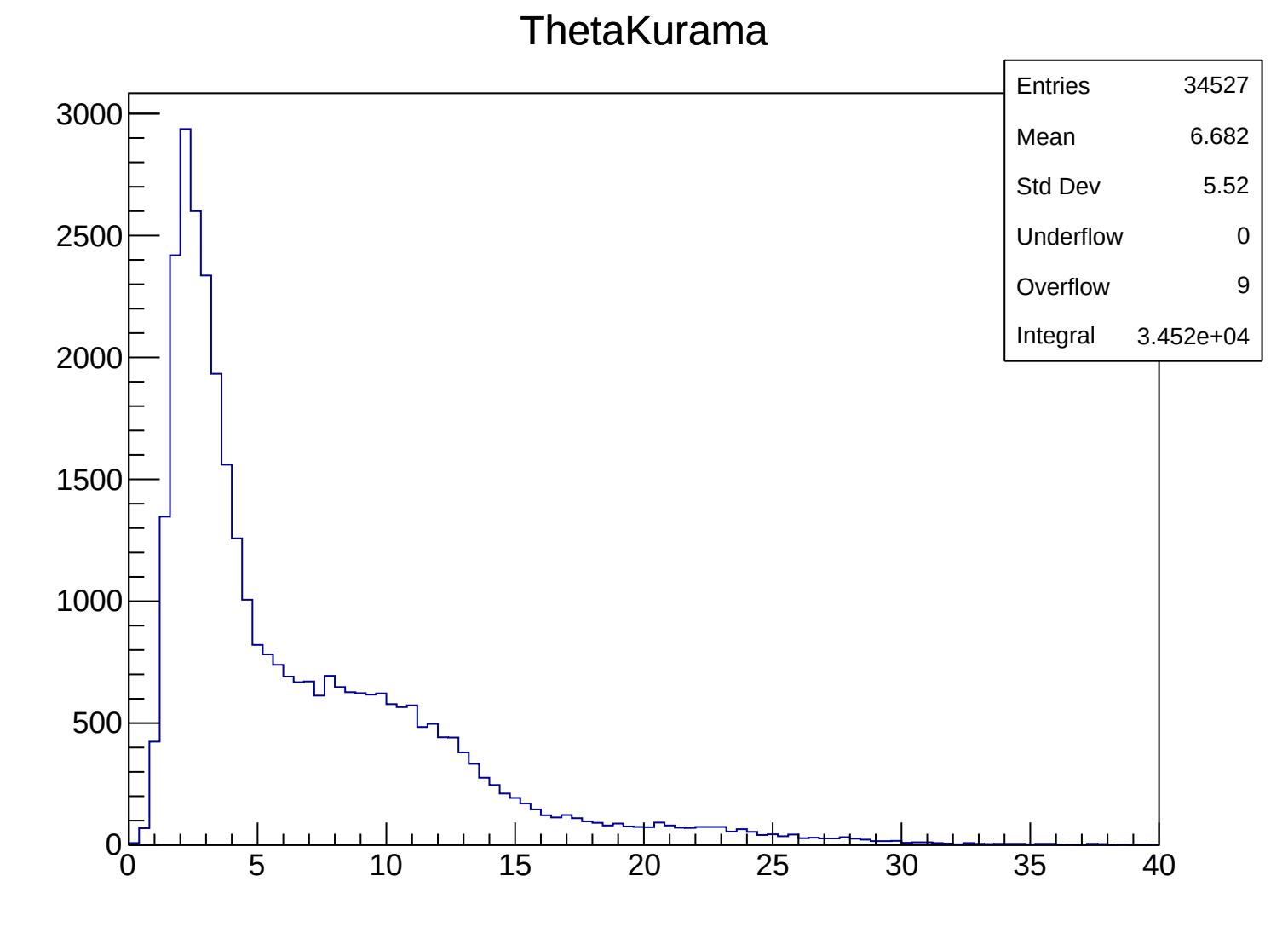
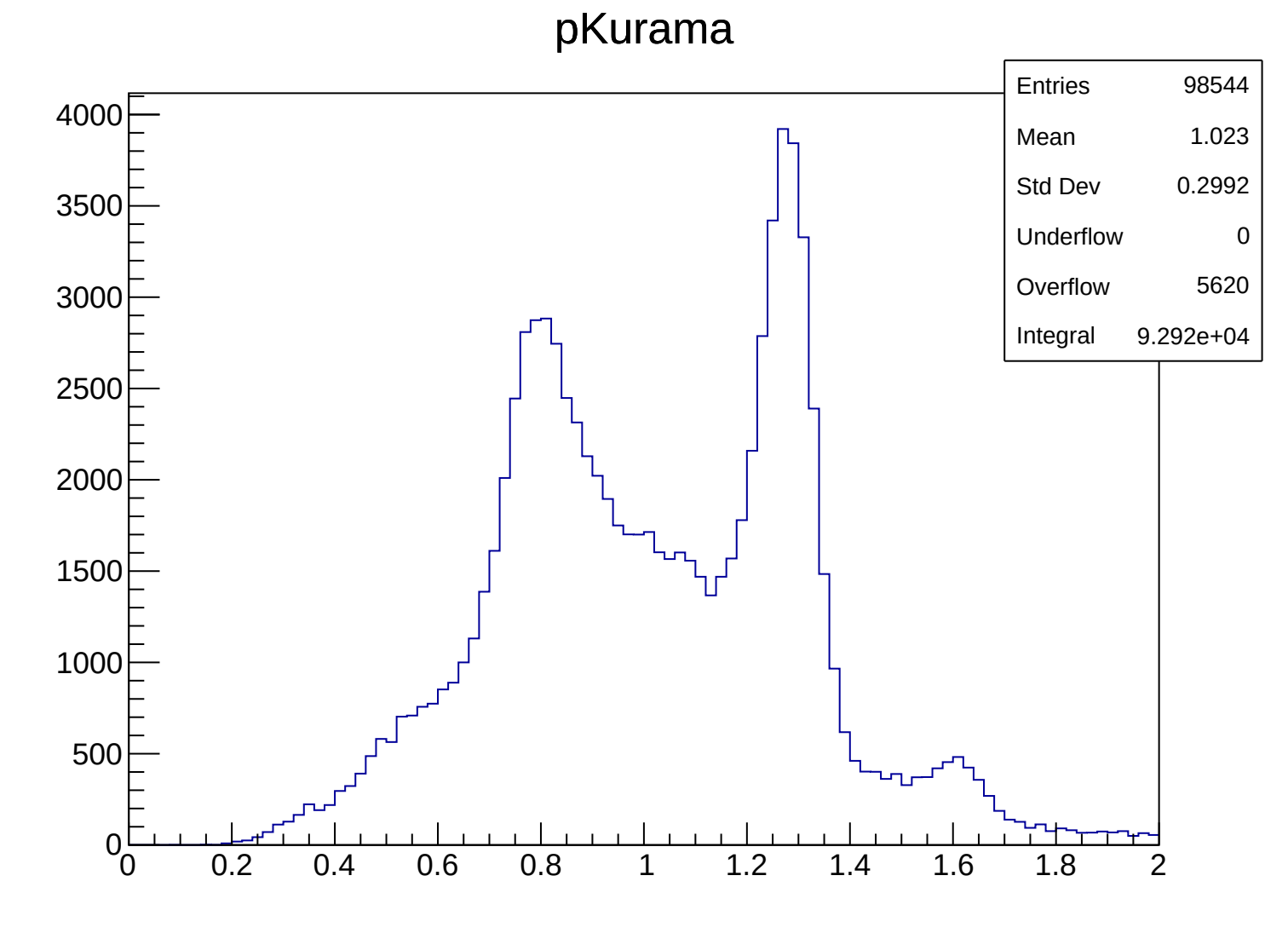
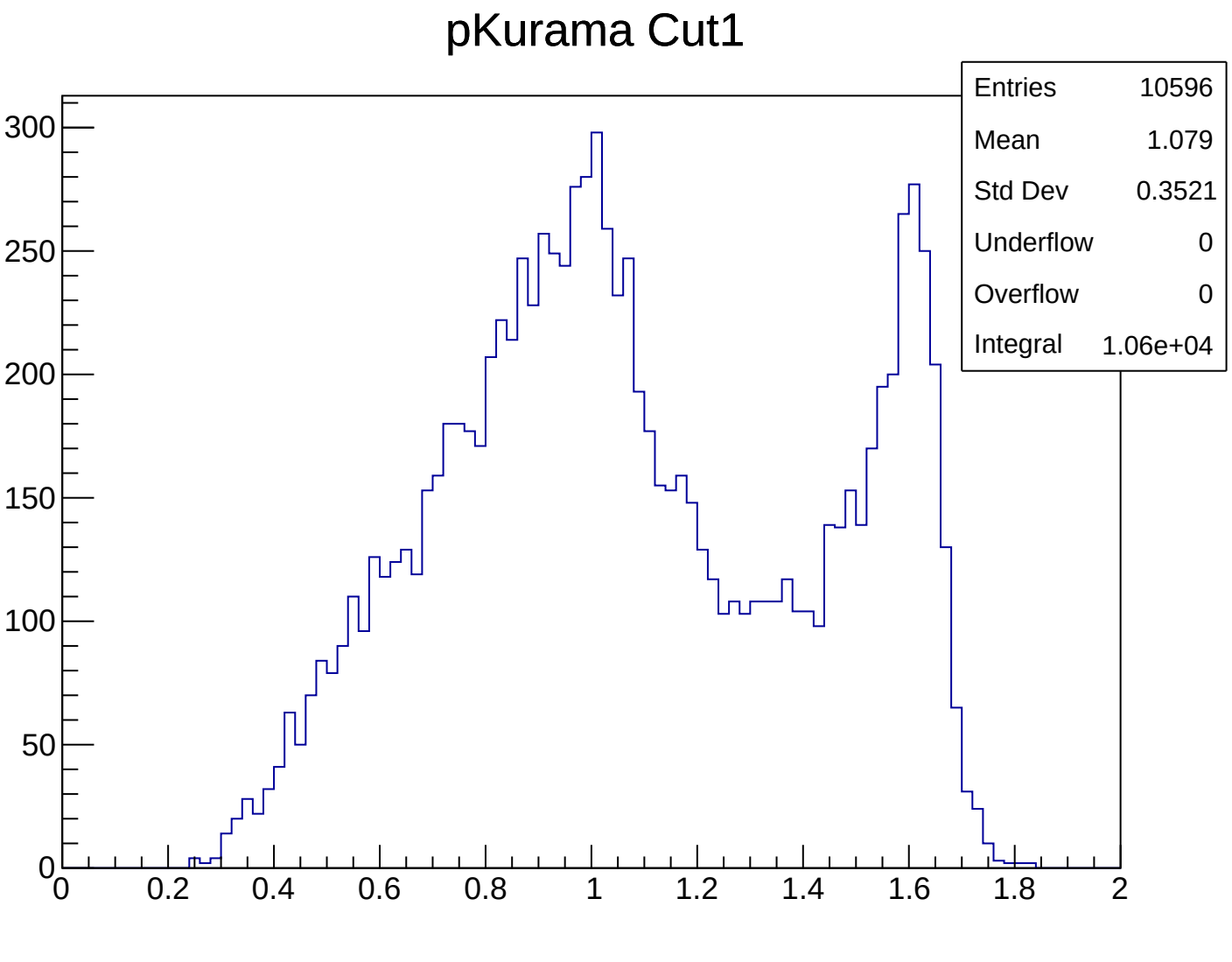
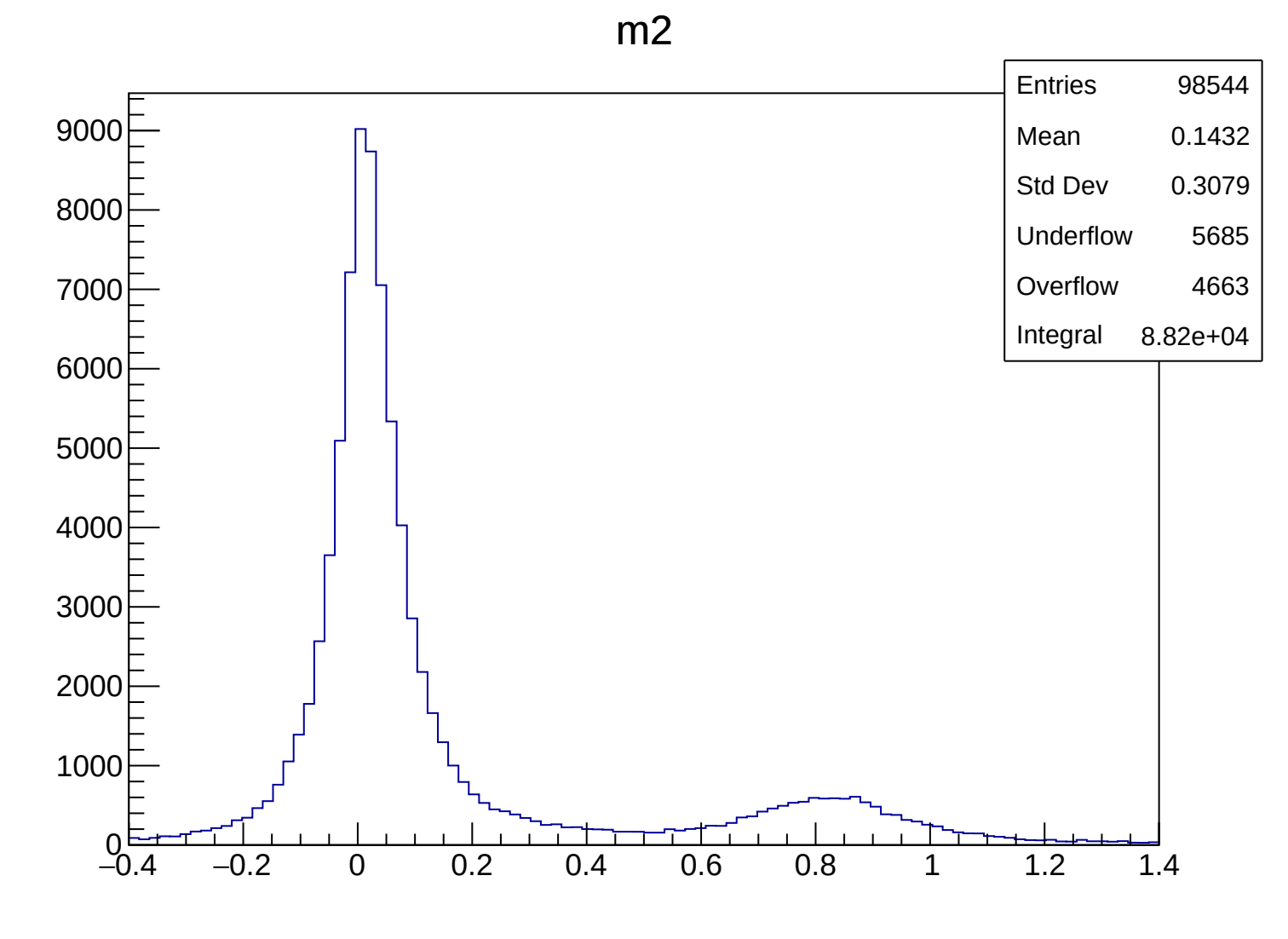
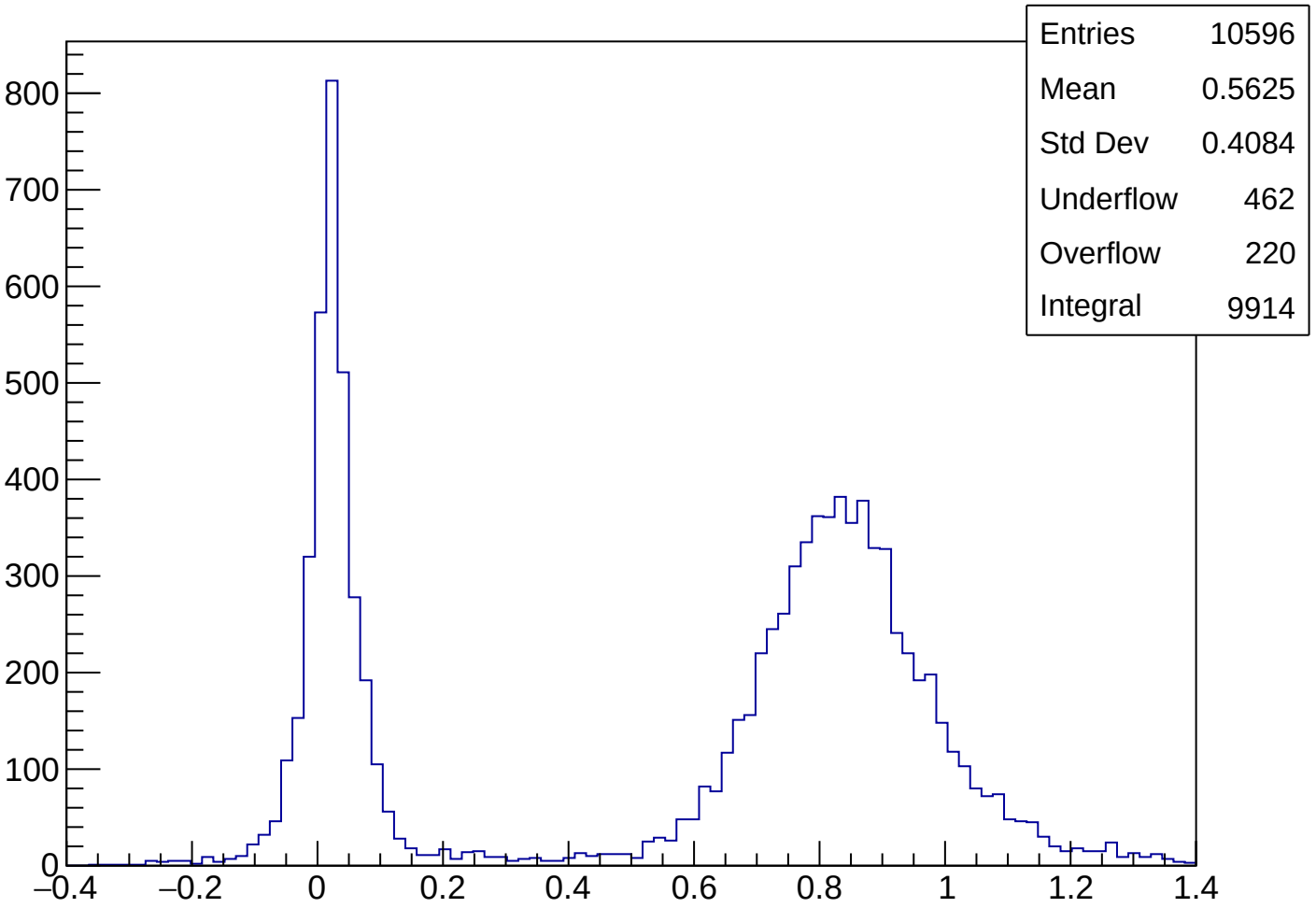
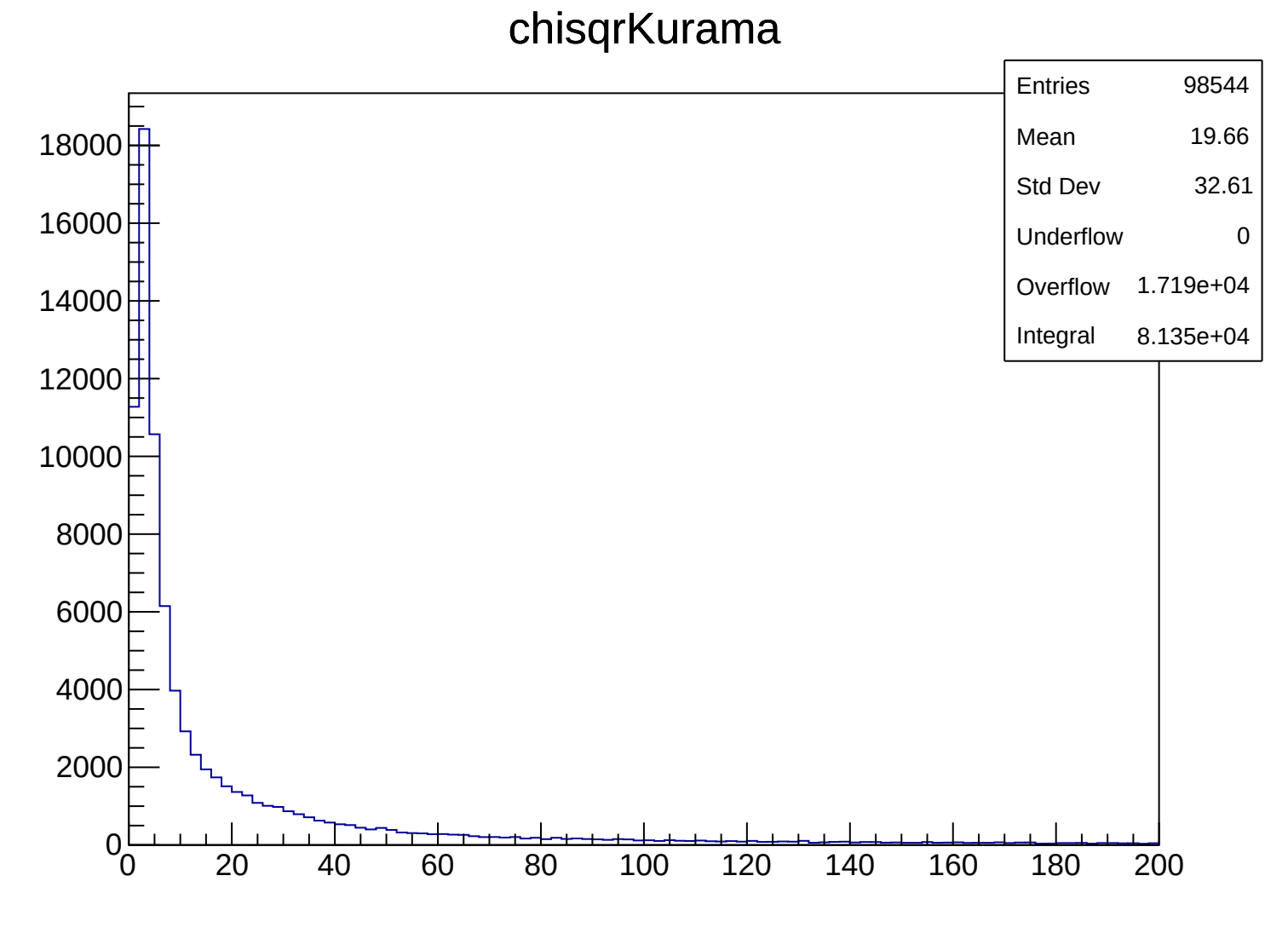

ThetaKurama
Entries 34527
Mean 6.682
Std Dev 5.52
Underflow 0
Overflow 9
Integral 3.452e+04
3000
2500
2000
1500
1000
500
0
0
5
10
15
20
25
30
35
40

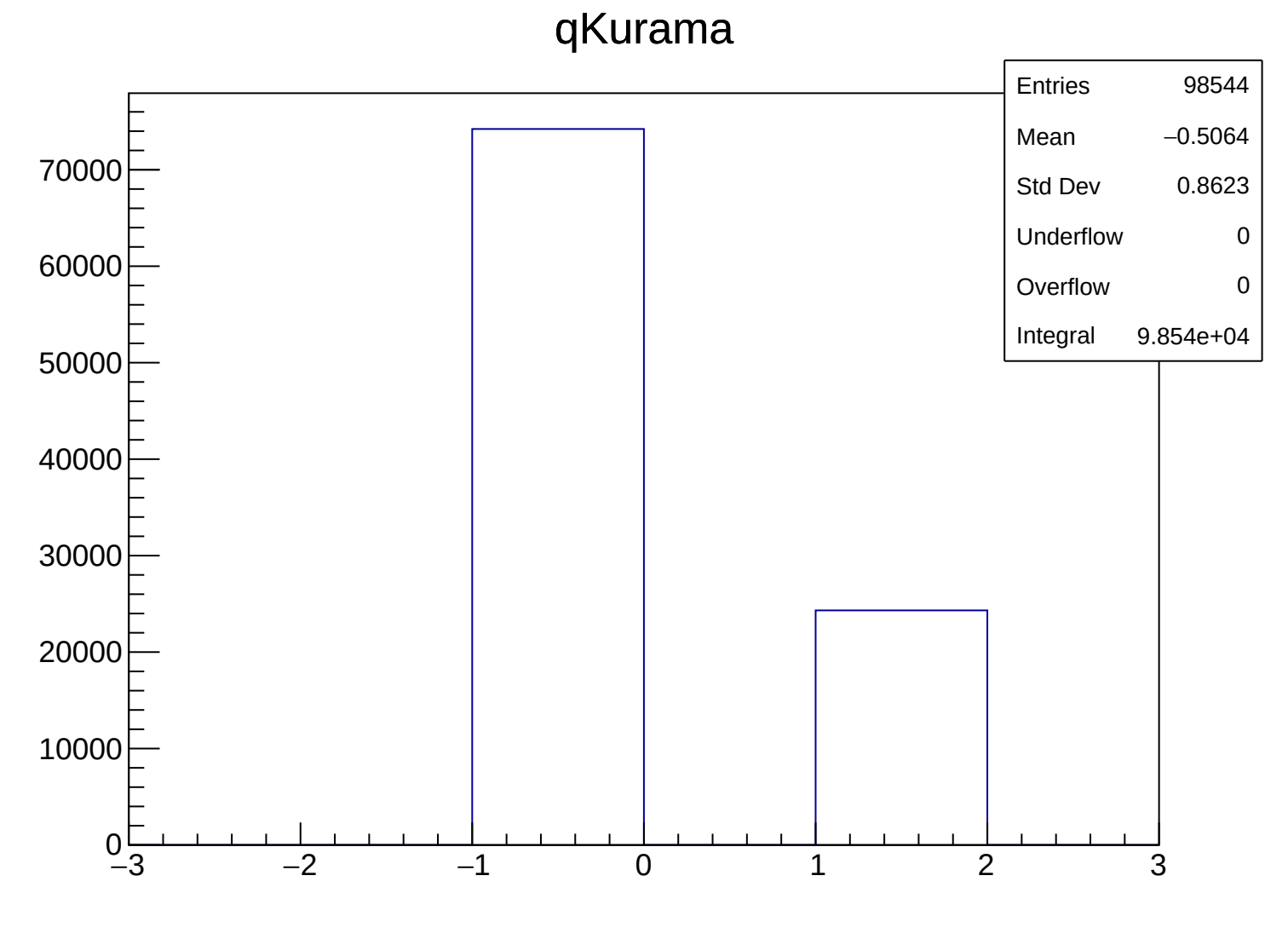

pKurama
Entries 98544
Mean 1.023
Std Dev 0.2992
Underflow 0
Overflow 5620
Integral 9.292e+04
4000
3500
3000
2500
2000
1500
1000
500
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

