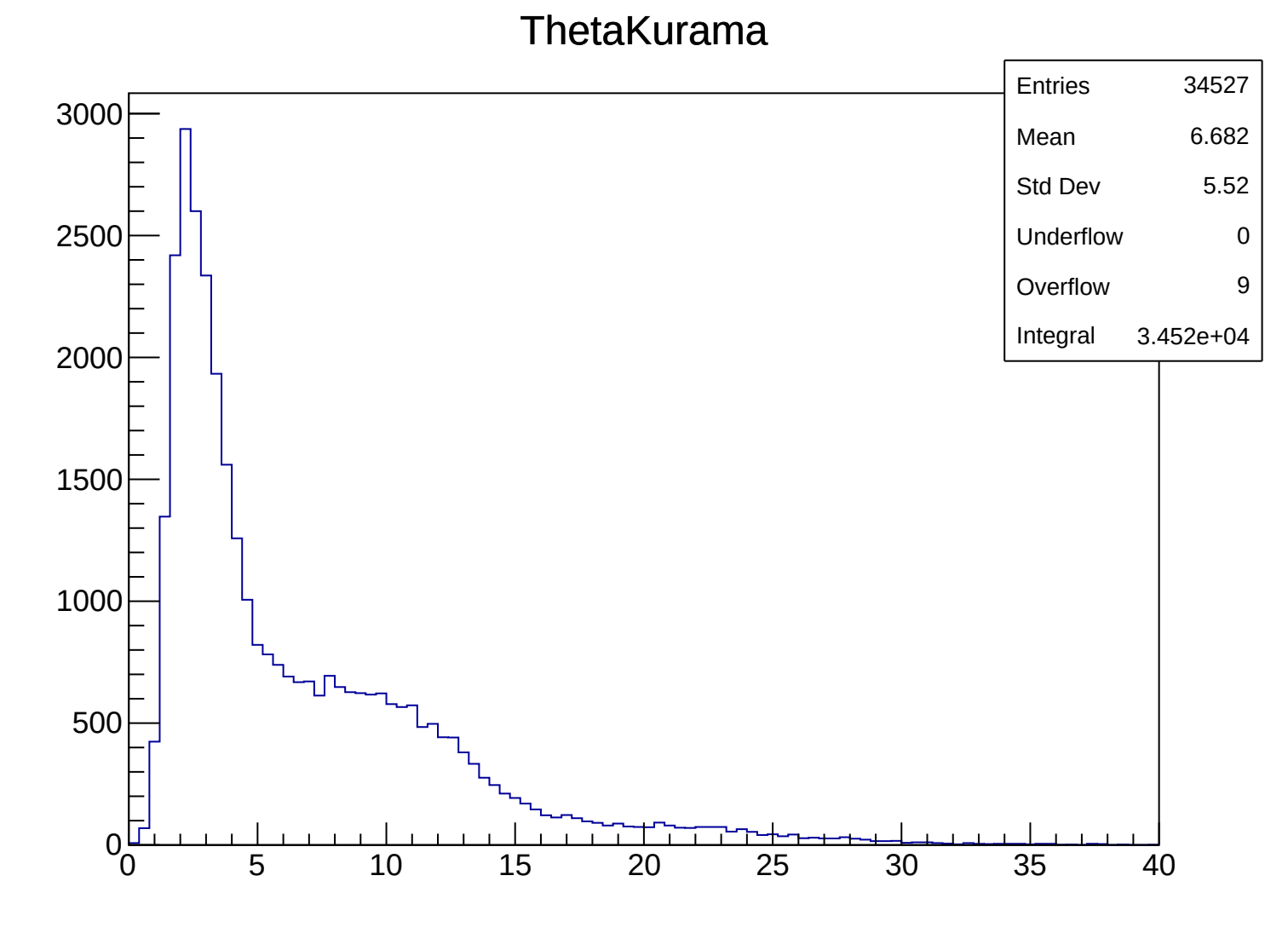
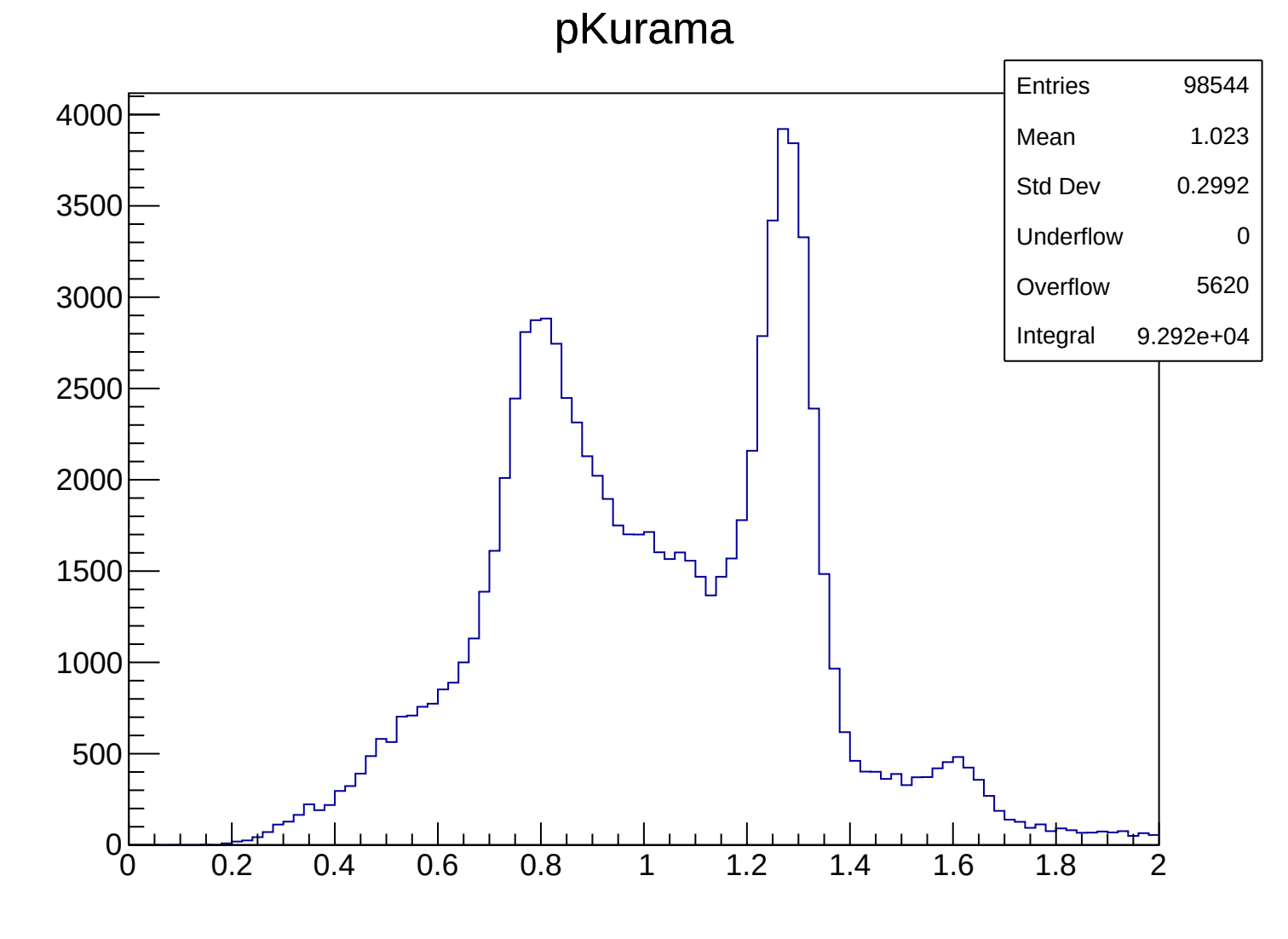
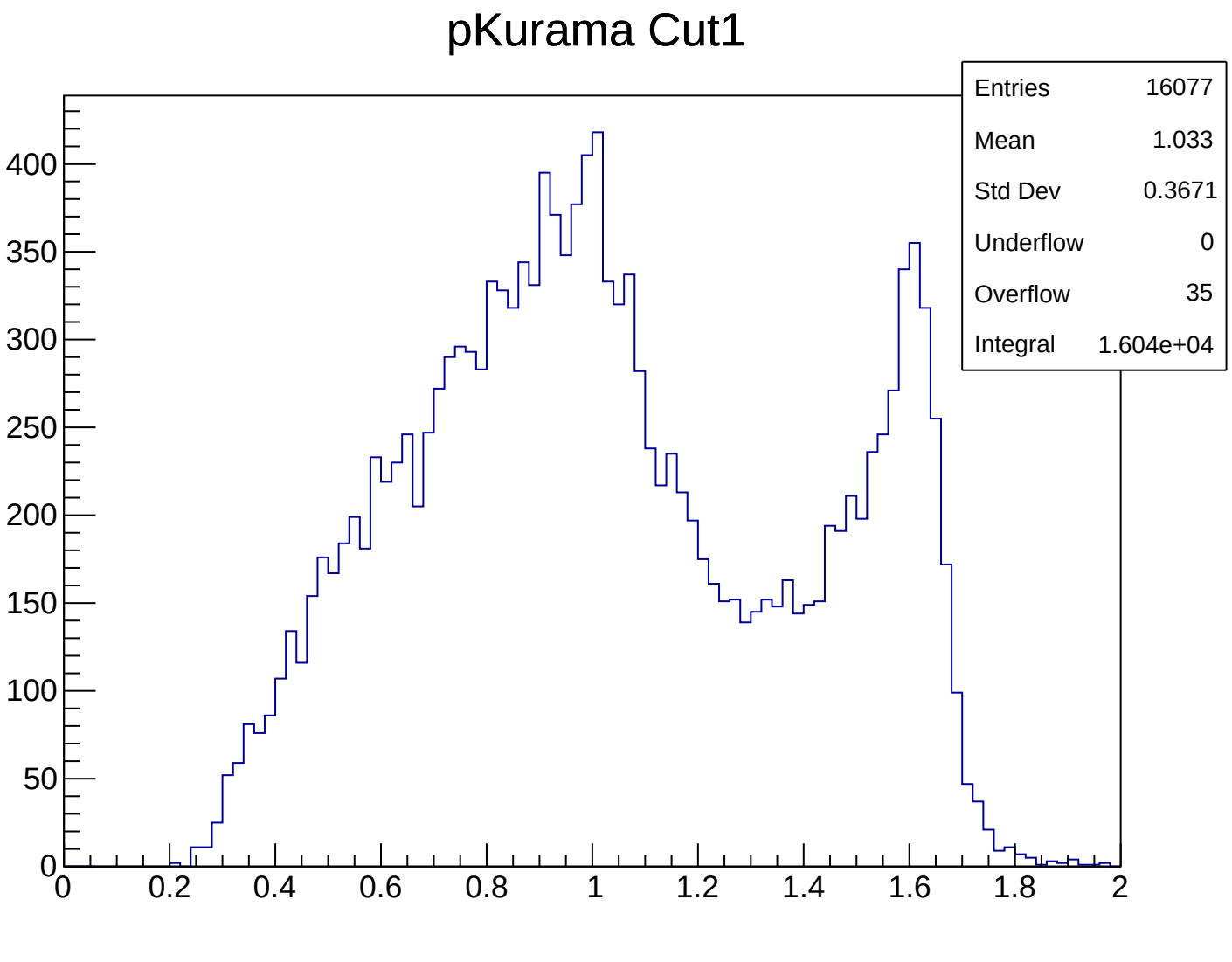
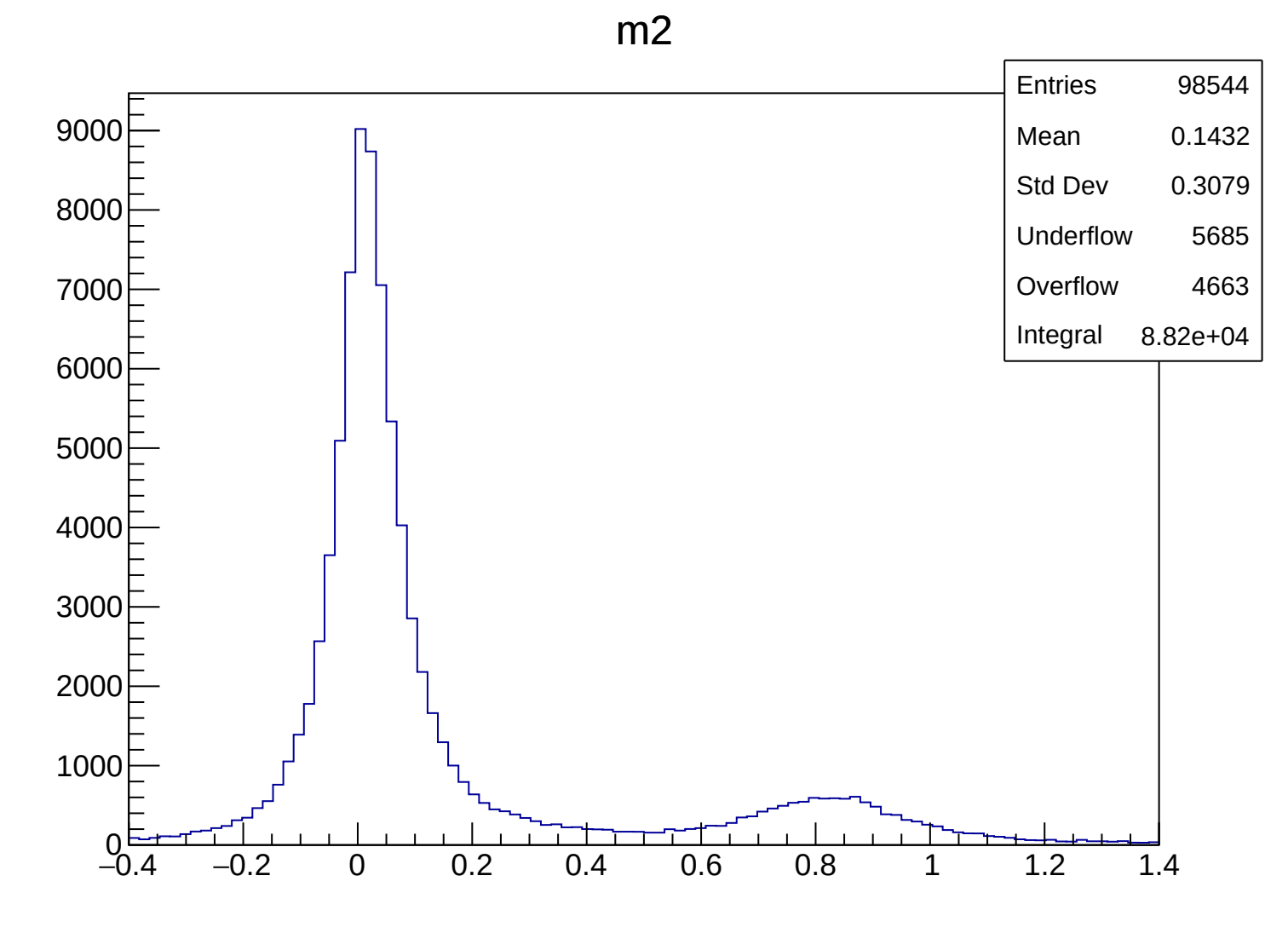
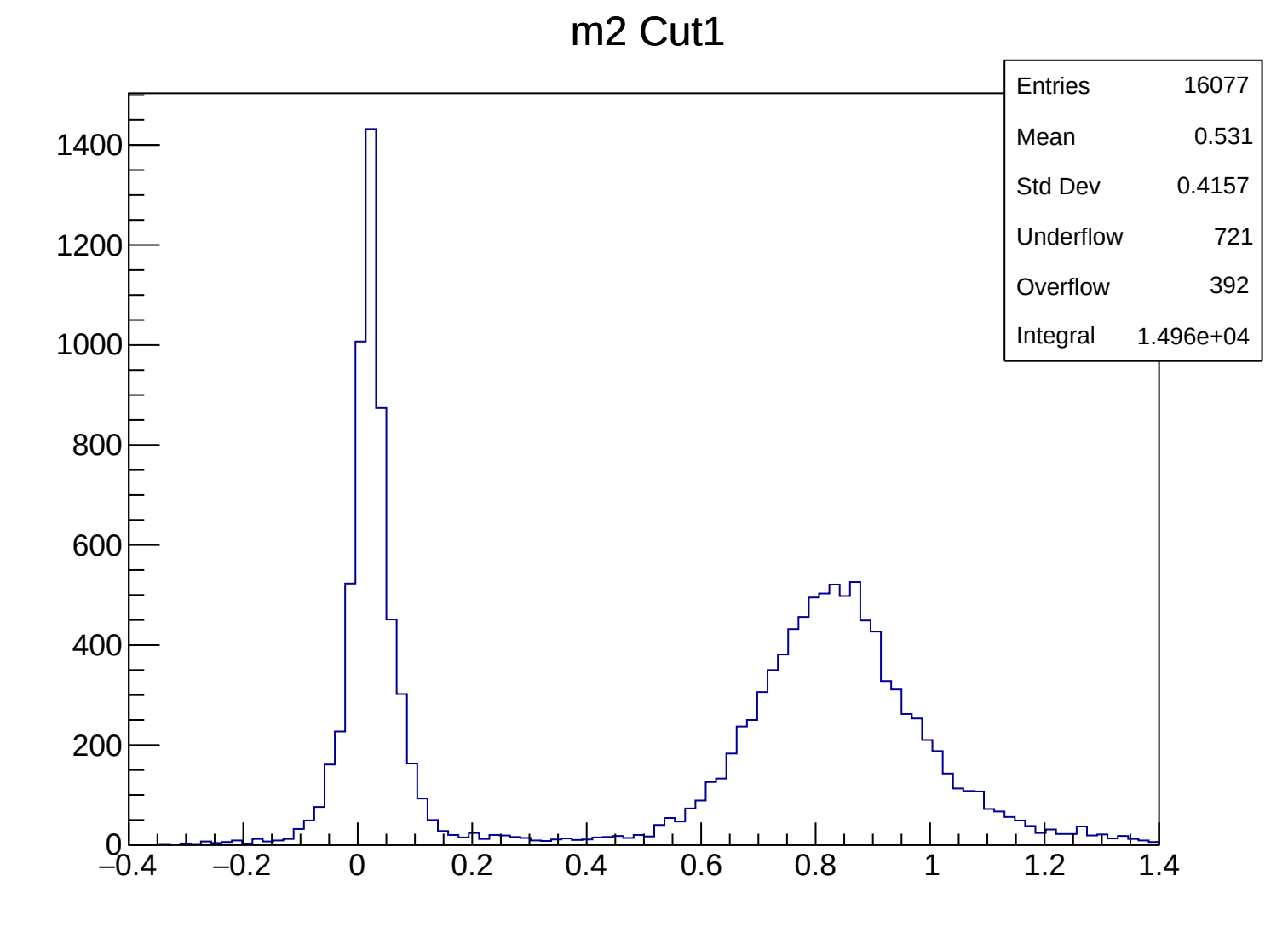
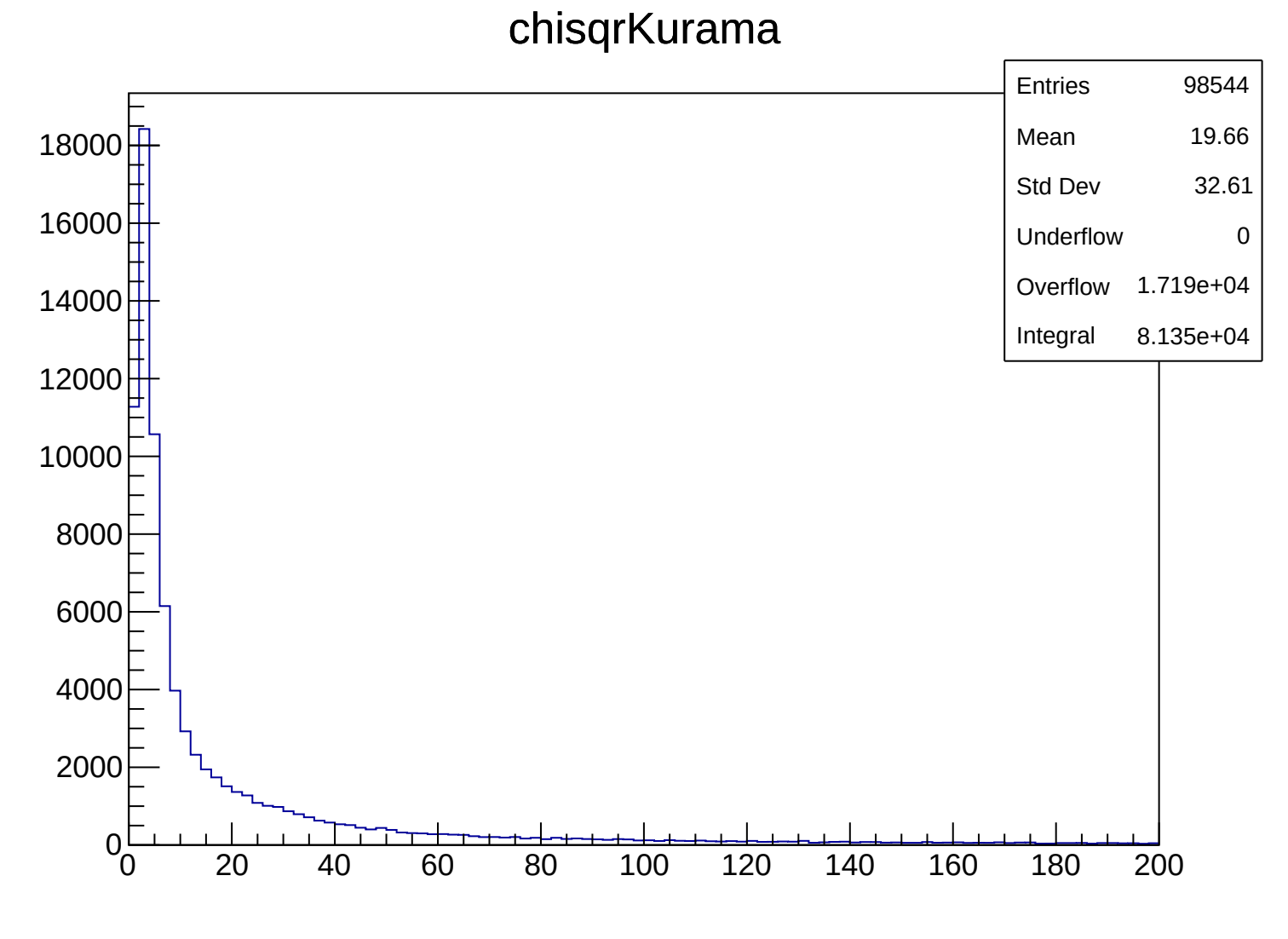

ThetaKurama
Entries 34527
Mean 6.682
Std Dev 5.52
Underflow 0
Overflow 9
Integral 3.452e+04
3000
2500
2000
1500
1000
500
0
0
5
10
15
20
25
30
35
40

