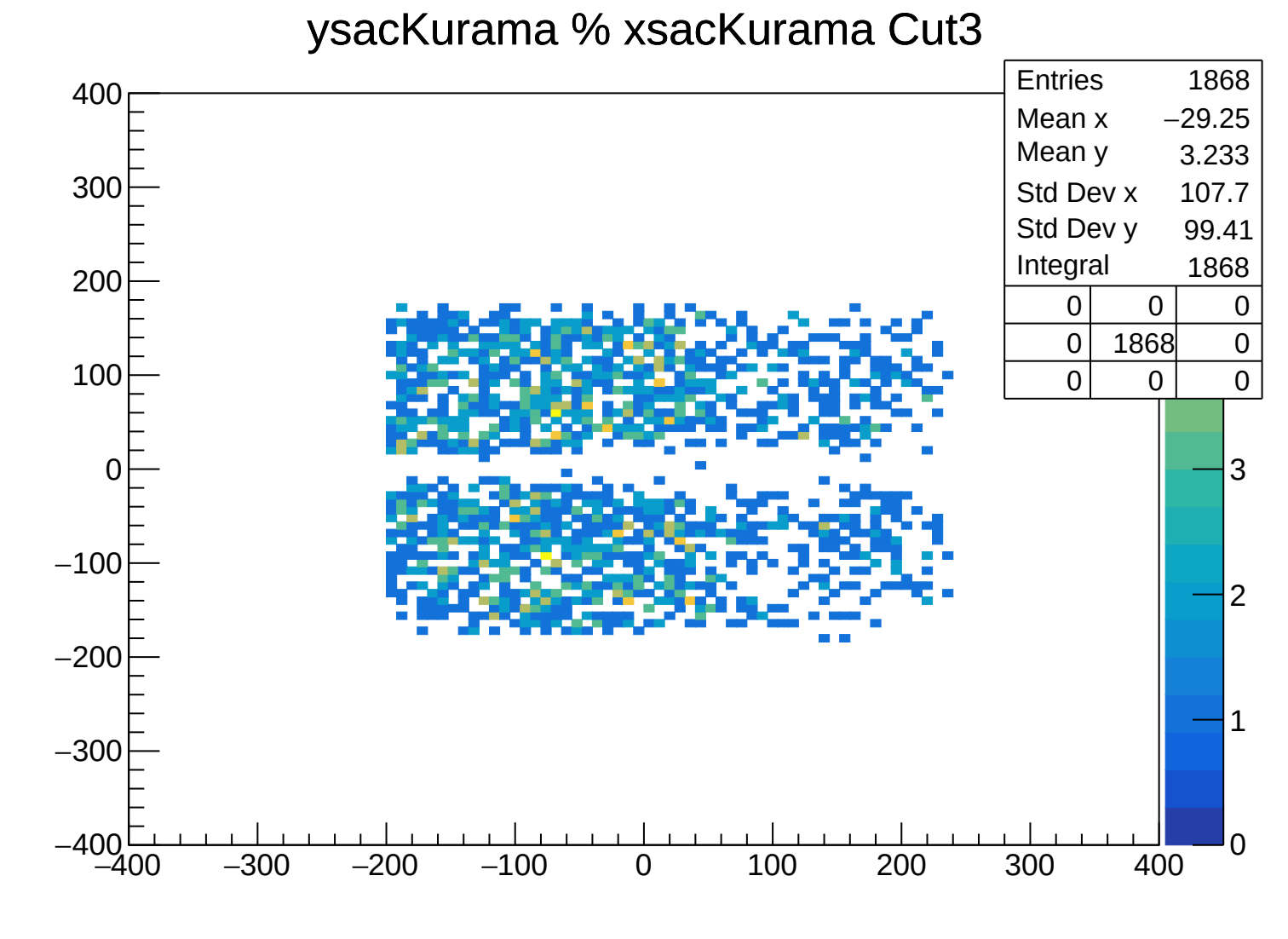

pKurama % m2
Entries 98544
Mean x 0.1386
Mean y 1.017
Std Dev x 0.3028
Std Dev y 0.2947
Integral 8.627e+04
1186 1928 2506
4499 86268 2157
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
200
150
100
50
0