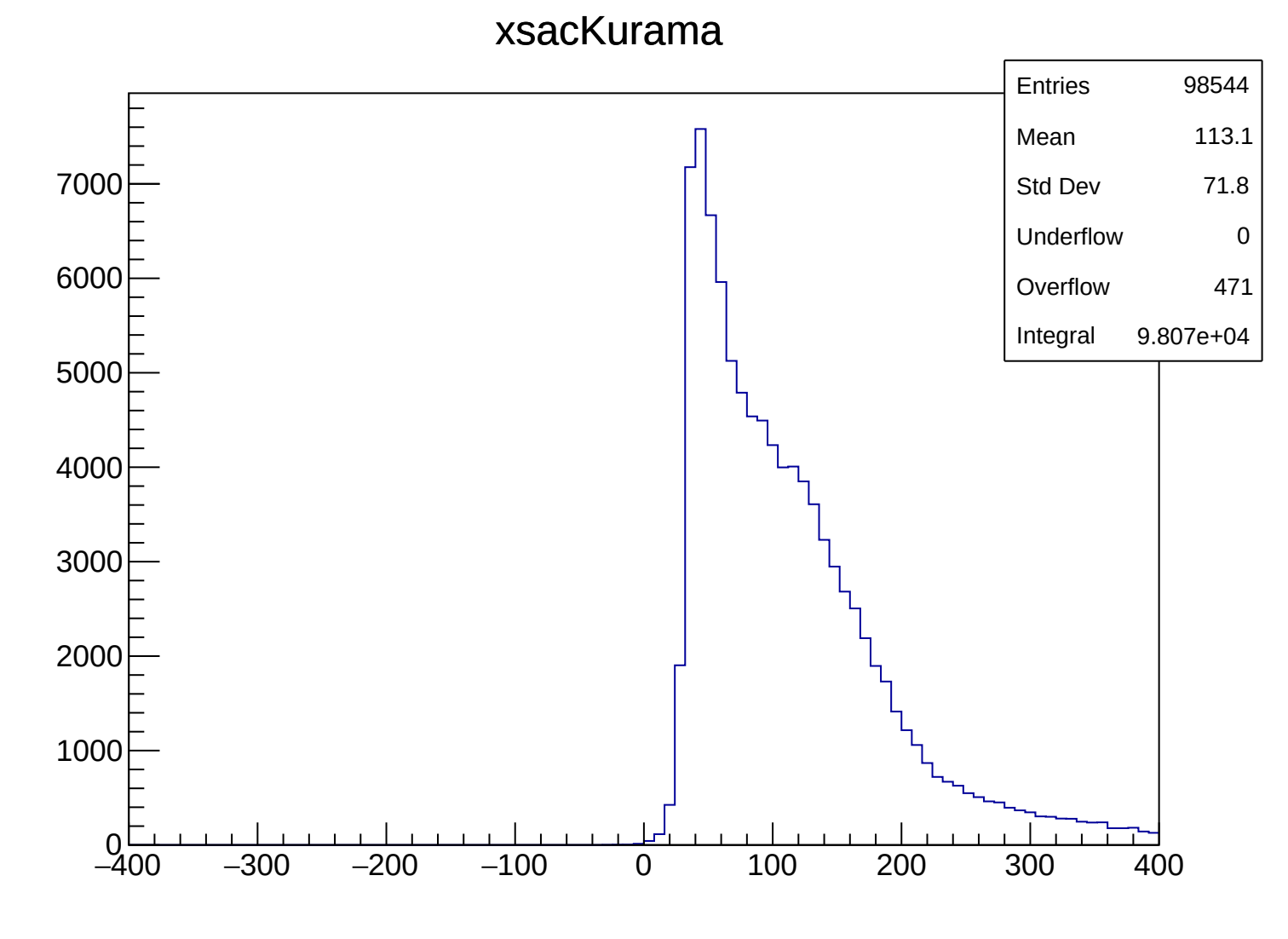

pKurama Cut1
Entries 10596
Mean 1.079
Std Dev 0.3521
Underflow 0
Overflow 0
Integral 1.06e+04
300
250
200
150
100
50
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

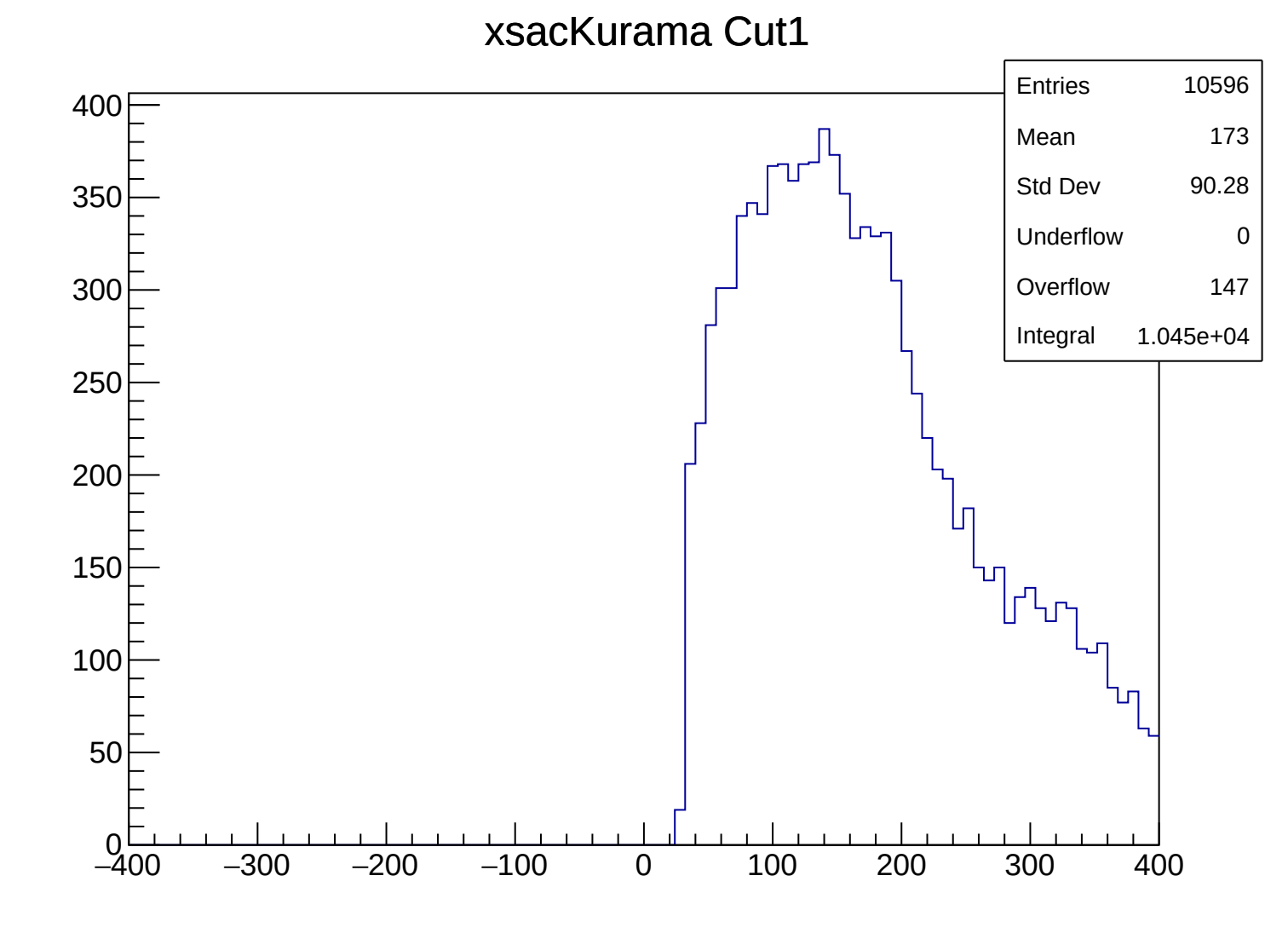

m2
Entries 98544
Mean 0.1432
Std Dev 0.3079
Underflow 5685
Overflow 4663
Integral 8.82e+04
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

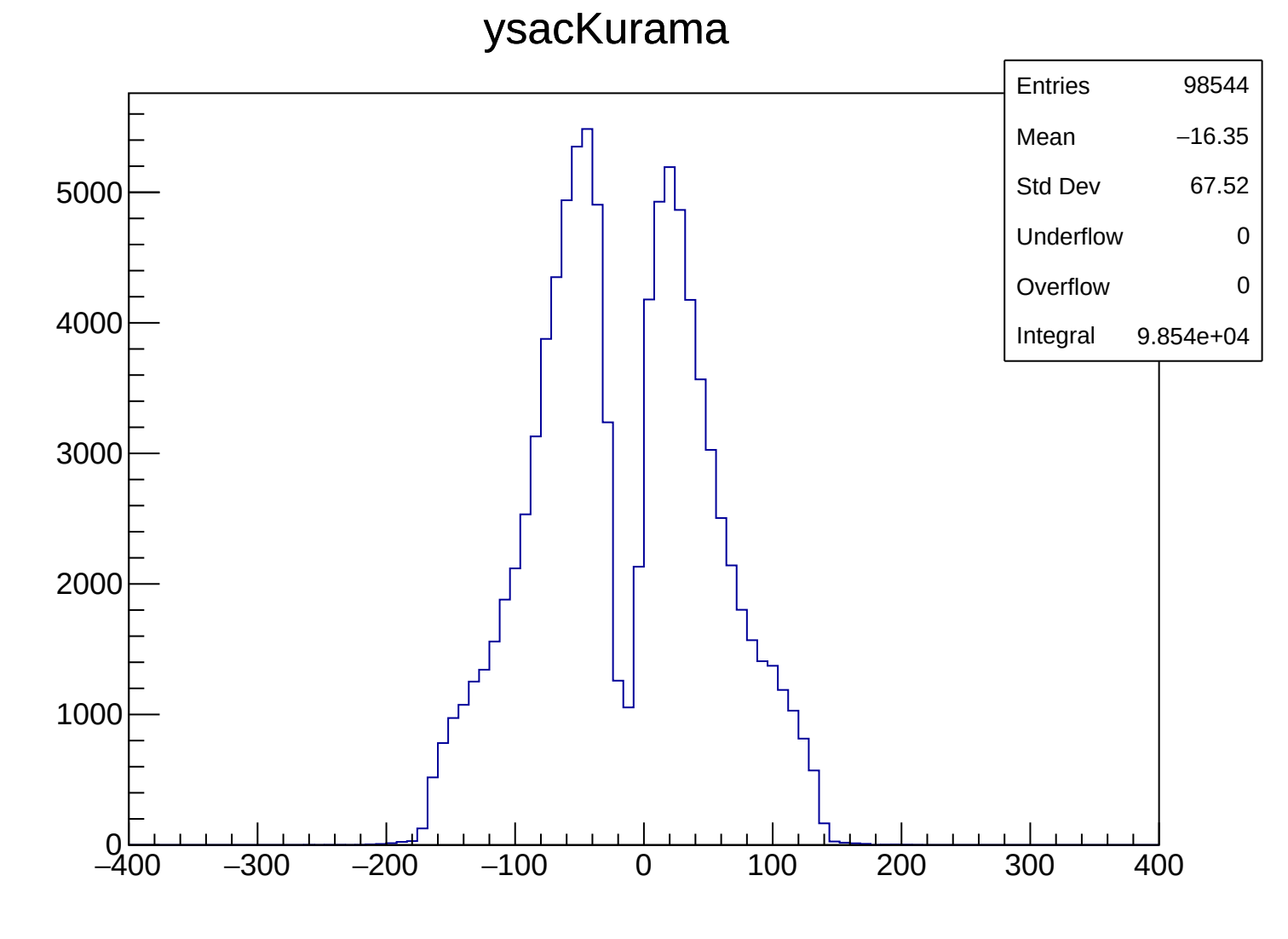

m2 Cut1
Entries 10596
Mean 0.5625
Std Dev 0.4084
Underflow 462
Overflow 220
Integral 9914
800
700
600
500
400
300
200
100
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

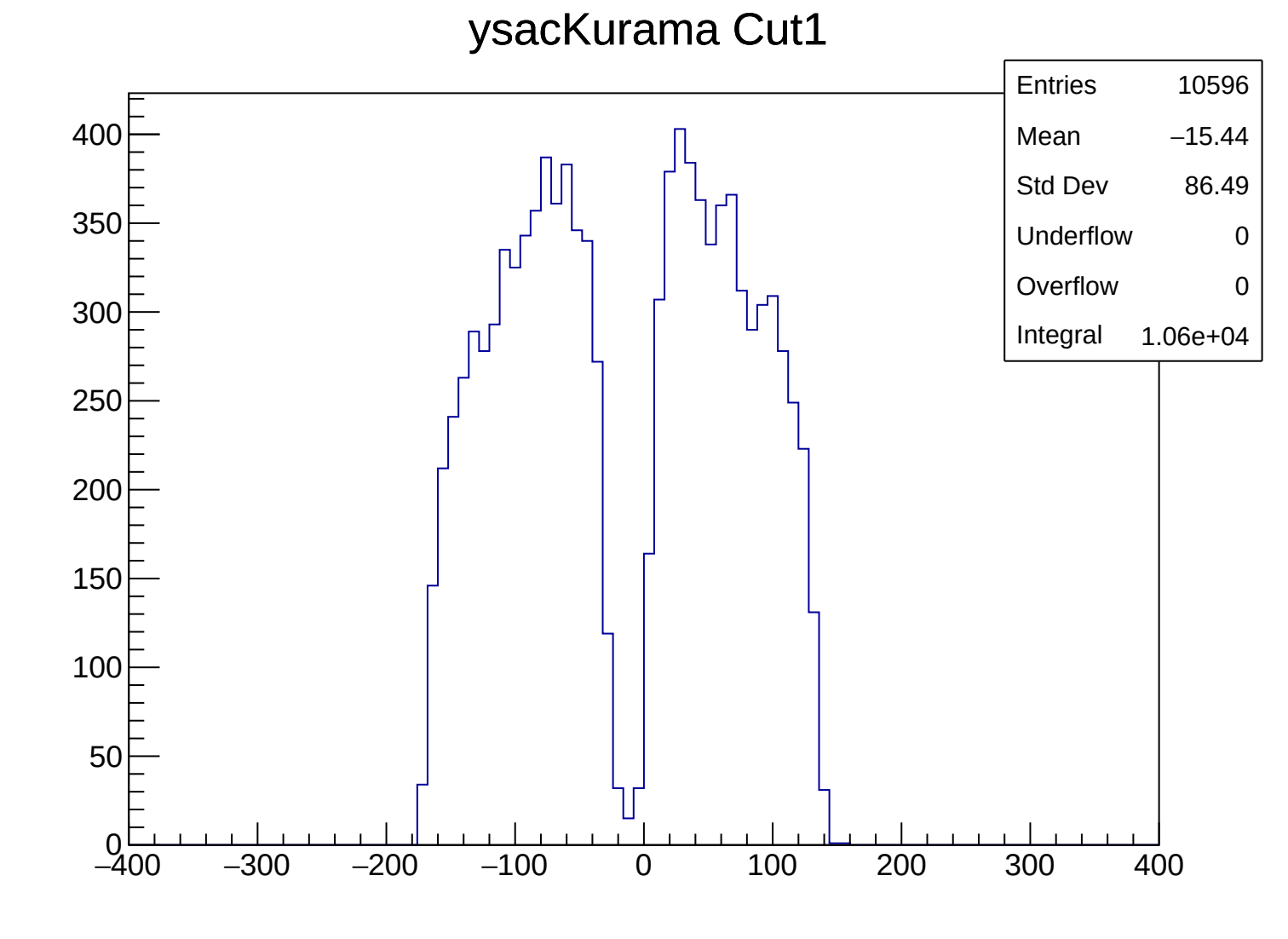

chisqrKurama
Entries 98544
Mean 19.66
Std Dev 32.61
Underflow 0
Overflow 1.719e+04
Integral 8.135e+04
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
20
40
60
80
100
120
140
160
180
200

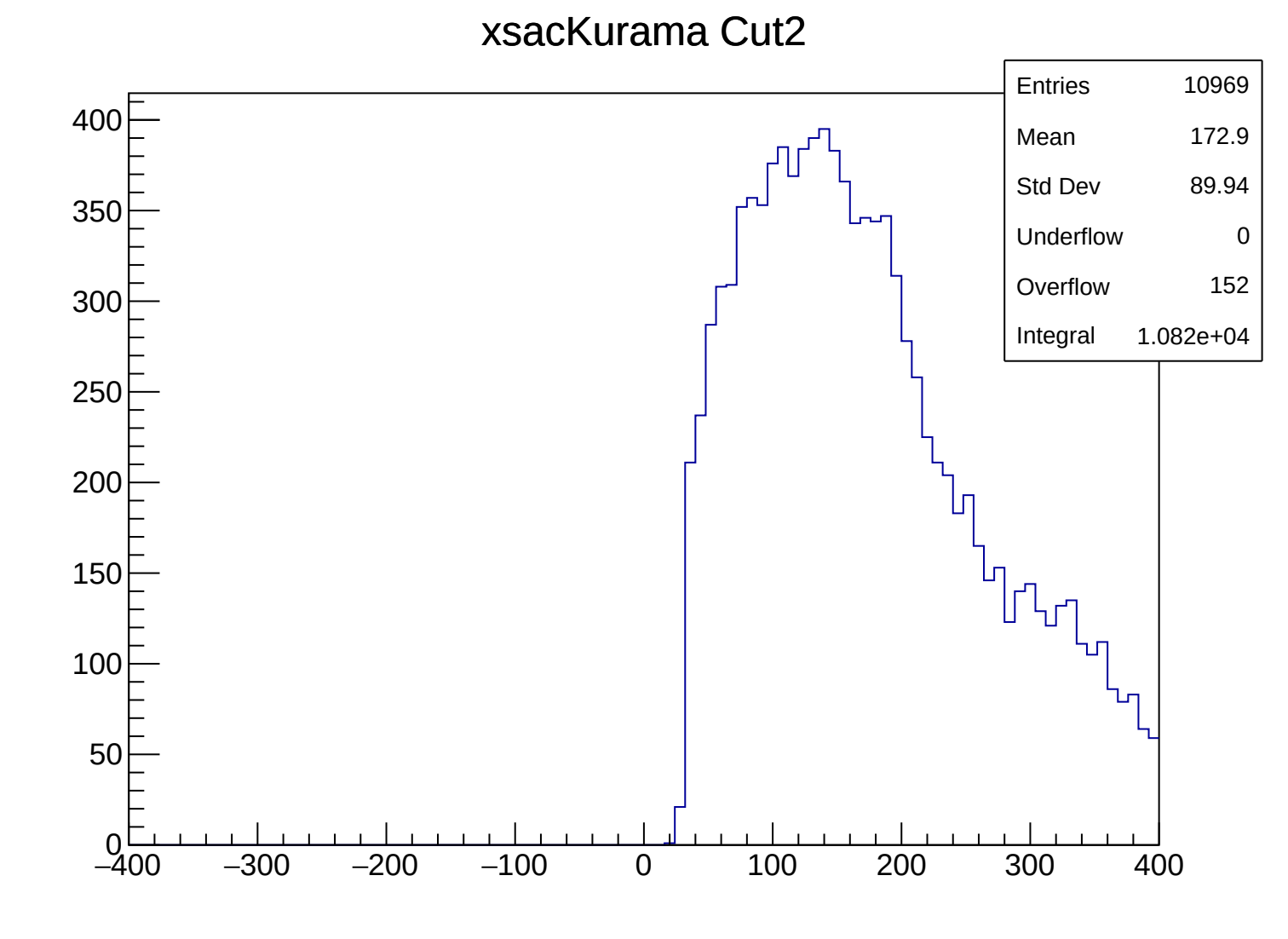

qKurama
Entries 98544
Mean −0.5064
Std Dev 0.8623
Underflow 0
Overflow 0
Integral 9.854e+04
70000
60000
50000
40000
30000
20000
10000
0
−3
−2
−1
0
1
2
3

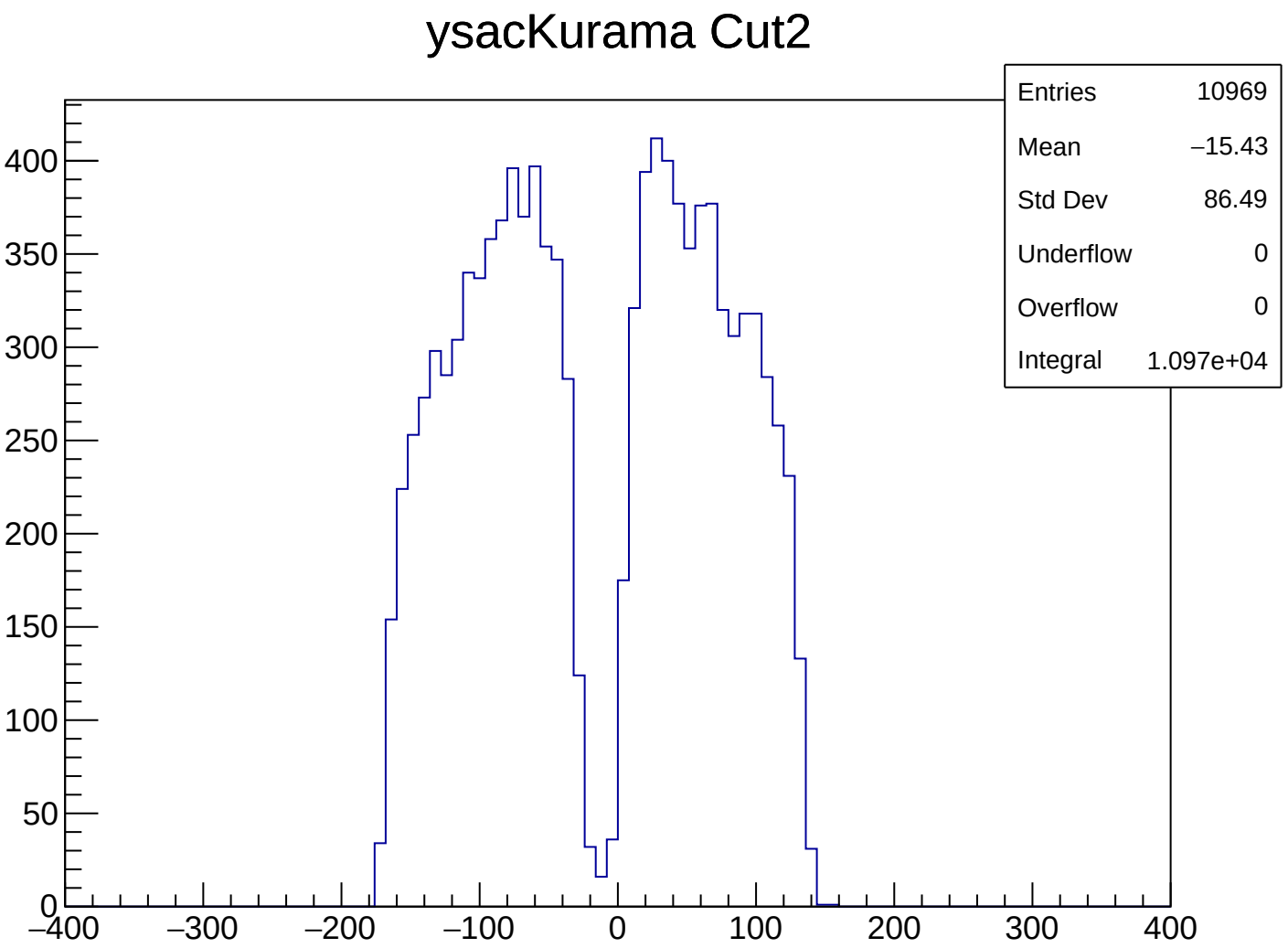

xsacKurama
Entries 98544
Mean 113.1
Std Dev 71.8
Underflow 0
Overflow 471
Integral 9.807e+04
7000
6000
5000
4000
3000
2000
1000
0
–400
–300
–200
–100
0
100
200
300
400

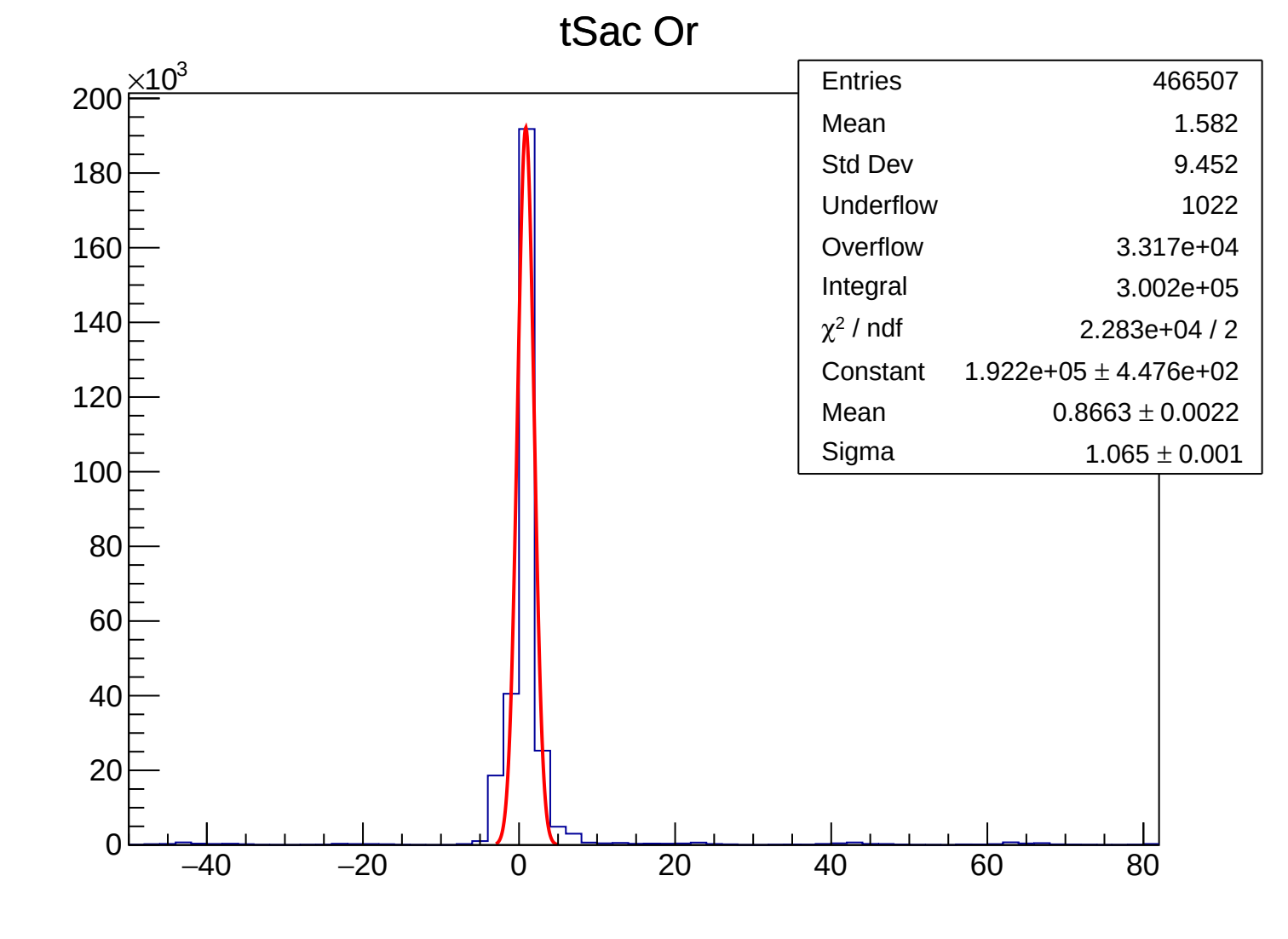

xsacKurama Cut1
Entries 10596
Mean 173
Std Dev 90.28
Underflow 0
Overflow 147
Integral 1.045e+04
400
350
300
250
200
150
100
50
0
–400
–300
–200
–100
0
100
200
300
400