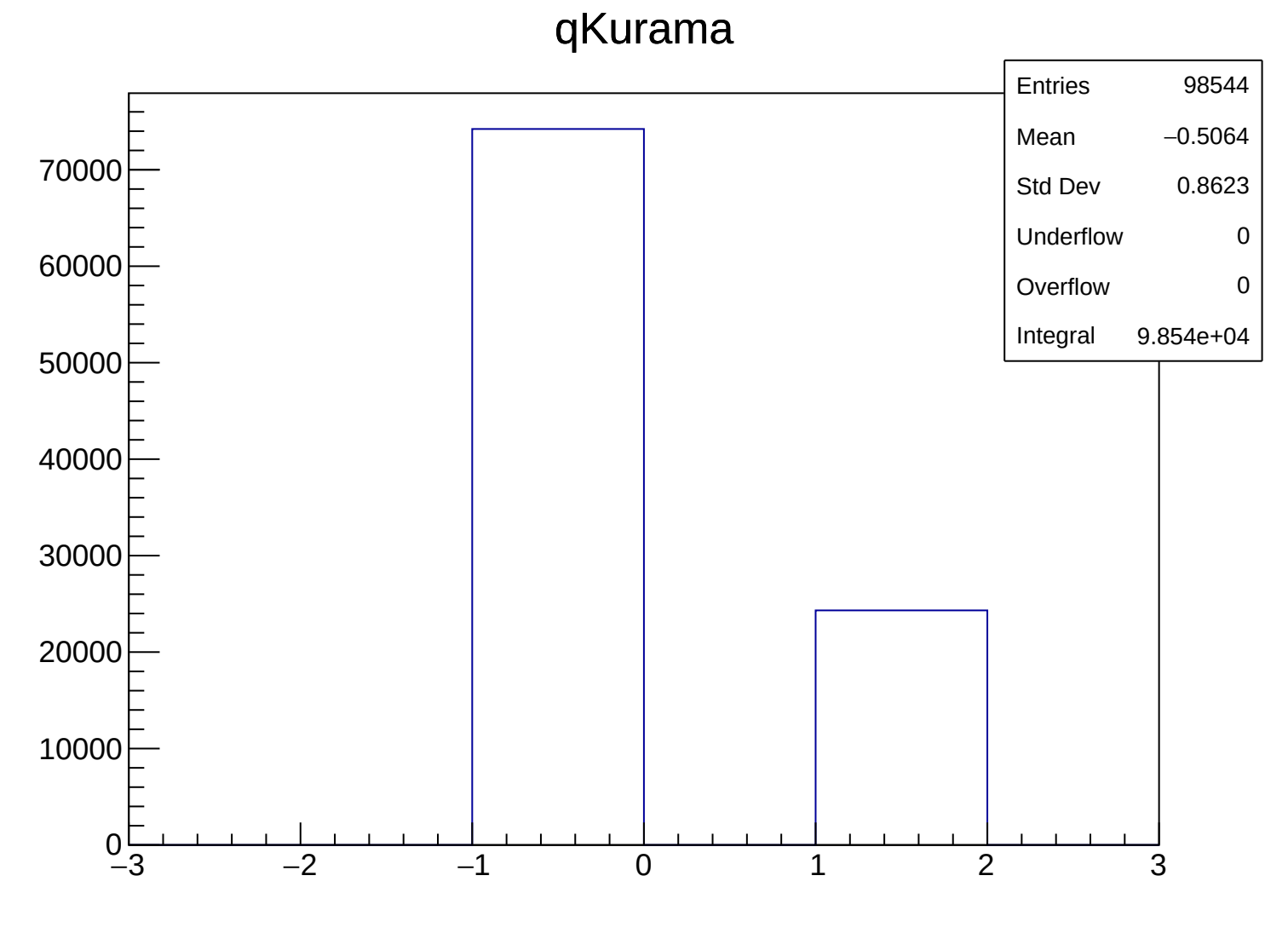

pKurama
Entries 98544
Mean 1.023
Std Dev 0.2992
Underflow 0
Overflow 5620
Integral 9.292e+04
4000
3500
3000
2500
2000
1500
1000
500
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

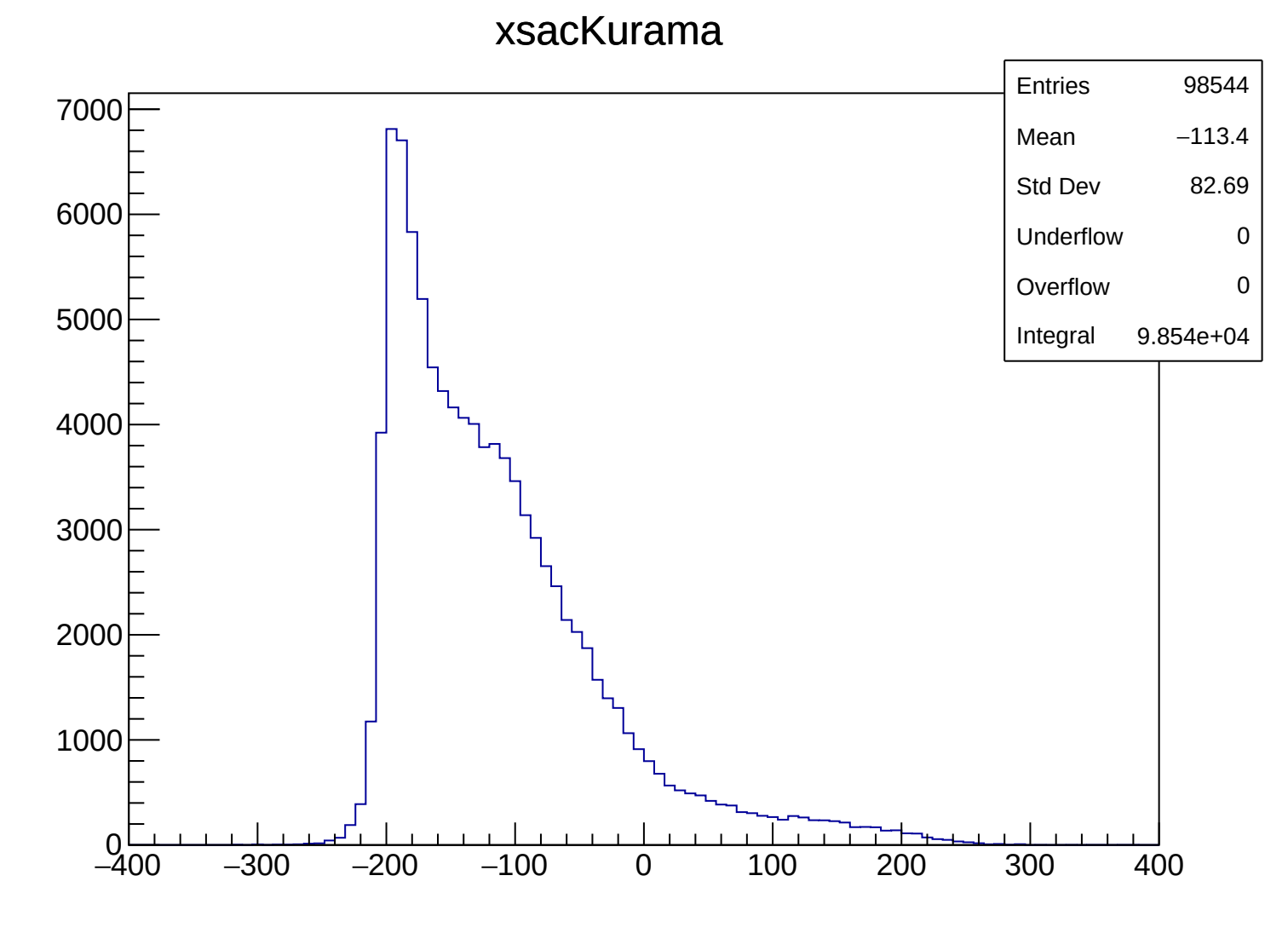

pKurama Cut1
Entries 16077
Mean 1.033
Std Dev 0.3671
Underflow 0
Overflow 35
Integral 1.604e+04
400
350
300
250
200
150
100
50
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

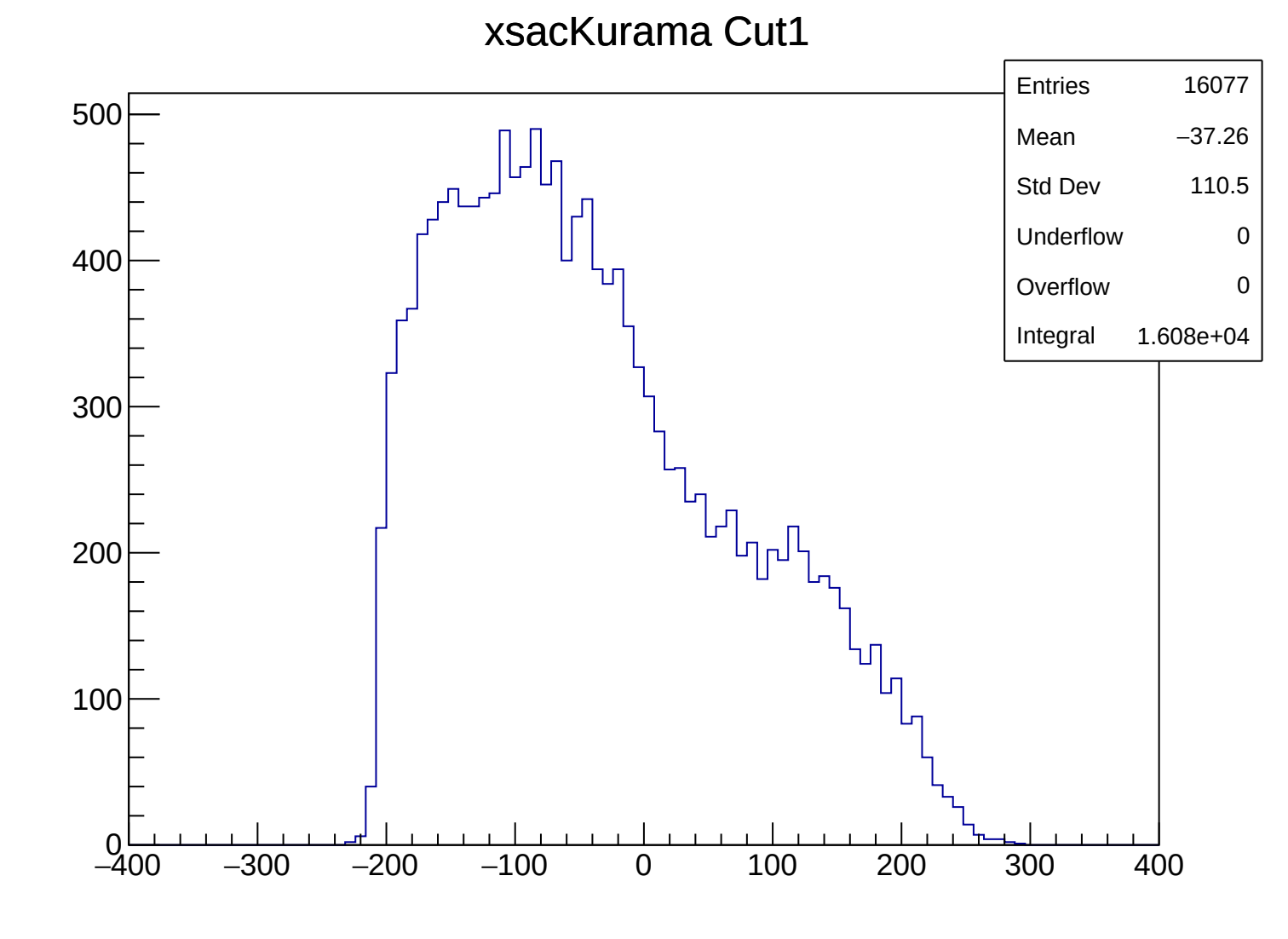

m2
Entries 98544
Mean 0.1432
Std Dev 0.3079
Underflow 5685
Overflow 4663
Integral 8.82e+04
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

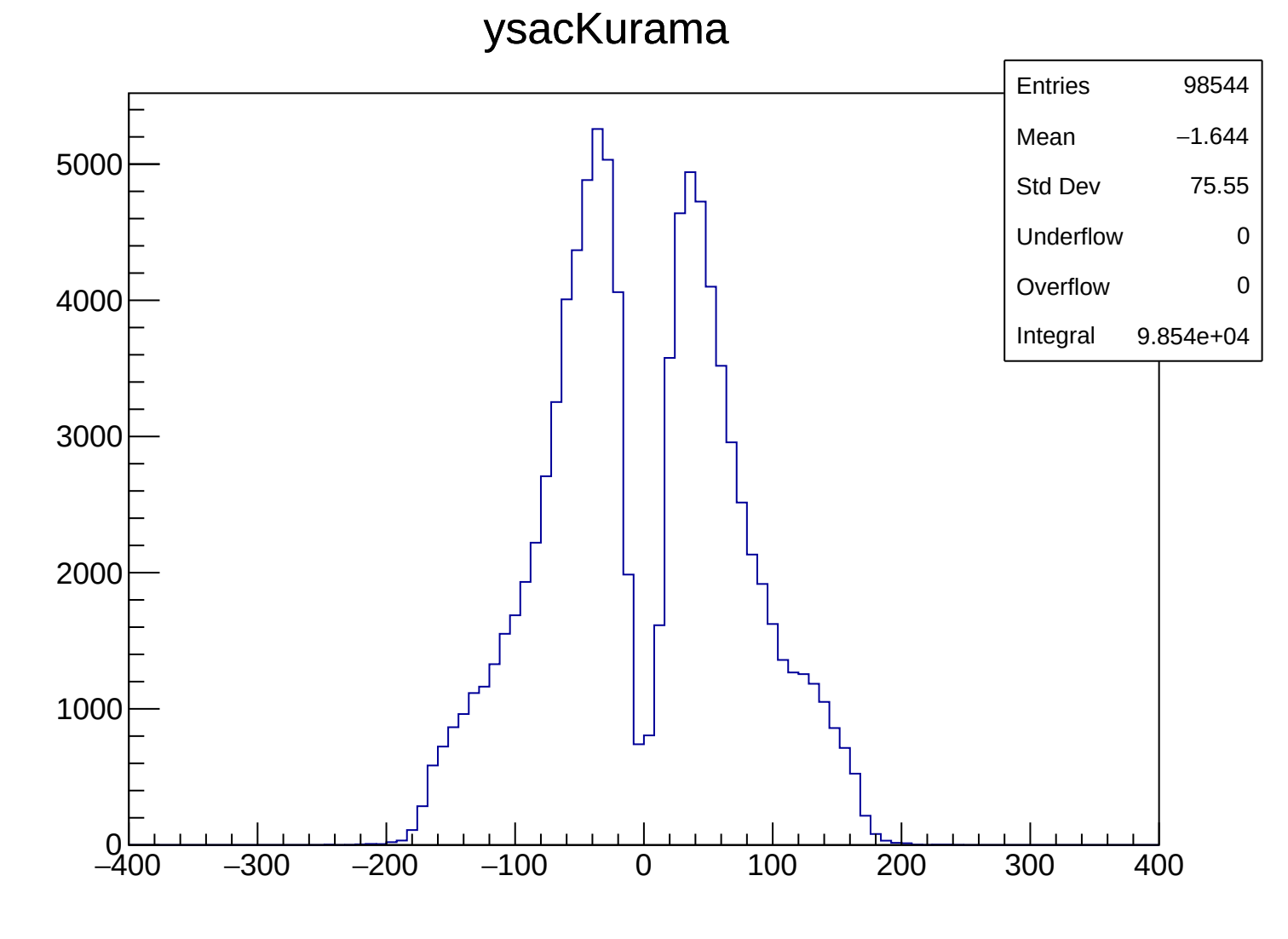

m2 Cut1
Entries 16077
Mean 0.531
Std Dev 0.4157
Underflow 721
Overflow 392
Integral 1.496e+04
1400
1200
1000
800
600
400
200
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

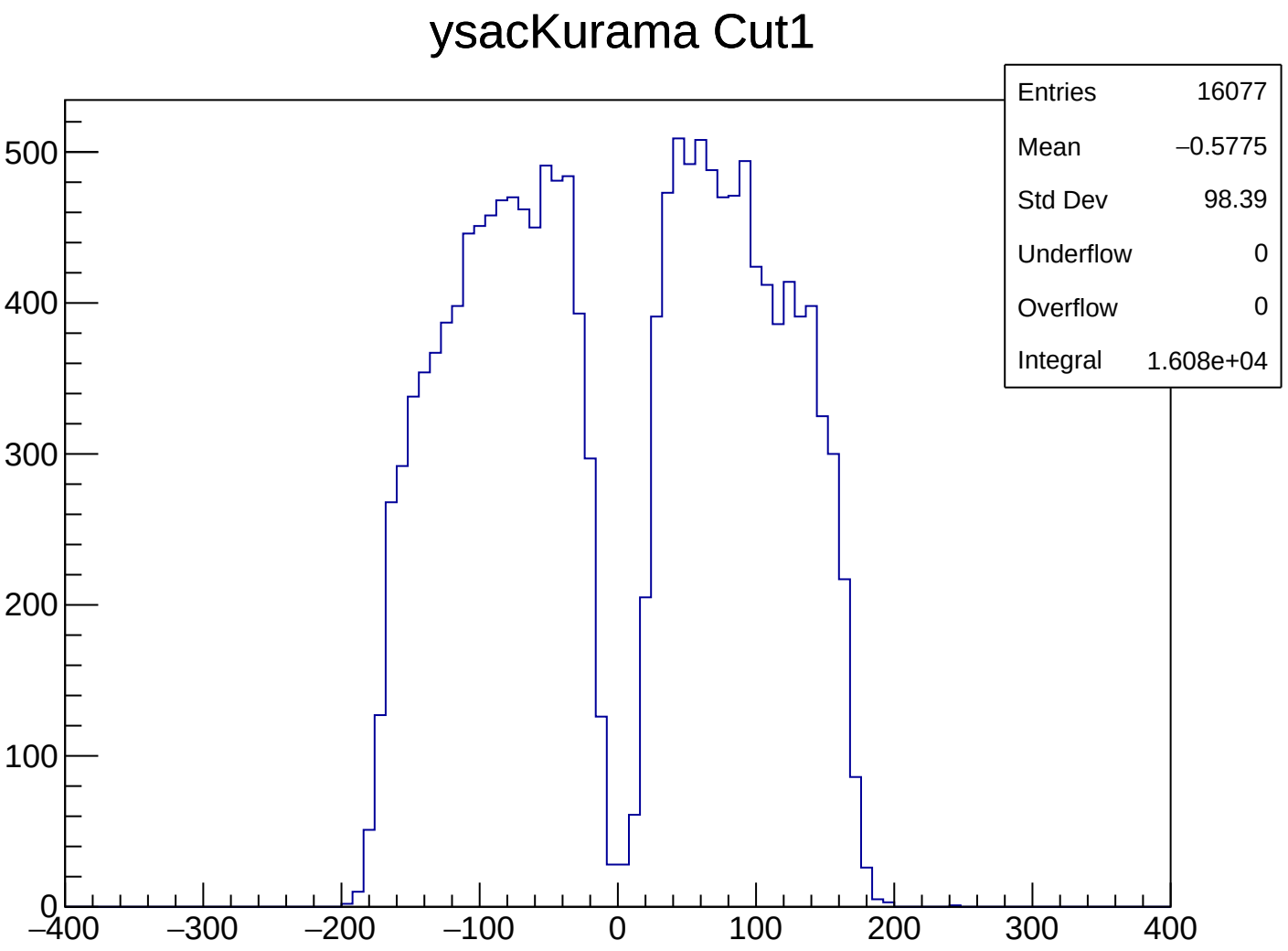

chisqrKurama
Entries 98544
Mean 19.66
Std Dev 32.61
Underflow 0
Overflow 1.719e+04
Integral 8.135e+04
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
20
40
60
80
100
120
140
160
180
200

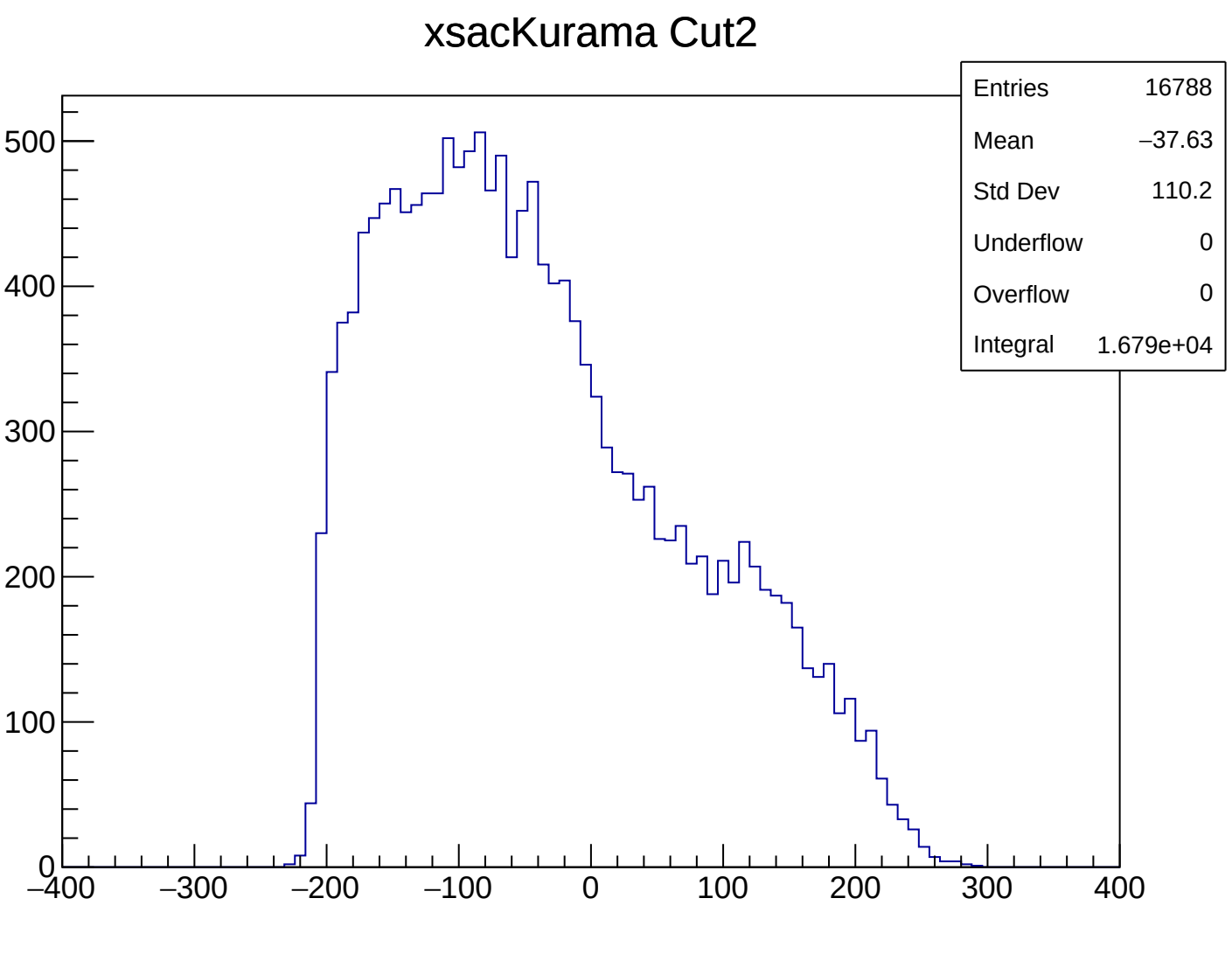

qKurama
Entries 98544
Mean −0.5064
Std Dev 0.8623
Underflow 0
Overflow 0
Integral 9.854e+04
70000
60000
50000
40000
30000
20000
10000
0
−3
−2
−1
0
1
2
3