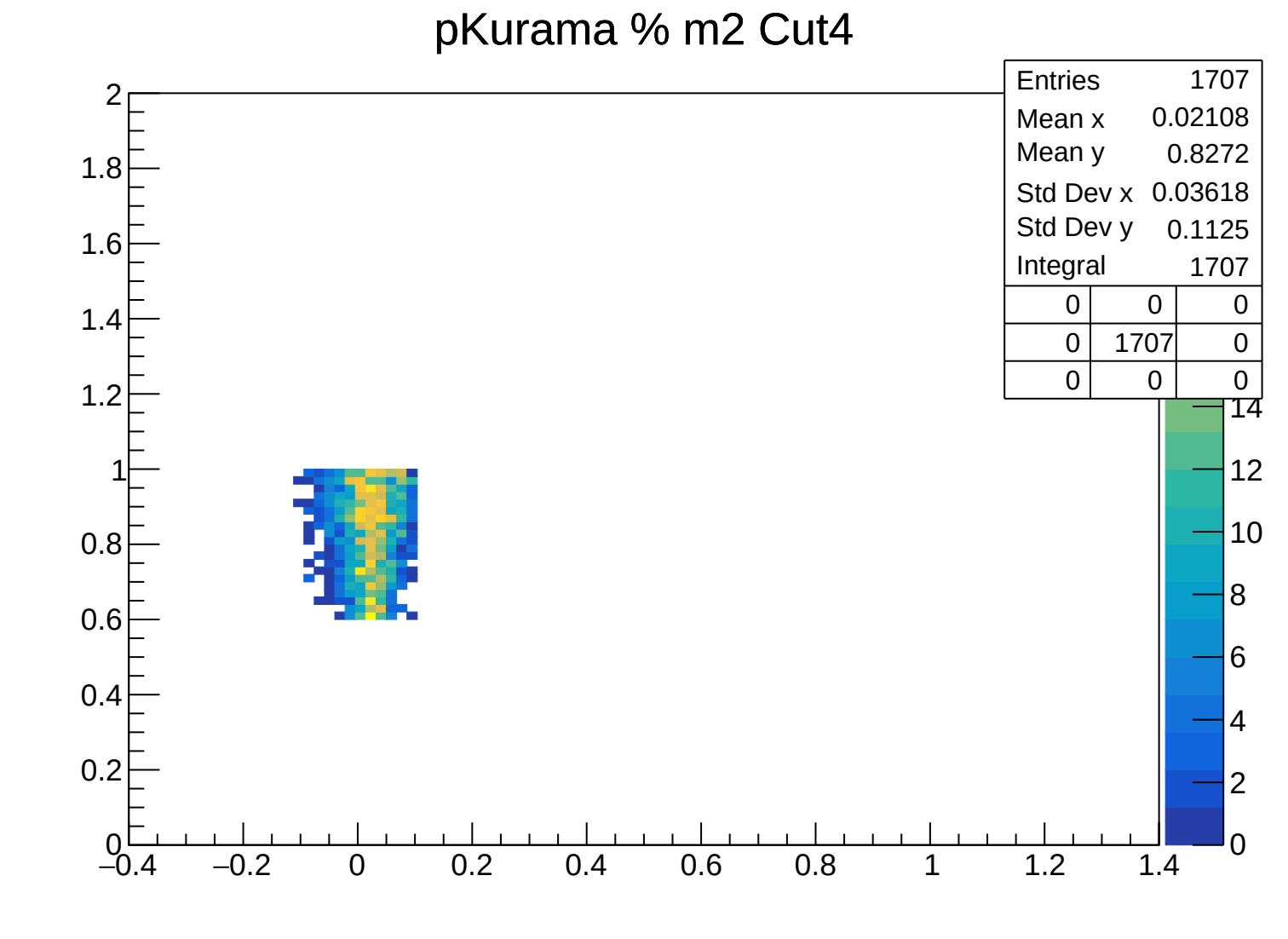

pKurama % m2 Cut1
Entries 10596
Mean x 0.5625
Mean y 1.074
Std Dev x 0.4084
Std Dev y 0.3526
Integral 9914
0 0 0
462 9914 220
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
20
15
10
5
0