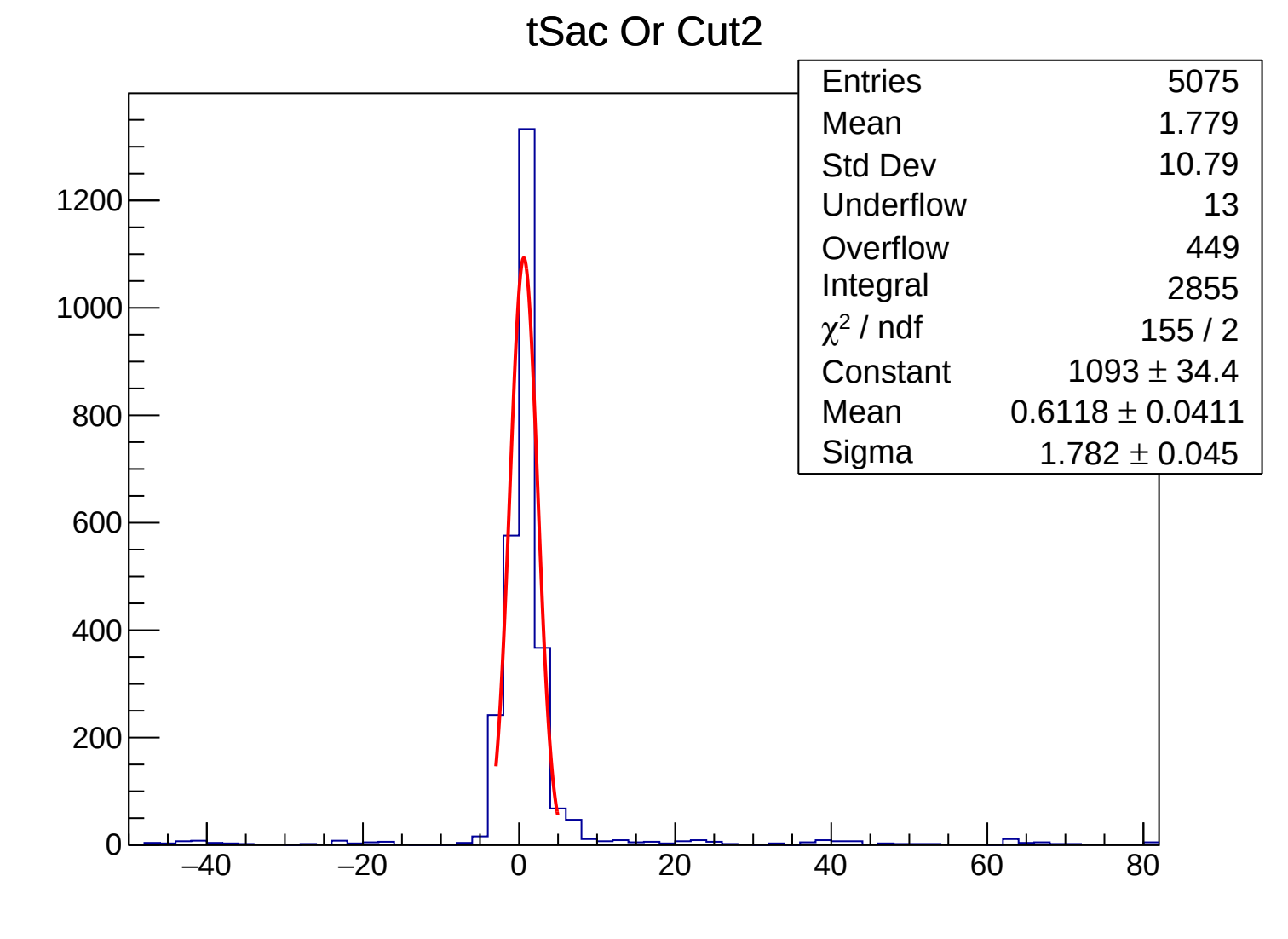

ysacKurama
Entries 98544
Mean −16.35
Std Dev 67.52
Underflow 0
Overflow 0
Integral 9.854e+04
5000
4000
3000
2000
1000
0
−400
−300
−200
−100
0
100
200
300
400

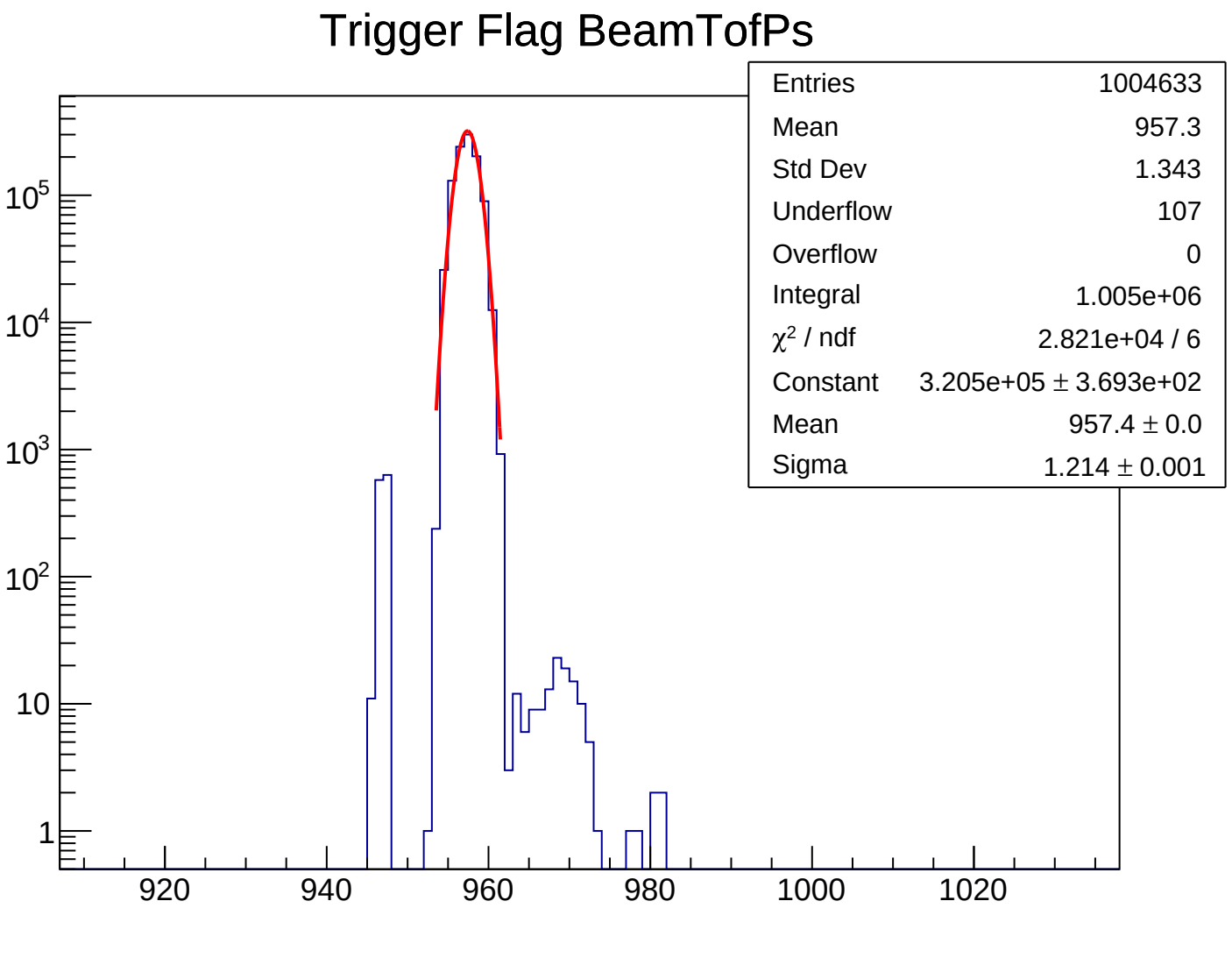

ysacKurama Cut1
Entries 10596
Mean −15.44
Std Dev 86.49
Underflow 0
Overflow 0
Integral 1.06e+04
400
350
300
250
200
150
100
50
0
−400
−300
−200
−100
0
100
200
300
400

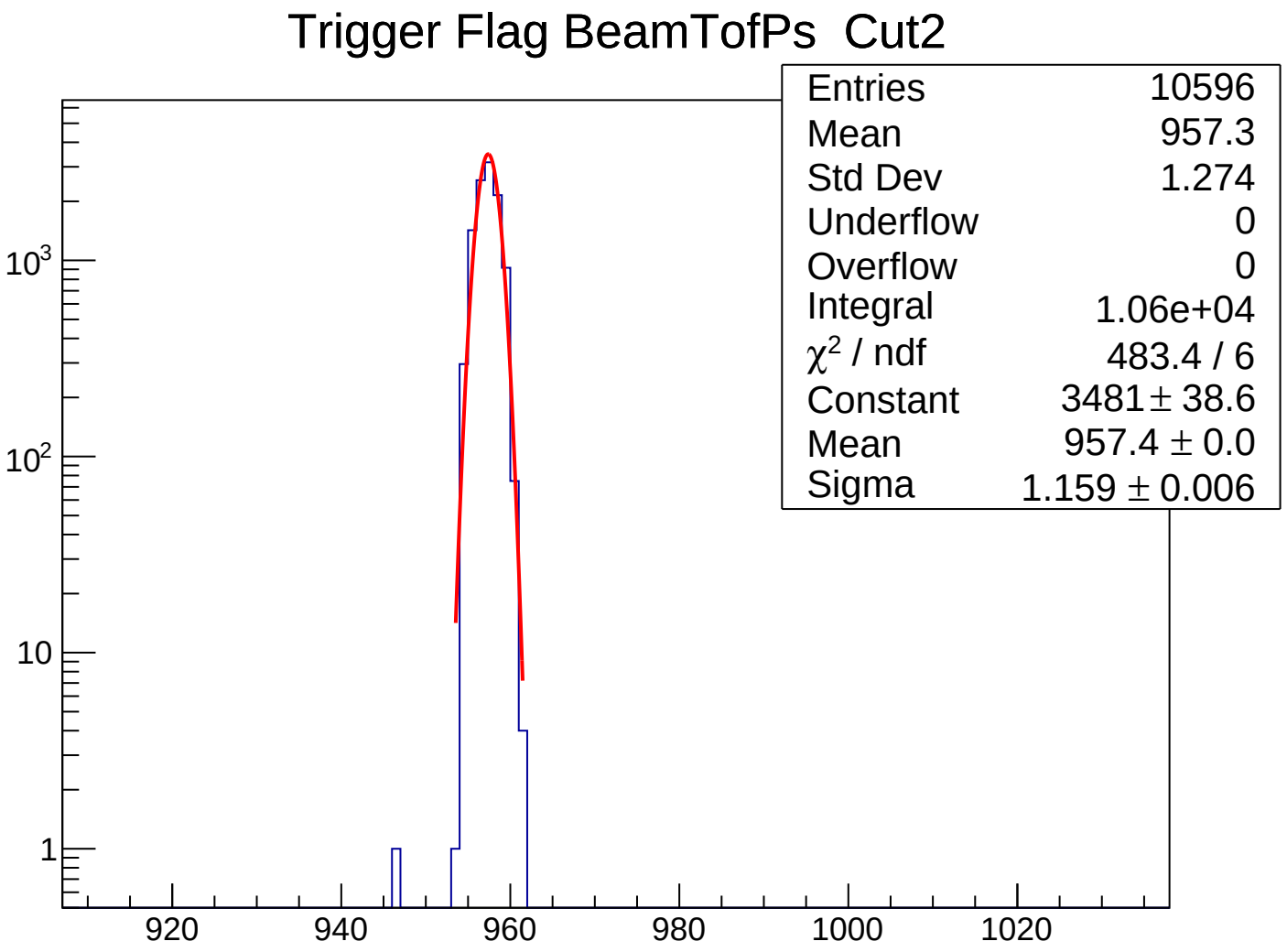

xsacKurama Cut2
Entries 10969
Mean 172.9
Std Dev 89.94
Underflow 0
Overflow 152
Integral 1.082e+04
400
350
300
250
200
150
100
50
0
–400
–300
–200
–100
0
100
200
300
400

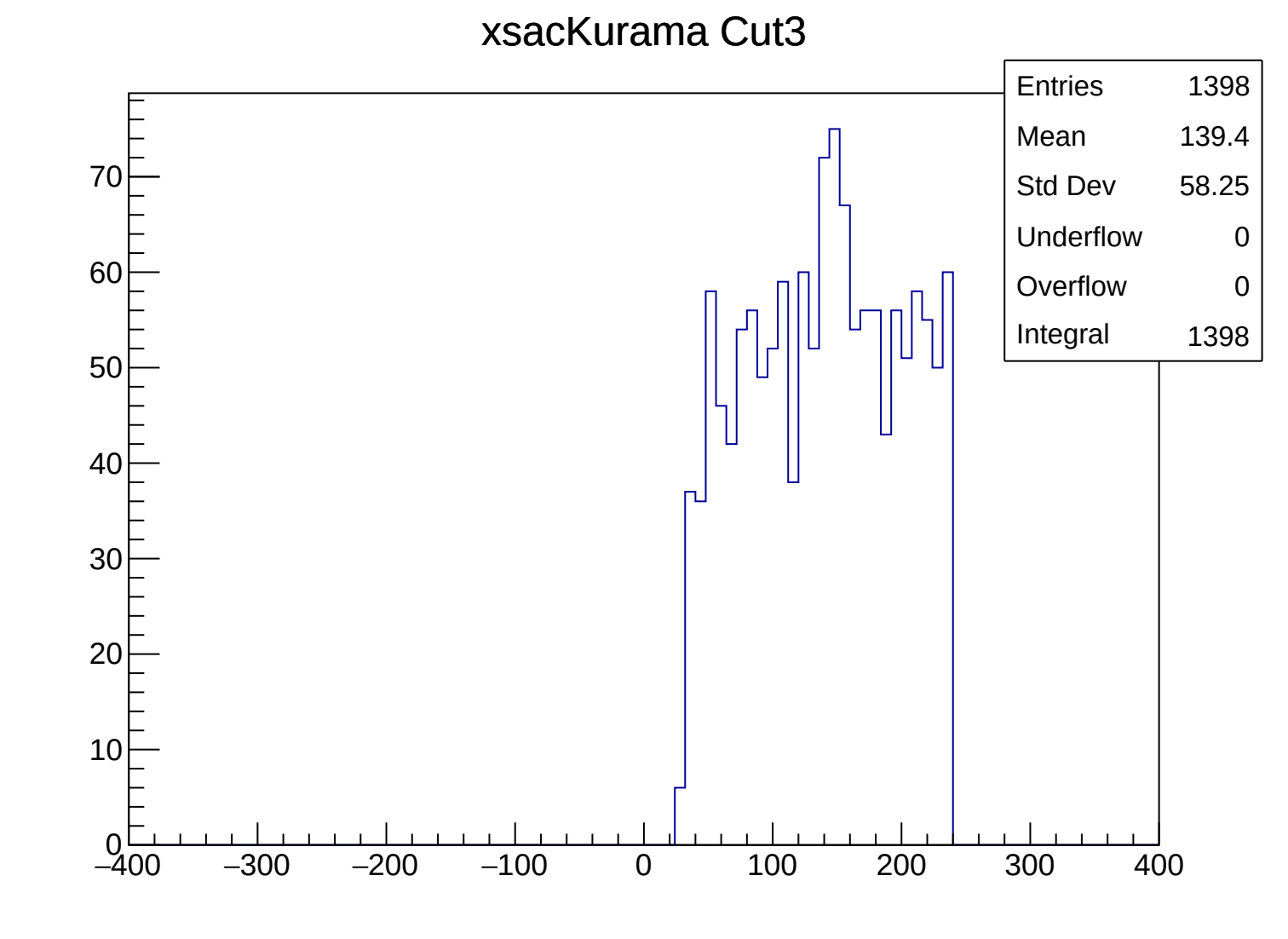

ysacKurama Cut2
Entries 10969
Mean −15.43
Std Dev 86.49
Underflow 0
Overflow 0
Integral 1.097e+04
400
350
300
250
200
150
100
50
0
−400
−300
−200
−100
0
100
200
300
400

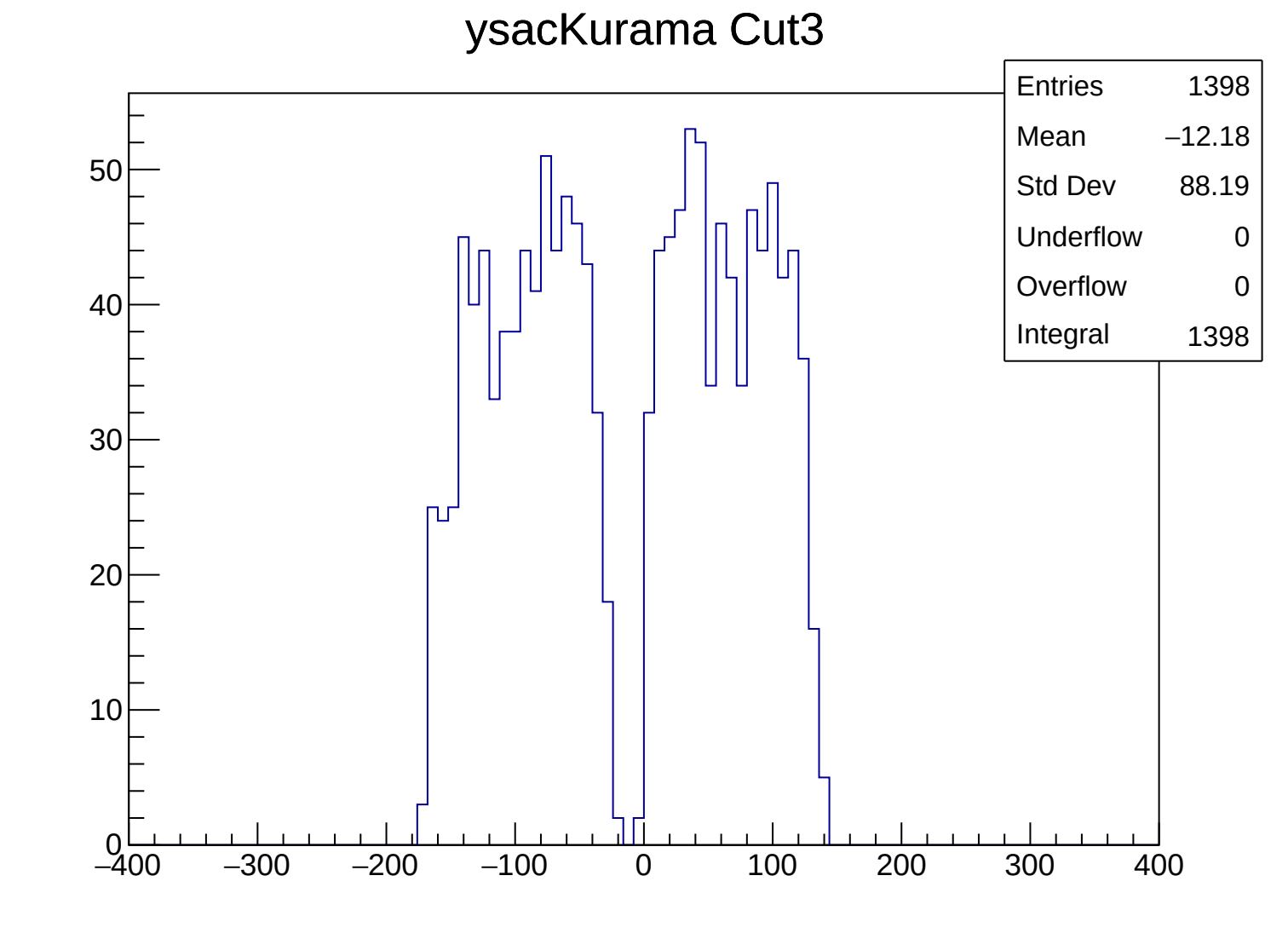

tSac Or
×10^3
200
180
160
140
120
100
80
60
40
20
0
−40
−20
0
20
40
60
80
Entries 466507
Mean 1.582
Std Dev 9.452
Underflow 1022
Overflow 3.317e+04
Integral 3.002e+05
χ² / ndf 2.283e+04 / 2
Constant 1.922e+05 ± 4.476e+02
Mean 0.8663 ± 0.0022
Sigma 1.065 ± 0.001

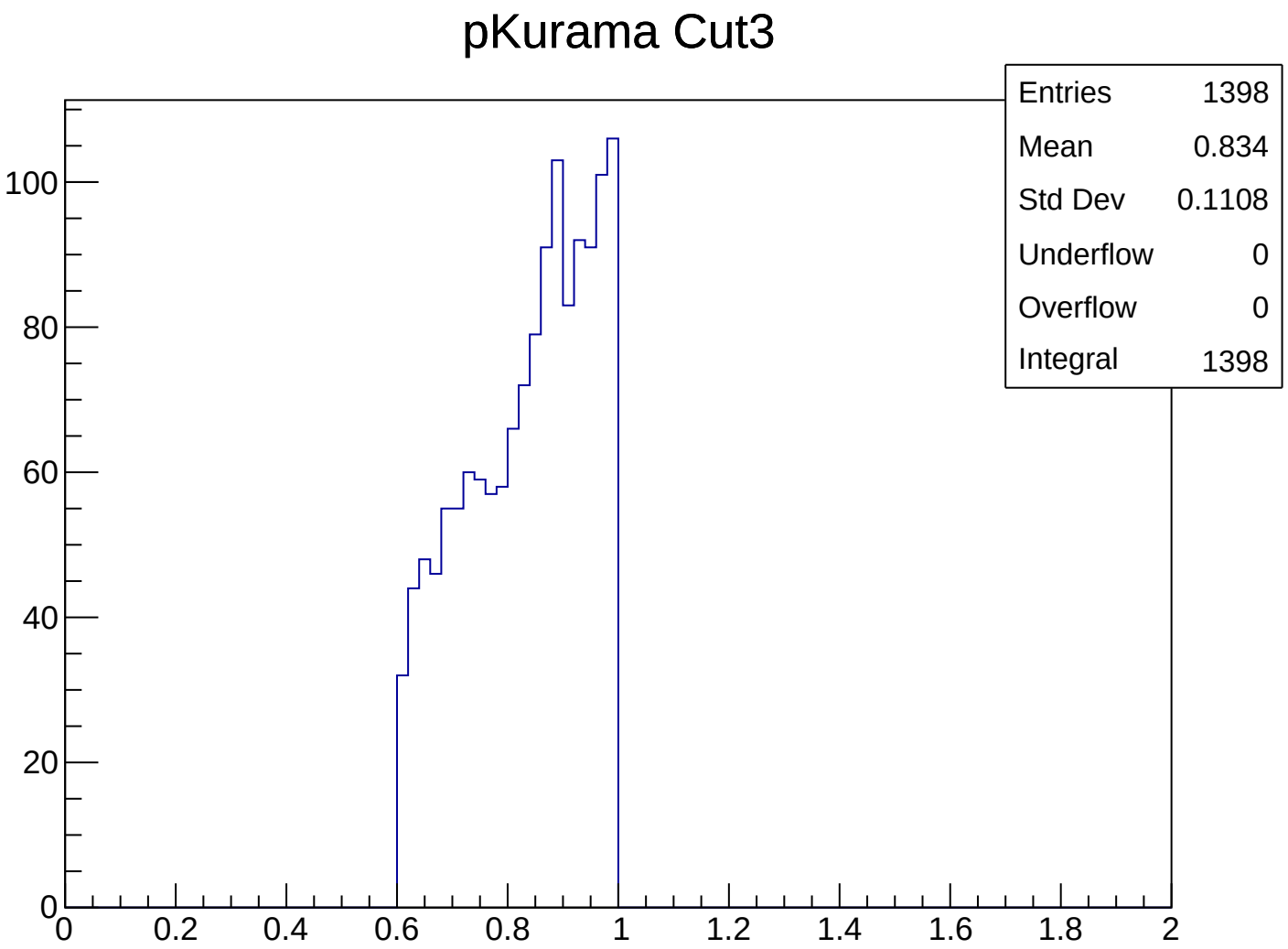

tSac Or Cut2
Entries 5075
Mean 1.779
Std Dev 10.79
Underflow 13
Overflow 449
Integral 2855
χ² / ndf 155 / 2
Constant 1093 ± 34.4
Mean 0.6118 ± 0.0411
Sigma 1.782 ± 0.045
1200
1000
800
600
400
200
0
–40
–20
0
20
40
60
80

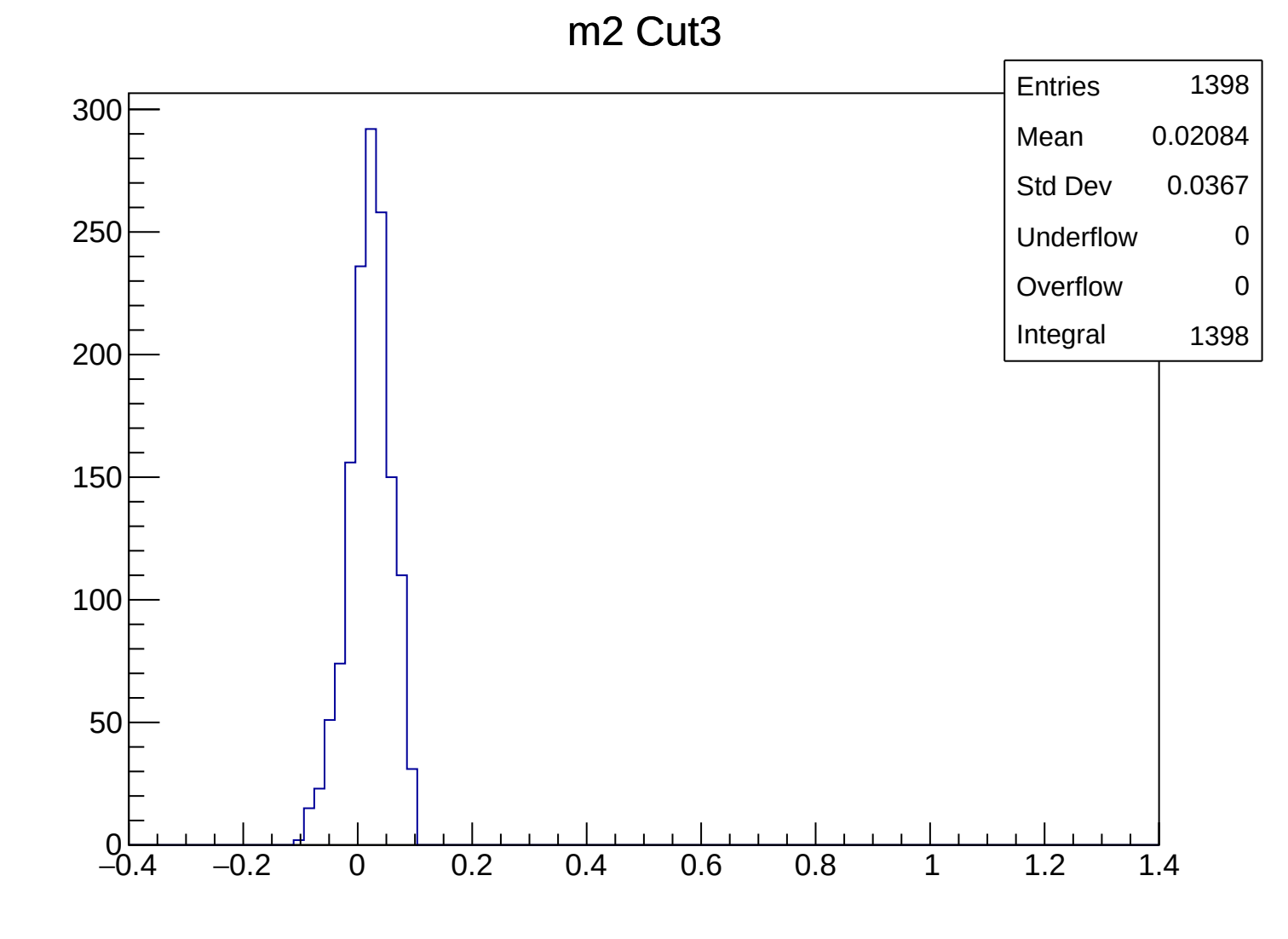

Trigger Flag BeamTofPs
Entries 1004633
Mean 957.3
Std Dev 1.343
Underflow 107
Overflow 0
Integral 1.005e+06
χ² / ndf 2.821e+04 / 6
Constant 3.205e+05 ± 3.693e+02
Mean 957.4 ± 0.0
Sigma 1.214 ± 0.001
10⁵
10⁴
10³
10²
10
1
920
940
960
980
1000
1020