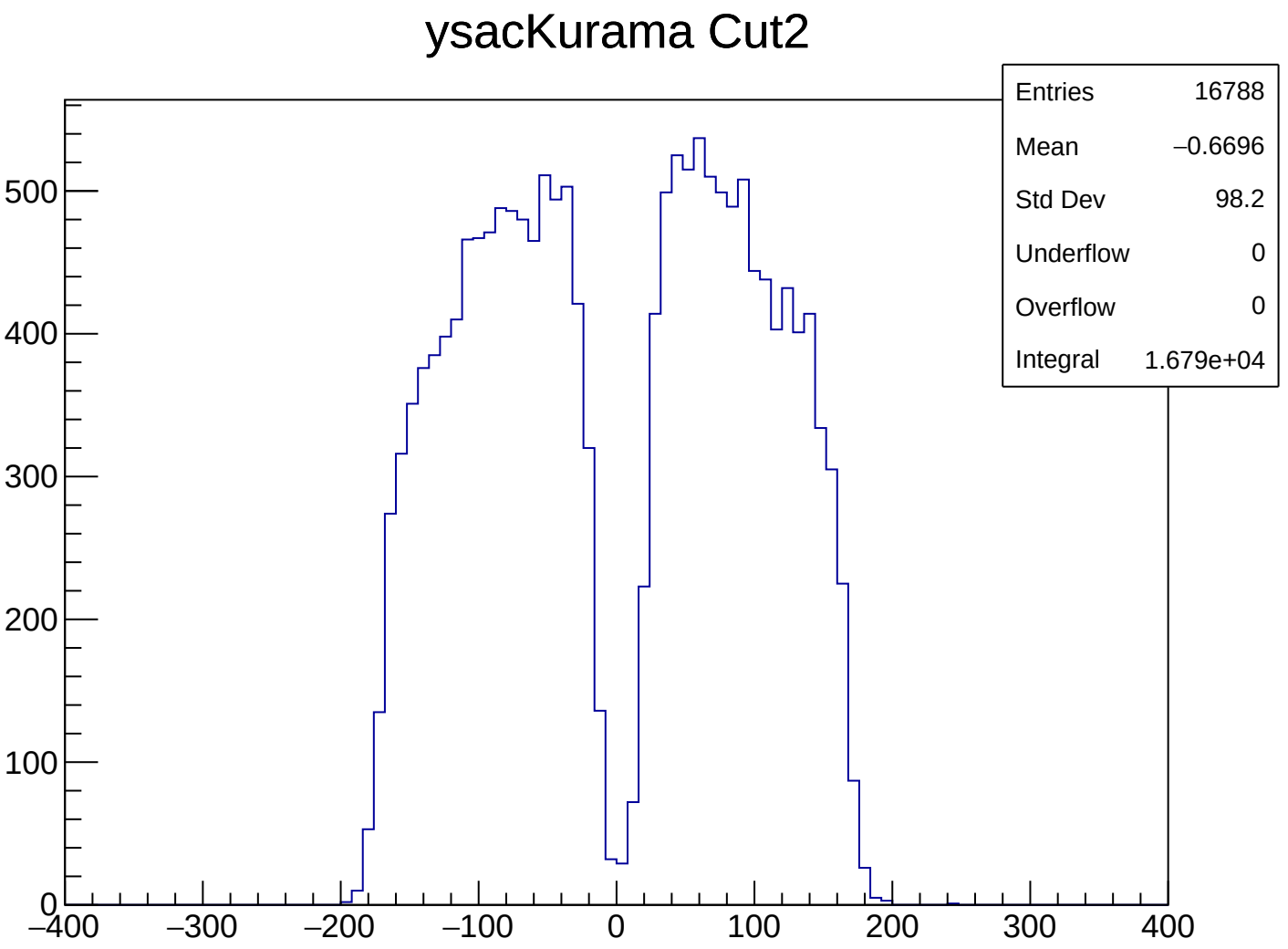

xsacKurama
Entries 98544
Mean −113.4
Std Dev 82.69
Underflow 0
Overflow 0
Integral 9.854e+04
7000
6000
5000
4000
3000
2000
1000
0
−400
−300
−200
−100
0
100
200
300
400

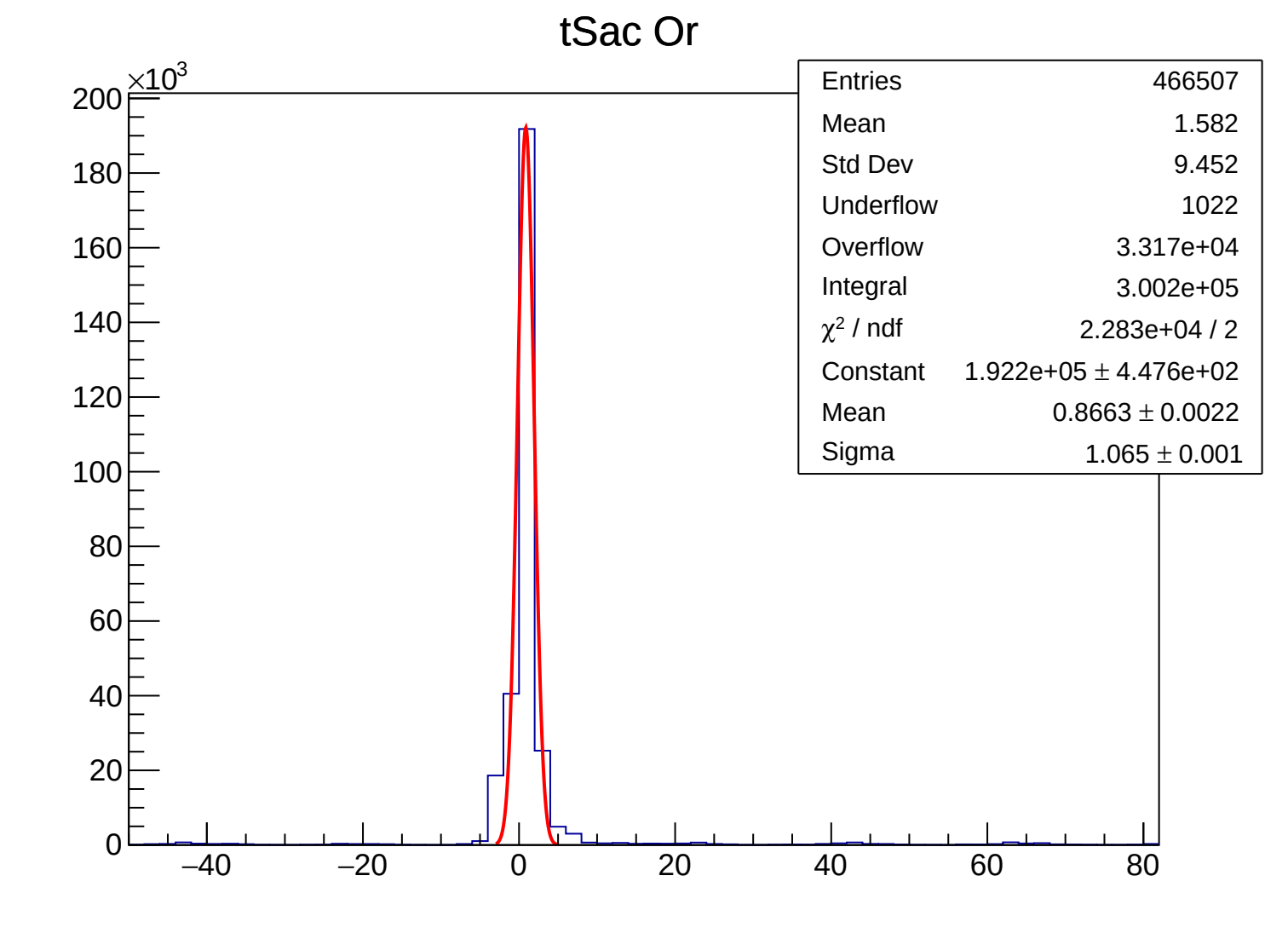

xsacKurama Cut1
Entries 16077
Mean –37.26
Std Dev 110.5
Underflow 0
Overflow 0
Integral 1.608e+04
500
400
300
200
100
0
–400
–300
–200
–100
0
100
200
300
400

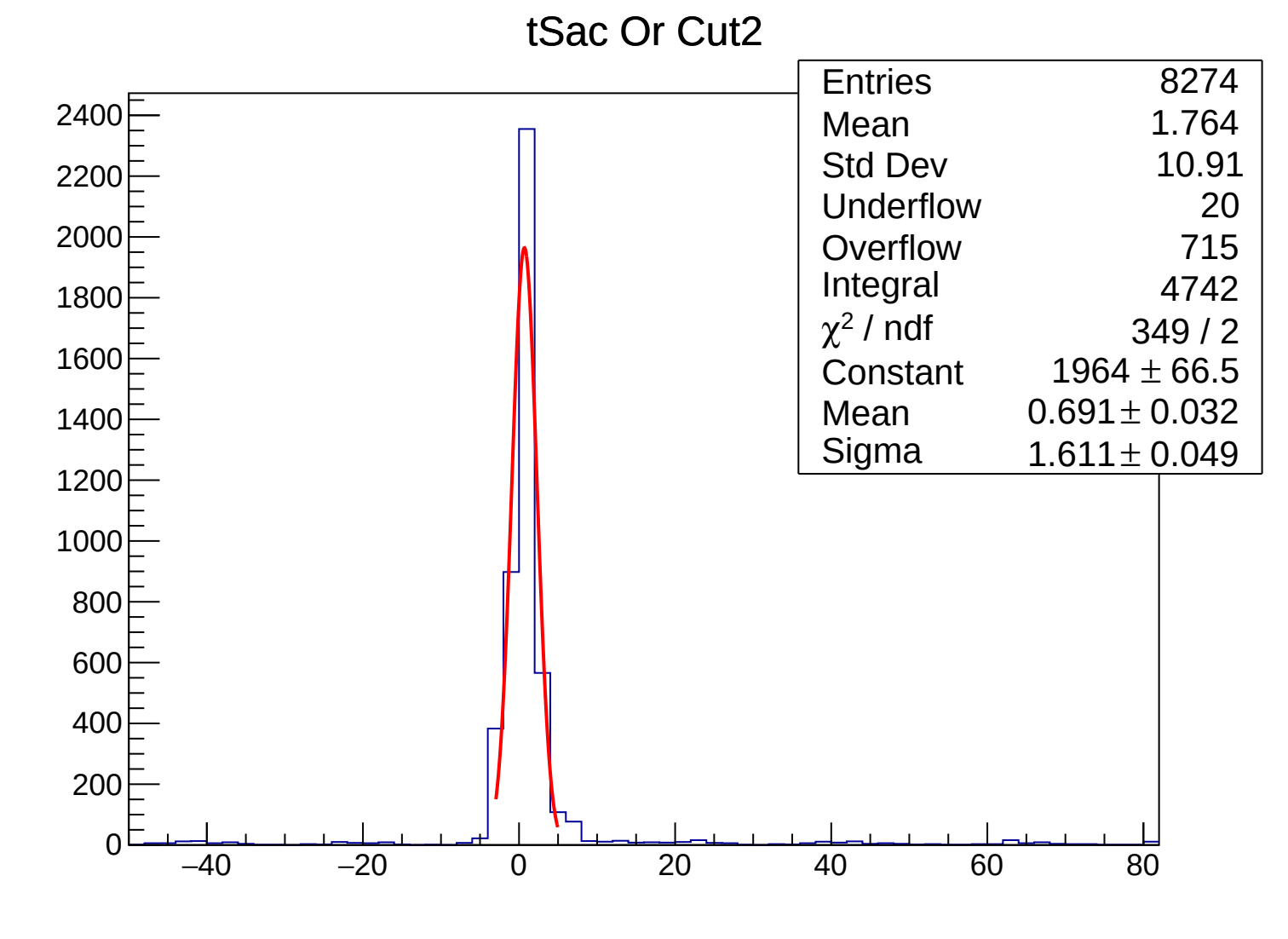

ysacKurama
Entries 98544
Mean –1.644
Std Dev 75.55
Underflow 0
Overflow 0
Integral 9.854e+04
5000
4000
3000
2000
1000
0
–400
–300
–200
–100
0
100
200
300
400

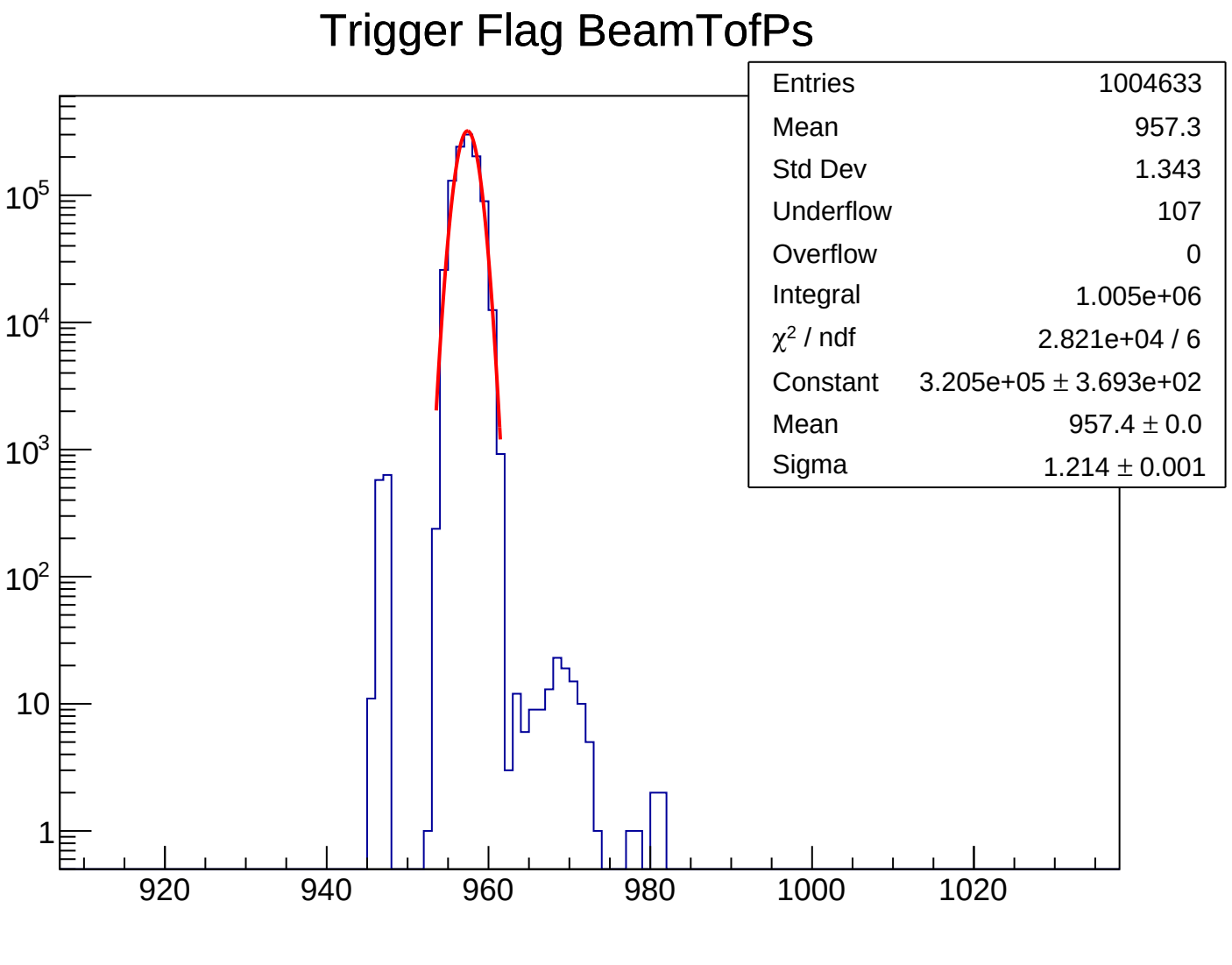

ysacKurama Cut1
Entries 16077
Mean −0.5775
Std Dev 98.39
Underflow 0
Overflow 0
Integral 1.608e+04
500
400
300
200
100
0
−400
−300
−200
−100
0
100
200
300
400

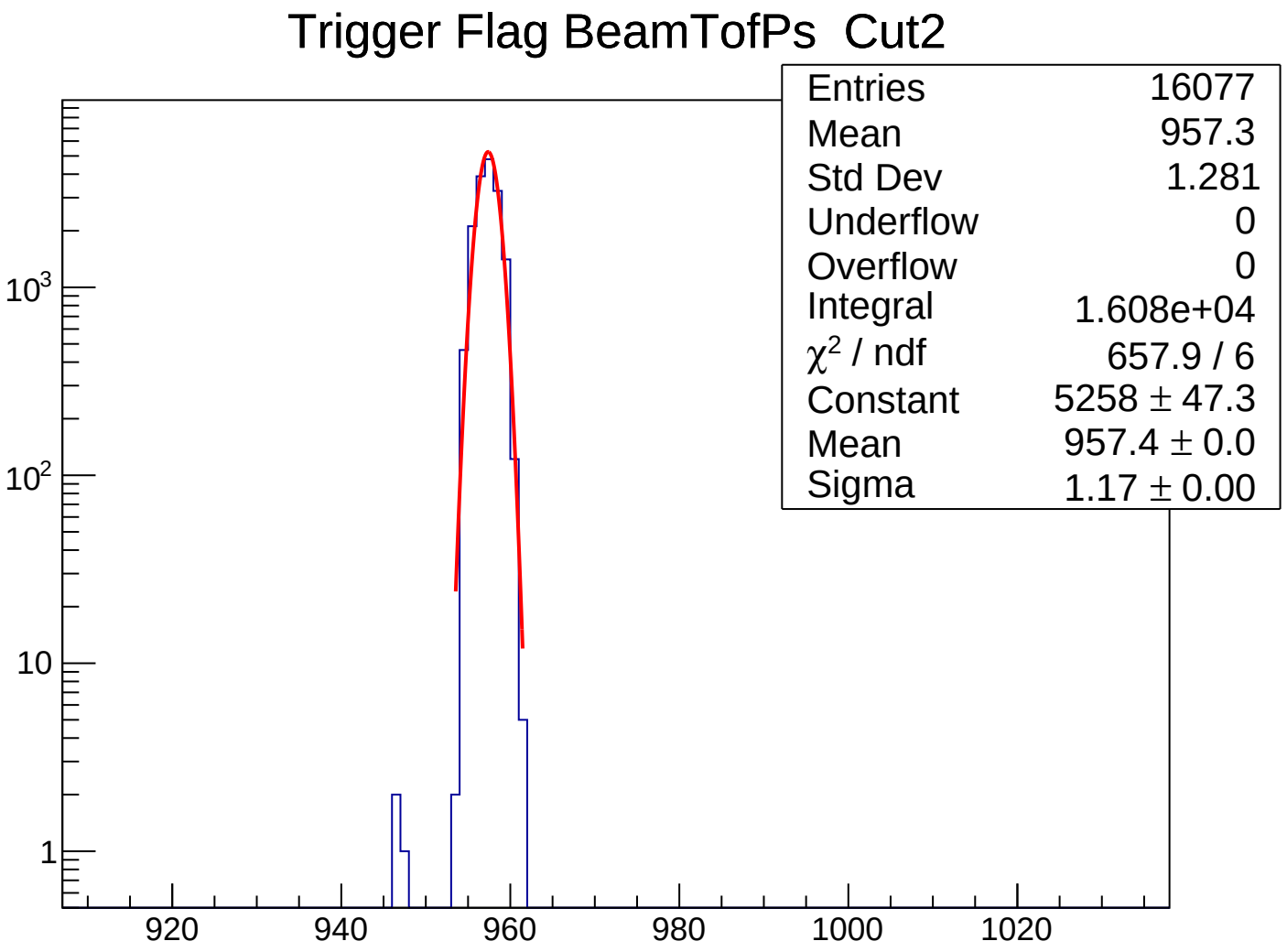

xsacKurama Cut2
Entries 16788
Mean –37.63
Std Dev 110.2
Underflow 0
Overflow 0
Integral 1.679e+04
500
400
300
200
100
0
–400
–300
–200
–100
0
100
200
300
400

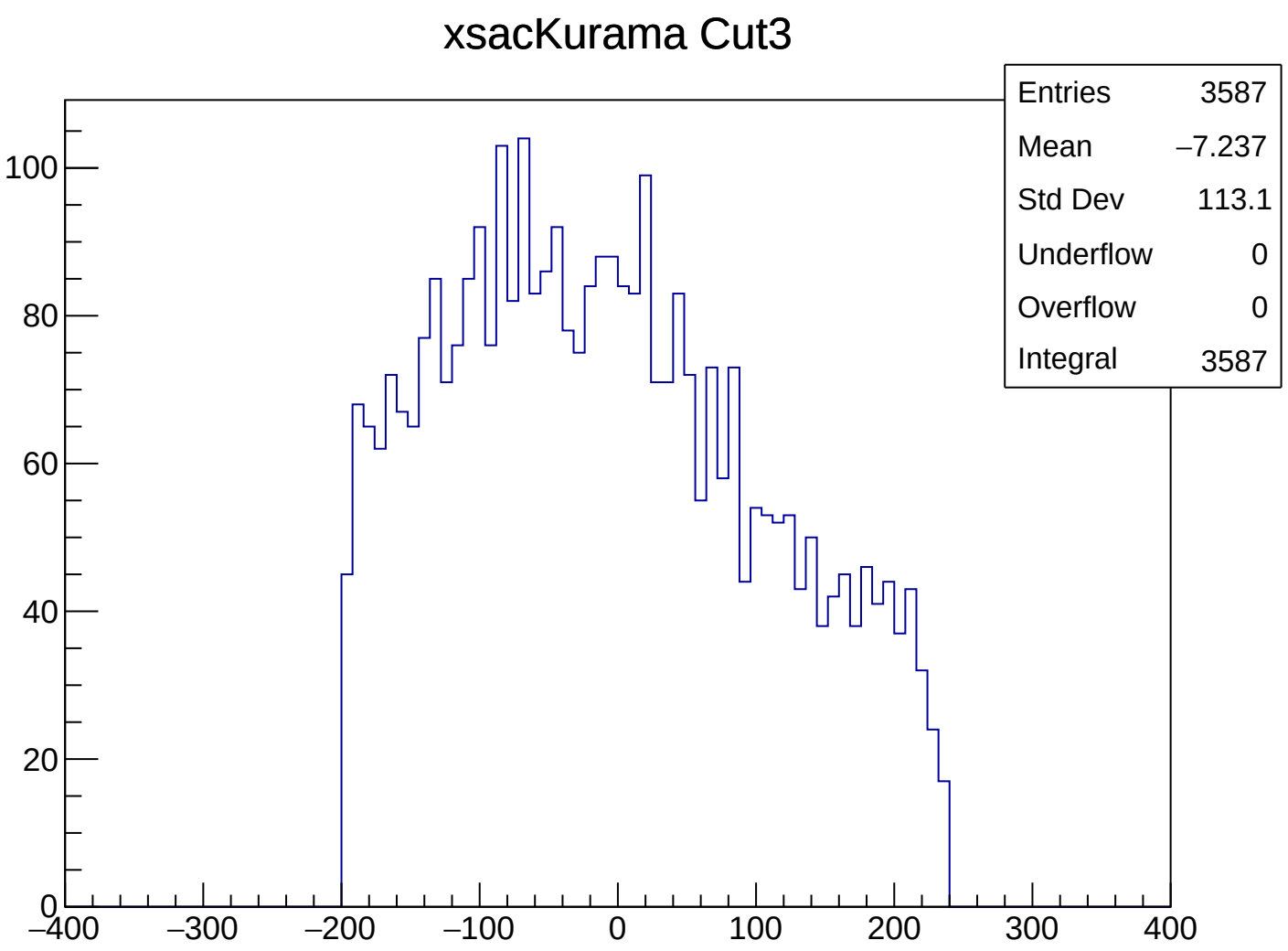

ysacKurama Cut2
Entries 16788
Mean −0.6696
Std Dev 98.2
Underflow 0
Overflow 0
Integral 1.679e+04
500
400
300
200
100
0
−400
−300
−200
−100
0
100
200
300
400