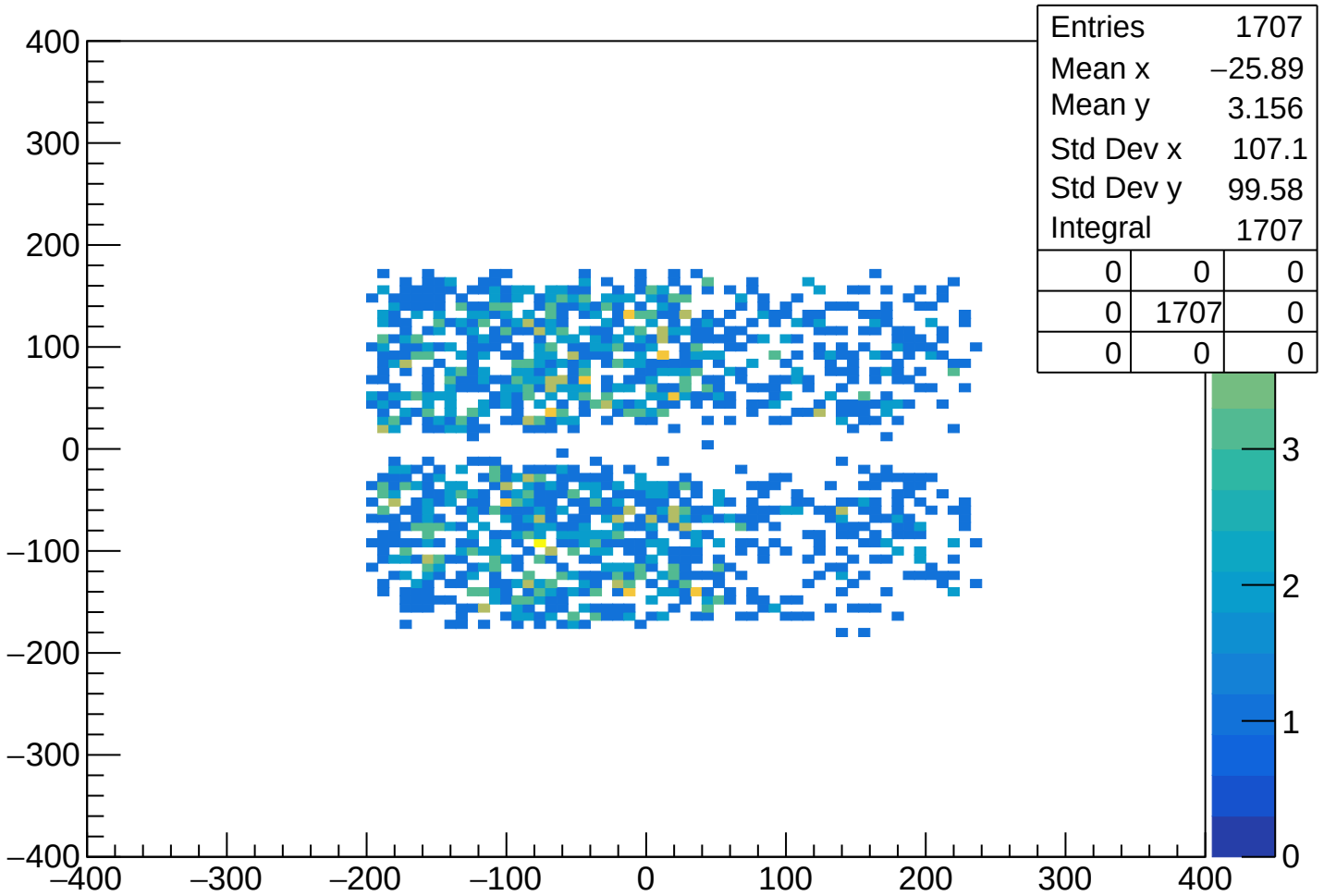

ysacKurama % xsacKurama
Entries 98544
Mean x −113.4
Mean y −1.644
Std Dev x 82.69
Std Dev y 75.55
Integral 9.854e+04
0 0 0
0 98544 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
200
150
100
50
0