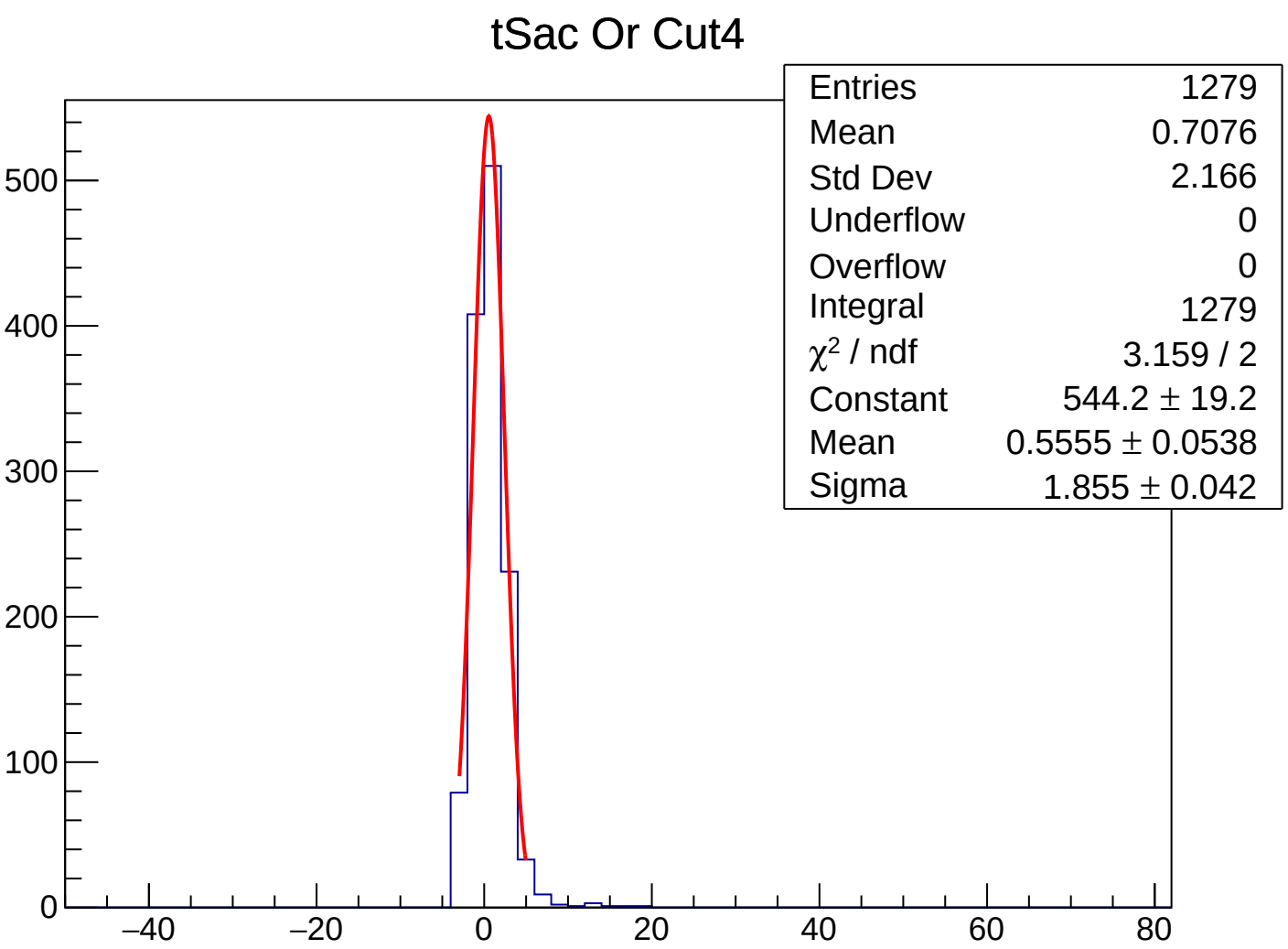

Trigger Flag BeamTofPs Cut2
Entries 10596
Mean 957.3
Std Dev 1.274
Underflow 0
Overflow 0
Integral 1.06e+04
χ² / ndf 483.4 / 6
Constant 3481 ± 38.6
Mean 957.4 ± 0.0
Sigma 1.159 ± 0.006
10³
10²
10
1
920
940
960
980
1000
1020

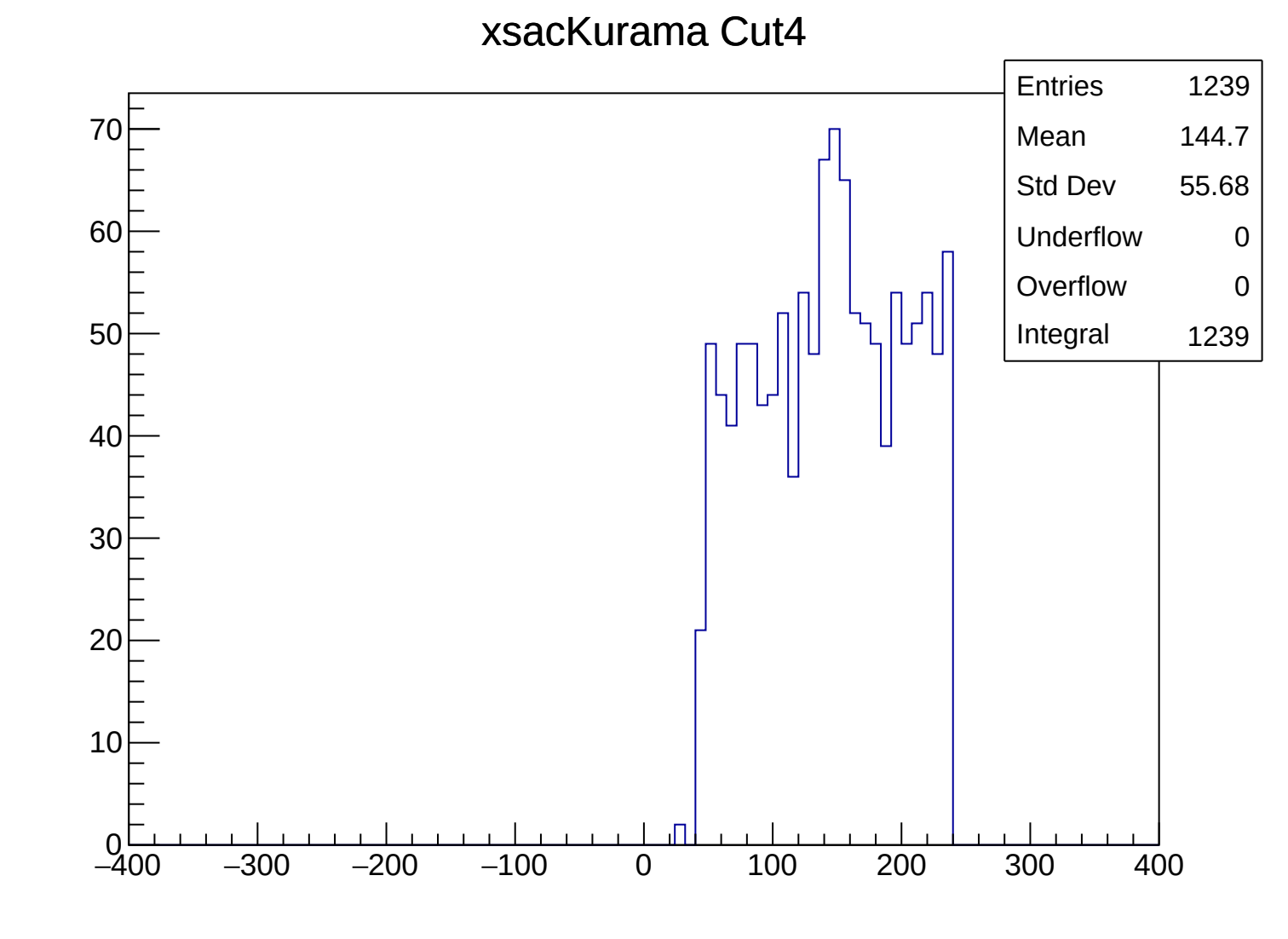

xsacKurama Cut3
Entries 1398
Mean 139.4
Std Dev 58.25
Underflow 0
Overflow 0
Integral 1398
70
60
50
40
30
20
10
0
–400
–300
–200
–100
0
100
200
300
400

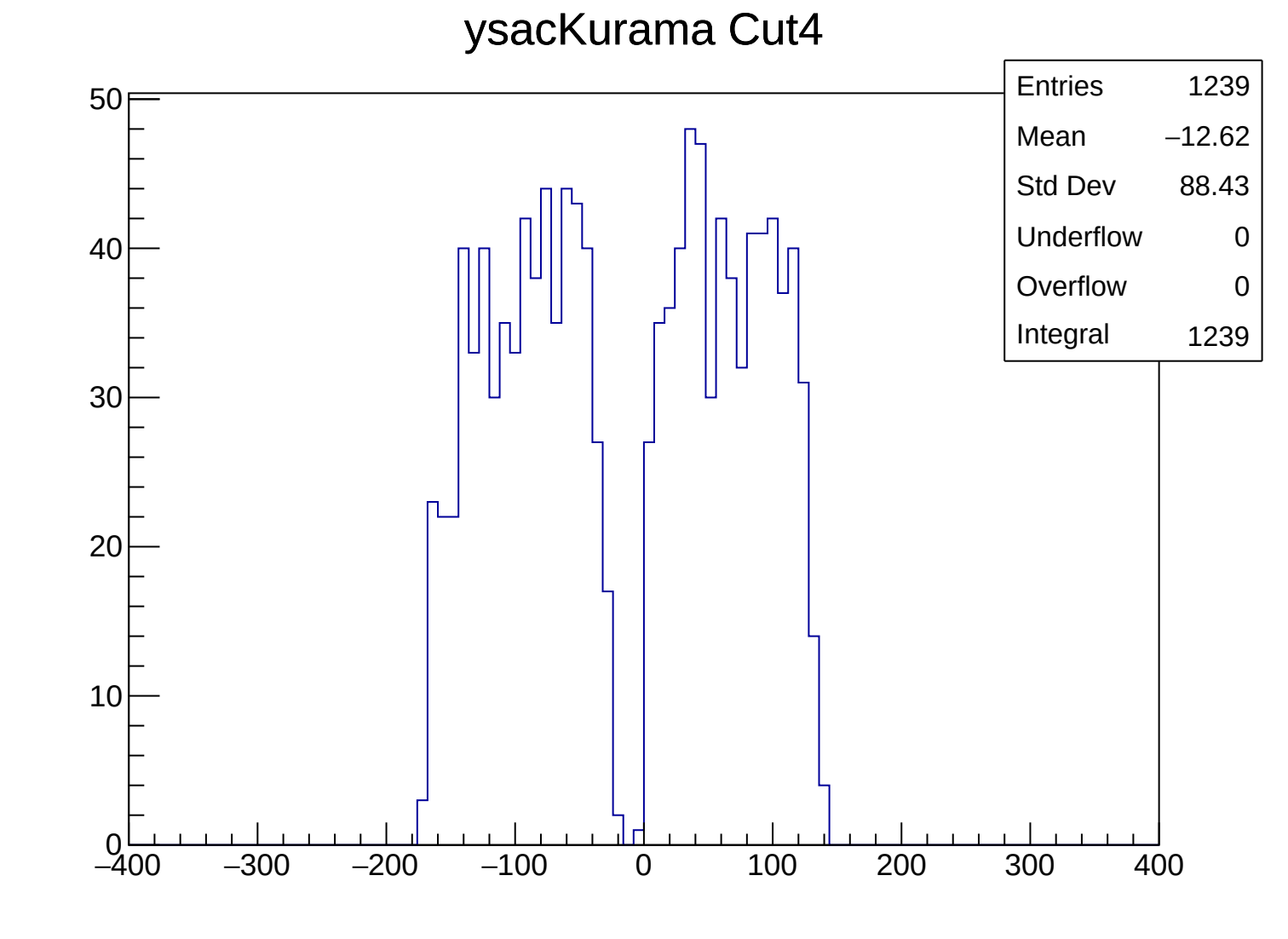

ysacKurama Cut3
Entries 1398
Mean −12.18
Std Dev 88.19
Underflow 0
Overflow 0
Integral 1398
50
40
30
20
10
0
−400
−300
−200
−100
0
100
200
300
400

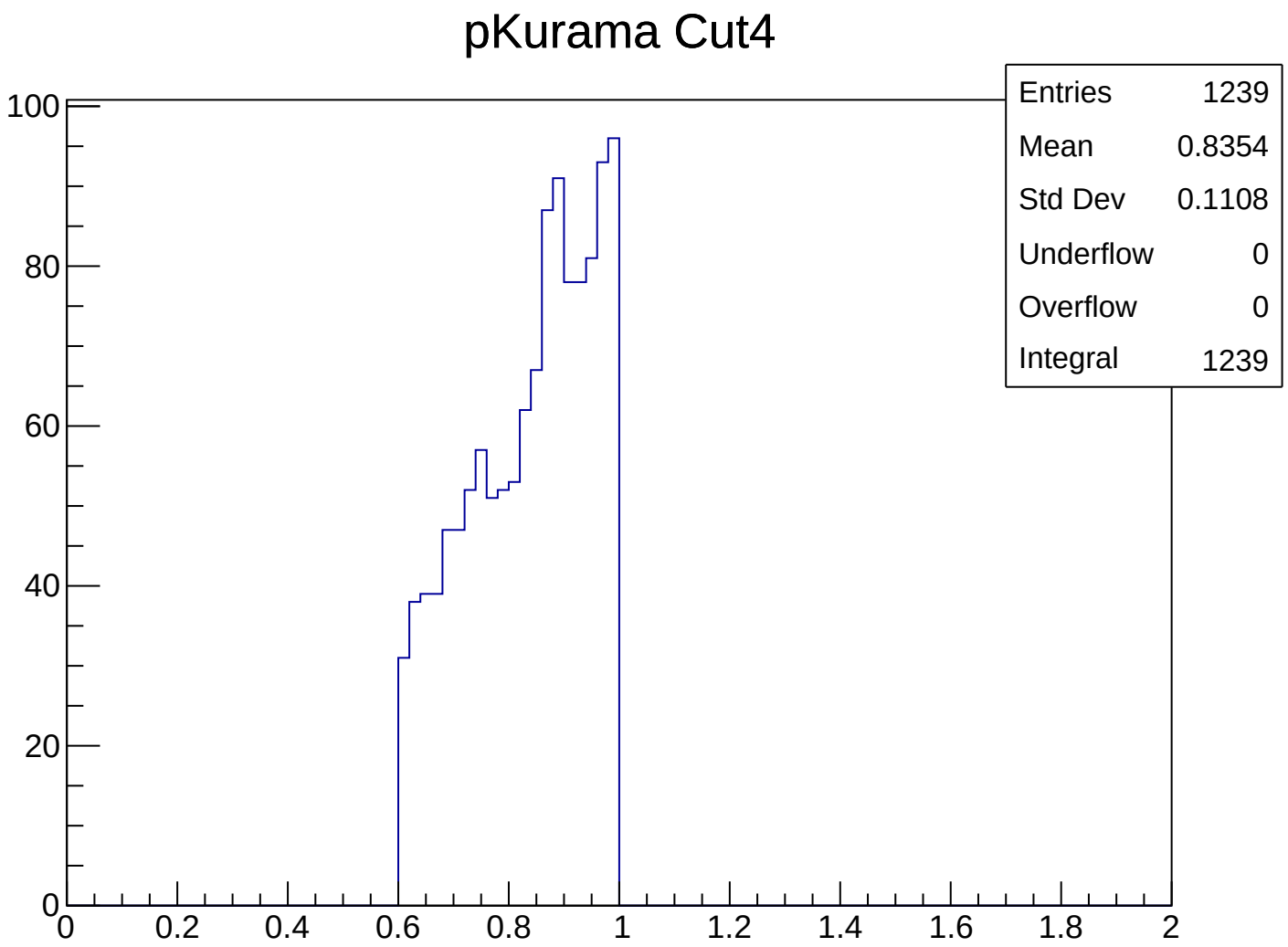

pKurama Cut3
Entries 1398
Mean 0.834
Std Dev 0.1108
Underflow 0
Overflow 0
Integral 1398
0
20
40
60
80
100
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

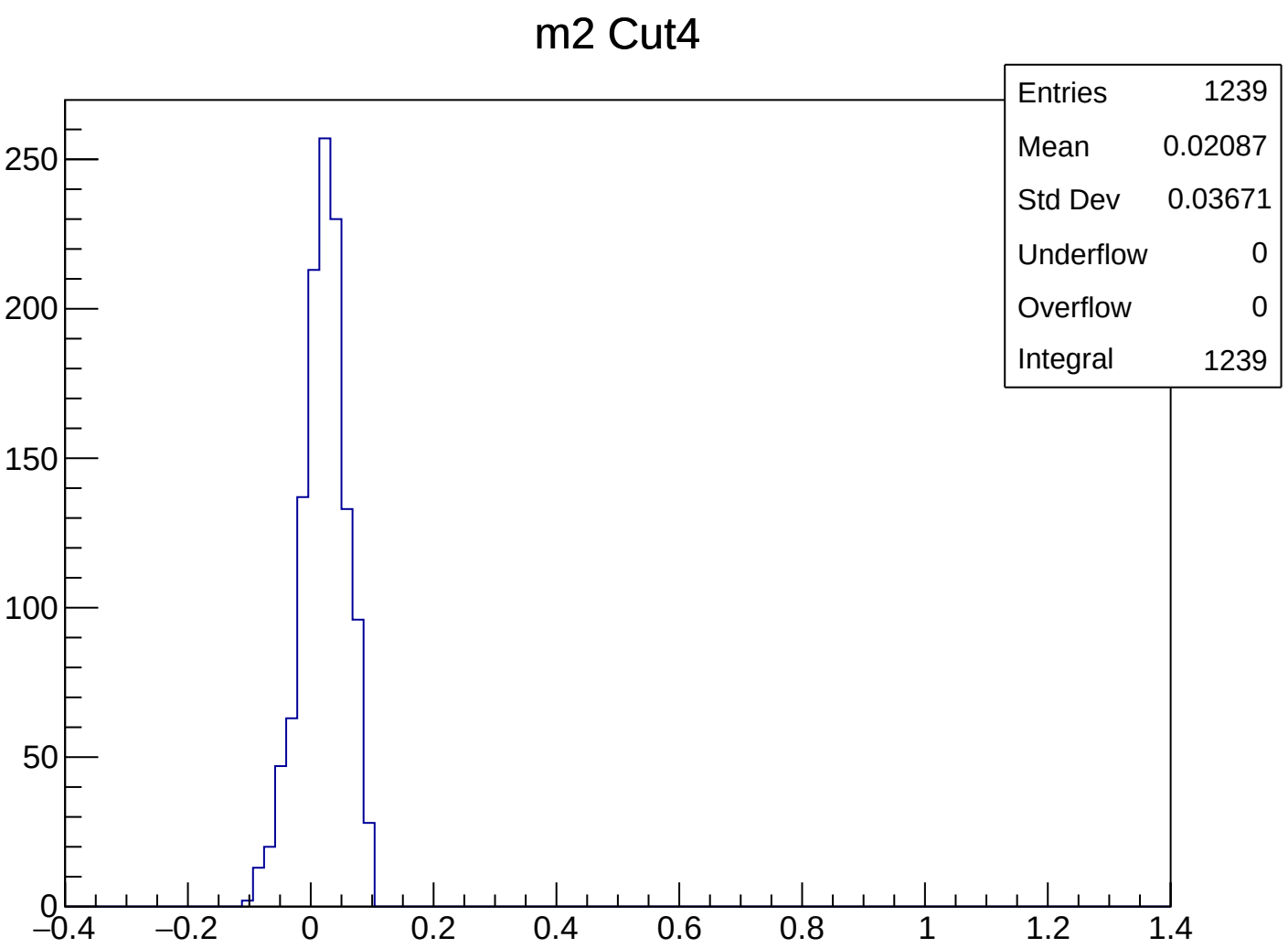

m2 Cut3
Entries 1398
Mean 0.02084
Std Dev 0.0367
Underflow 0
Overflow 0
Integral 1398
300
250
200
150
100
50
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

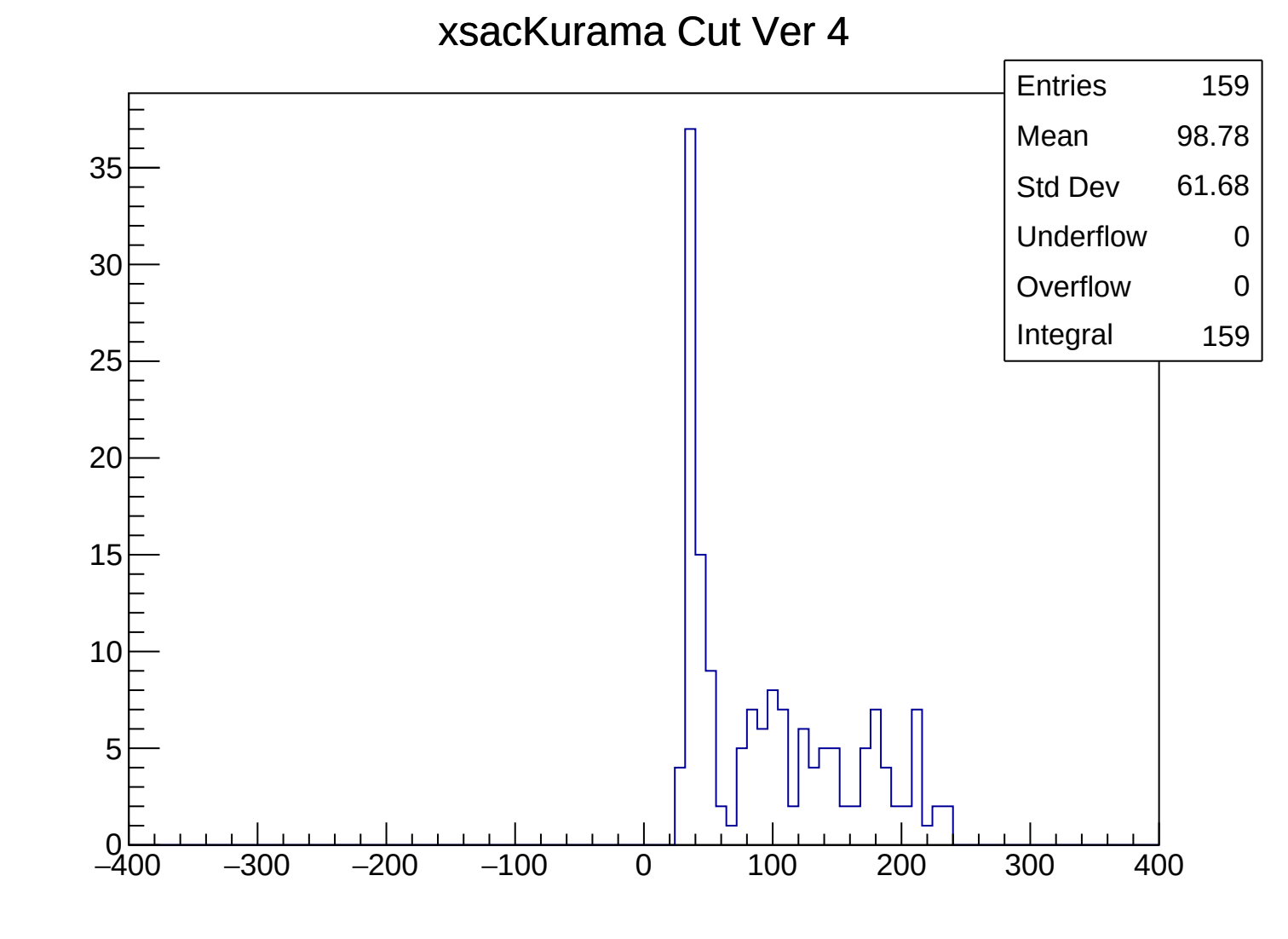

tSac Or Cut4
Entries 1279
Mean 0.7076
Std Dev 2.166
Underflow 0
Overflow 0
Integral 1279
χ² / ndf 3.159 / 2
Constant 544.2 ± 19.2
Mean 0.5555 ± 0.0538
Sigma 1.855 ± 0.042
500
400
300
200
100
0
–40
–20
0
20
40
60
80

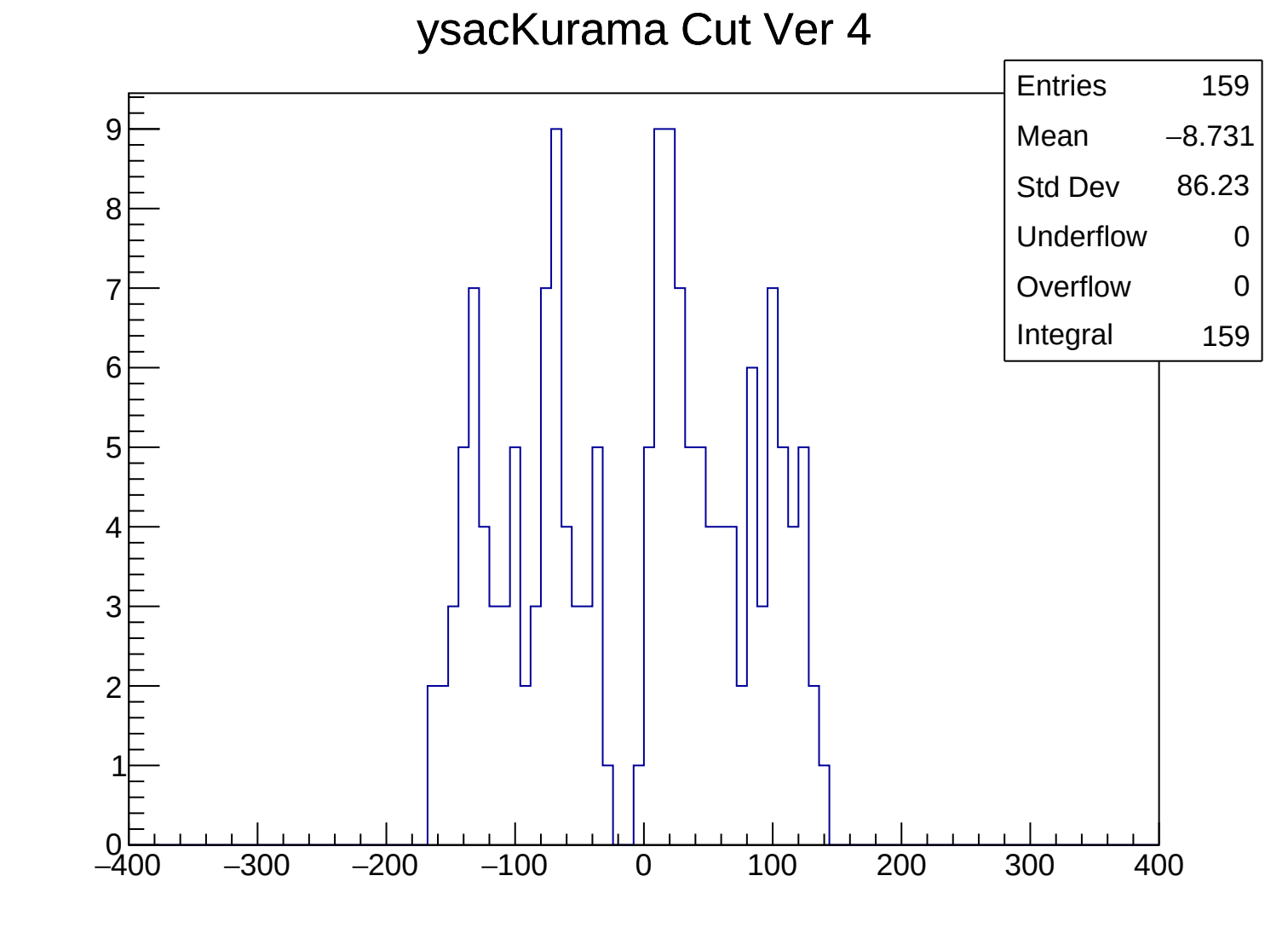

xsacKurama Cut4
Entries 1239
Mean 144.7
Std Dev 55.68
Underflow 0
Overflow 0
Integral 1239
70
60
50
40
30
20
10
0
–400
–300
–200
–100
0
100
200
300
400