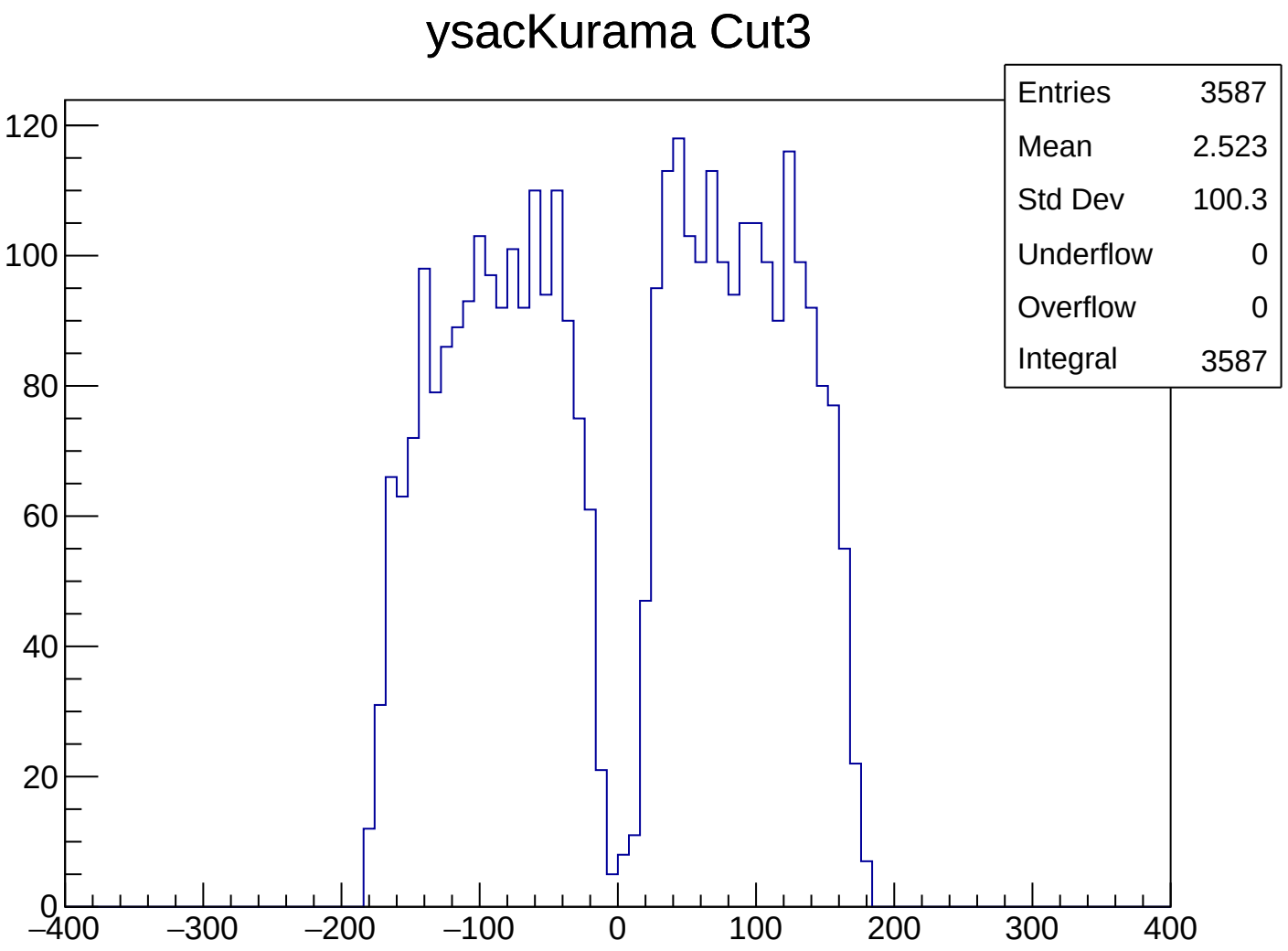

tSac Or
×10^3
200
180
160
140
120
100
80
60
40
20
0
−40
−20
0
20
40
60
80
Entries 466507
Mean 1.582
Std Dev 9.452
Underflow 1022
Overflow 3.317e+04
Integral 3.002e+05
χ² / ndf 2.283e+04 / 2
Constant 1.922e+05 ± 4.476e+02
Mean 0.8663 ± 0.0022
Sigma 1.065 ± 0.001

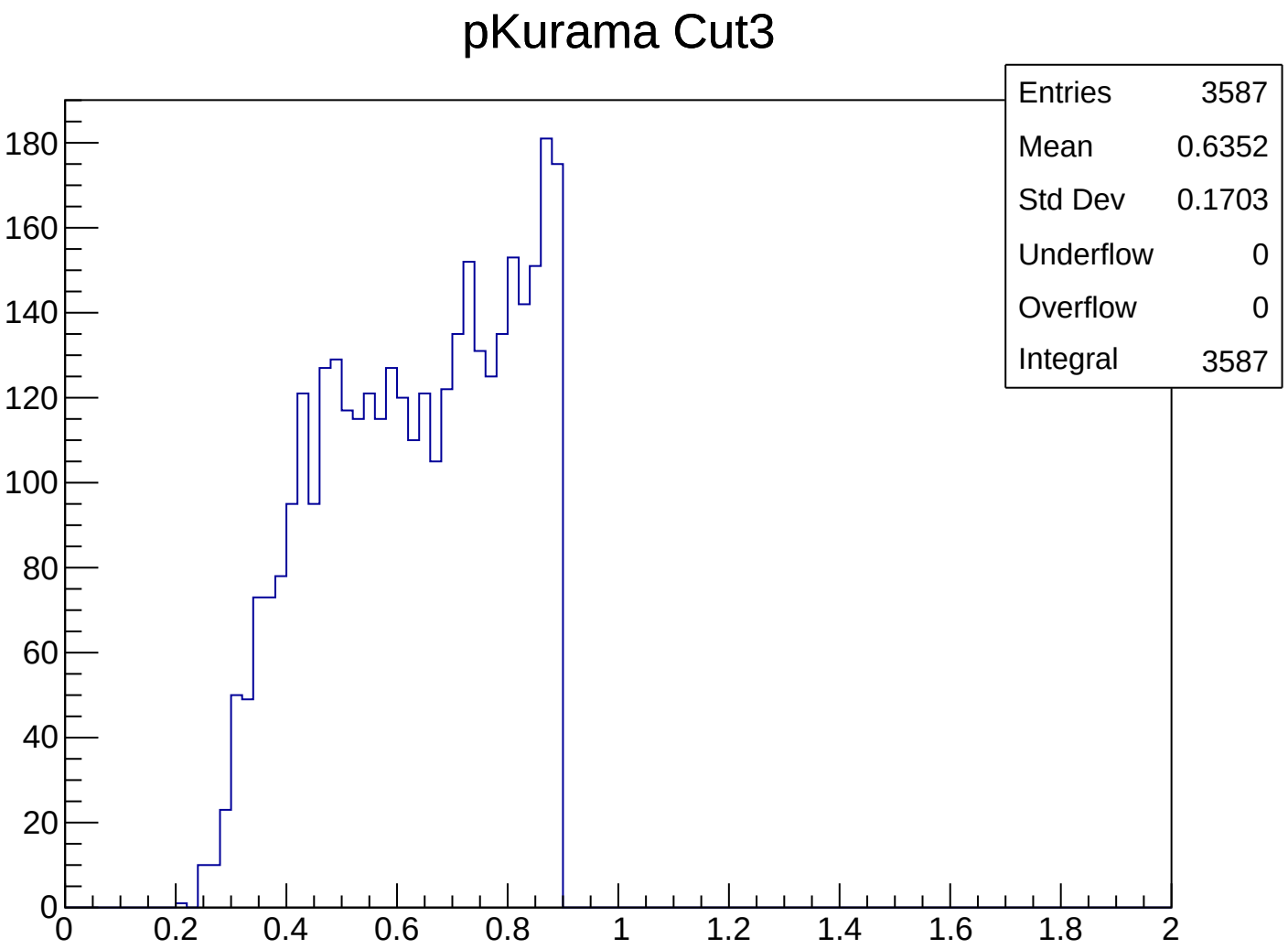

tSac Or Cut2
Entries 8274
Mean 1.764
Std Dev 10.91
Underflow 20
Overflow 715
Integral 4742
χ² / ndf 349 / 2
Constant 1964 ± 66.5
Mean 0.691 ± 0.032
Sigma 1.611 ± 0.049
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
–40
–20
0
20
40
60
80

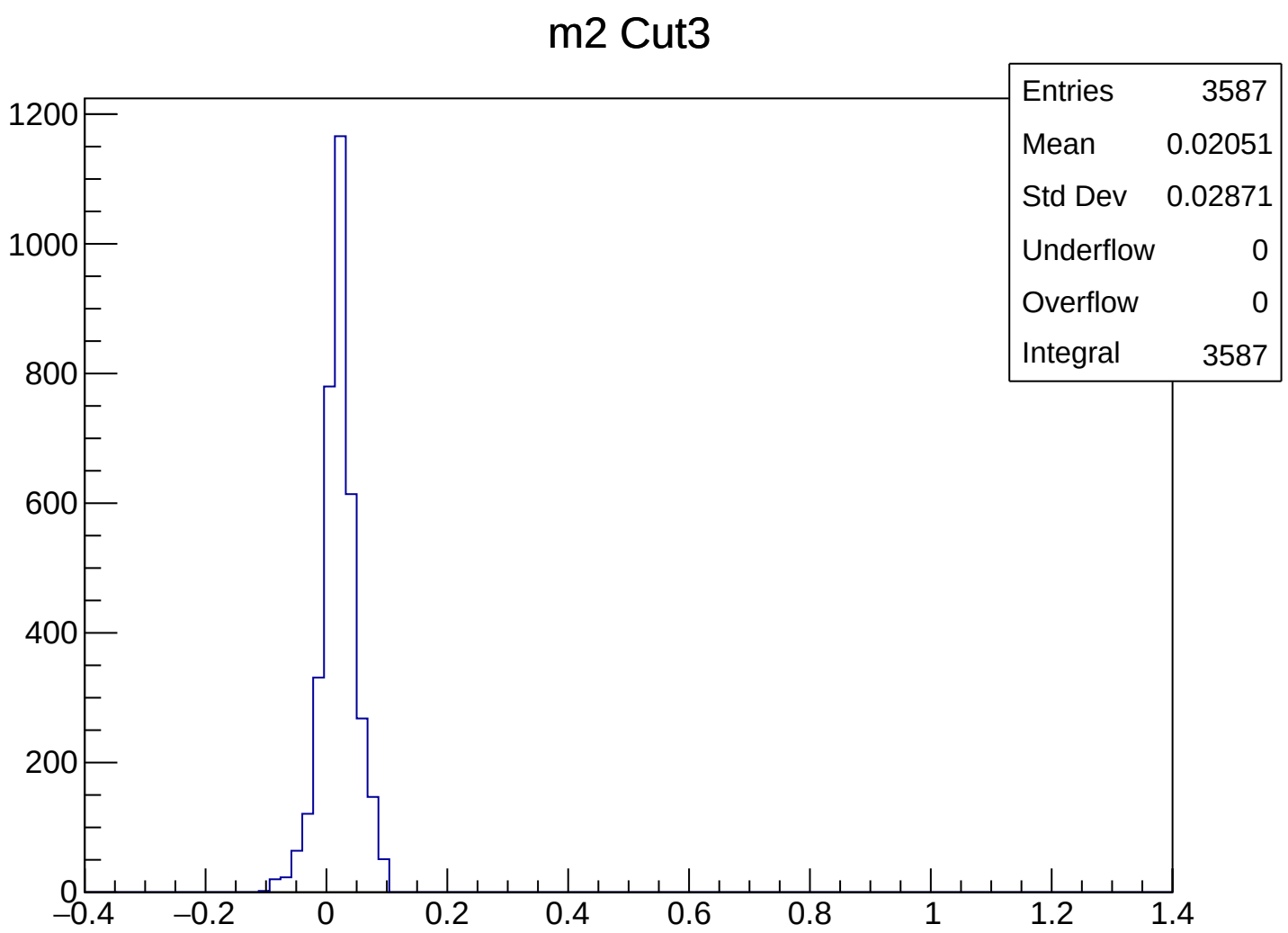

Trigger Flag BeamTofPs
Entries 1004633
Mean 957.3
Std Dev 1.343
Underflow 107
Overflow 0
Integral 1.005e+06
χ² / ndf 2.821e+04 / 6
Constant 3.205e+05 ± 3.693e+02
Mean 957.4 ± 0.0
Sigma 1.214 ± 0.001
10⁵
10⁴
10³
10²
10
1
920
940
960
980
1000
1020

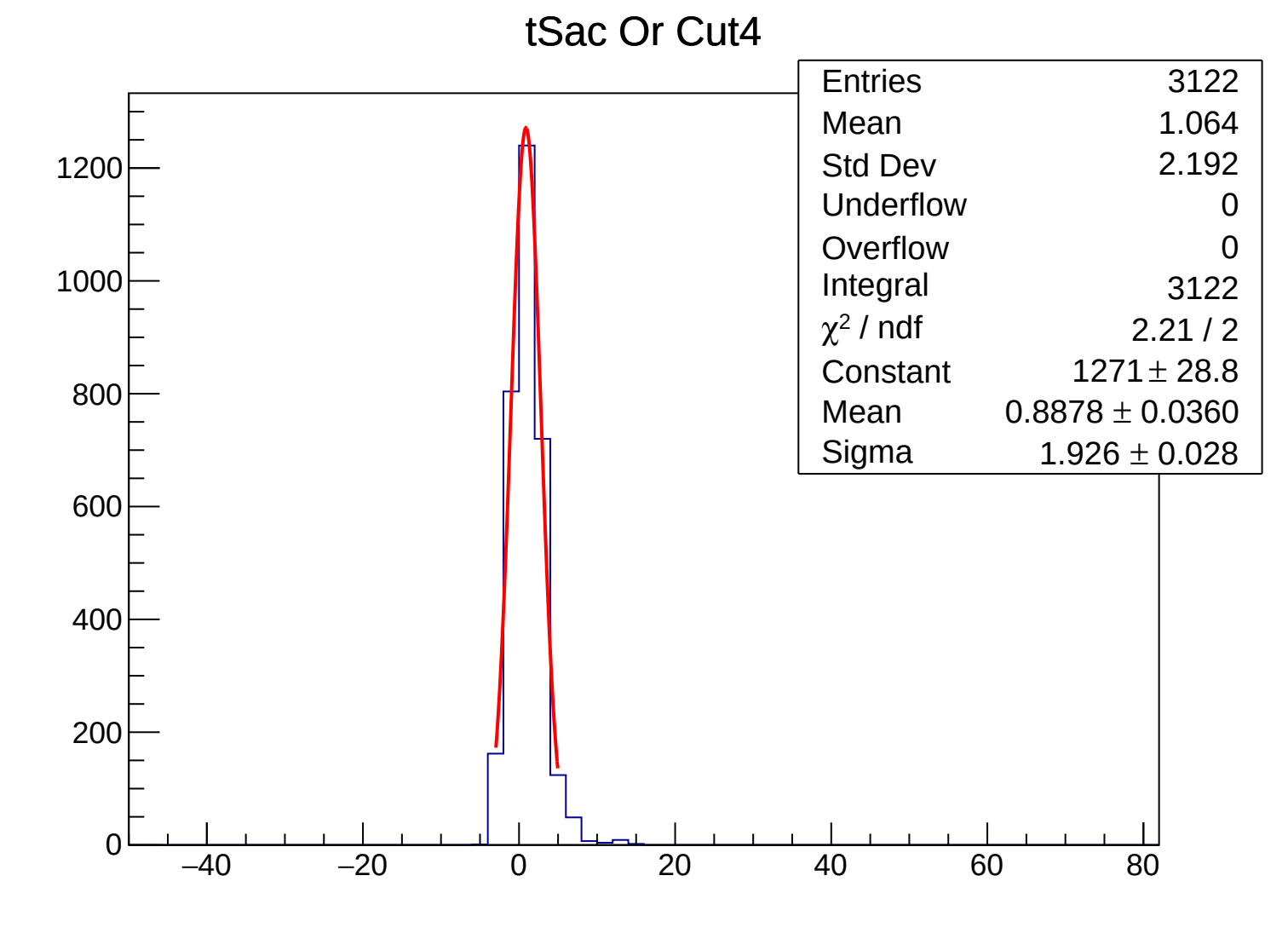

Trigger Flag BeamTofPs Cut2
Entries 16077
Mean 957.3
Std Dev 1.281
Underflow 0
Overflow 0
Integral 1.608e+04
χ² / ndf 657.9 / 6
Constant 5258 ± 47.3
Mean 957.4 ± 0.0
Sigma 1.17 ± 0.00
10³
10²
10
1
920
940
960
980
1000
1020

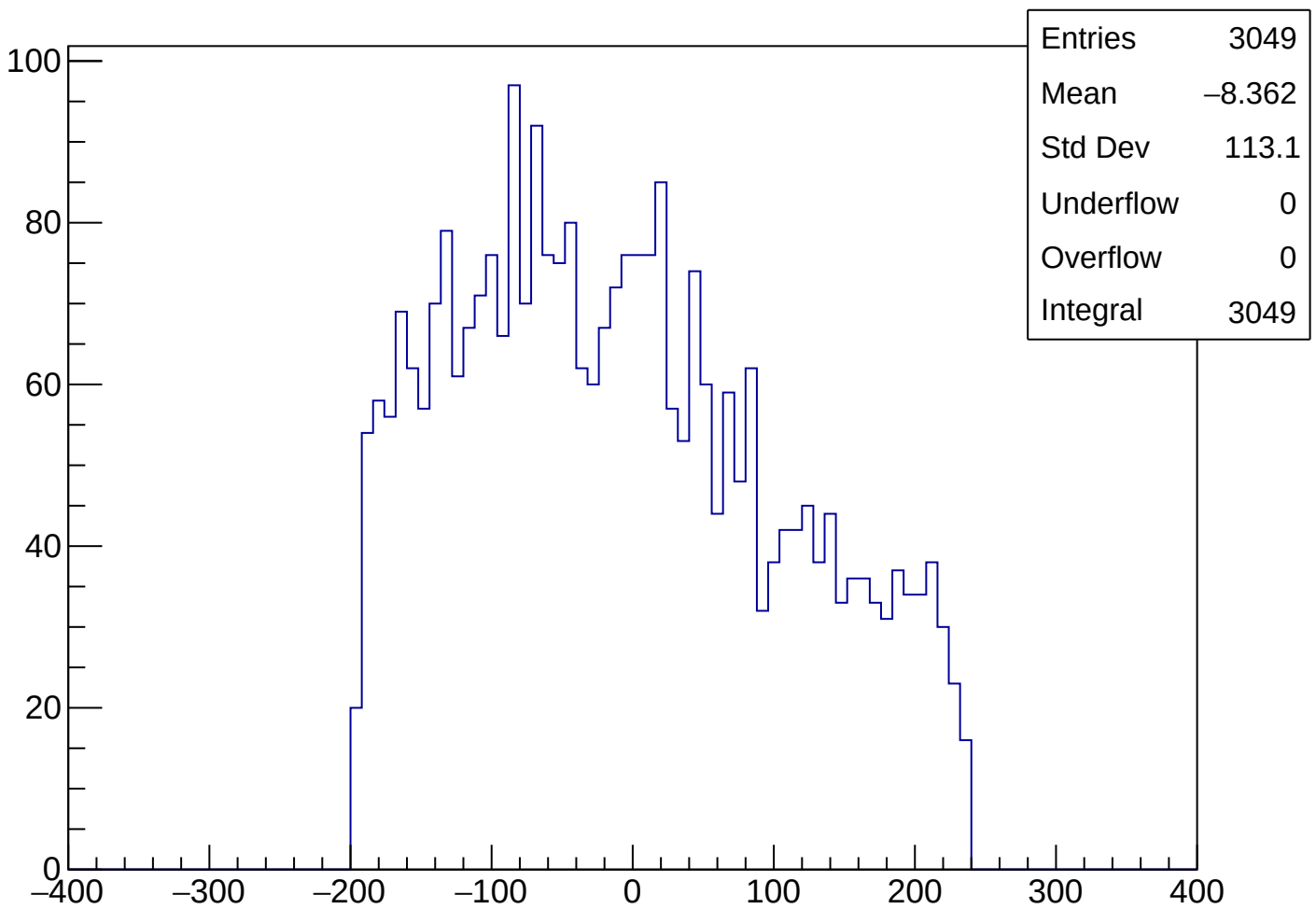

xsacKurama Cut3
Entries 3587
Mean −7.237
Std Dev 113.1
Underflow 0
Overflow 0
Integral 3587
100
80
60
40
20
0
−400
−300
−200
−100
0
100
200
300
400