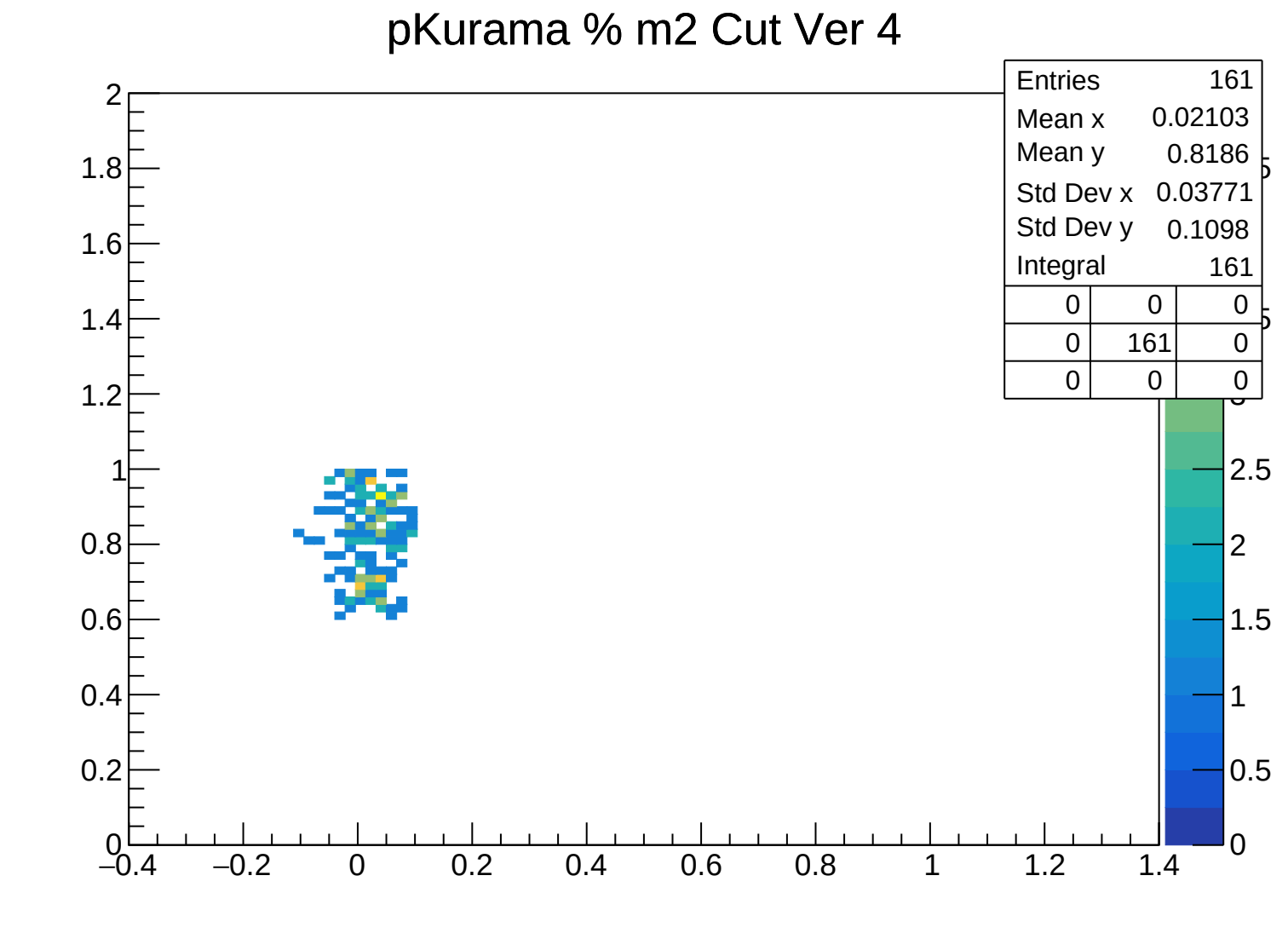

ysacKurama % xsacKurama Cut1
Entries 10596
Mean x –44.27
Mean y –0.9333
Std Dev x 104.5
Std Dev y 97.35
Integral 1.06e+04
0 0 0
0 10596 0
0 0 0
400
300
200
100
0
–100
–200
–300
–400
–400
–300
–200
–100
0
100
200
300
400
10
8
6
4
2
0