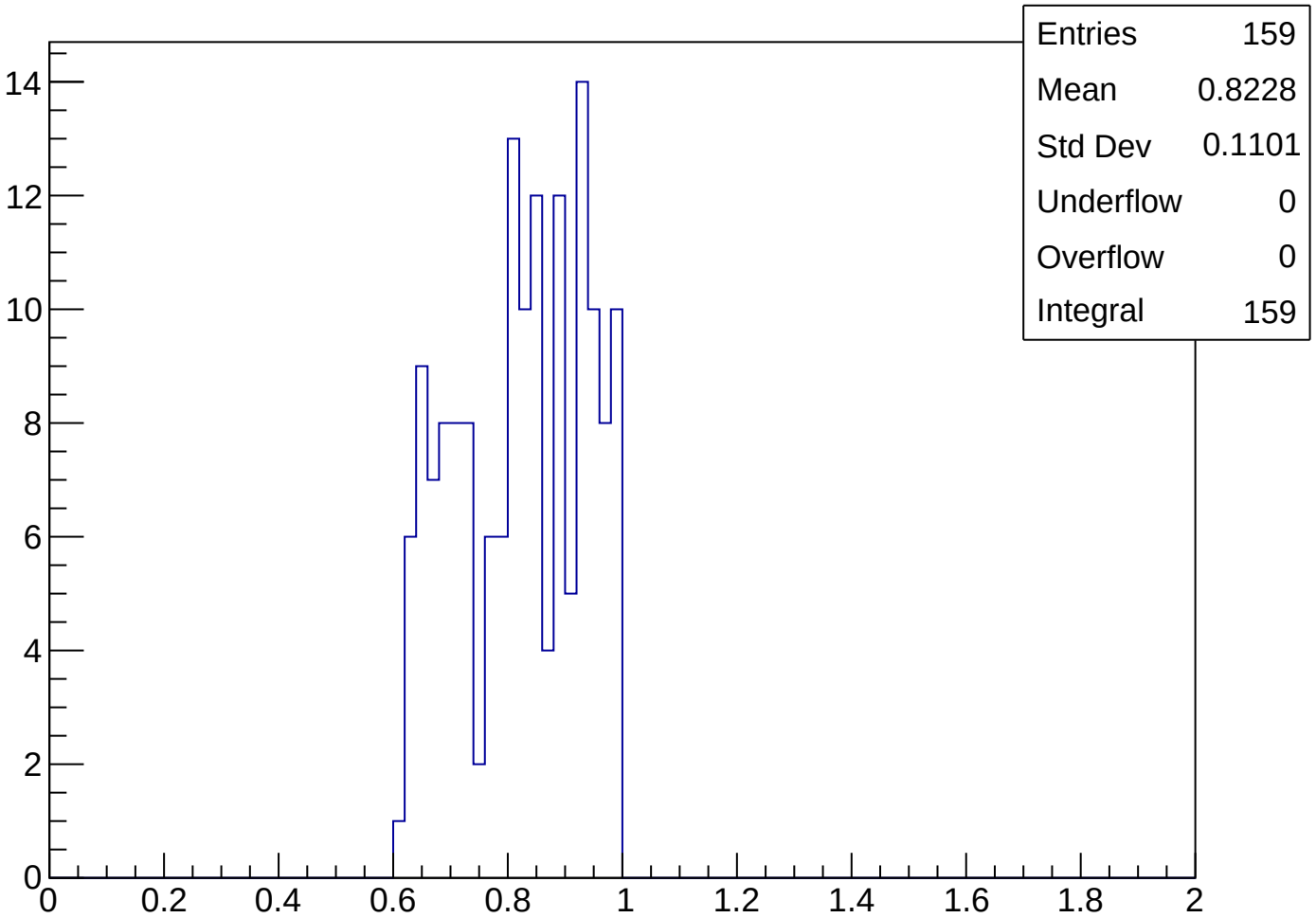

ysacKurama Cut4
Entries 1239
Mean −12.62
Std Dev 88.43
Underflow 0
Overflow 0
Integral 1239
50
40
30
20
10
0
−400
−300
−200
−100
0
100
200
300
400

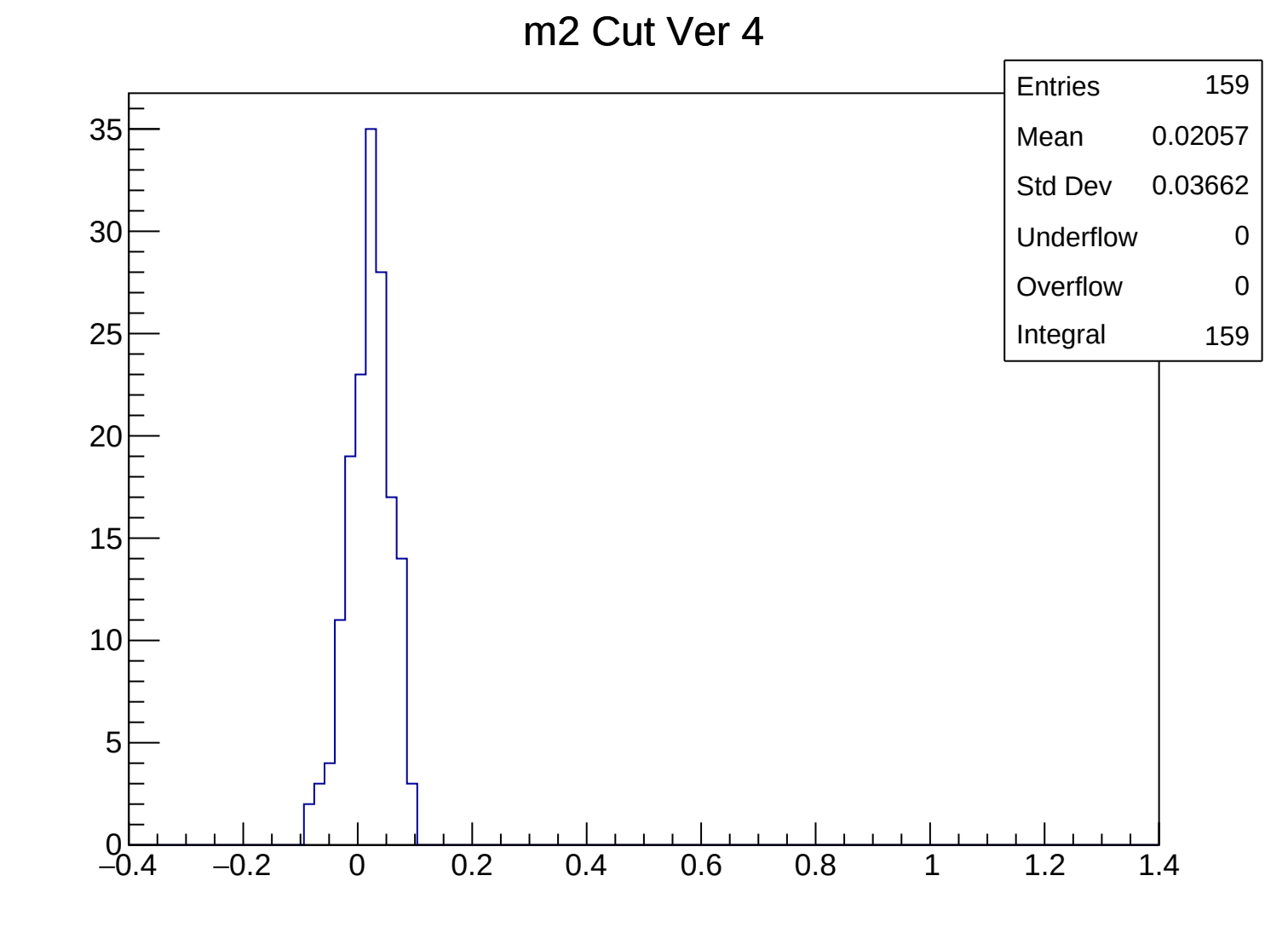

pKurama Cut4
Entries 1239
Mean 0.8354
Std Dev 0.1108
Underflow 0
Overflow 0
Integral 1239
100
80
60
40
20
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

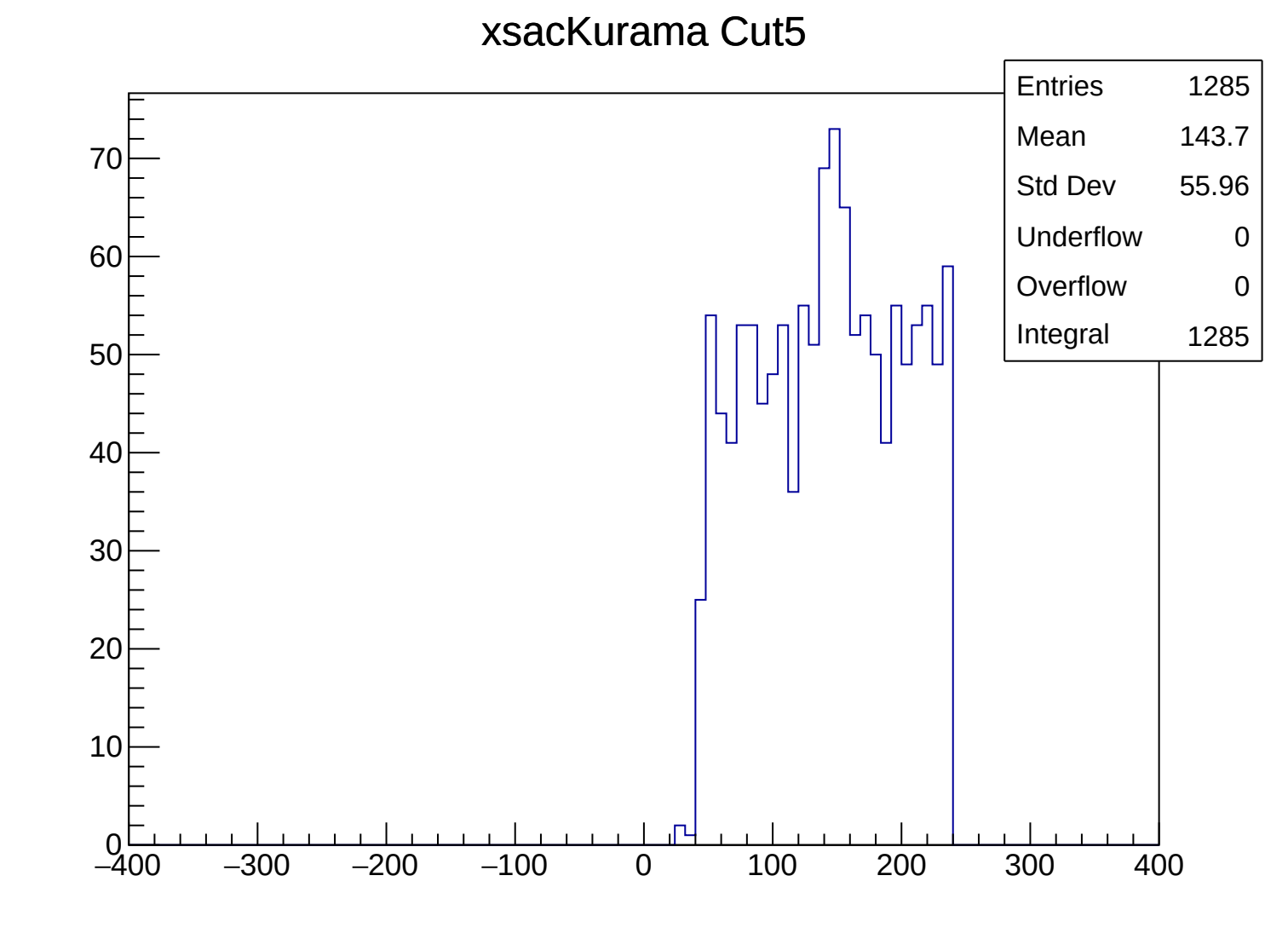

m2 Cut4
Entries 1239
Mean 0.02087
Std Dev 0.03671
Underflow 0
Overflow 0
Integral 1239
250
200
150
100
50
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

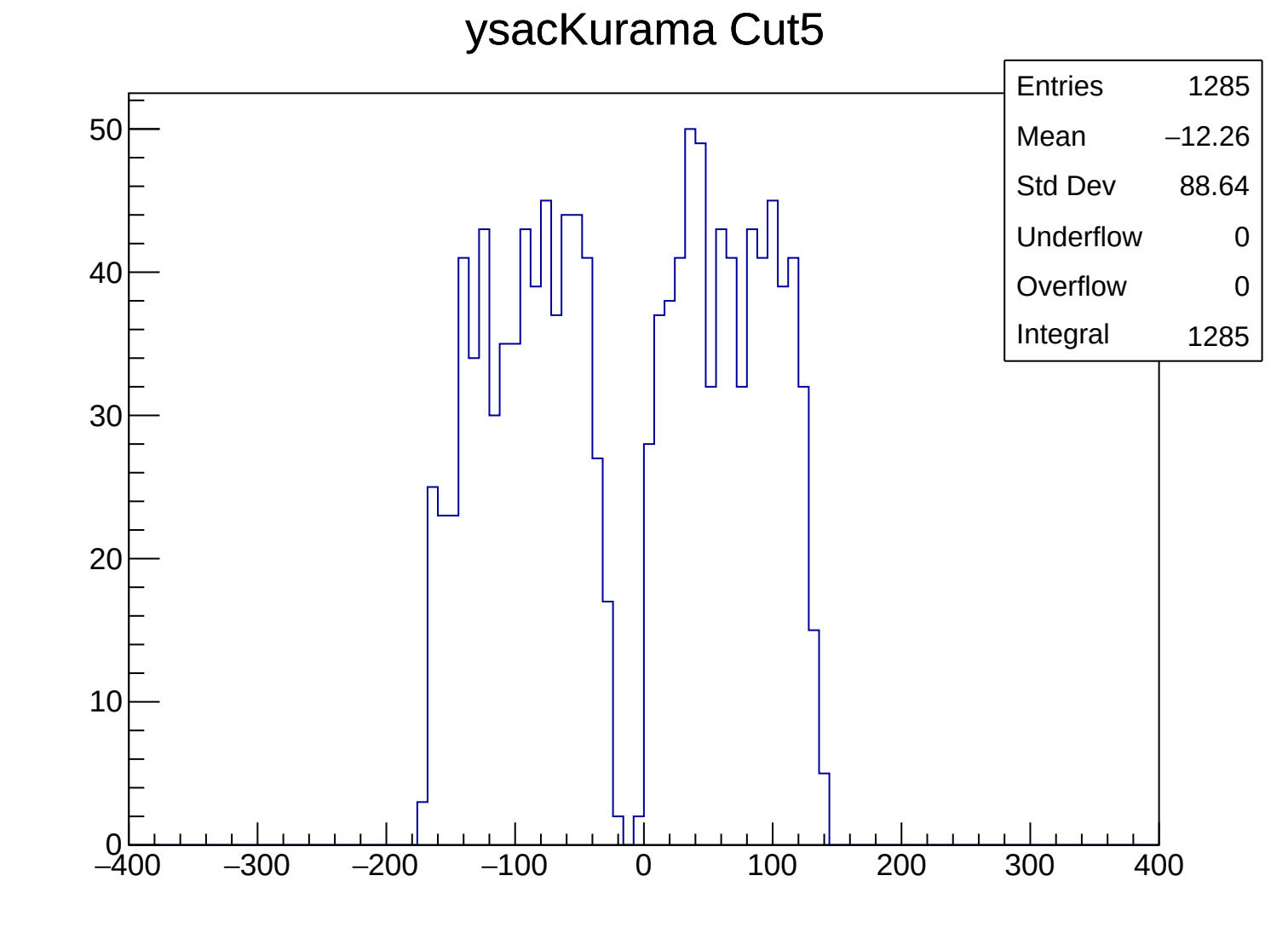

xsacKurama Cut Ver 4
Entries 159
Mean 98.78
Std Dev 61.68
Underflow 0
Overflow 0
Integral 159
35
30
25
20
15
10
5
0
–400
–300
–200
–100
0
100
200
300
400

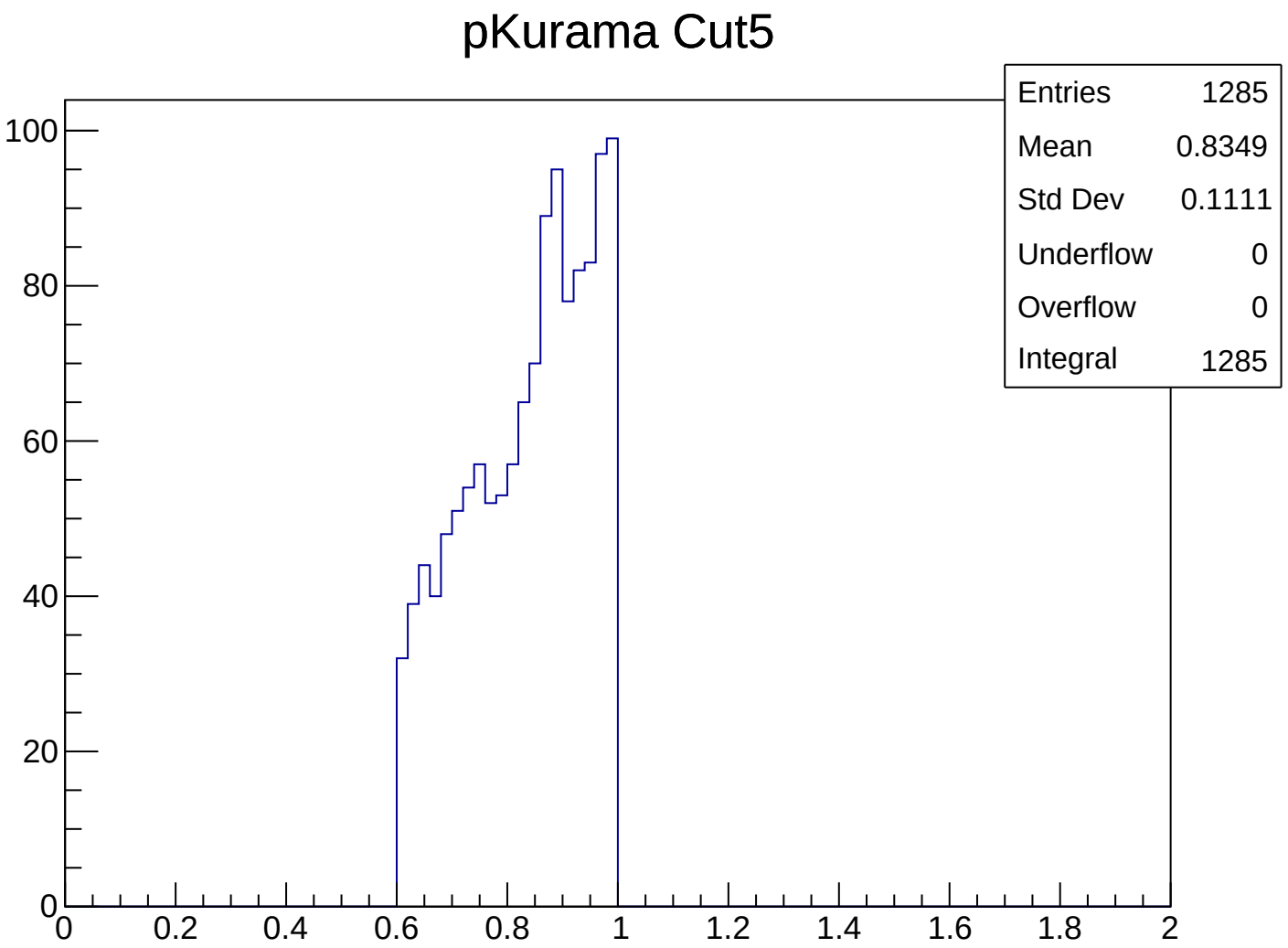

ysacKurama Cut Ver 4
Entries 159
Mean –8.731
Std Dev 86.23
Underflow 0
Overflow 0
Integral 159
9
8
7
6
5
4
3
2
1
0
–400
–300
–200
–100
0
100
200
300
400

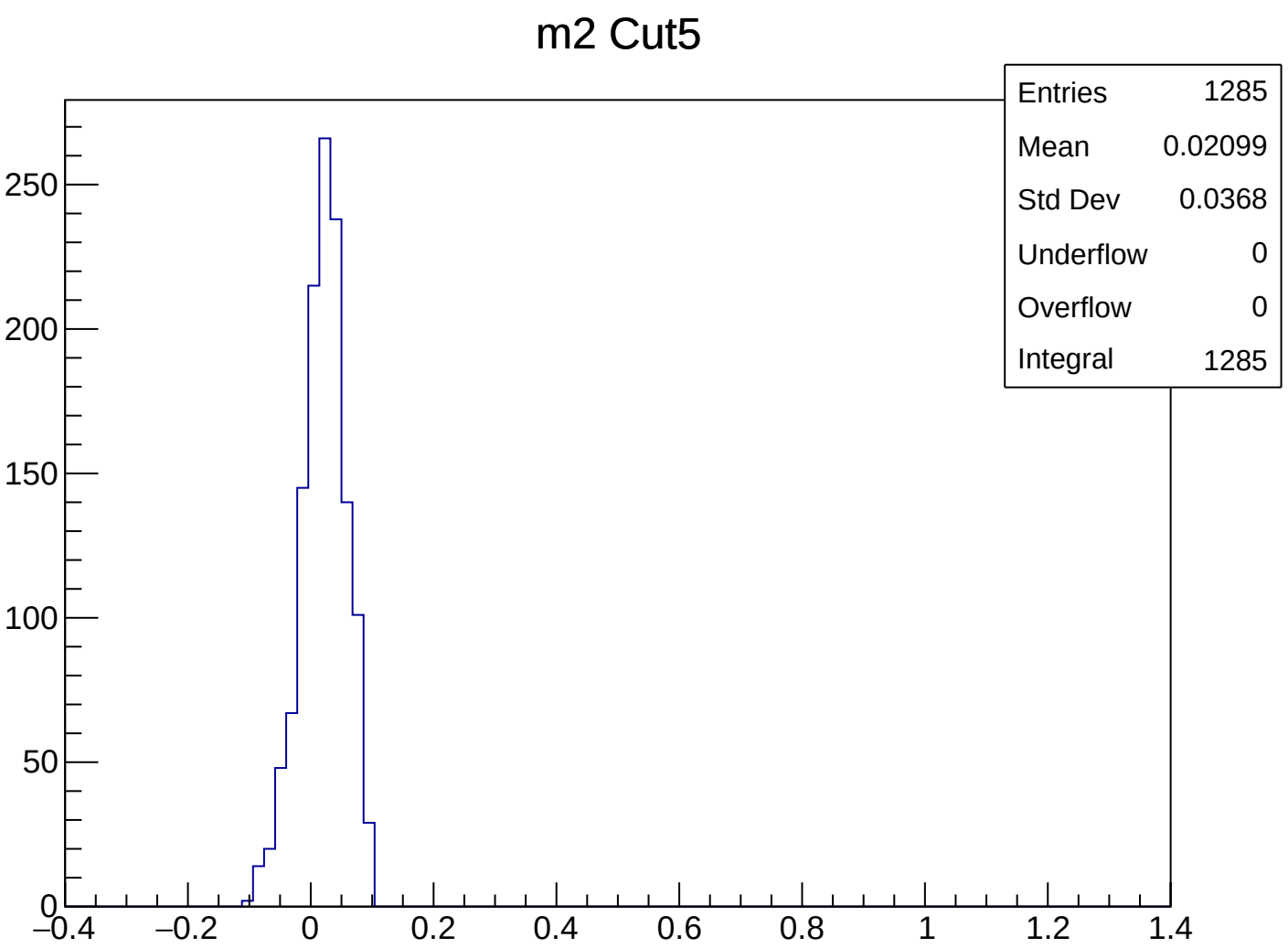

pKurama Cut Ver 4
Entries 159
Mean 0.8228
Std Dev 0.1101
Underflow 0
Overflow 0
Integral 159
0
2
4
6
8
10
12
14
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

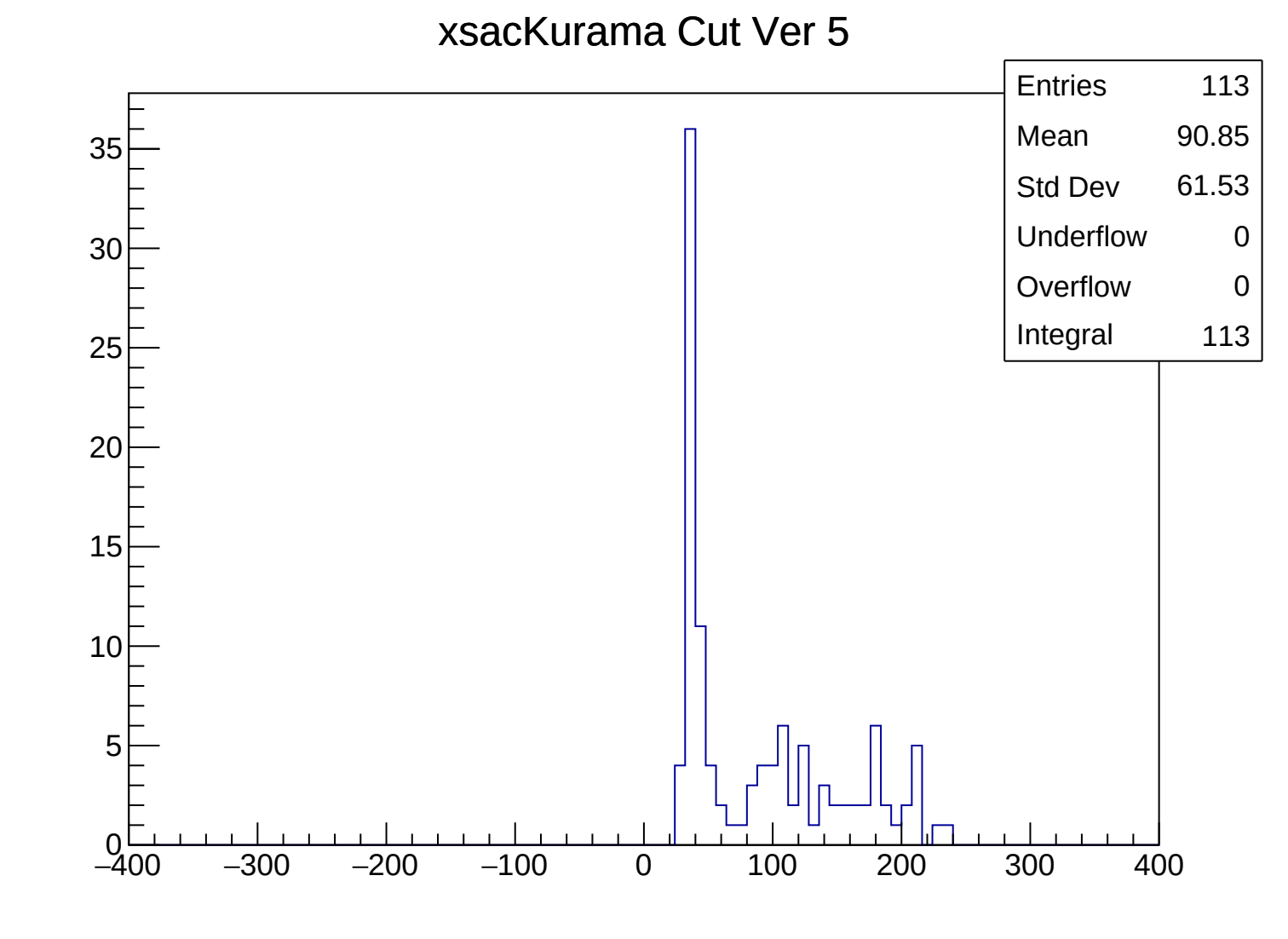

m2 Cut Ver 4
Entries 159
Mean 0.02057
Std Dev 0.03662
Underflow 0
Overflow 0
Integral 159
35
30
25
20
15
10
5
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