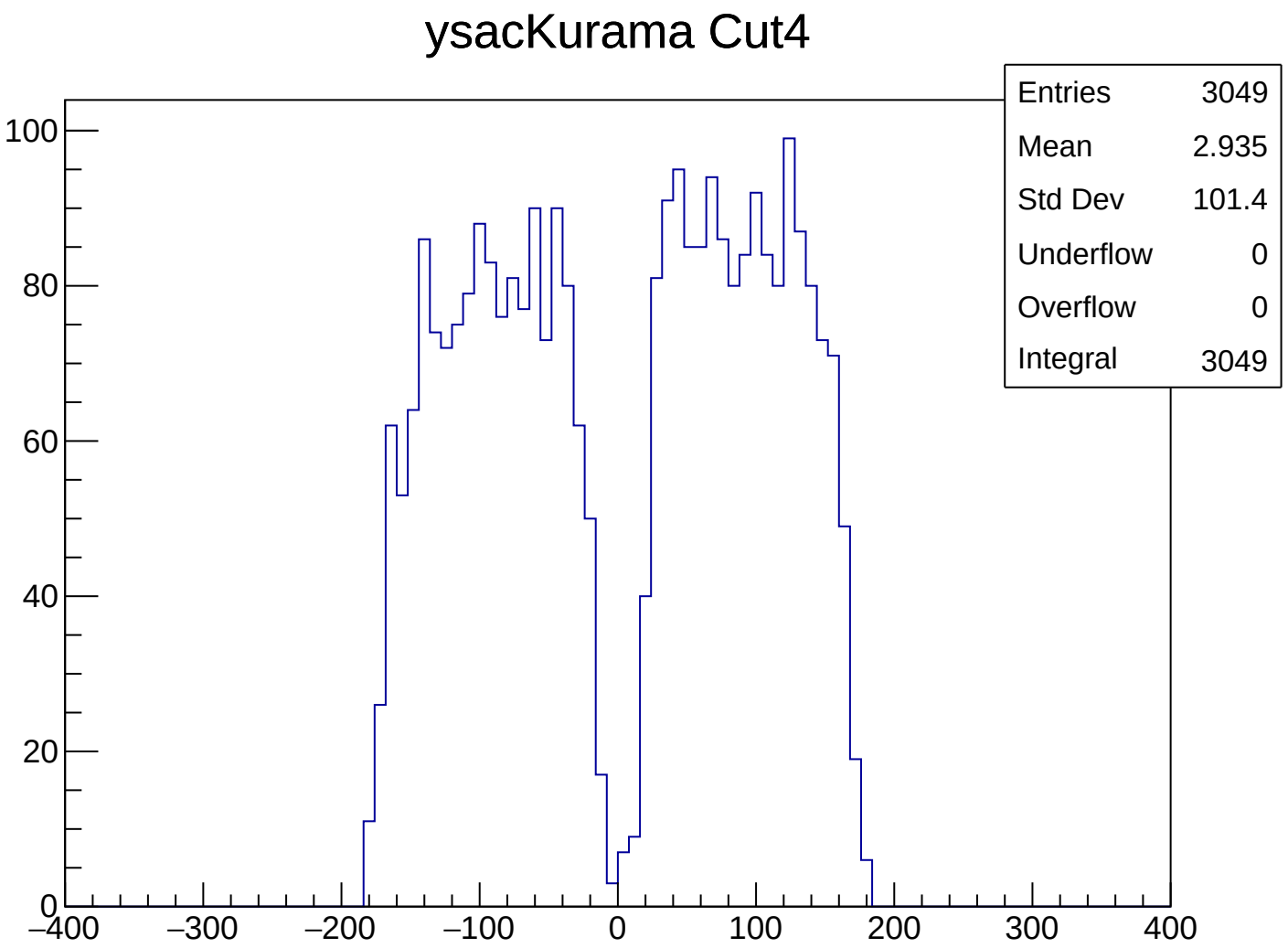

ysacKurama Cut3
Entries 3587
Mean 2.523
Std Dev 100.3
Underflow 0
Overflow 0
Integral 3587
120
100
80
60
40
20
0
–400
–300
–200
–100
0
100
200
300
400

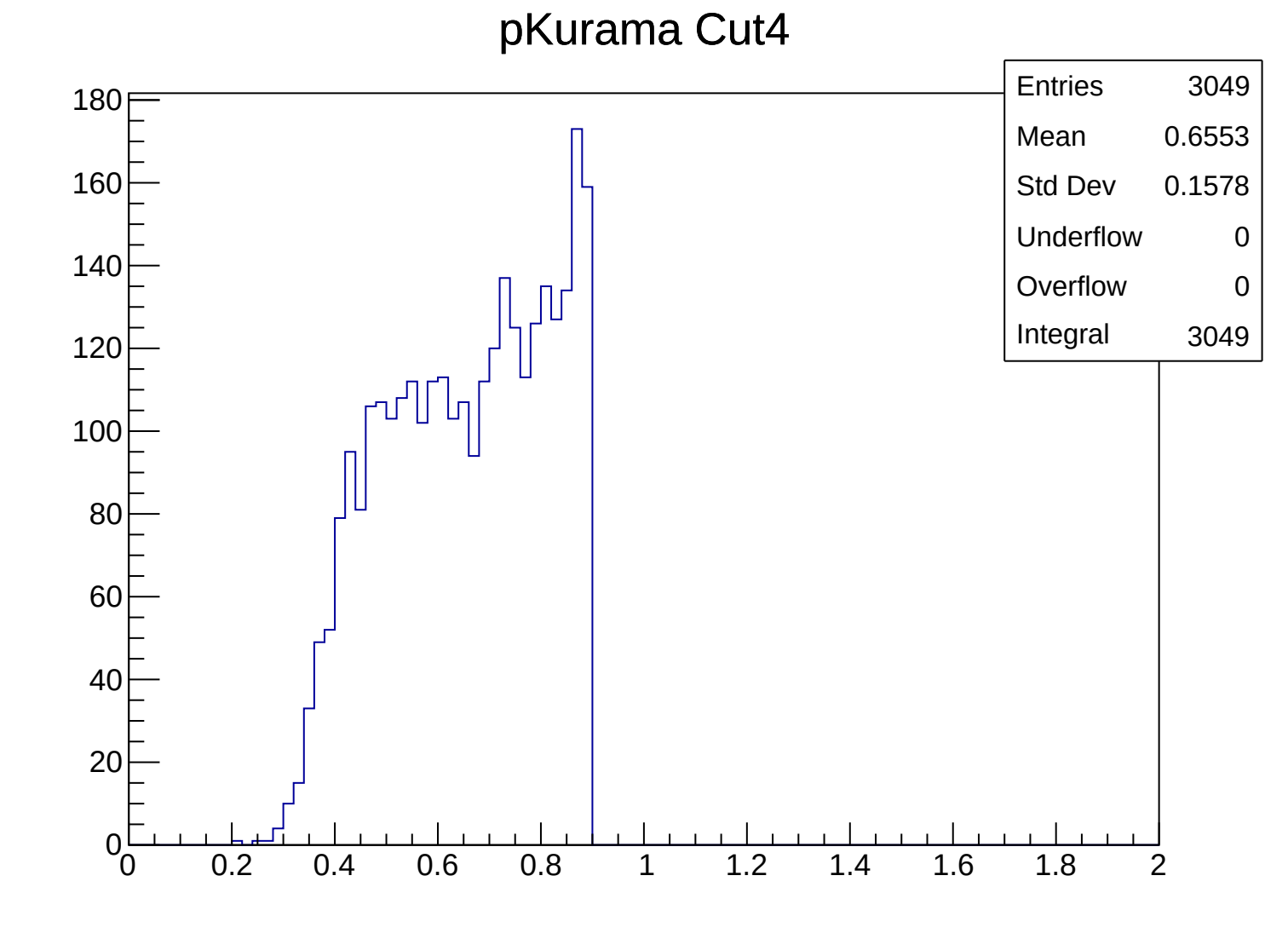

pKurama Cut3
Entries 3587
Mean 0.6352
Std Dev 0.1703
Underflow 0
Overflow 0
Integral 3587
180
160
140
120
100
80
60
40
20
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

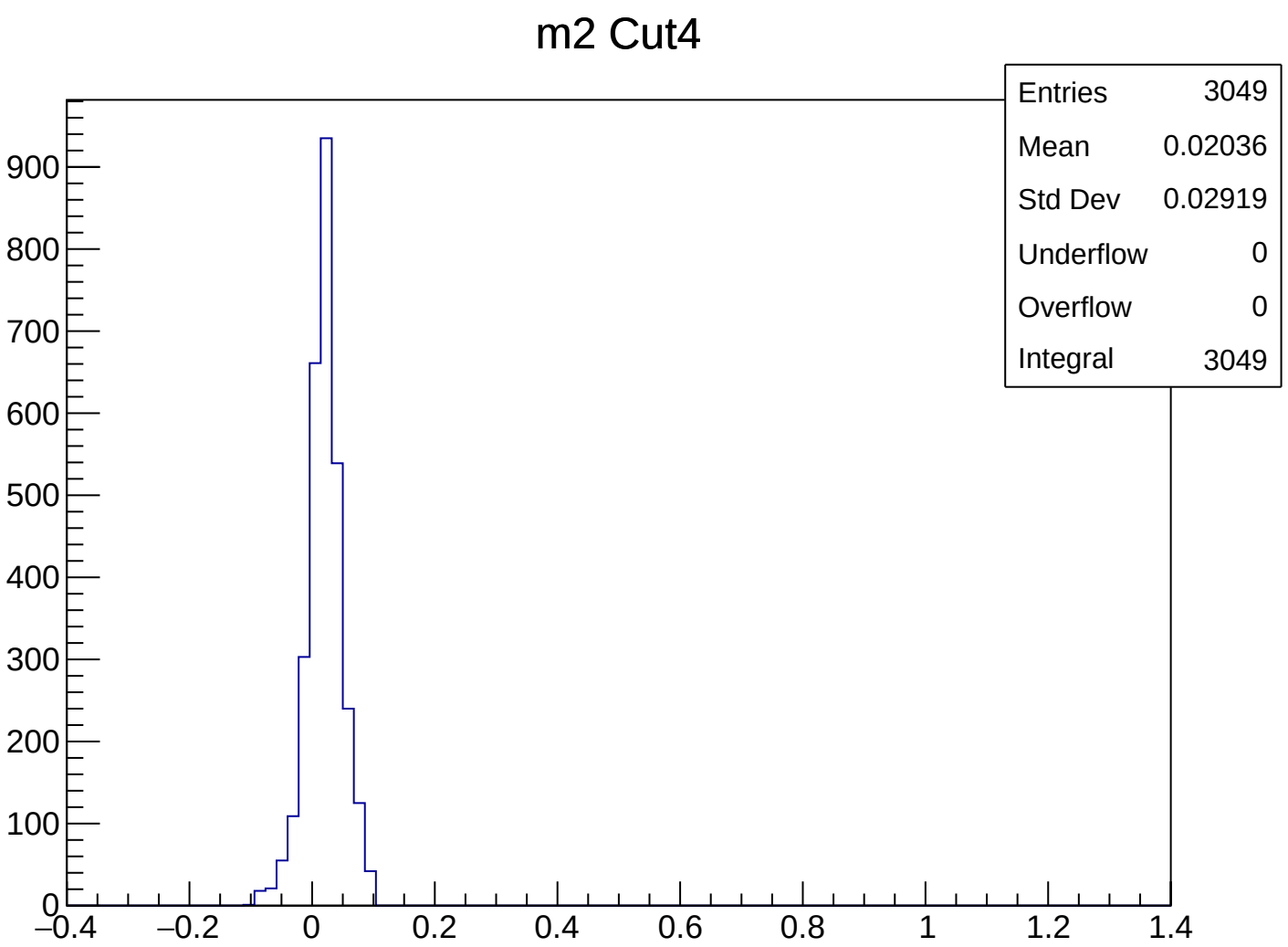

m2 Cut3
Entries 3587
Mean 0.02051
Std Dev 0.02871
Underflow 0
Overflow 0
Integral 3587
1200
1000
800
600
400
200
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

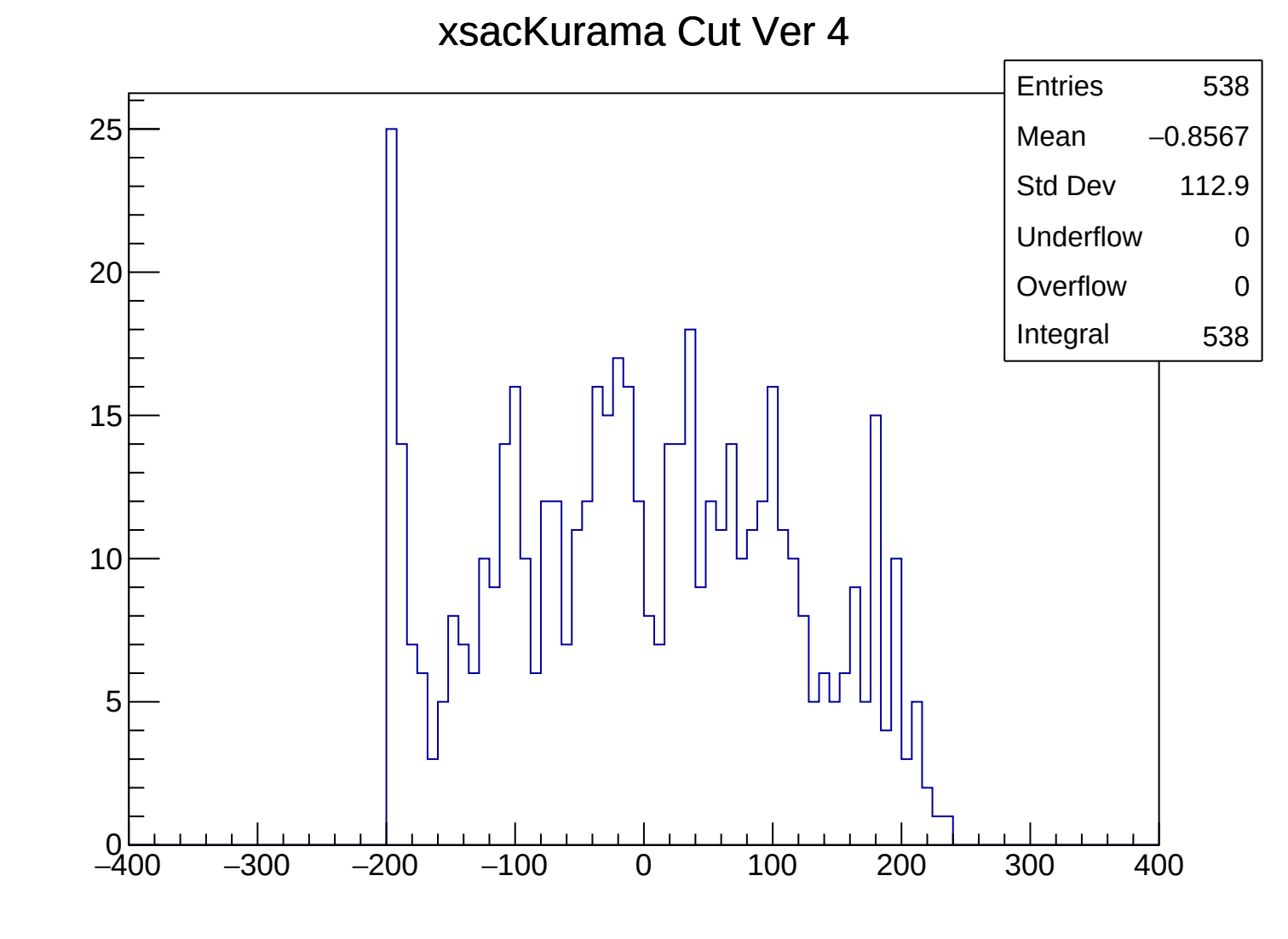

tSac Or Cut4
Entries 3122
Mean 1.064
Std Dev 2.192
Underflow 0
Overflow 0
Integral 3122
χ² / ndf 2.21 / 2
Constant 1271 ± 28.8
Mean 0.8878 ± 0.0360
Sigma 1.926 ± 0.028
1200
1000
800
600
400
200
0
–40
–20
0
20
40
60
80

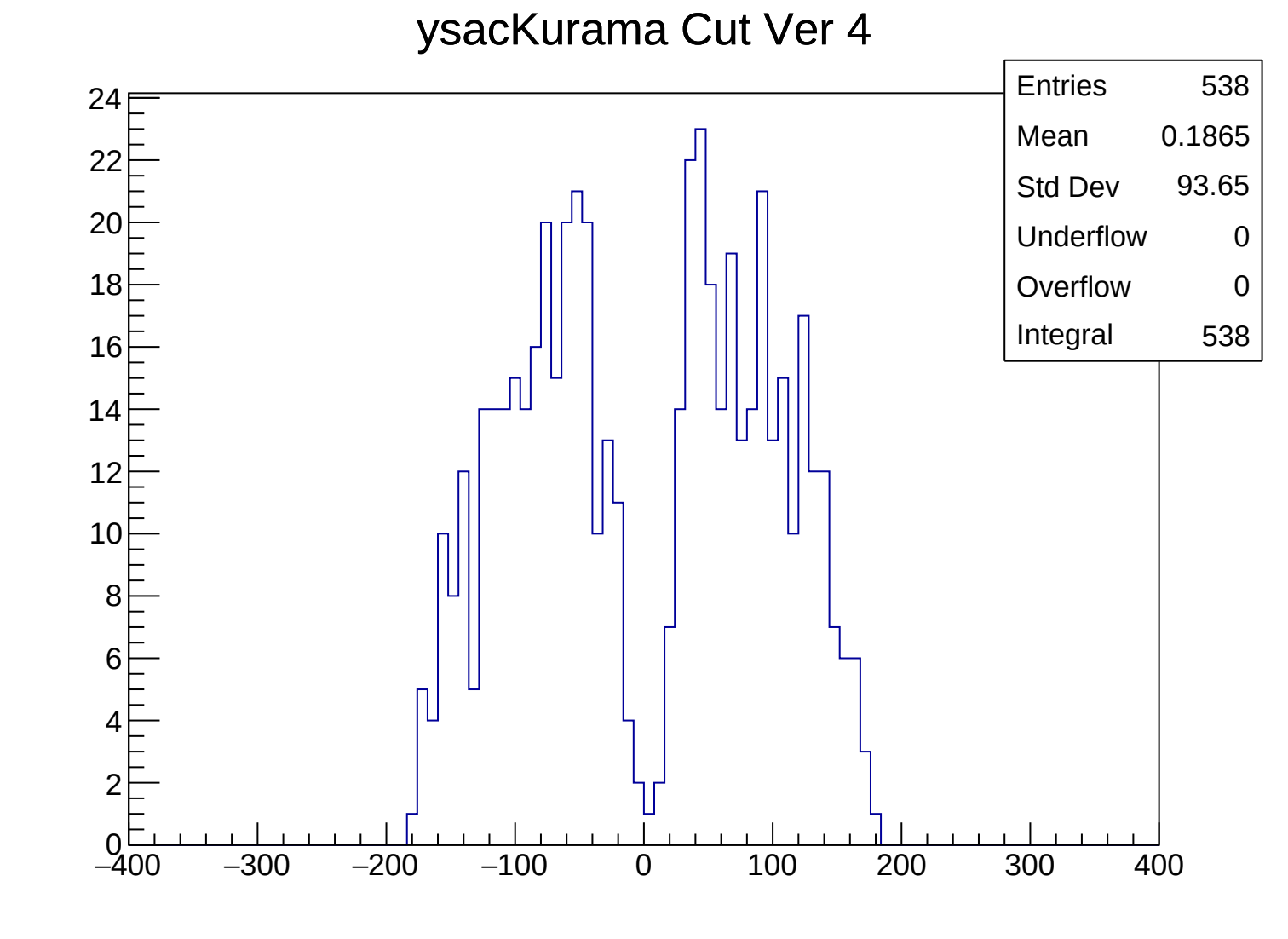

xsacKurama Cut4
Entries 3049
Mean –8.362
Std Dev 113.1
Underflow 0
Overflow 0
Integral 3049
100
80
60
40
20
0
–400
–300
–200
–100
0
100
200
300
400

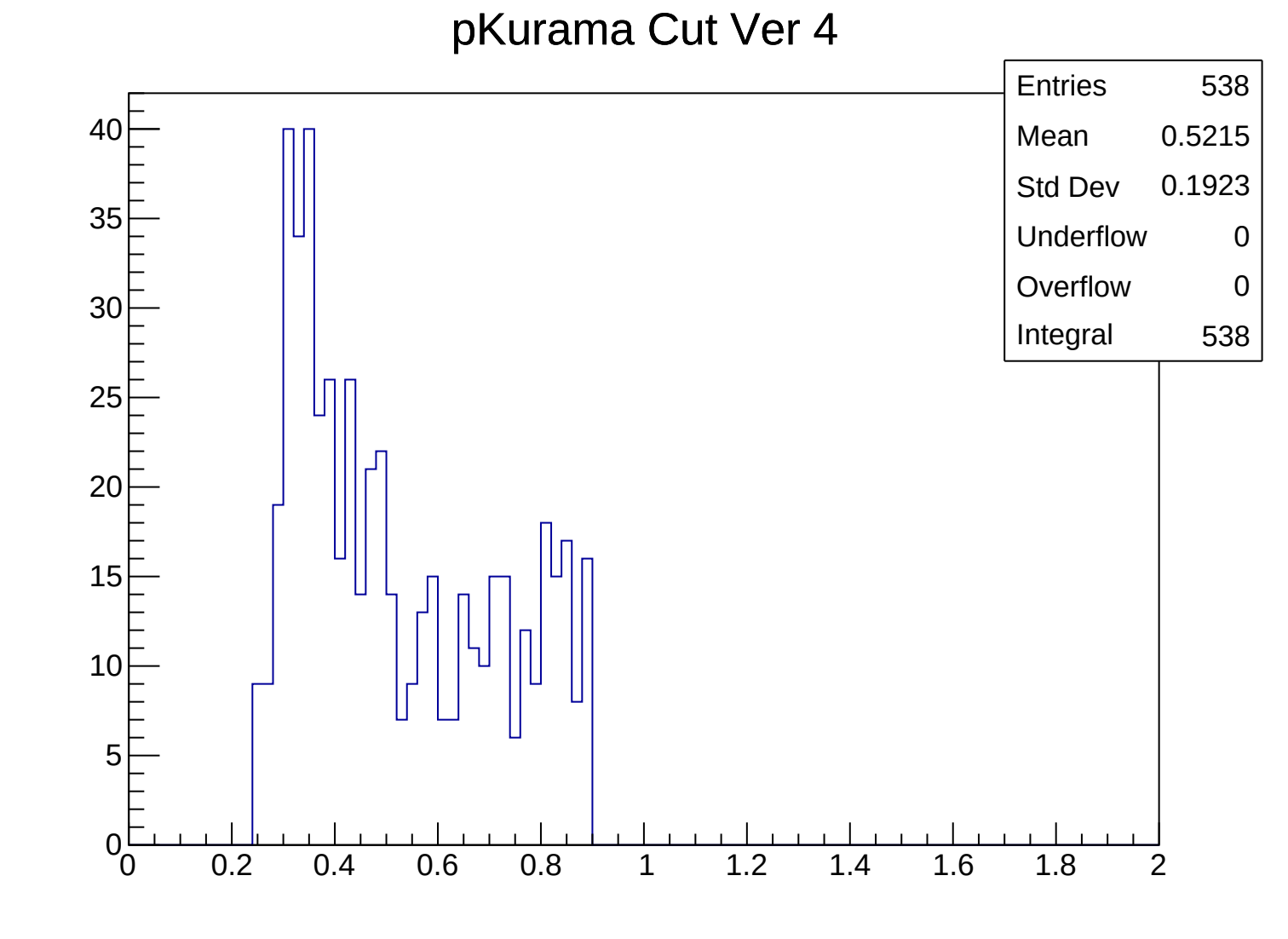

ysacKurama Cut4
Entries 3049
Mean 2.935
Std Dev 101.4
Underflow 0
Overflow 0
Integral 3049
100
80
60
40
20
0
–400
–300
–200
–100
0
100
200
300
400