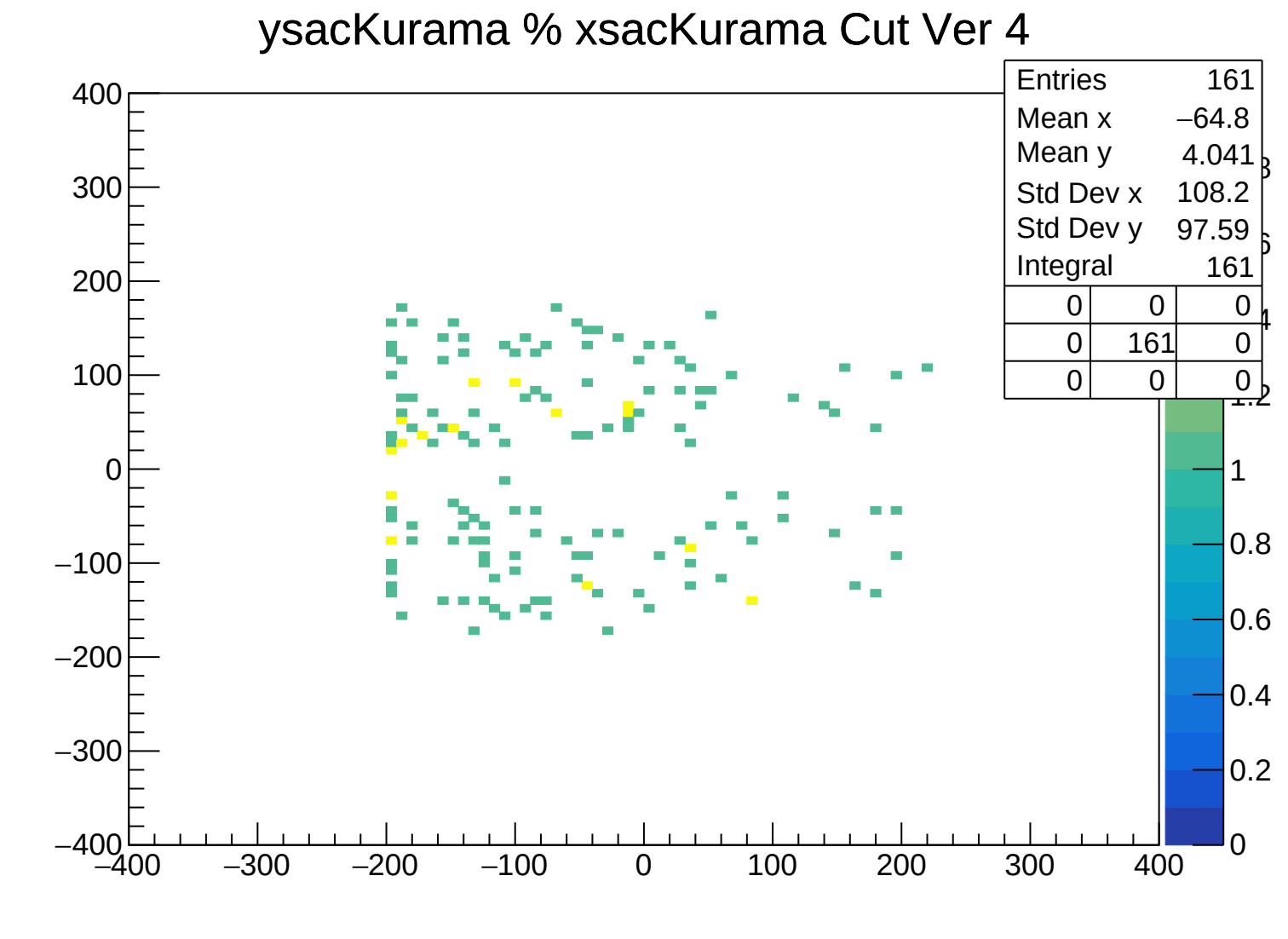

pKurama % m2 Cut3
Entries 1868
Mean x 0.02108
Mean y 0.8265
Std Dev x 0.03632
Std Dev y 0.1123
Integral 1868
0 0 0
0 1868 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
14
12
10
8
6
4
2
0