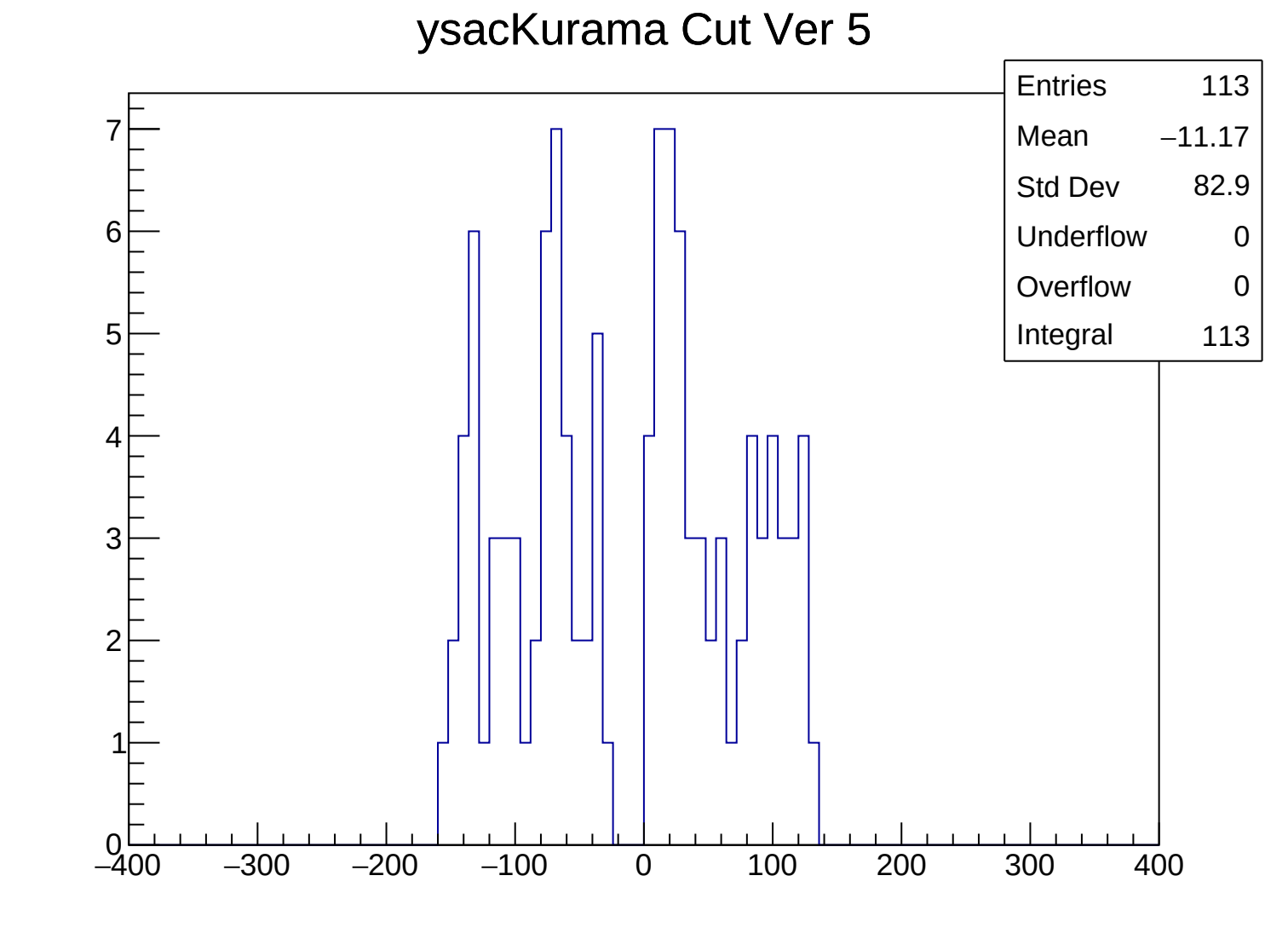

xsacKurama Cut5
Entries 1285
Mean 143.7
Std Dev 55.96
Underflow 0
Overflow 0
Integral 1285
70
60
50
40
30
20
10
0
–400
–300
–200
–100
0
100
200
300
400

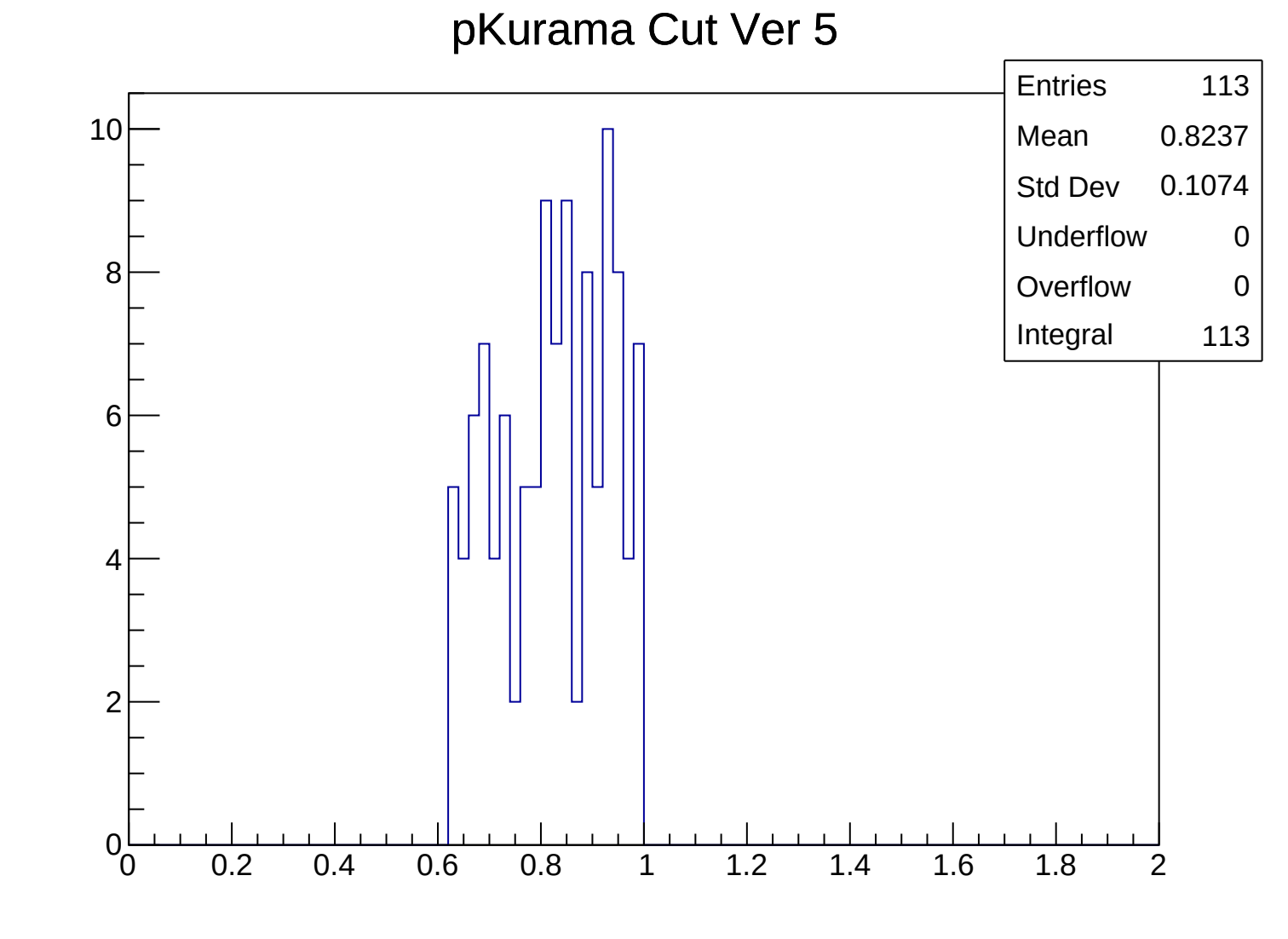

ysacKurama Cut5
Entries 1285
Mean −12.26
Std Dev 88.64
Underflow 0
Overflow 0
Integral 1285
50
40
30
20
10
0
−400
−300
−200
−100
0
100
200
300
400

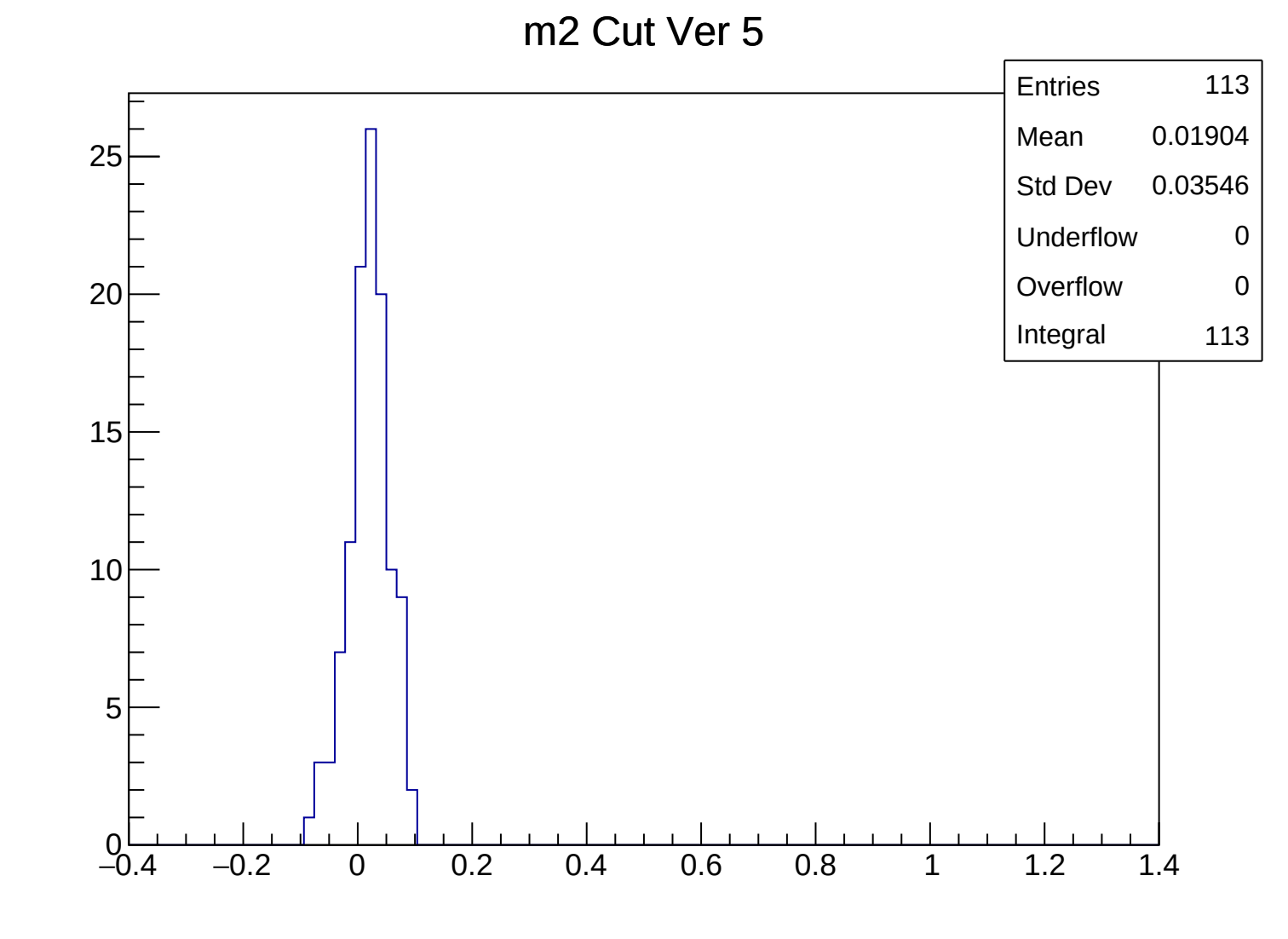

pKurama Cut5
Entries 1285
Mean 0.8349
Std Dev 0.1111
Underflow 0
Overflow 0
Integral 1285
100
80
60
40
20
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

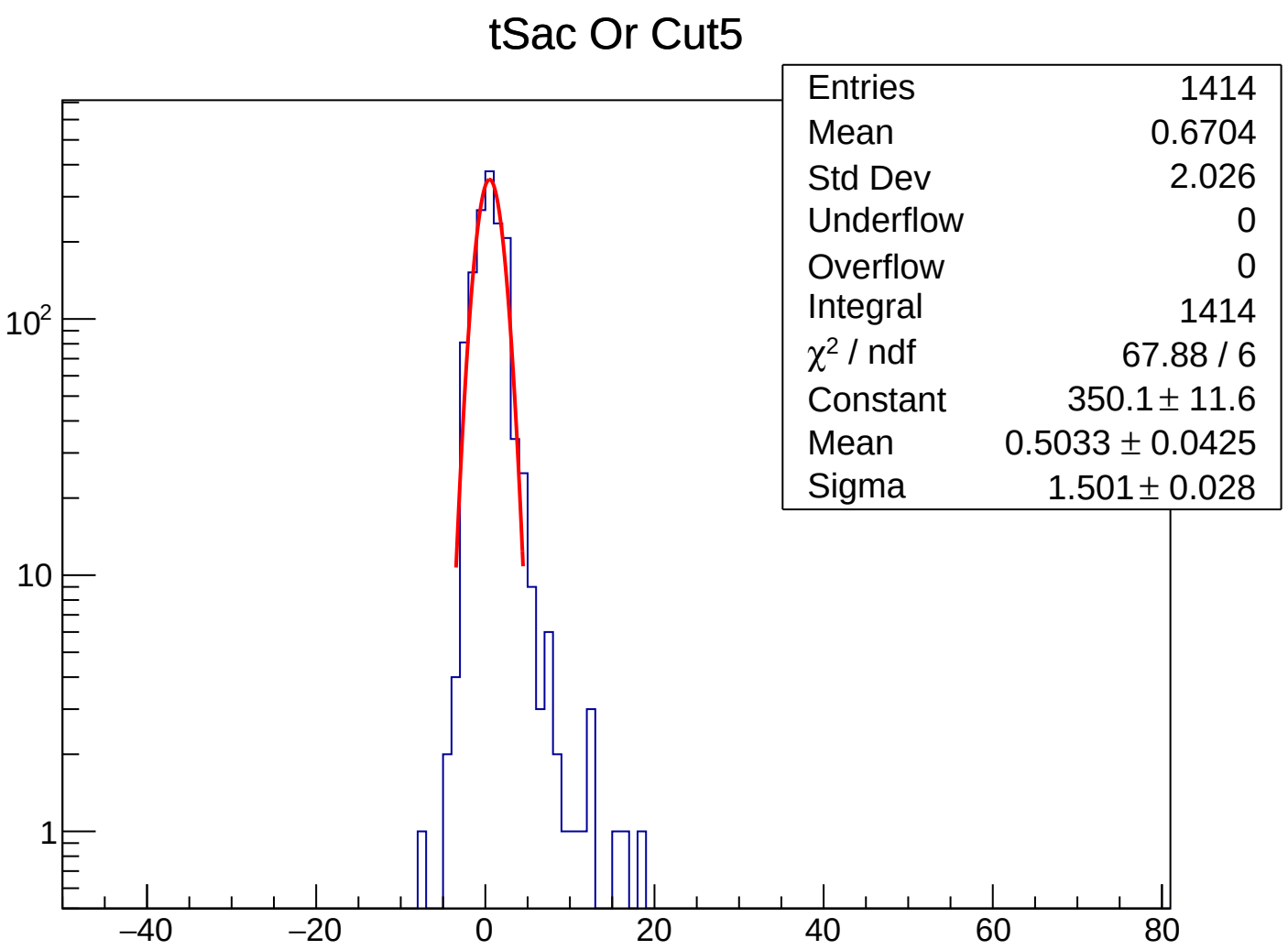

m2 Cut5
Entries 1285
Mean 0.02099
Std Dev 0.0368
Underflow 0
Overflow 0
Integral 1285
250
200
150
100
50
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

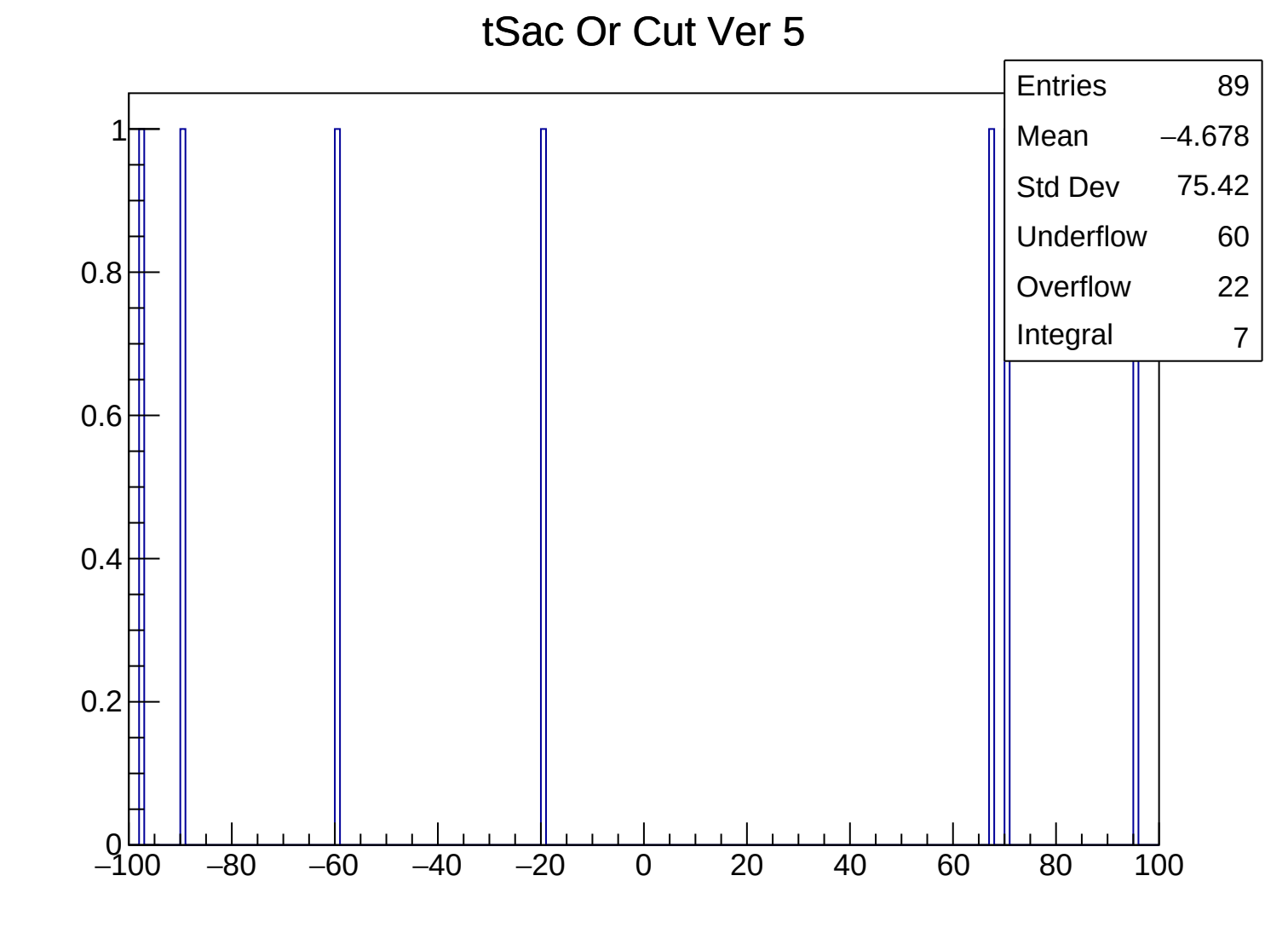

xsacKurama Cut Ver 5
Entries 113
Mean 90.85
Std Dev 61.53
Underflow 0
Overflow 0
Integral 113
35
30
25
20
15
10
5
0
–400
–300
–200
–100
0
100
200
300
400

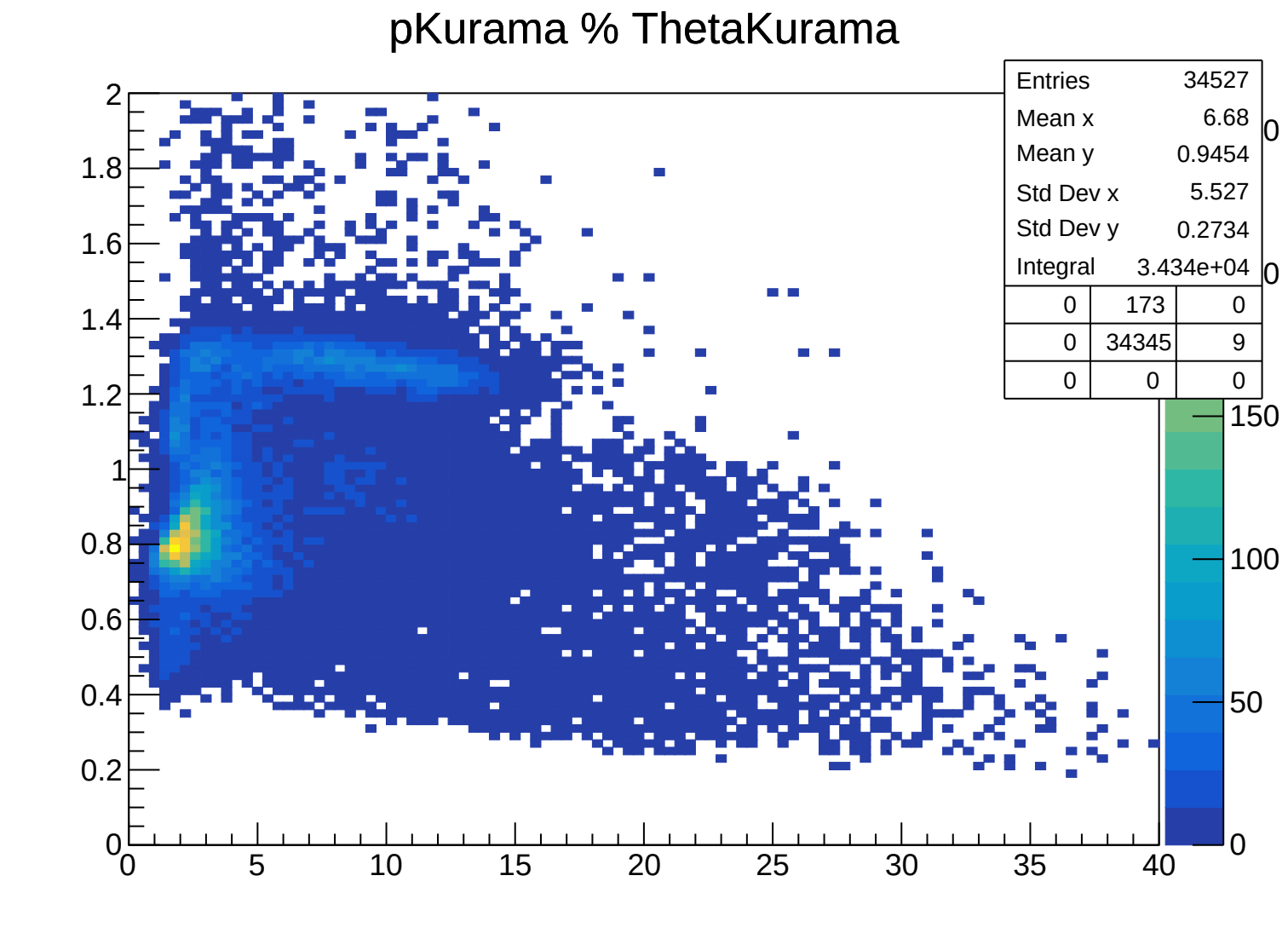

ysacKurama Cut Ver 5
Entries 113
Mean −11.17
Std Dev 82.9
Underflow 0
Overflow 0
Integral 113
0
1
2
3
4
5
6
7
−400
−300
−200
−100
0
100
200
300
400

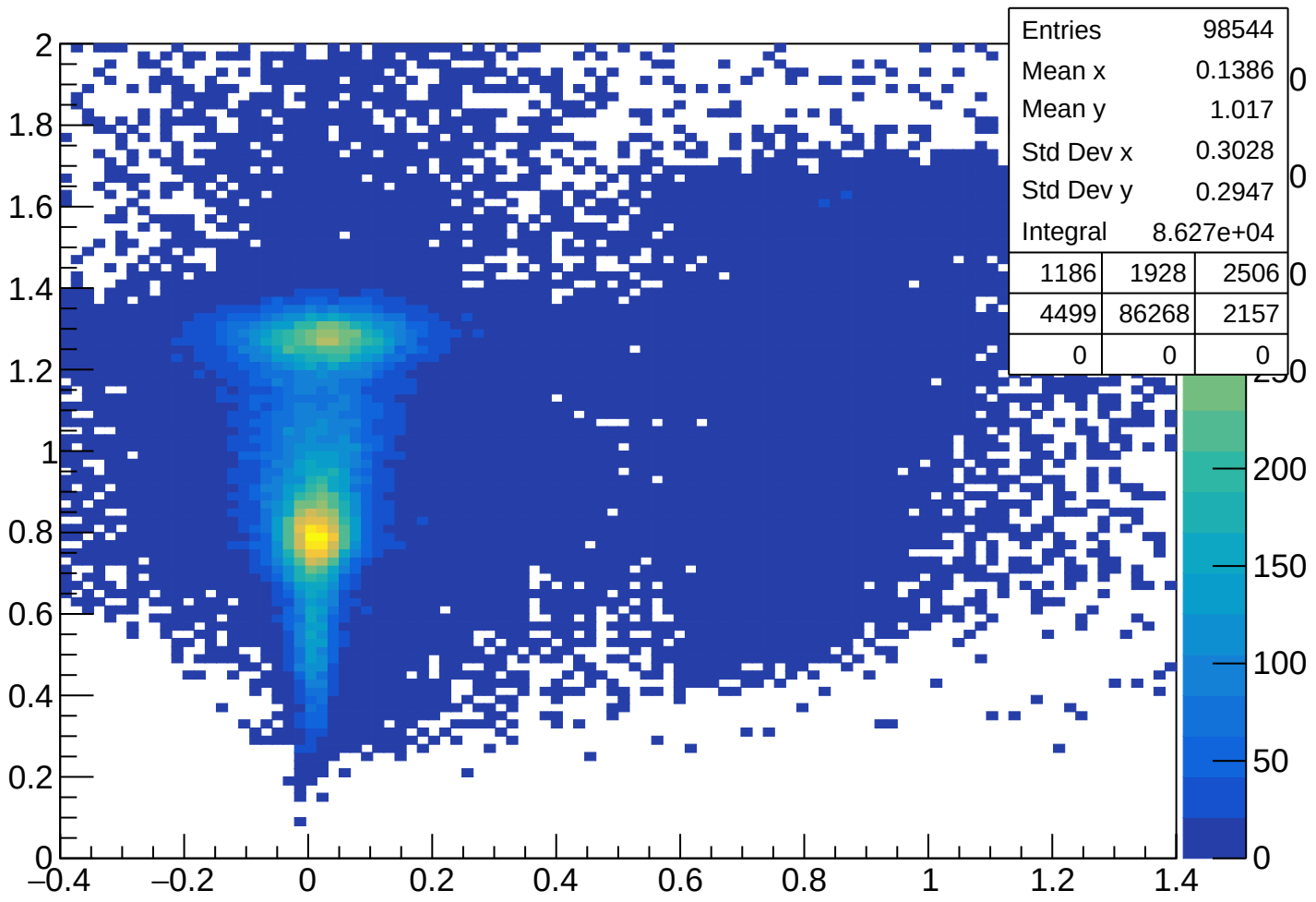

pKurama Cut Ver 5
Entries 113
Mean 0.8237
Std Dev 0.1074
Underflow 0
Overflow 0
Integral 113
10
8
6
4
2
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