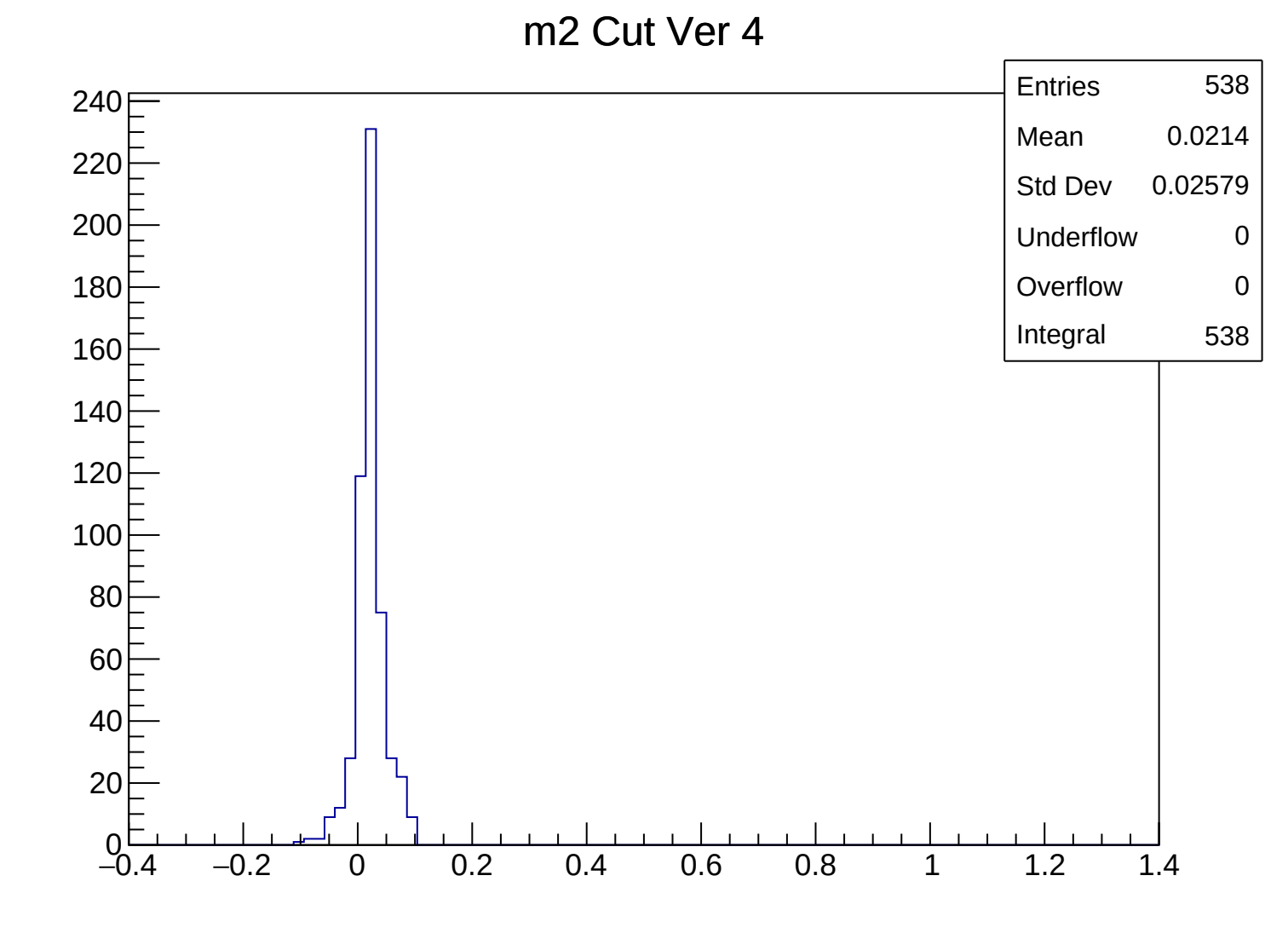

pKurama Cut4
Entries 3049
Mean 0.6553
Std Dev 0.1578
Underflow 0
Overflow 0
Integral 3049
180
160
140
120
100
80
60
40
20
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

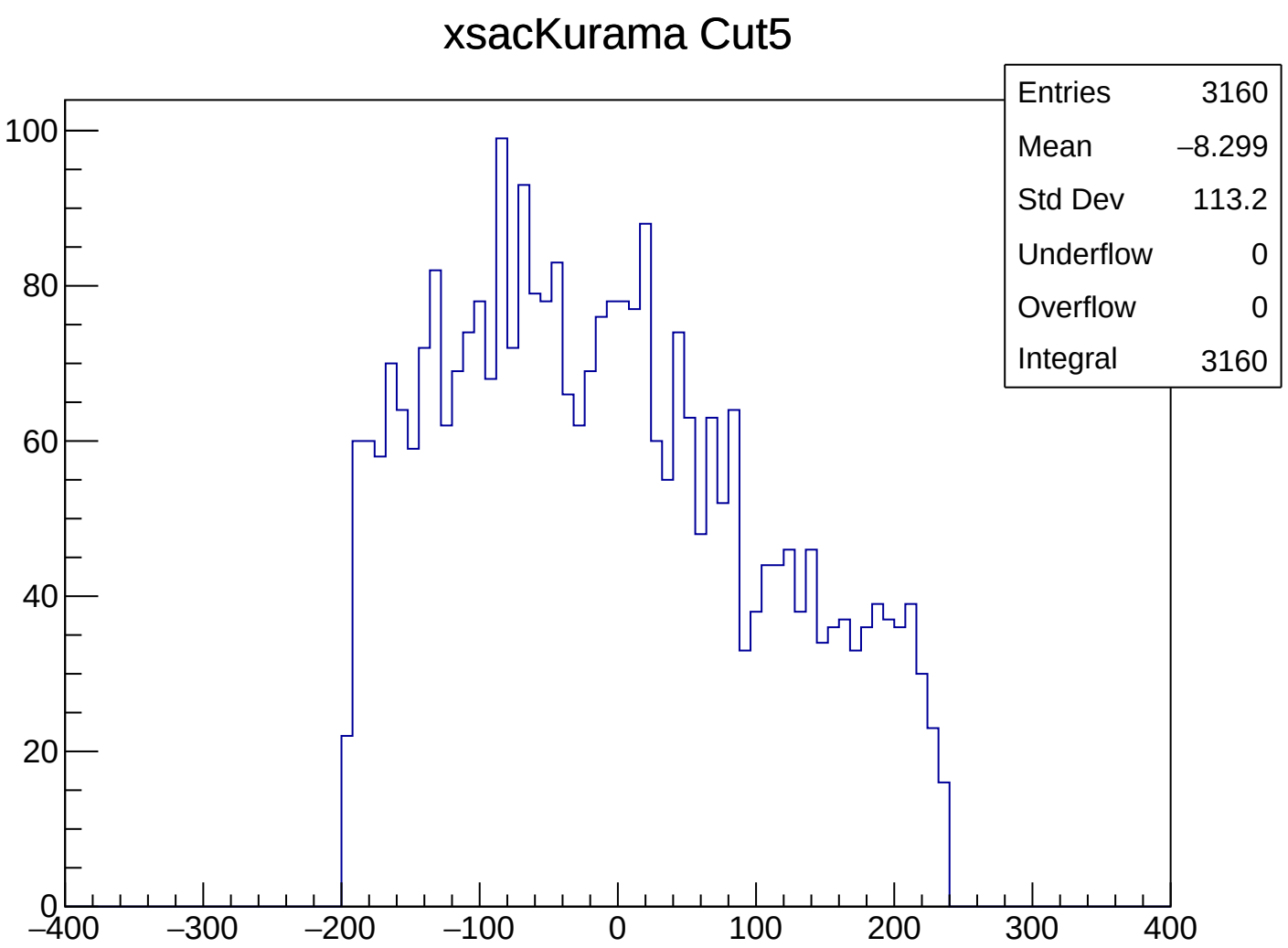

m2 Cut4
Entries 3049
Mean 0.02036
Std Dev 0.02919
Underflow 0
Overflow 0
Integral 3049
900
800
700
600
500
400
300
200
100
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

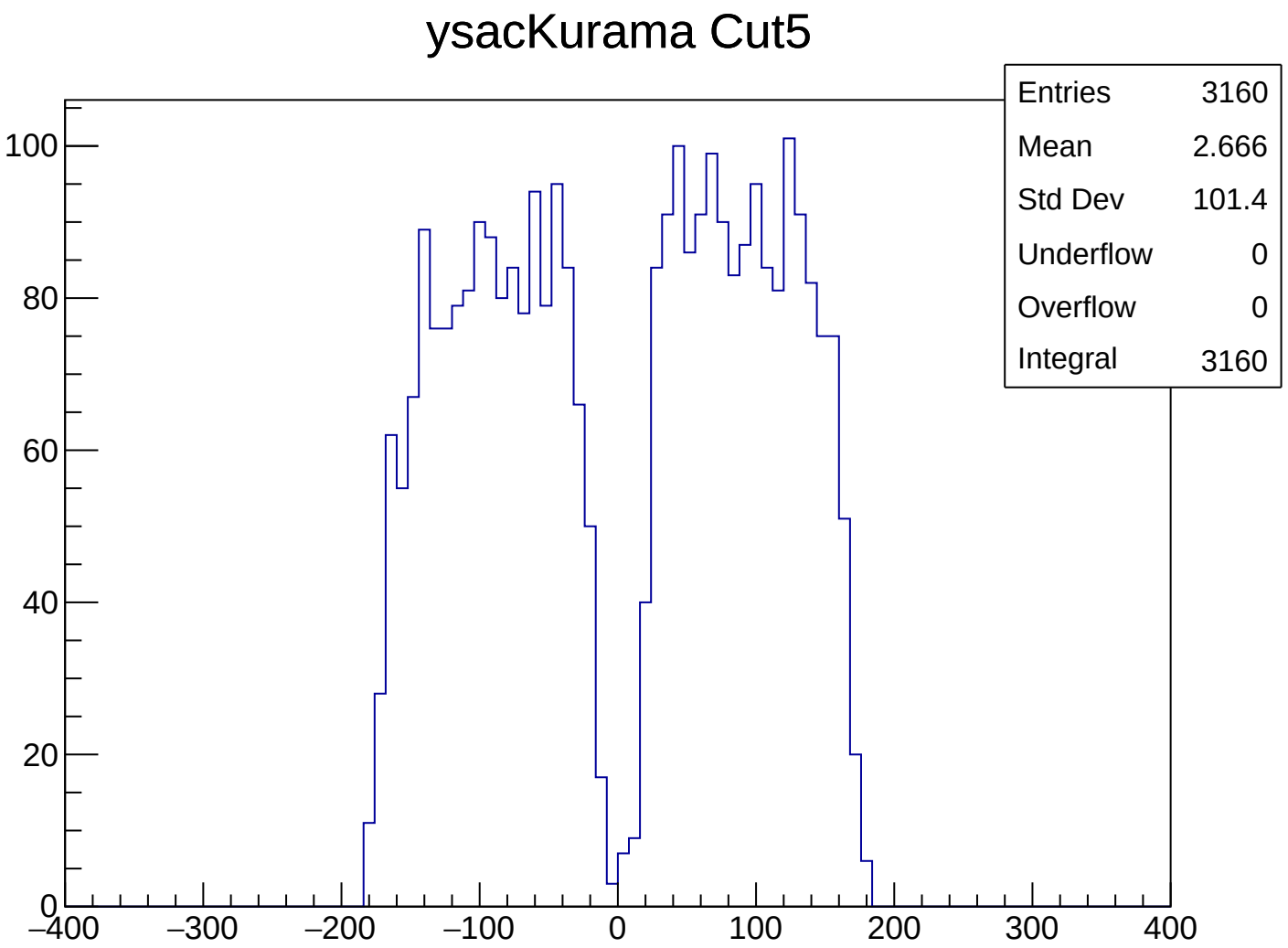

xsacKurama Cut Ver 4
Entries 538
Mean –0.8567
Std Dev 112.9
Underflow 0
Overflow 0
Integral 538
25
20
15
10
5
0
–400
–300
–200
–100
0
100
200
300
400

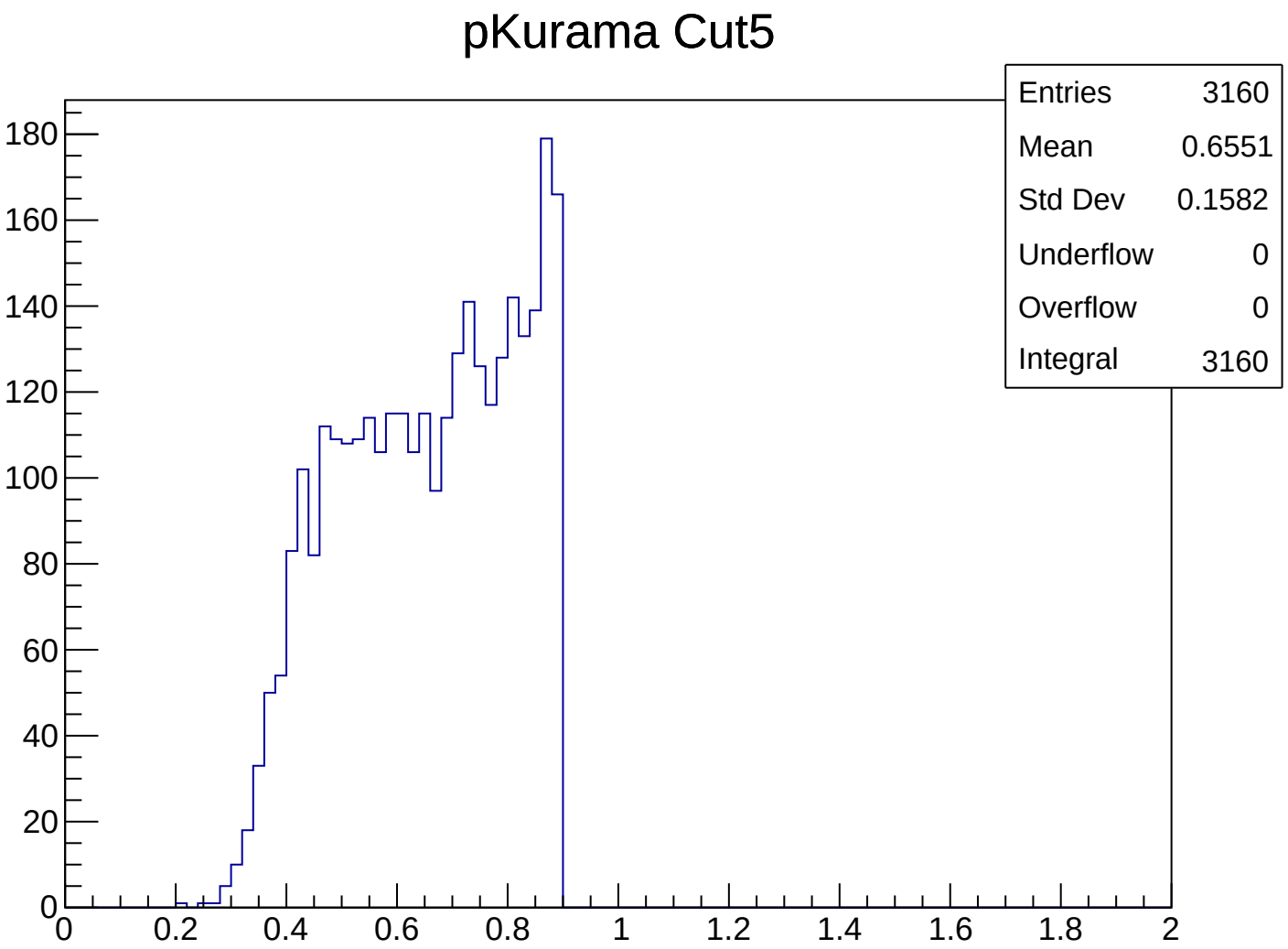

ysacKurama Cut Ver 4
Entries 538
Mean 0.1865
Std Dev 93.65
Underflow 0
Overflow 0
Integral 538
24
22
20
18
16
14
12
10
8
6
4
2
0
–400
–300
–200
–100
0
100
200
300
400

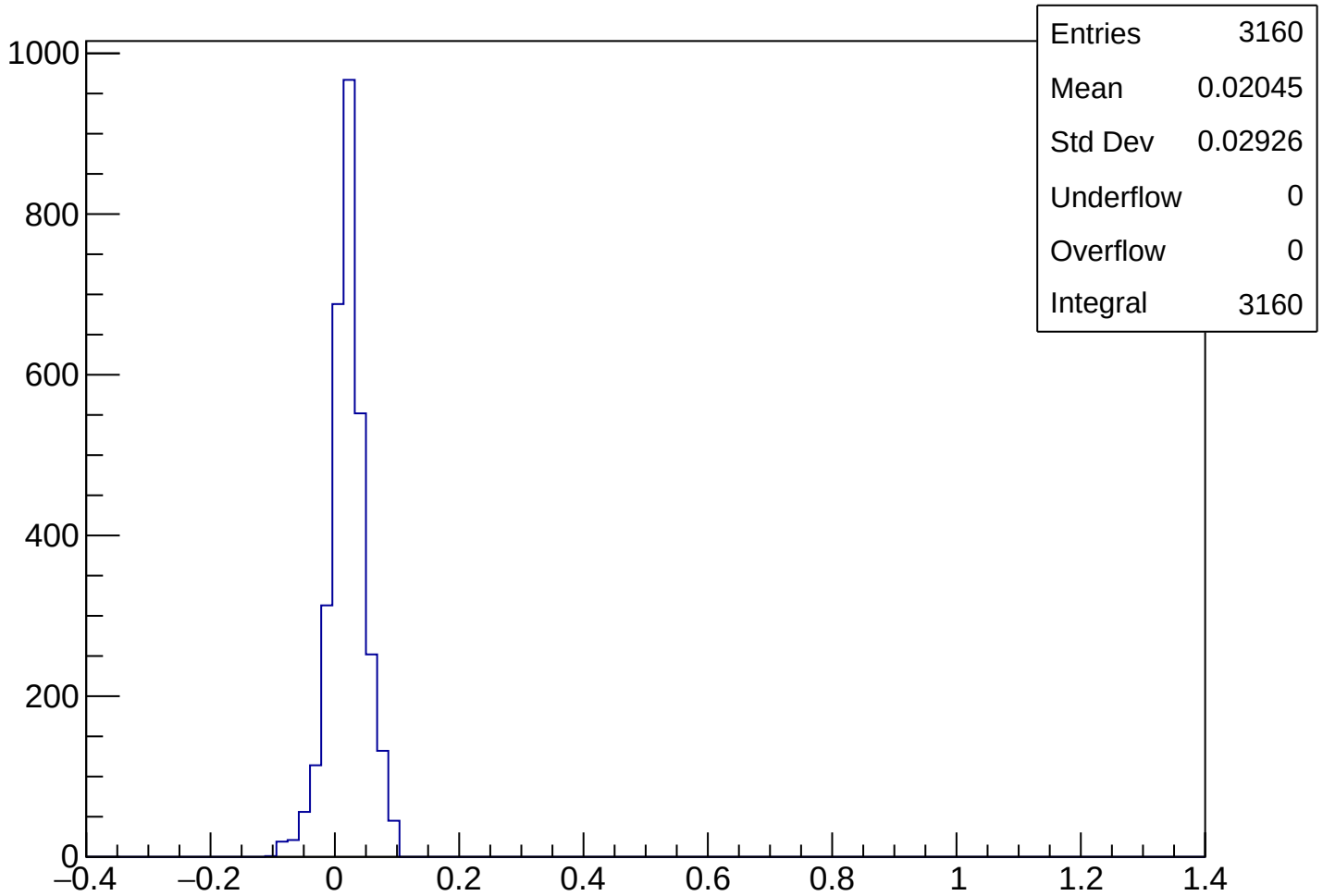

pKurama Cut Ver 4
Entries 538
Mean 0.5215
Std Dev 0.1923
Underflow 0
Overflow 0
Integral 538
0
5
10
15
20
25
30
35
40
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

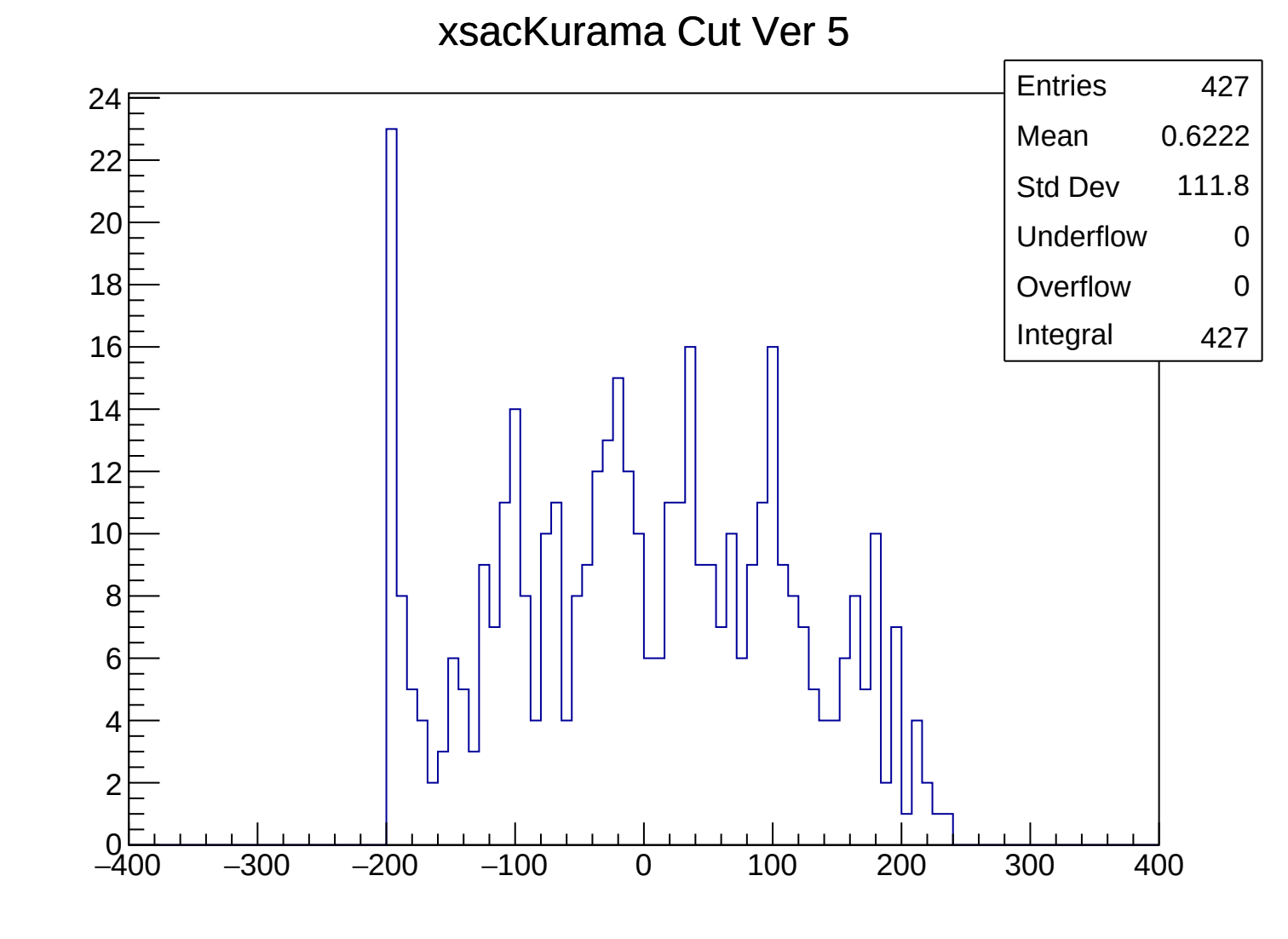

m2 Cut Ver 4
Entries 538
Mean 0.0214
Std Dev 0.02579
Underflow 0
Overflow 0
Integral 538
240
220
200
180
160
140
120
100
80
60
40
20
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