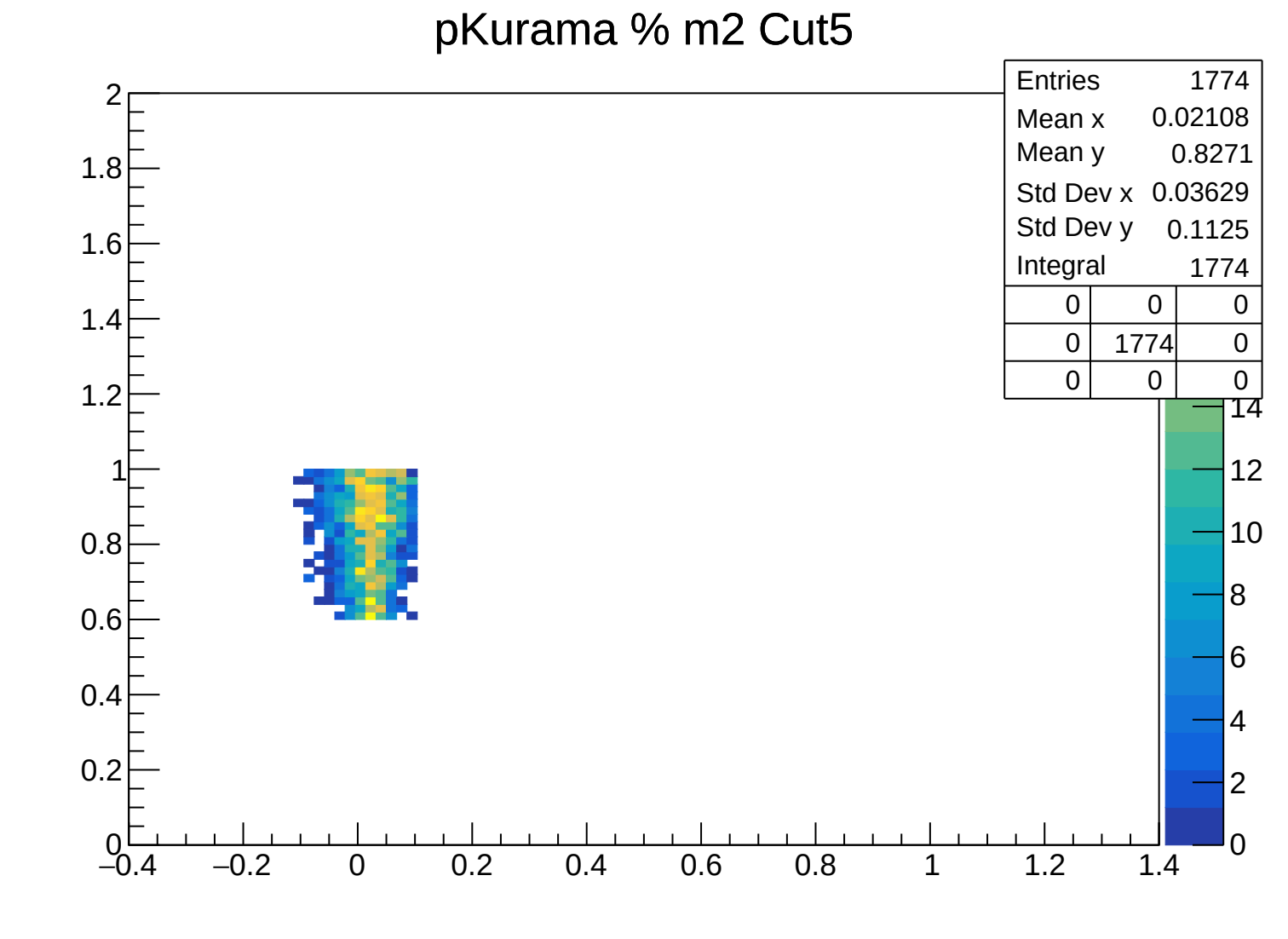

ysacKurama % xsacKurama Cut3
Entries 1868
Mean x −29.25
Mean y 3.233
Std Dev x 107.7
Std Dev y 99.41
Integral 1868
0 0 0
0 1868 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400
−300
−200
−100
0
100
200
300
400
3
2
1
0

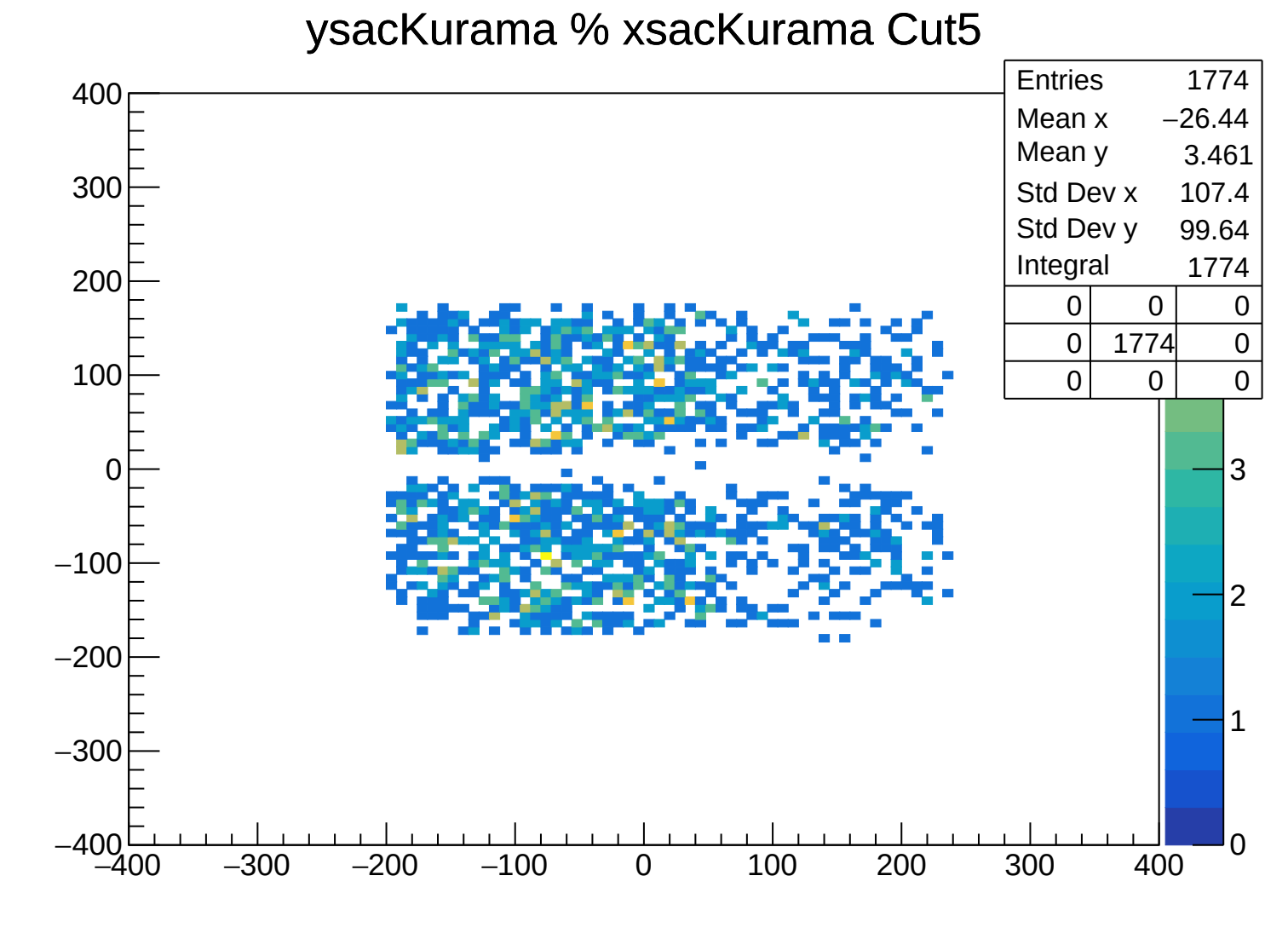

pKurama % m2 Cut4
Entries 1707
Mean x 0.02108
Mean y 0.8272
Std Dev x 0.03618
Std Dev y 0.1125
Integral 1707
0 0 0
0 1707 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
14
12
10
8
6
4
2
0