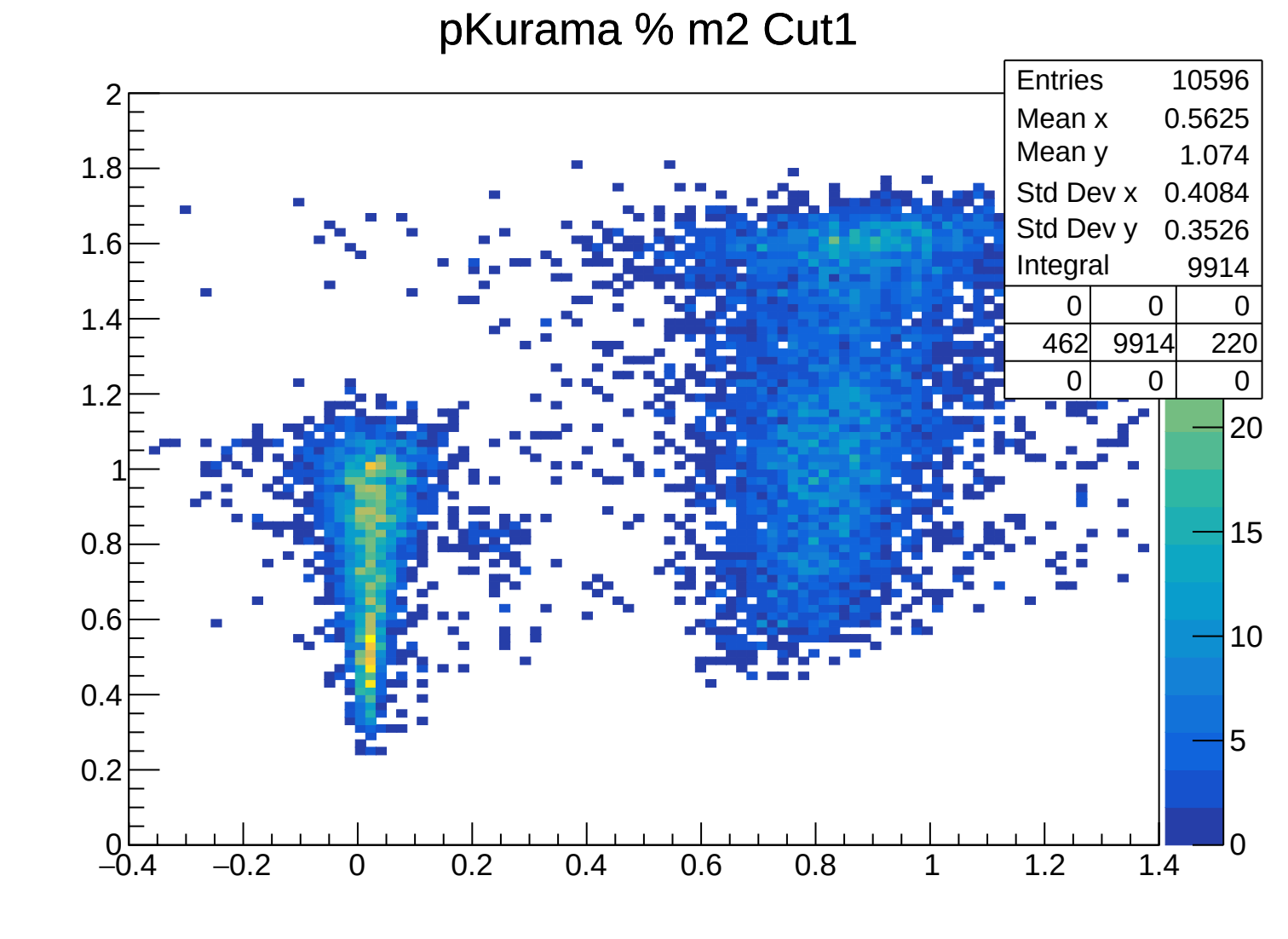

m2 Cut Ver 5
Entries 113
Mean 0.01904
Std Dev 0.03546
Underflow 0
Overflow 0
Integral 113
25
20
15
10
5
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

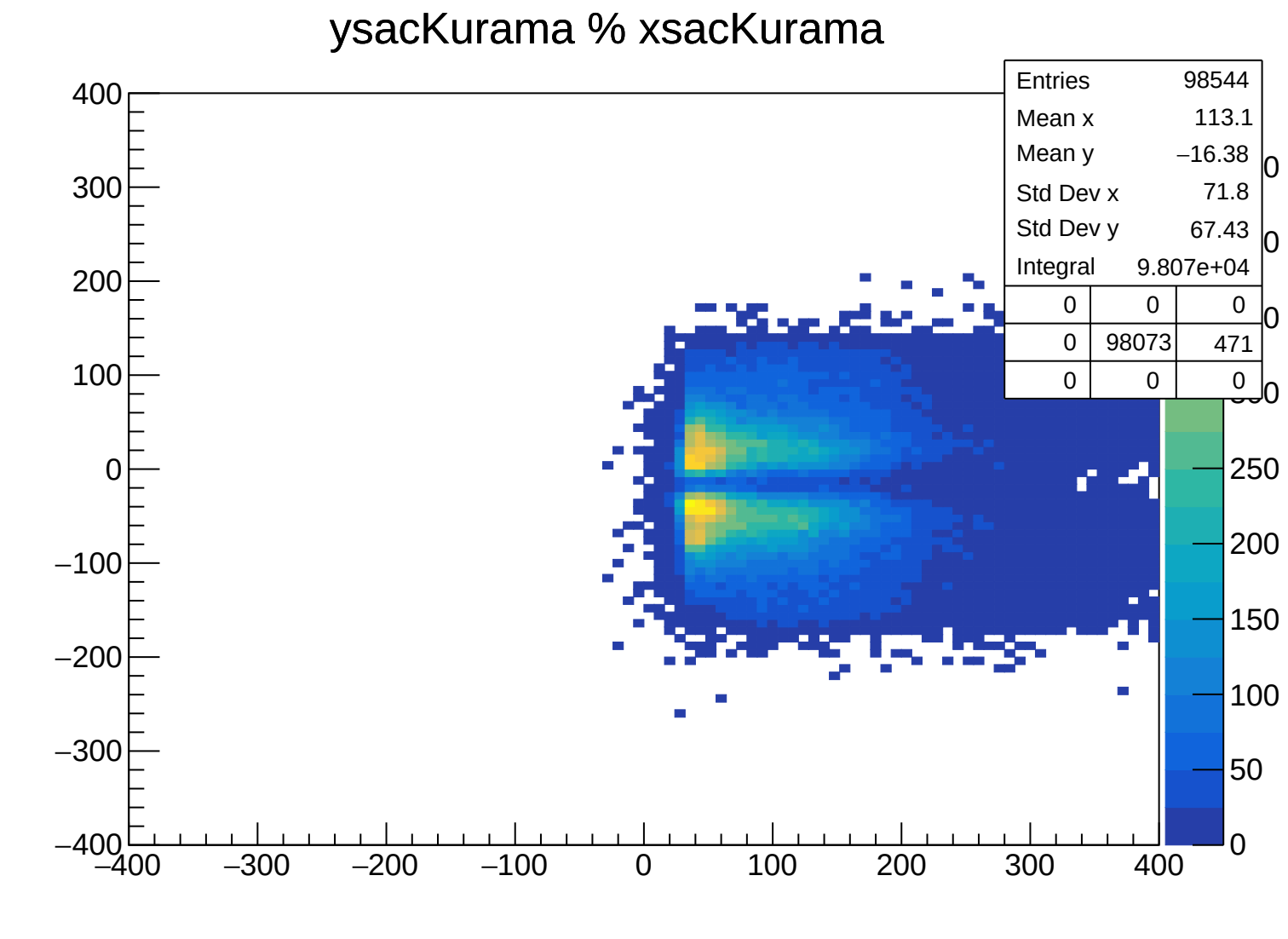

tSac Or Cut5
Entries 1414
Mean 0.6704
Std Dev 2.026
Underflow 0
Overflow 0
Integral 1414
χ² / ndf 67.88 / 6
Constant 350.1 ± 11.6
Mean 0.5033 ± 0.0425
Sigma 1.501 ± 0.028
10²
10
1
–40
–20
0
20
40
60
80

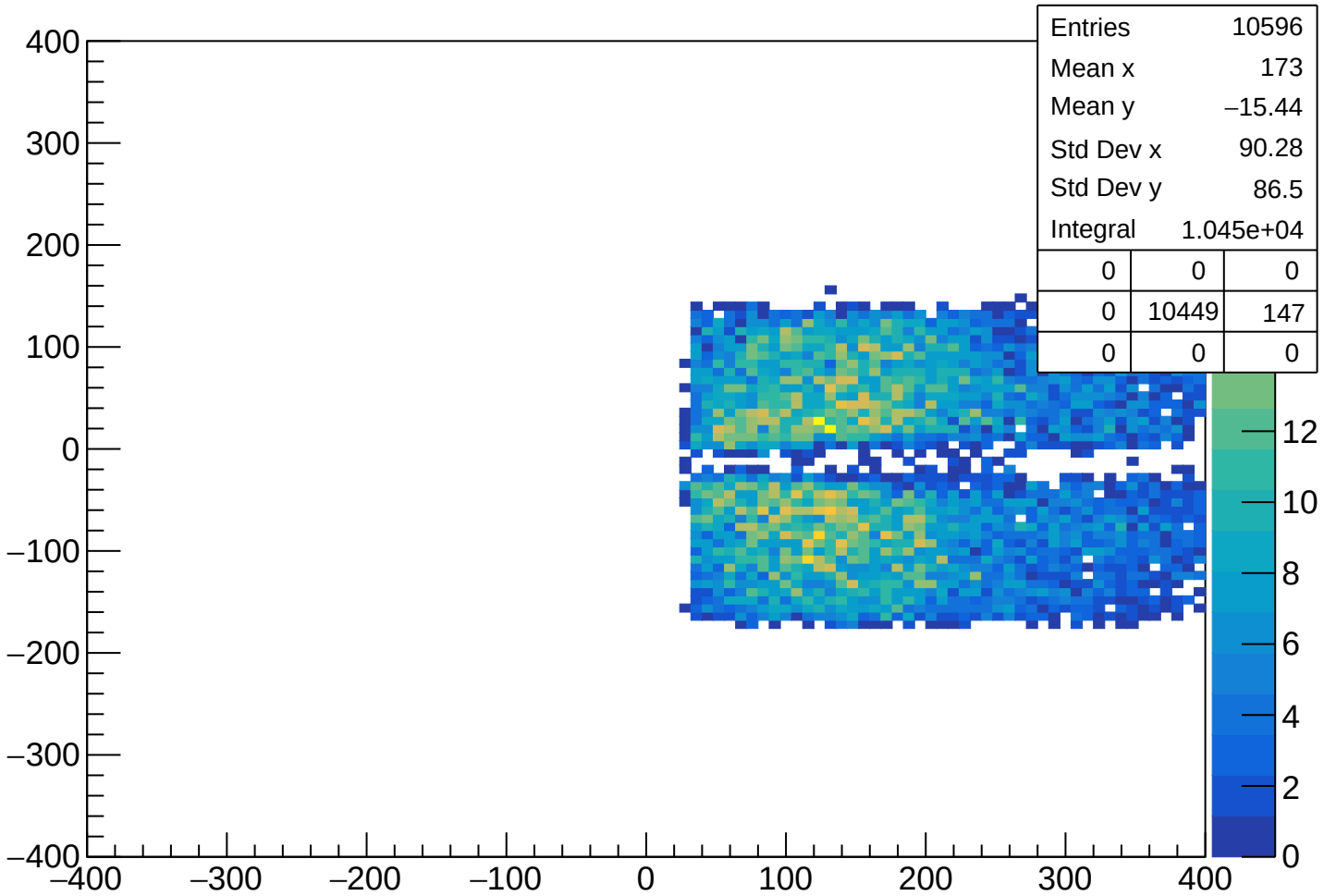

tSac Or Cut Ver 5
Entries 89
Mean −4.678
Std Dev 75.42
Underflow 60
Overflow 22
Integral 7
1
0.8
0.6
0.4
0.2
0
−100
−80
−60
−40
−20
0
20
40
60
80
100

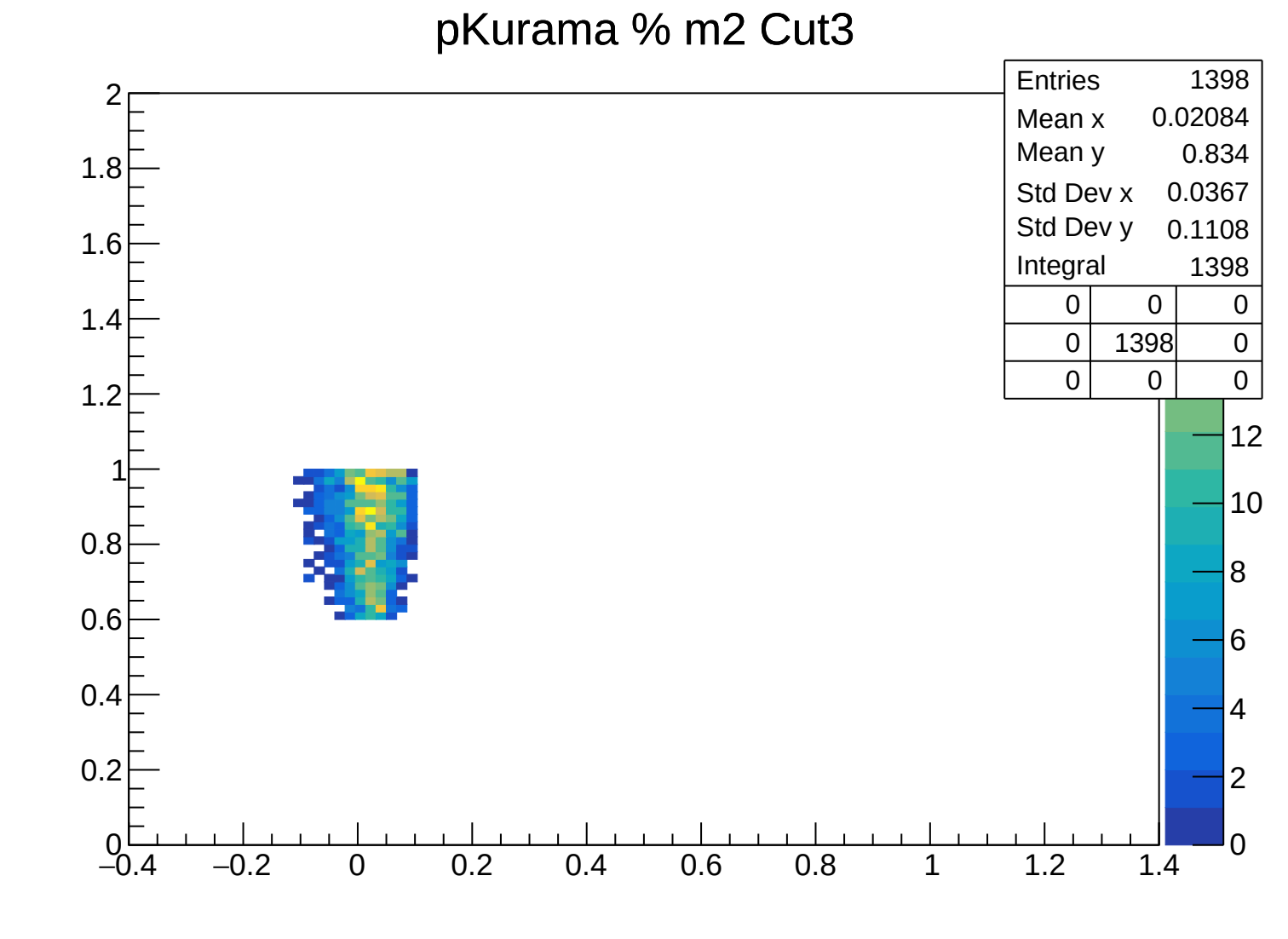

pKurama % ThetaKurama
Entries 34527
Mean x 6.68
Mean y 0.9454
Std Dev x 5.527
Std Dev y 0.2734
Integral 3.434e+04
0 173 0
0 34345 9
0 0 0
0
0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35 40
150
100
50
0

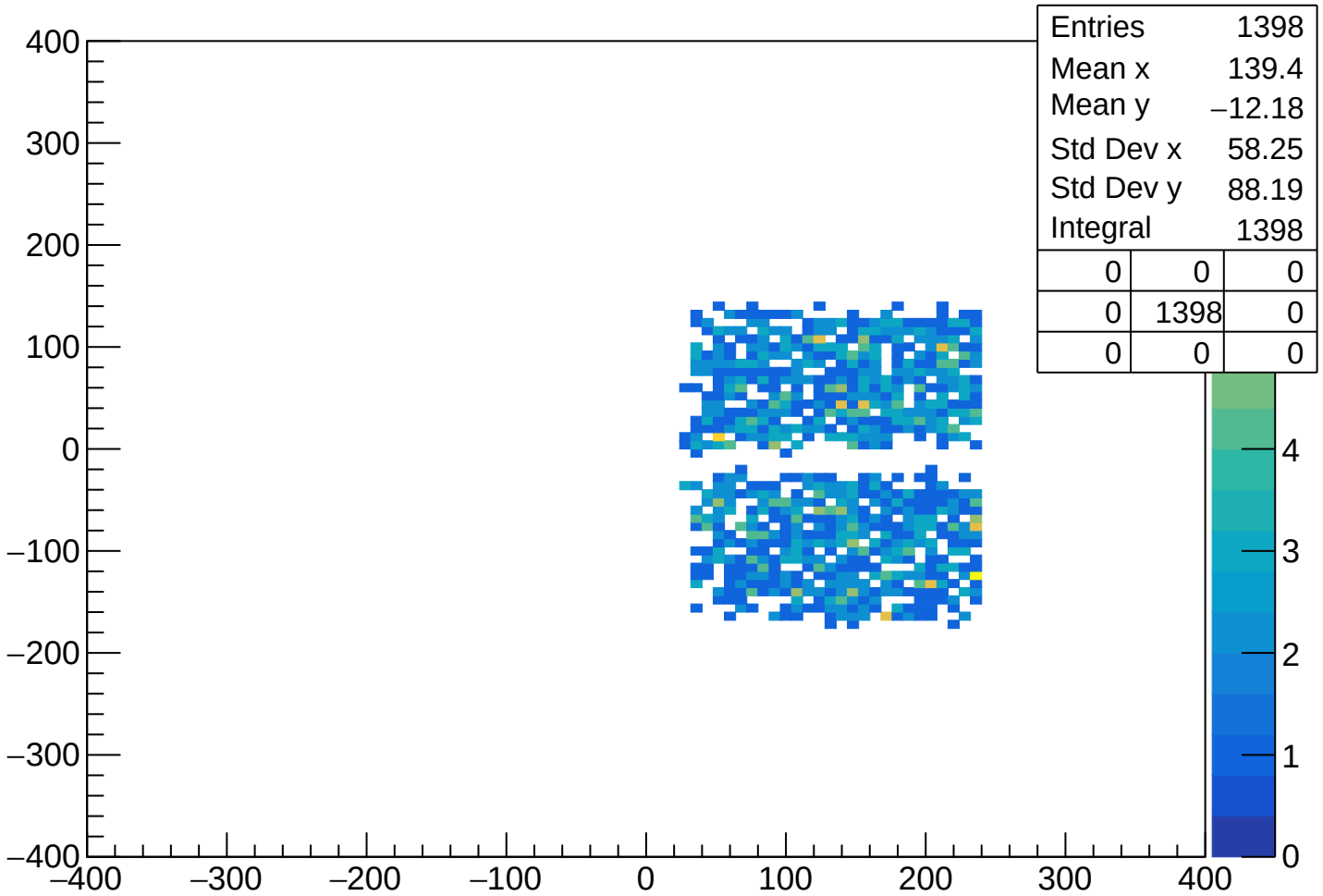

pKurama % m2
Entries 98544
Mean x 0.1386
Mean y 1.017
Std Dev x 0.3028
Std Dev y 0.2947
Integral 8.627e+04
1186 1928 2506
4499 86268 2157
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
200
150
100
50
0

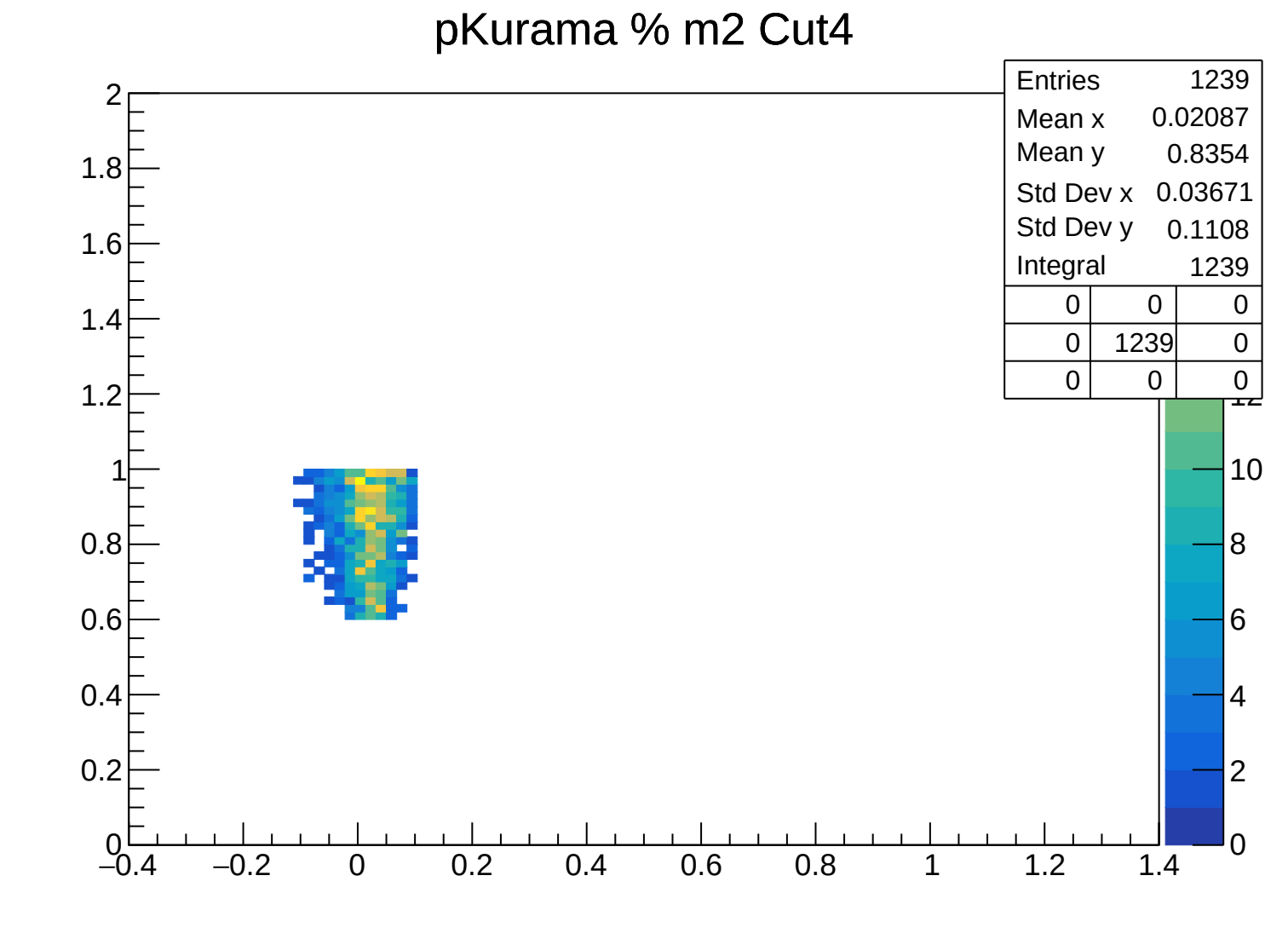

pKurama % m2 Cut1
Entries 10596
Mean x 0.5625
Mean y 1.074
Std Dev x 0.4084
Std Dev y 0.3526
Integral 9914
0 0 0
462 9914 220
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
20
15
10
5
0