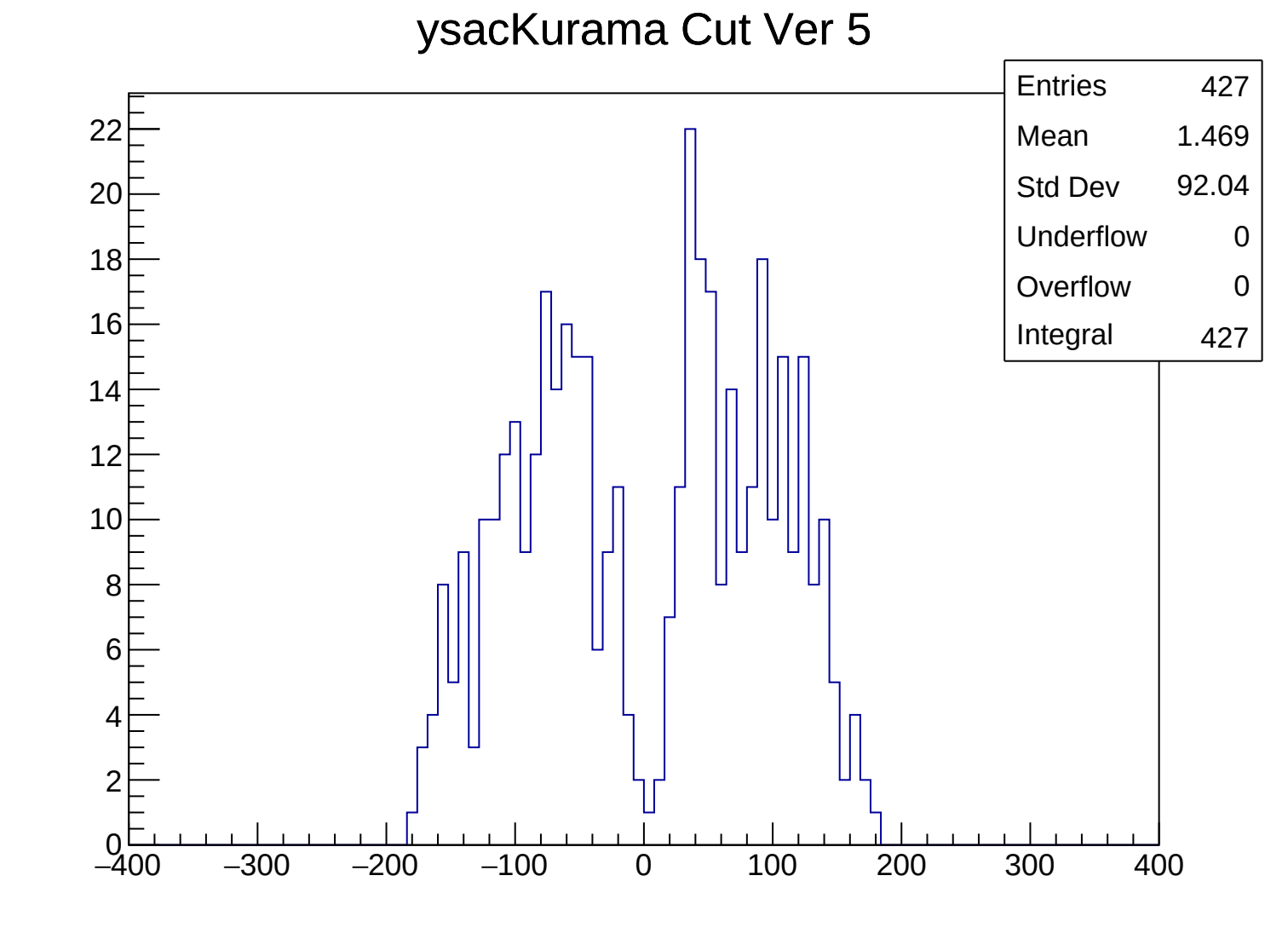

xsacKurama Cut5
Entries 3160
Mean –8.299
Std Dev 113.2
Underflow 0
Overflow 0
Integral 3160
100
80
60
40
20
0
–400
–300
–200
–100
0
100
200
300
400

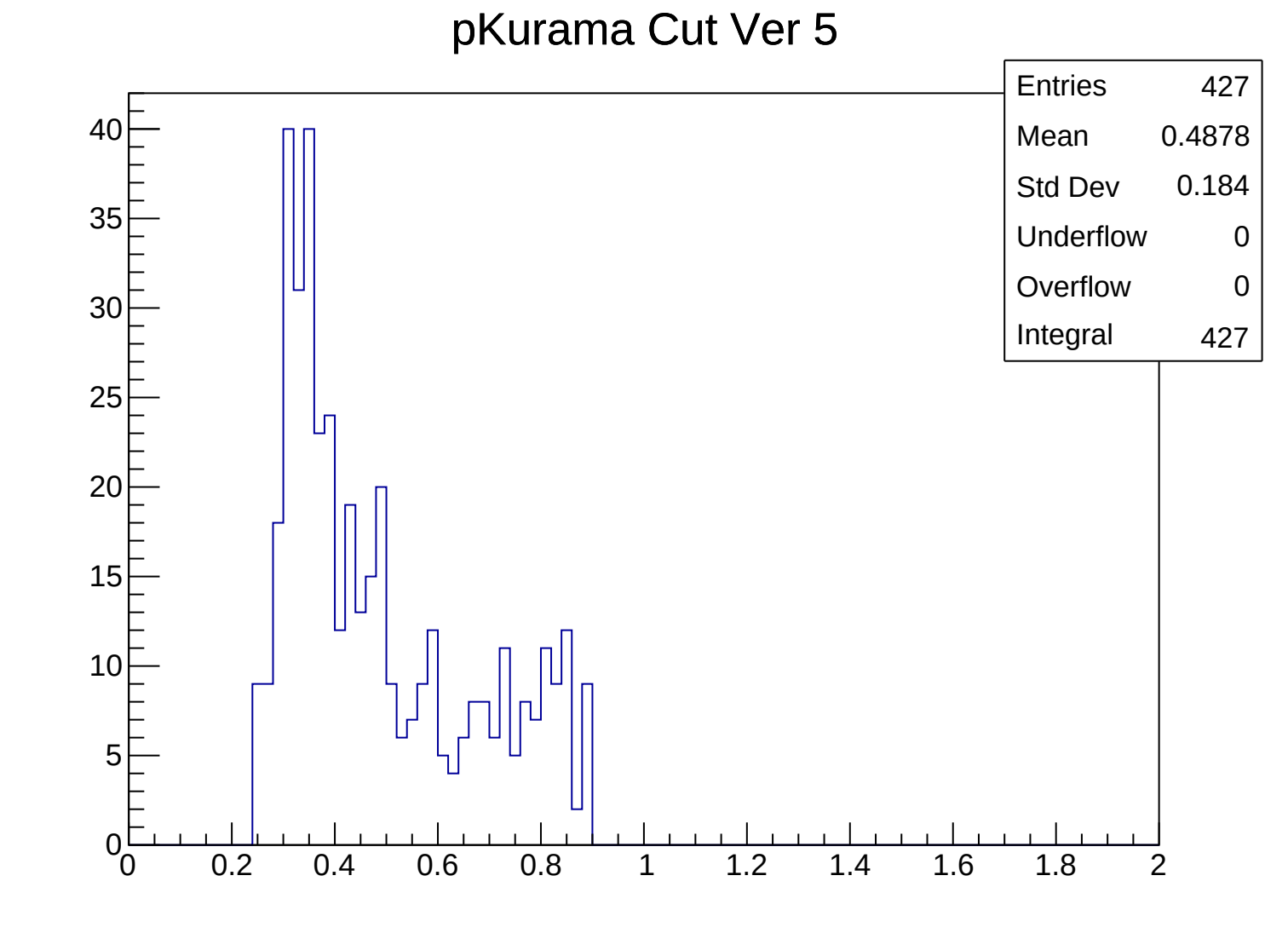

ysacKurama Cut5
Entries 3160
Mean 2.666
Std Dev 101.4
Underflow 0
Overflow 0
Integral 3160
100
80
60
40
20
0
–400
–300
–200
–100
0
100
200
300
400

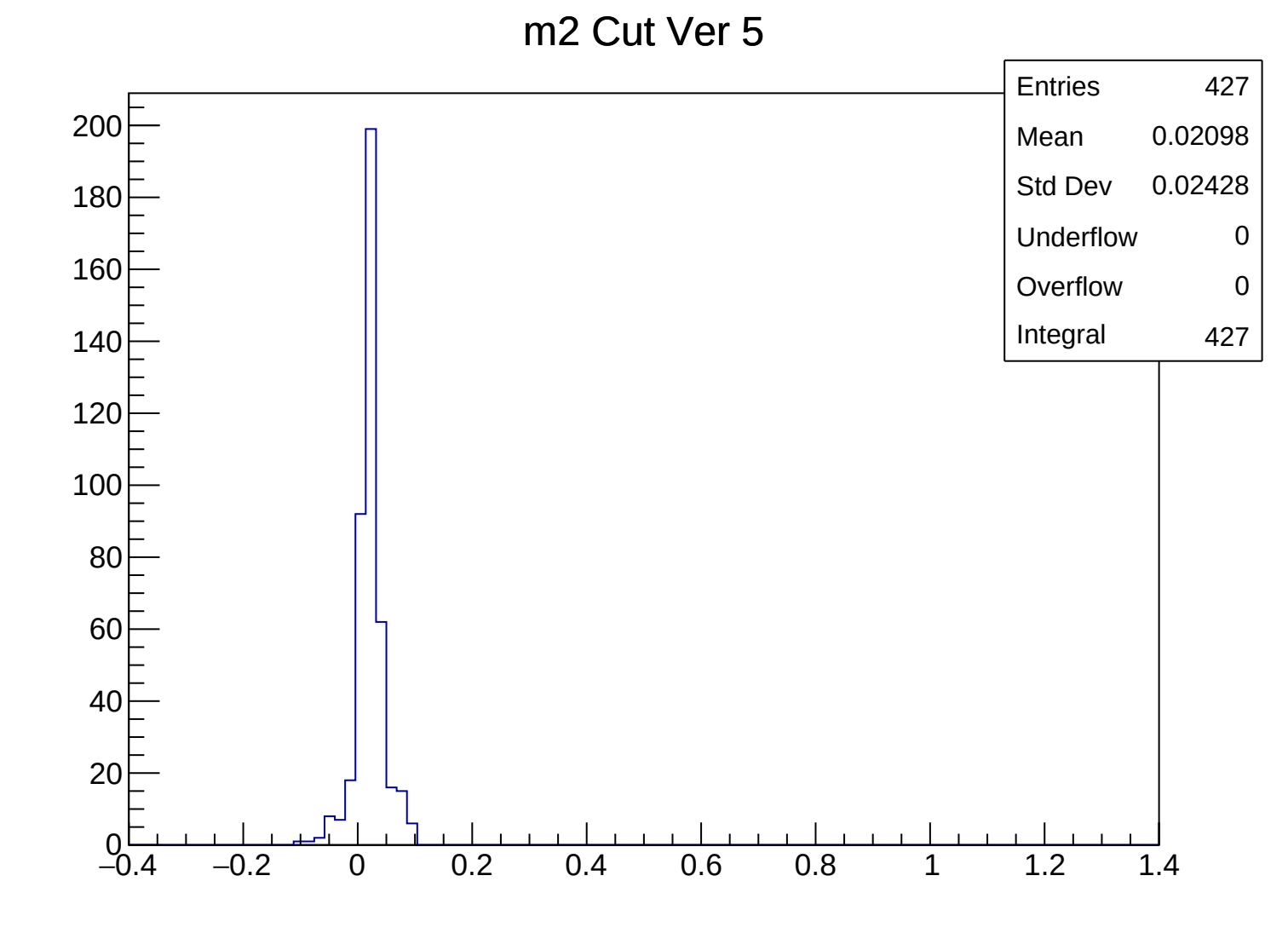

pKurama Cut5
Entries 3160
Mean 0.6551
Std Dev 0.1582
Underflow 0
Overflow 0
Integral 3160
180
160
140
120
100
80
60
40
20
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

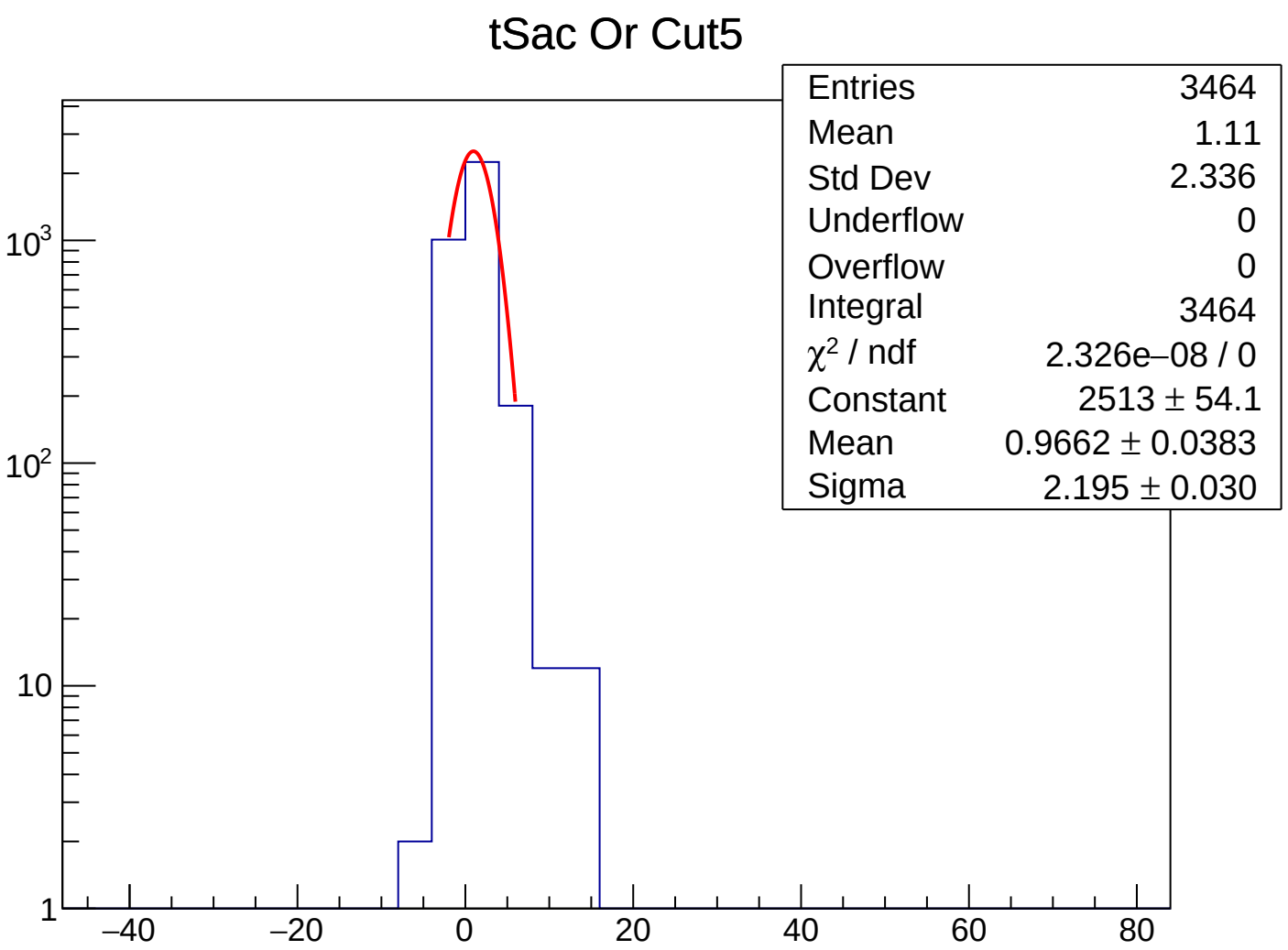

m2 Cut5
Entries 3160
Mean 0.02045
Std Dev 0.02926
Underflow 0
Overflow 0
Integral 3160
1000
800
600
400
200
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

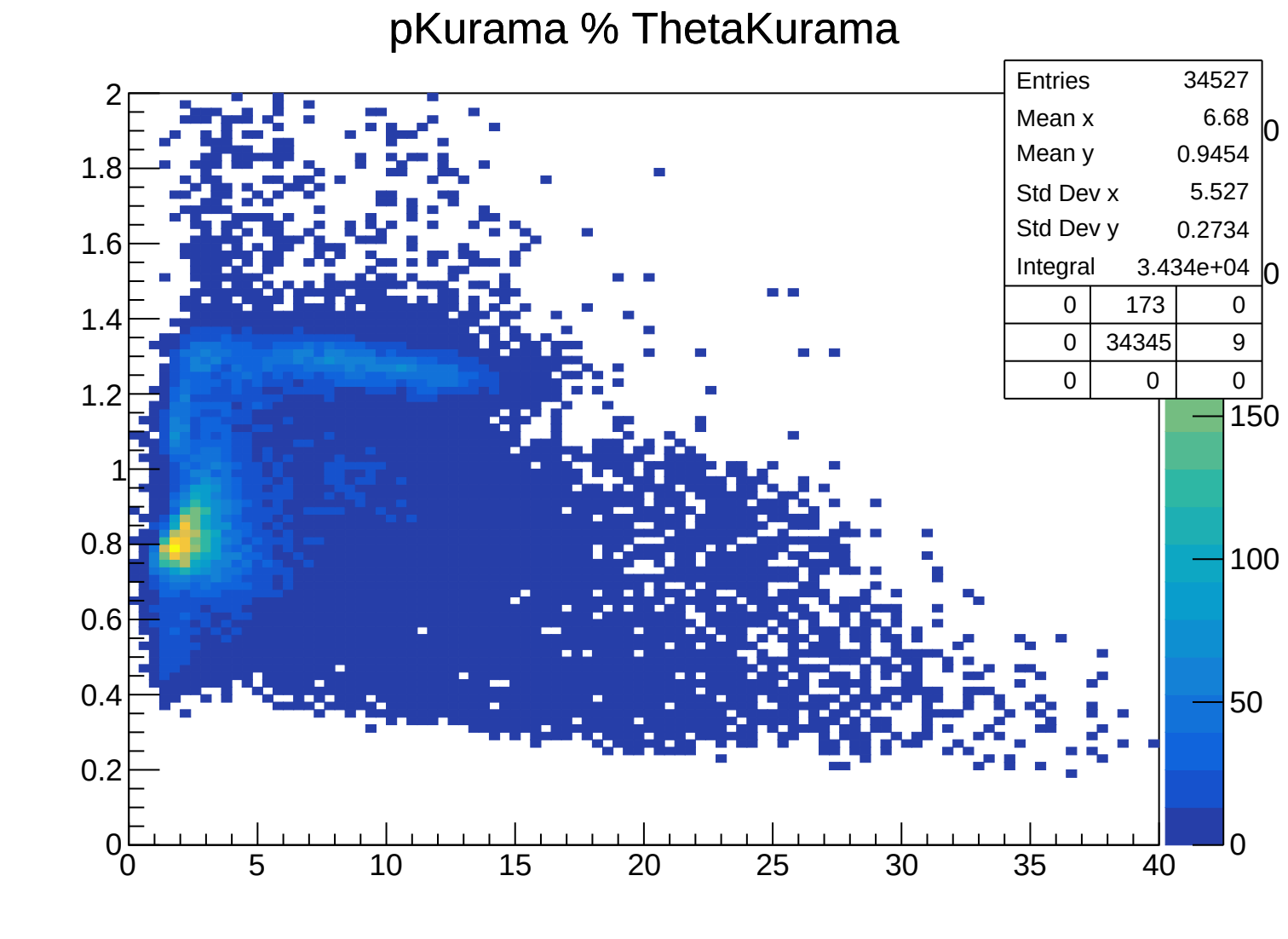

xsacKurama Cut Ver 5
Entries 427
Mean 0.6222
Std Dev 111.8
Underflow 0
Overflow 0
Integral 427
24
22
20
18
16
14
12
10
8
6
4
2
0
–400
–300
–200
–100
0
100
200
300
400