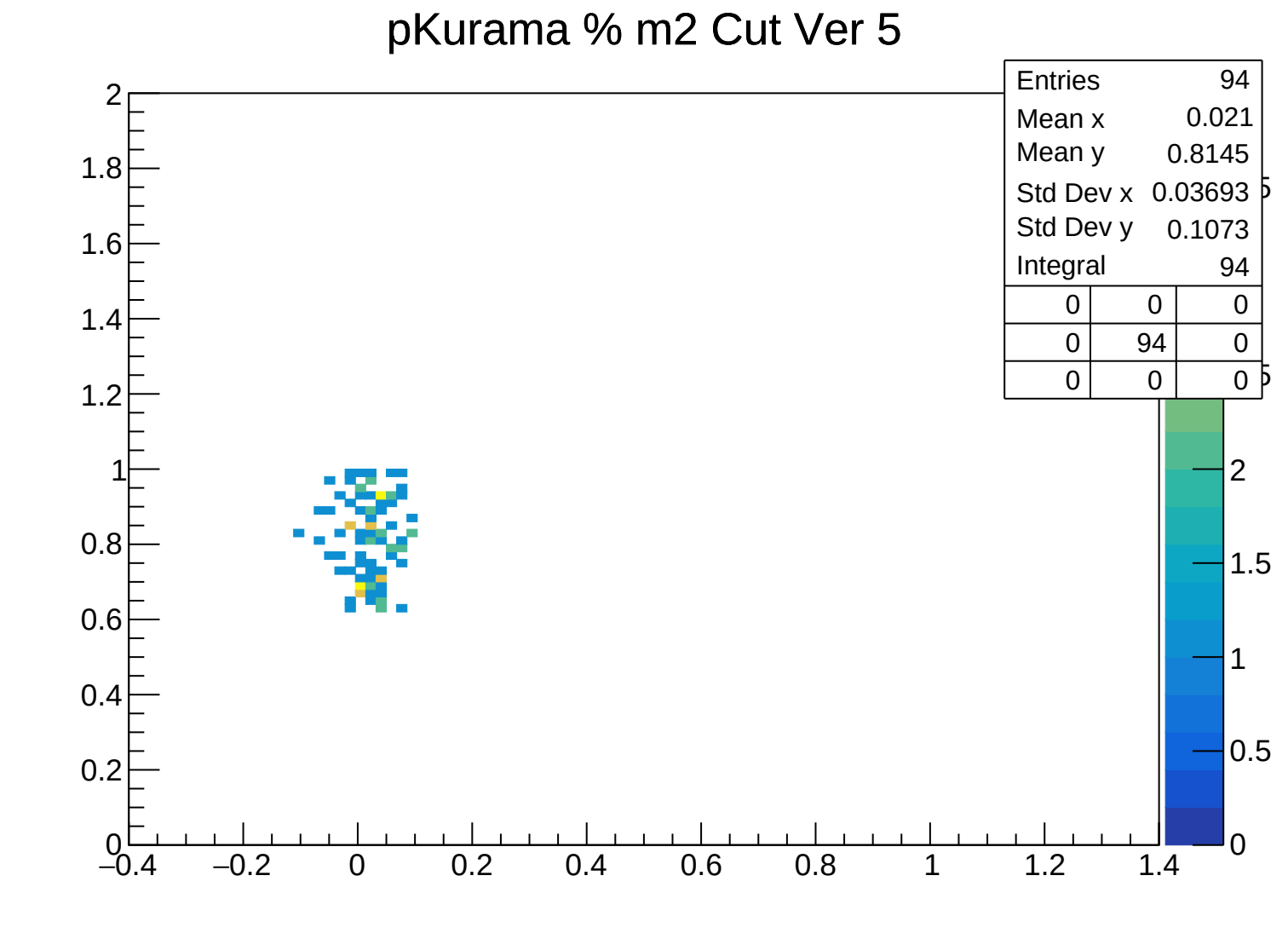

ysacKurama % xsacKurama Cut4
Entries 1707
Mean x −25.89
Mean y 3.156
Std Dev x 107.1
Std Dev y 99.58
Integral 1707
0 0 0
0 1707 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
3
2
1
0