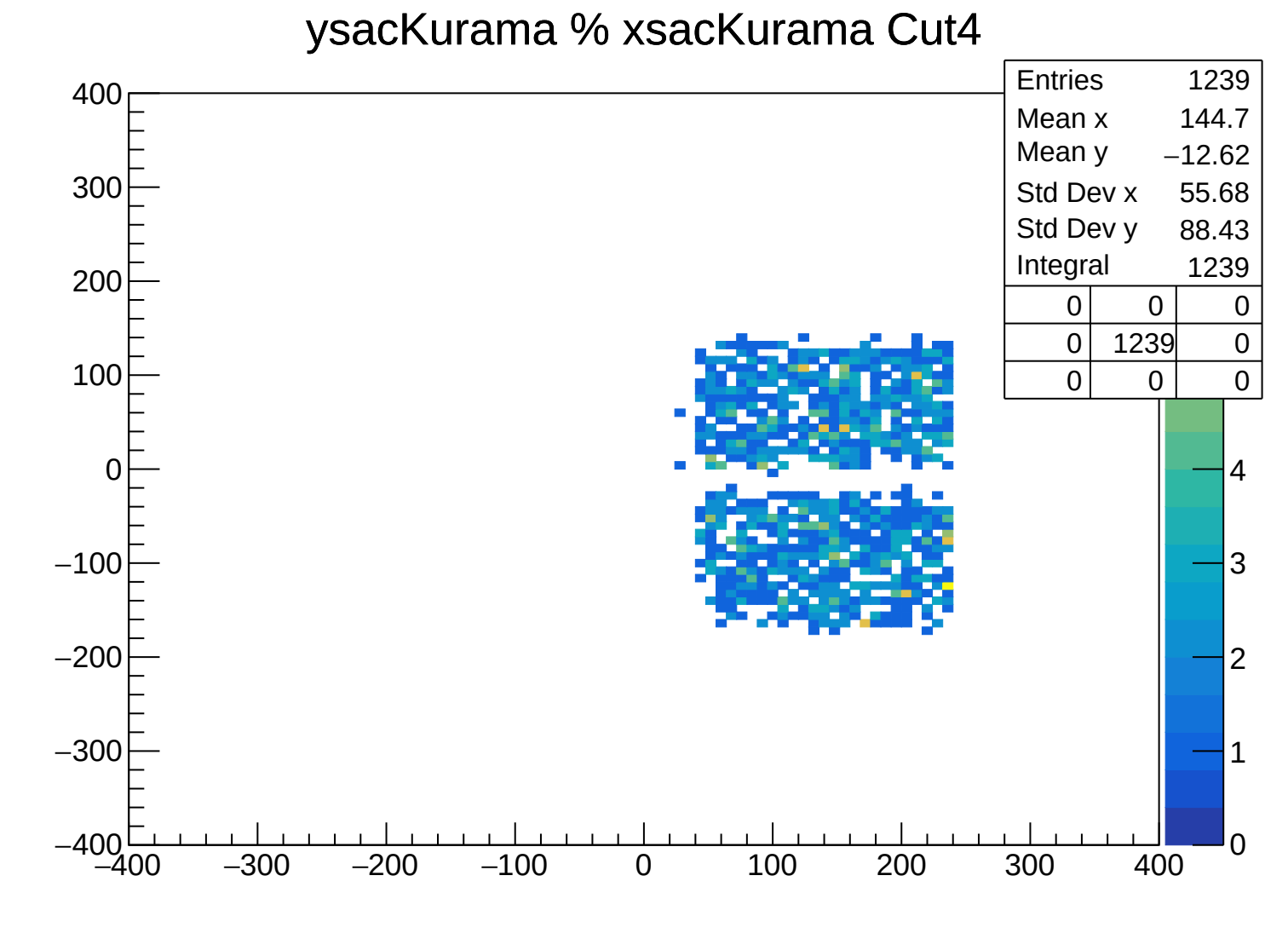

ysacKurama % xsacKurama
Entries 98544
Mean x 113.1
Mean y −16.38
Std Dev x 71.8
Std Dev y 67.43
Integral 9.807e+04
0 0 0
0 98073 471
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
250
200
150
100
50
0

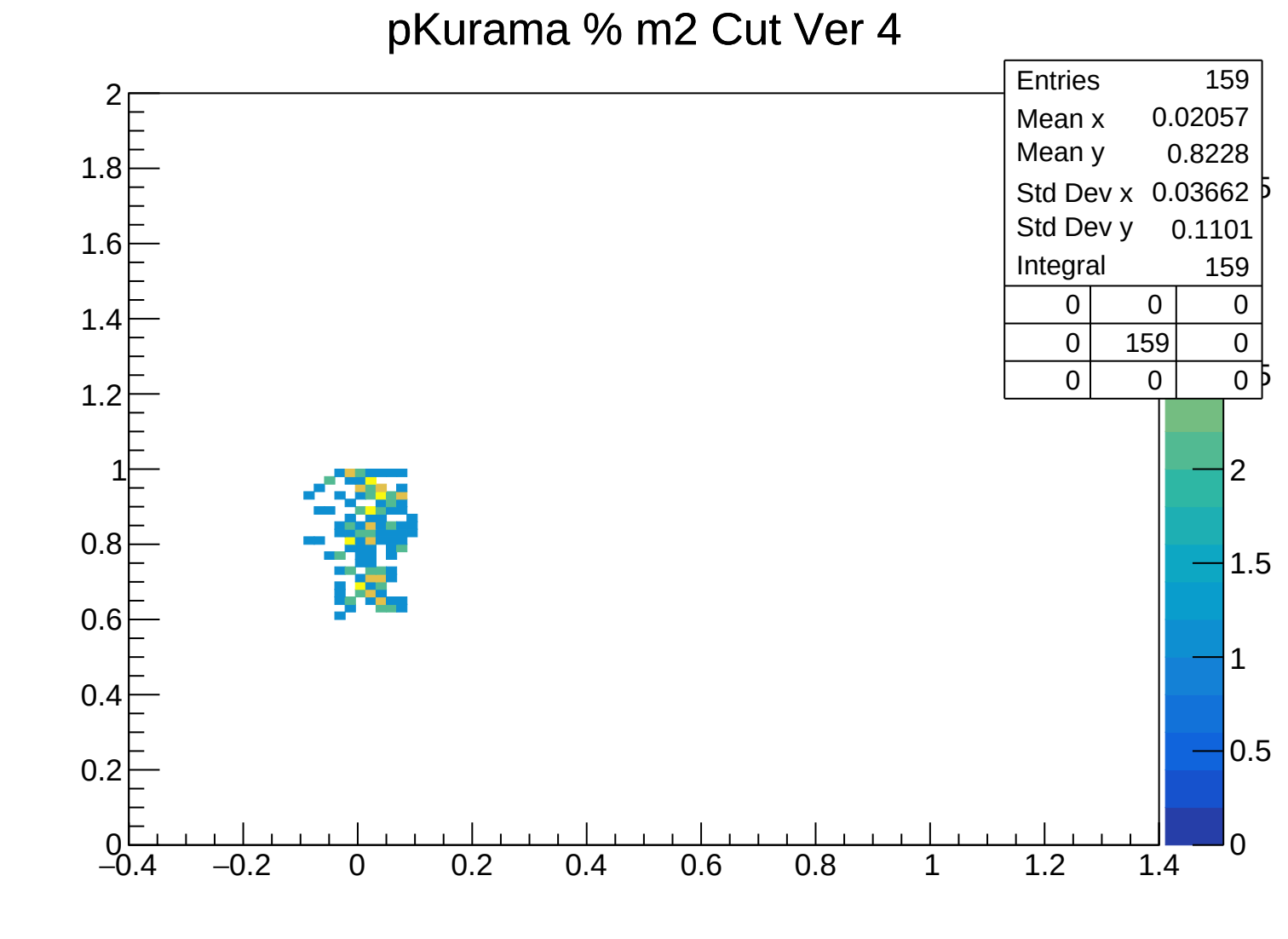

ysacKurama % xsacKurama Cut1
Entries 10596
Mean x 173
Mean y −15.44
Std Dev x 90.28
Std Dev y 86.5
Integral 1.045e+04
0 0 0
0 10449 147
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
12
10
8
6
4
2
0

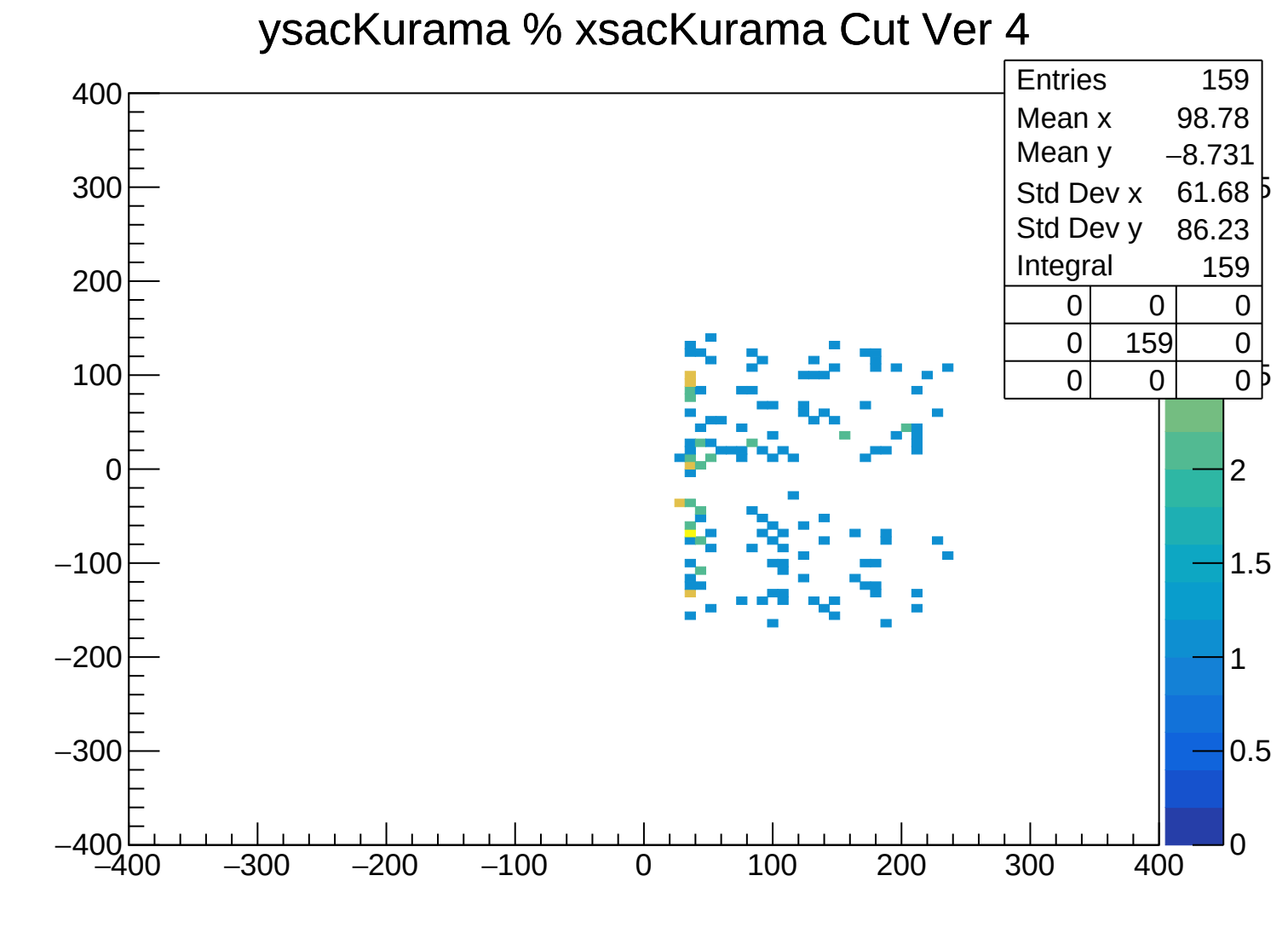

pKurama % m2 Cut3
Entries 1398
Mean x 0.02084
Mean y 0.834
Std Dev x 0.0367
Std Dev y 0.1108
Integral 1398
0 0 0
0 1398 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
12
10
8
6
4
2
0

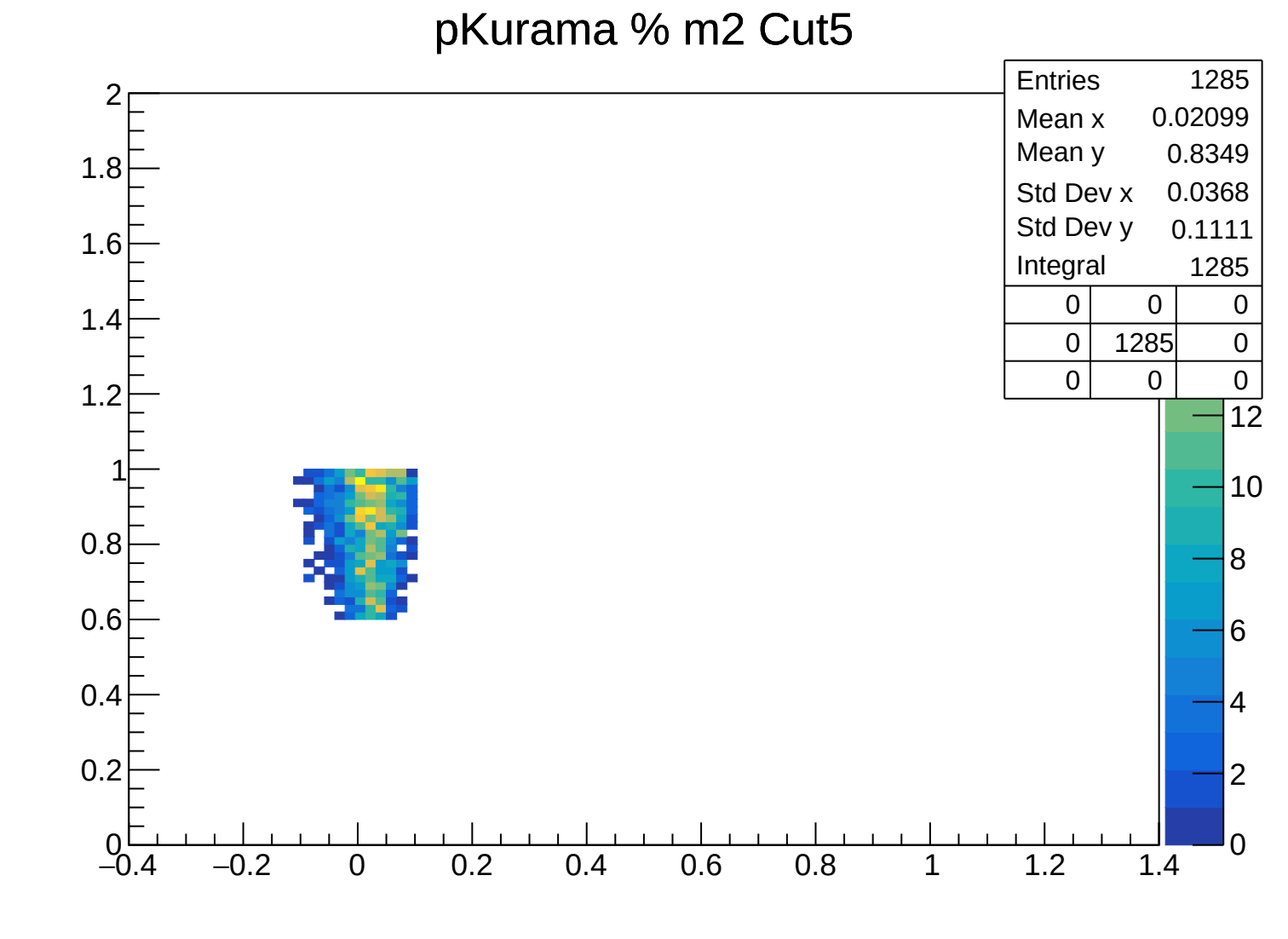

ysacKurama % xsacKurama Cut3
Entries 1398
Mean x 139.4
Mean y −12.18
Std Dev x 58.25
Std Dev y 88.19
Integral 1398
0 0 0
0 1398 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
4
3
2
1
0

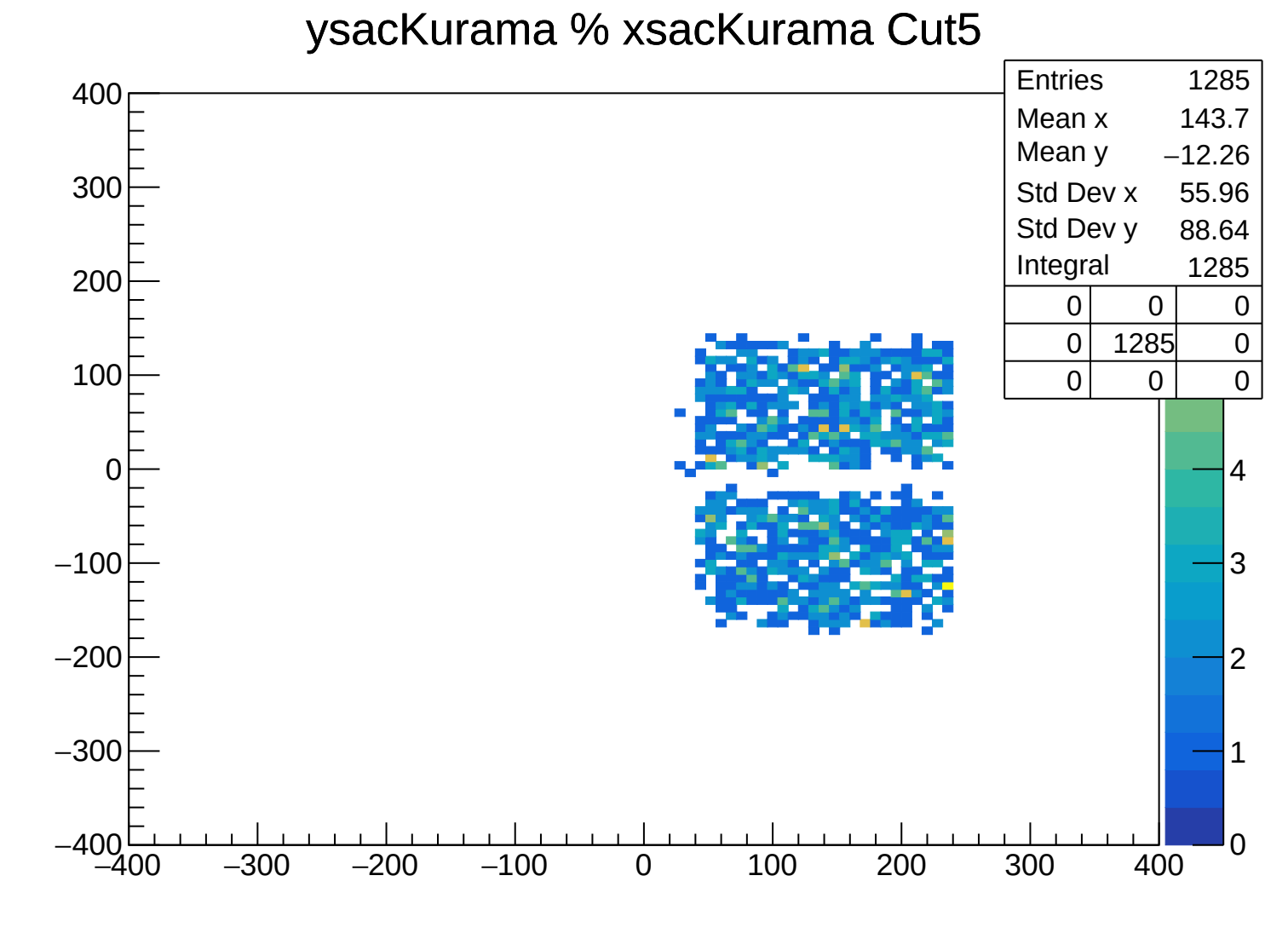

pKurama % m2 Cut4
Entries 1239
Mean x 0.02087
Mean y 0.8354
Std Dev x 0.03671
Std Dev y 0.1108
Integral 1239
0 0 0
0 1239 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
10
8
6
4
2
0

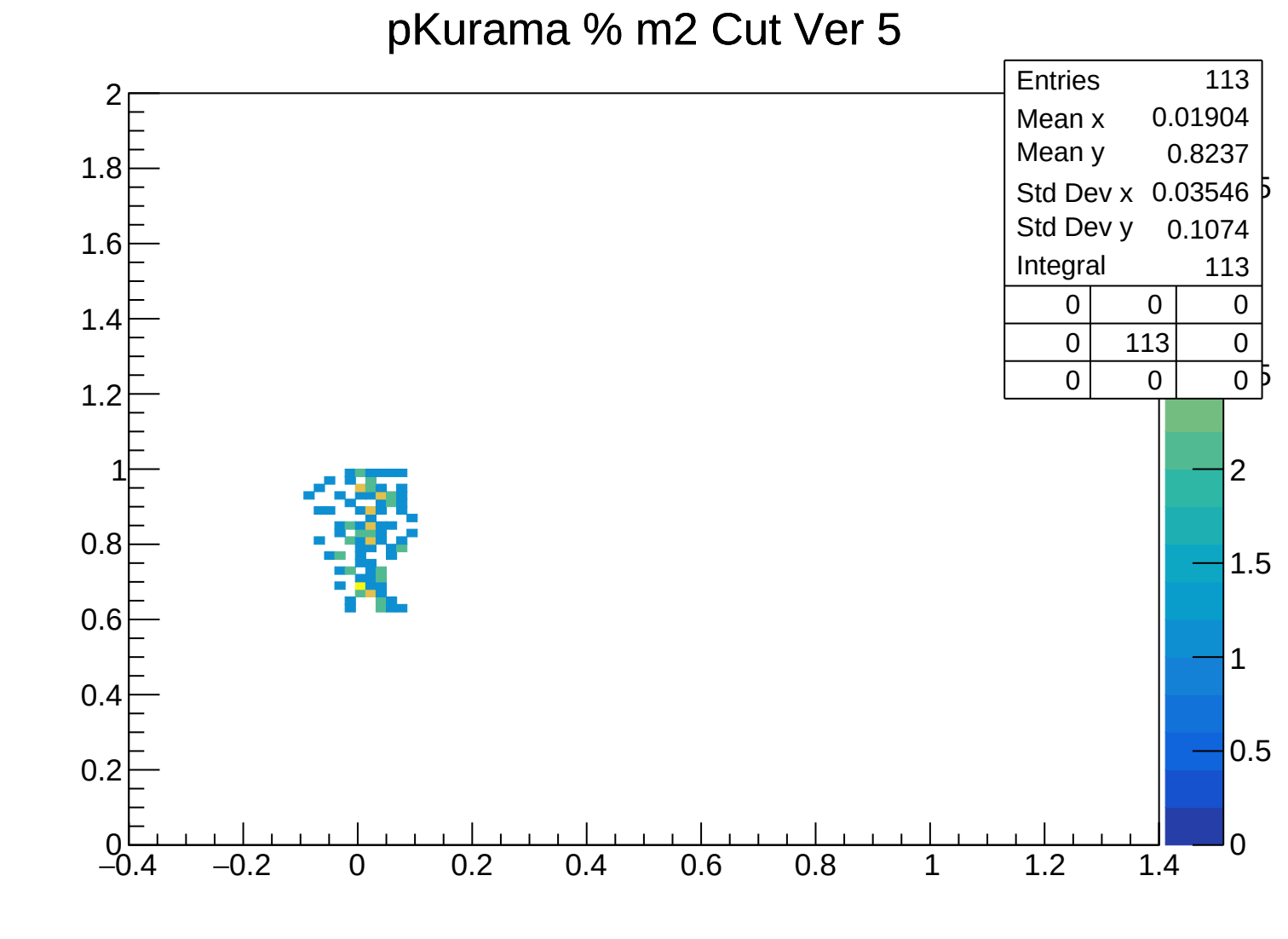

ysacKurama % xsacKurama Cut4
Entries 1239
Mean x 144.7
Mean y −12.62
Std Dev x 55.68
Std Dev y 88.43
Integral 1239
0 0 0
0 1239 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400
−300
−200
−100
0
100
200
300
400
4
3
2
1
0

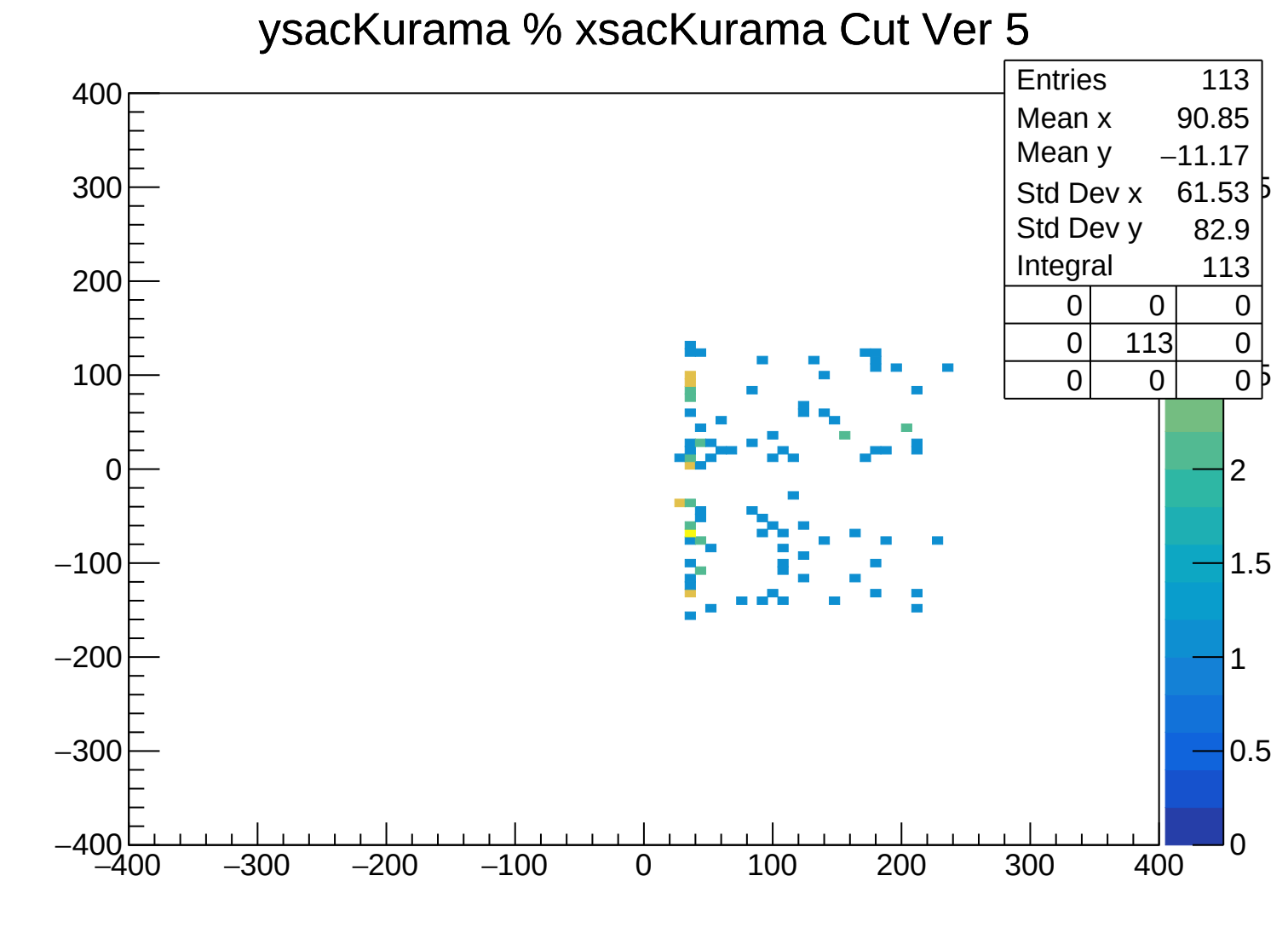

pKurama % m2 Cut Ver 4
Entries 159
Mean x 0.02057
Mean y 0.8228
Std Dev x 0.03662
Std Dev y 0.1101
Integral 159
0 0 0
0 159 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
2
1.5
1
0.5
0


ysacKurama % xsacKurama Cut Ver 4
Entries 159
Mean x 98.78
Mean y –8.731
Std Dev x 61.68
Std Dev y 86.23
Integral 159
0 0 0
0 159 0
0 0 0
400
300
200
100
0
–100
–200
–300
–400
–400
–300
–200
–100
0
100
200
300
400
2
1.5
1
0.5
0


pKurama % m2 Cut5
Entries 1285
Mean x 0.02099
Mean y 0.8349
Std Dev x 0.0368
Std Dev y 0.1111
Integral 1285
0 0 0
0 1285 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
12
10
8
6
4
2
0


ysacKurama % xsacKurama Cut5
Entries 1285
Mean x 143.7
Mean y −12.26
Std Dev x 55.96
Std Dev y 88.64
Integral 1285
0 0 0
0 1285 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400
−300
−200
−100
0
100
200
300
400
4
3
2
1
0


pKurama % m2 Cut Ver 5
Entries 113
Mean x 0.01904
Mean y 0.8237
Std Dev x 0.03546
Std Dev y 0.1074
Integral 113
0 0 0
0 113 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 113
Mean x 90.85
Mean y −11.17
Std Dev x 61.53
Std Dev y 82.9
Integral 113
0 0 0
0 113 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400
−300
−200
−100
0
100
200
300
400
2
1.5
1
0.5
0