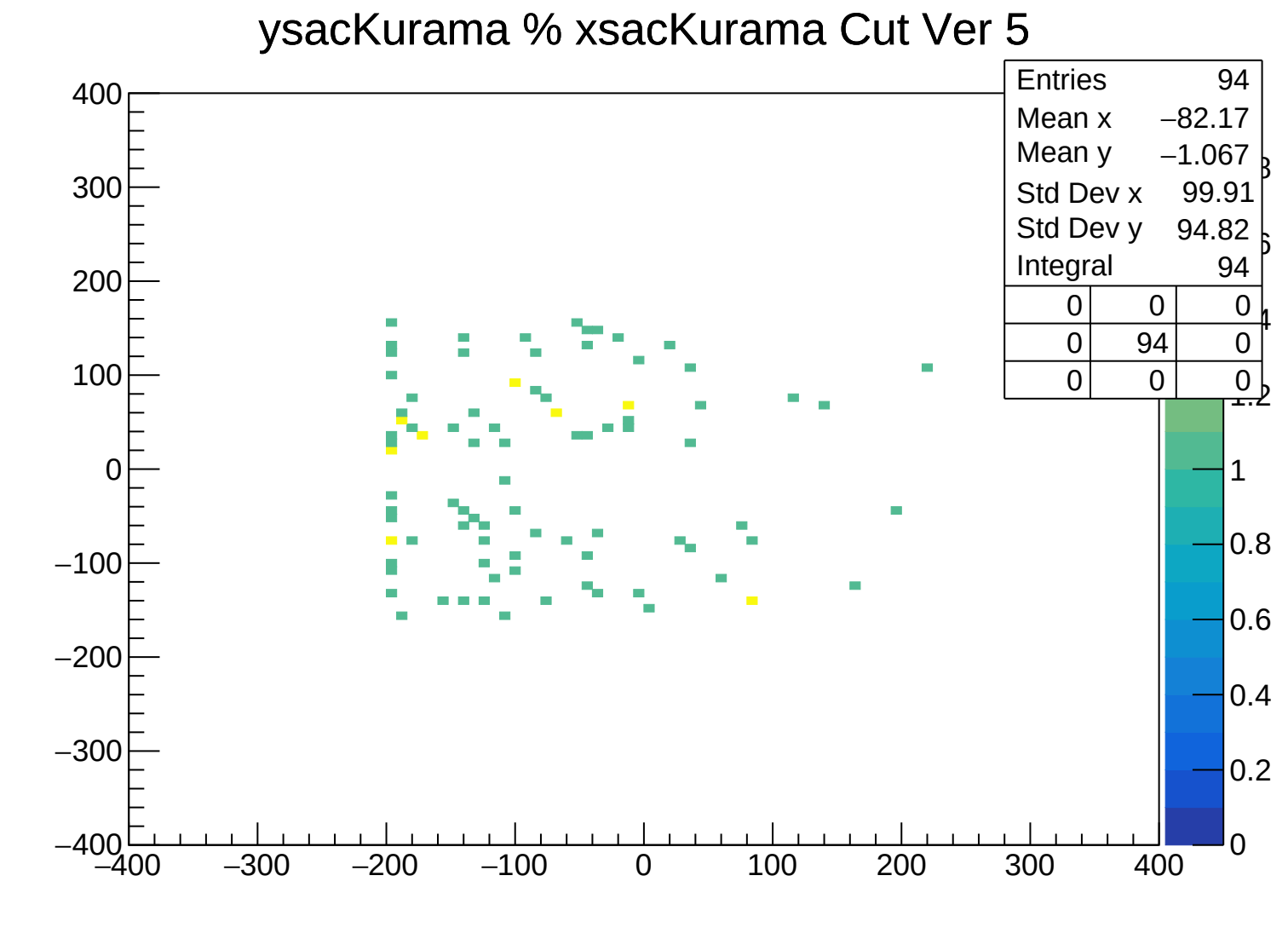

pKurama % m2 Cut Ver 4
Entries 161
Mean x 0.02103
Mean y 0.8186
Std Dev x 0.03771
Std Dev y 0.1098
Integral 161
0 0 0
0 161 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
2.5
2
1.5
1
0.5
0


ysacKurama % xsacKurama Cut Ver 4
Entries 161
Mean x −64.8
Mean y 4.041
Std Dev x 108.2
Std Dev y 97.59
Integral 161
0 0 0
0 161 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
1
0.8
0.6
0.4
0.2
0


pKurama % m2 Cut5
Entries 1774
Mean x 0.02108
Mean y 0.8271
Std Dev x 0.03629
Std Dev y 0.1125
Integral 1774
0 0 0
0 1774 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
14
12
10
8
6
4
2
0


ysacKurama % xsacKurama Cut5
Entries 1774
Mean x −26.44
Mean y 3.461
Std Dev x 107.4
Std Dev y 99.64
Integral 1774
0 0 0
0 1774 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
3
2
1
0


pKurama % m2 Cut Ver 5
Entries 94
Mean x 0.021
Mean y 0.8145
Std Dev x 0.03693
Std Dev y 0.1073
Integral 94
0 0 0
0 94 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
2
1.5
1
0.5
0


ysacKurama % xsacKurama Cut Ver 5
Entries 94
Mean x −82.17
Mean y −1.067
Std Dev x 99.91
Std Dev y 94.82
Integral 94
0 0 0
0 94 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
1
0.8
0.6
0.4
0.2
0