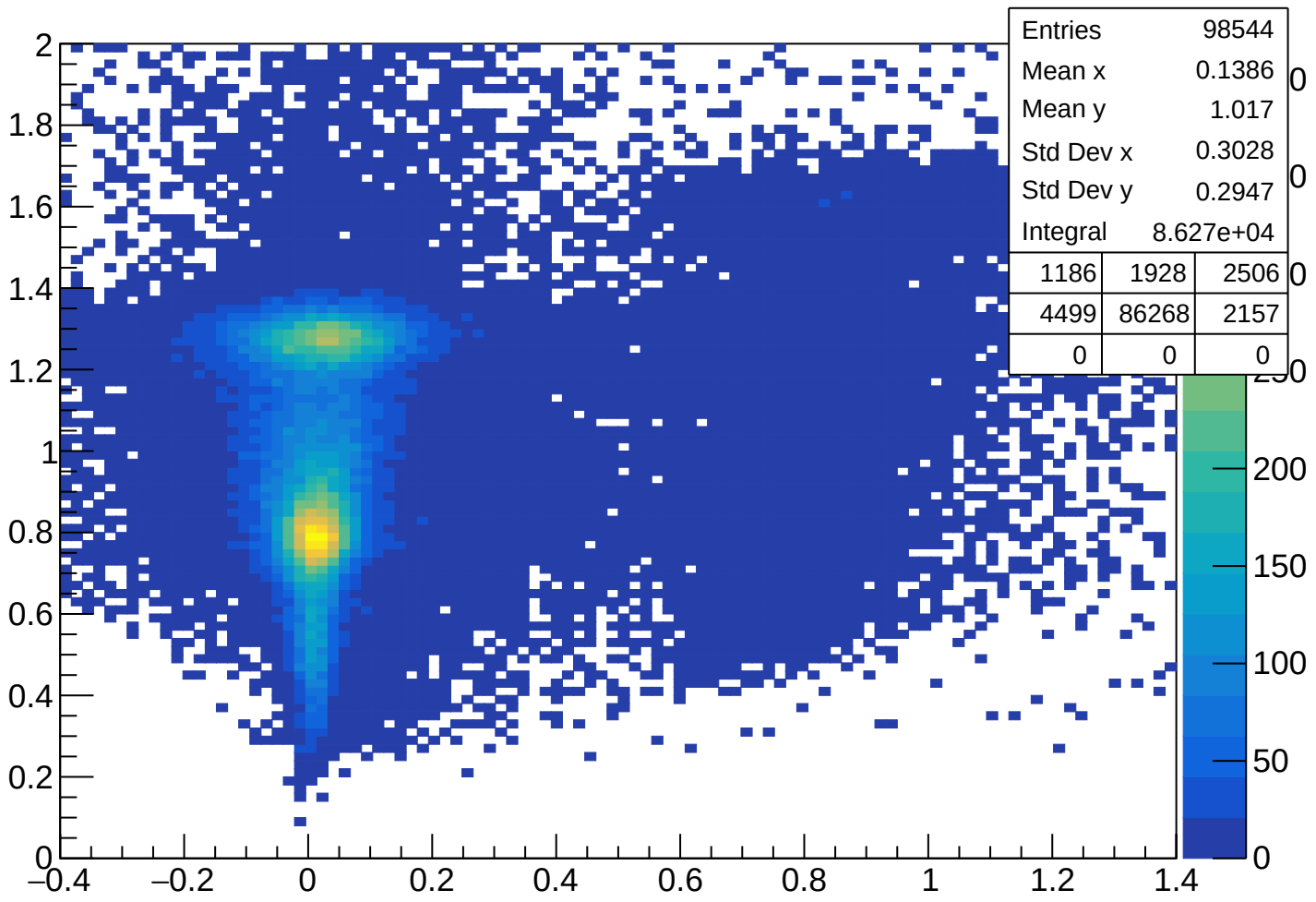

ysacKurama Cut Ver 5
Entries 427
Mean 1.469
Std Dev 92.04
Underflow 0
Overflow 0
Integral 427
22
20
18
16
14
12
10
8
6
4
2
0
–400
–300
–200
–100
0
100
200
300
400

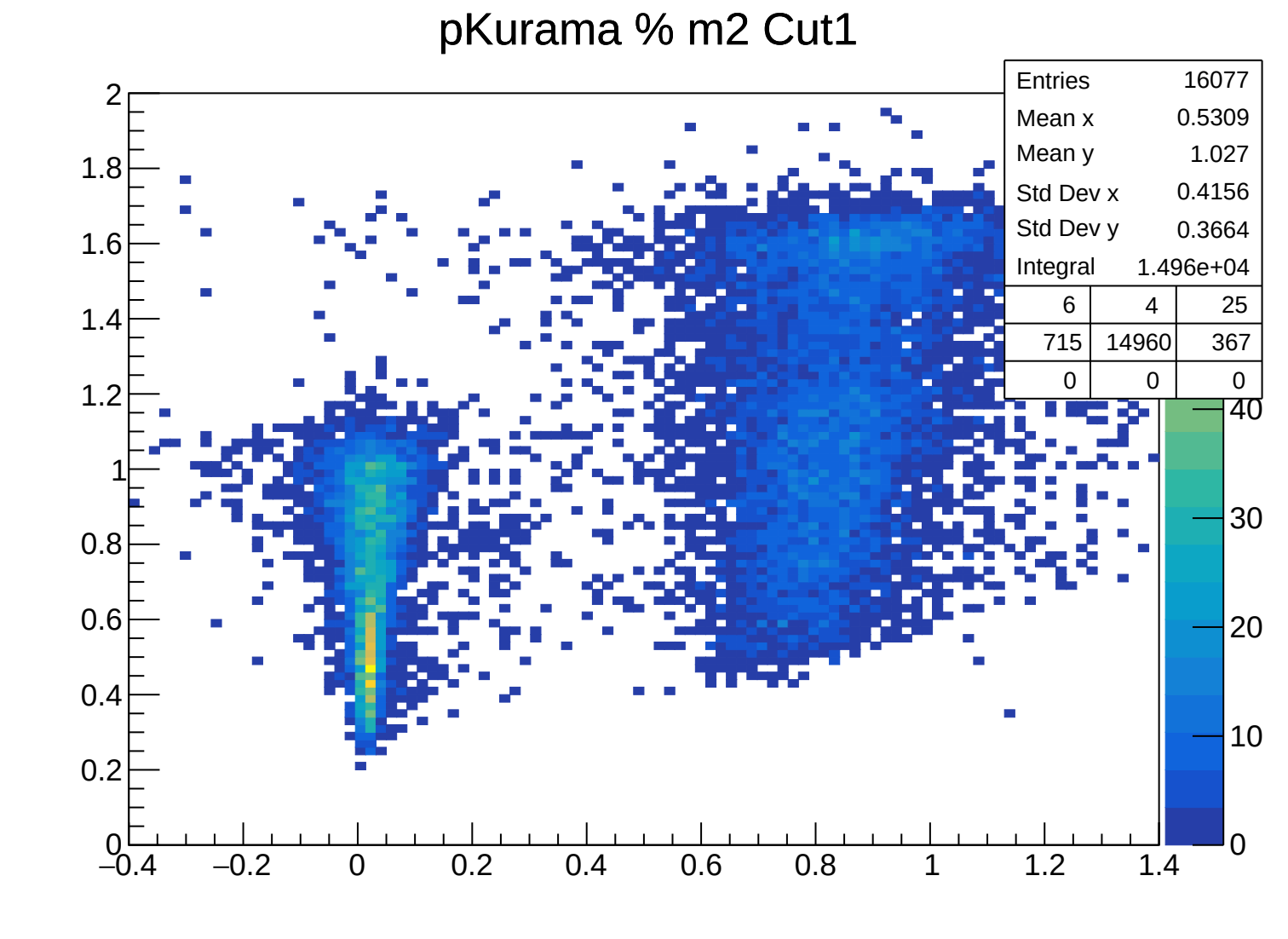

pKurama Cut Ver 5
Entries 427
Mean 0.4878
Std Dev 0.184
Underflow 0
Overflow 0
Integral 427
0
5
10
15
20
25
30
35
40
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

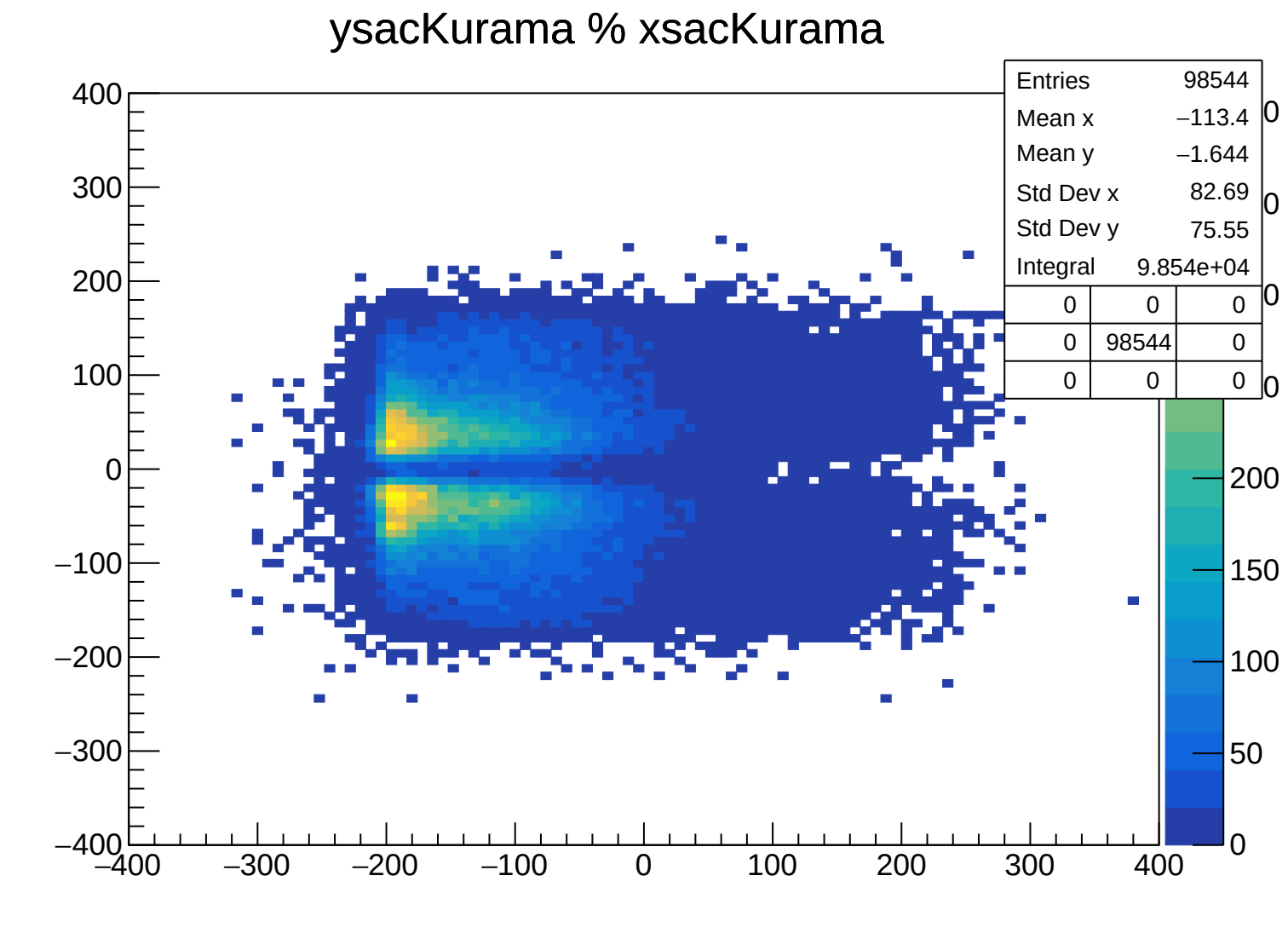

m2 Cut Ver 5
Entries 427
Mean 0.02098
Std Dev 0.02428
Underflow 0
Overflow 0
Integral 427
200
180
160
140
120
100
80
60
40
20
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4

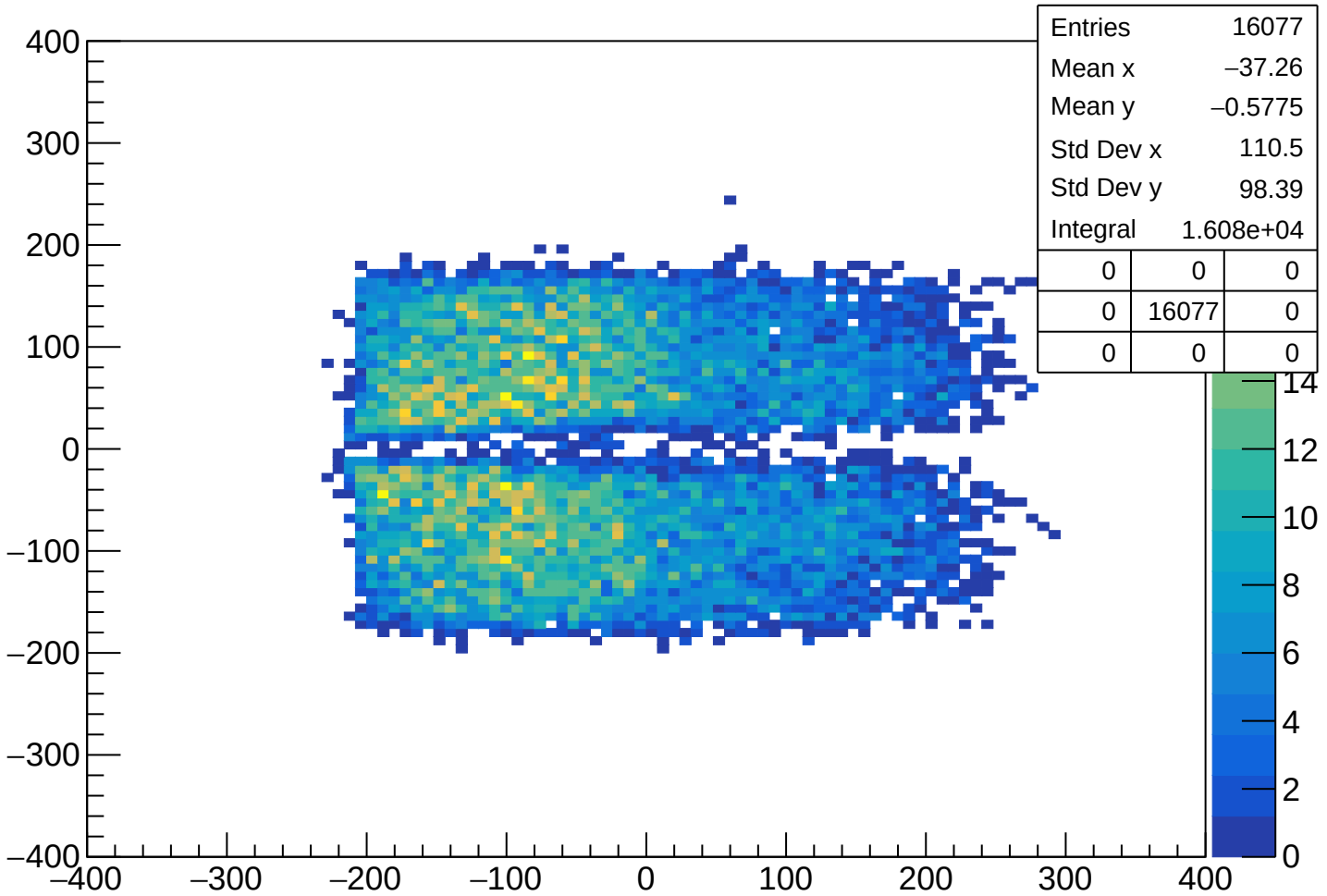

tSac Or Cut5
Entries 3464
Mean 1.11
Std Dev 2.336
Underflow 0
Overflow 0
Integral 3464
χ2 / ndf 2.326e−08 / 0
Constant 2513 ± 54.1
Mean 0.9662 ± 0.0383
Sigma 2.195 ± 0.030
10^3
10^2
10
1
−40
−20
0
20
40
60
80

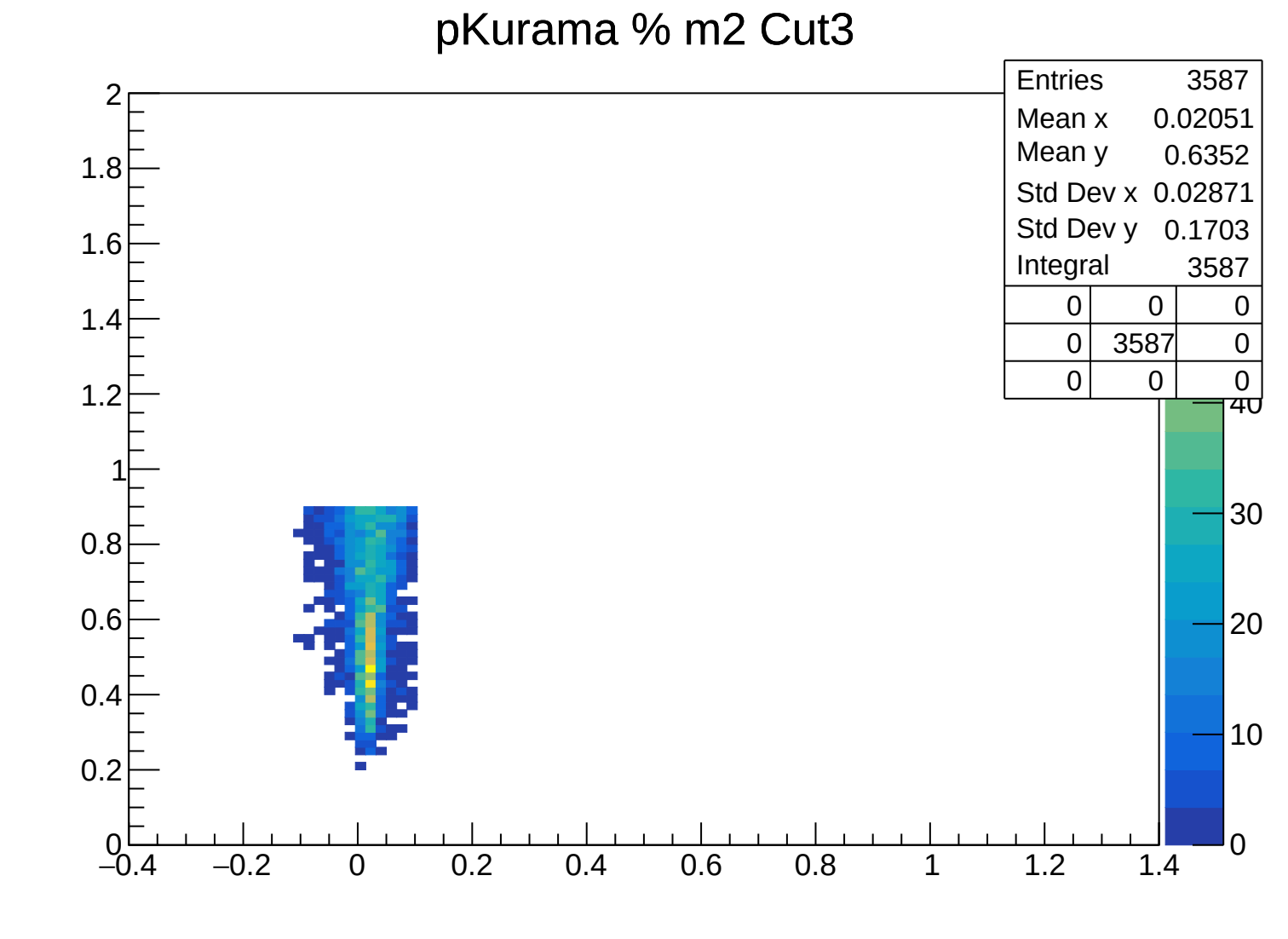

pKurama % ThetaKurama
Entries 34527
Mean x 6.68
Mean y 0.9454
Std Dev x 5.527
Std Dev y 0.2734
Integral 3.434e+04
0 173 0
0 34345 9
0 0 0
0
0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35 40
150
100
50
0

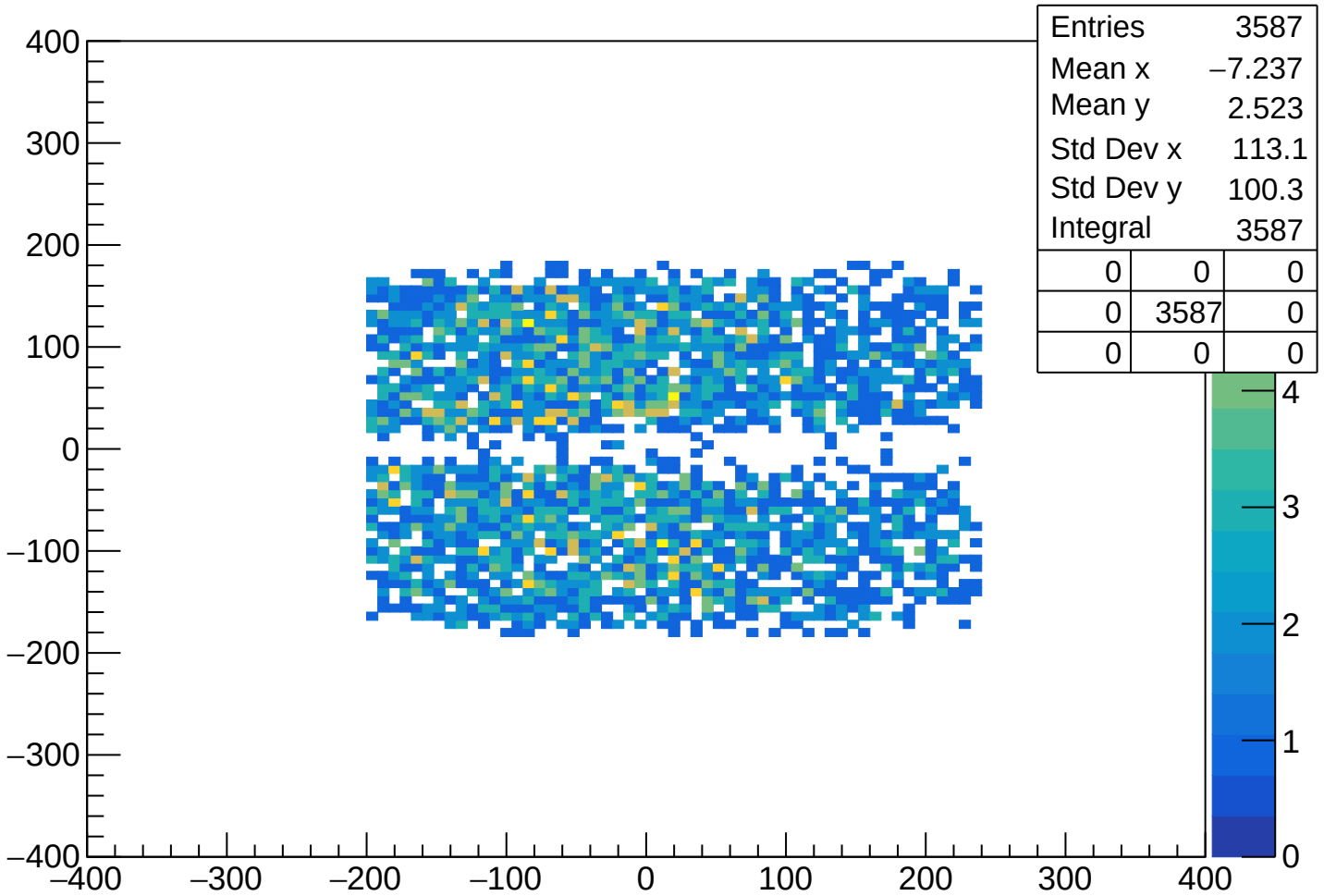

pKurama % m2
Entries 98544
Mean x 0.1386
Mean y 1.017
Std Dev x 0.3028
Std Dev y 0.2947
Integral 8.627e+04
1186 1928 2506
4499 86268 2157
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
200
150
100
50
0

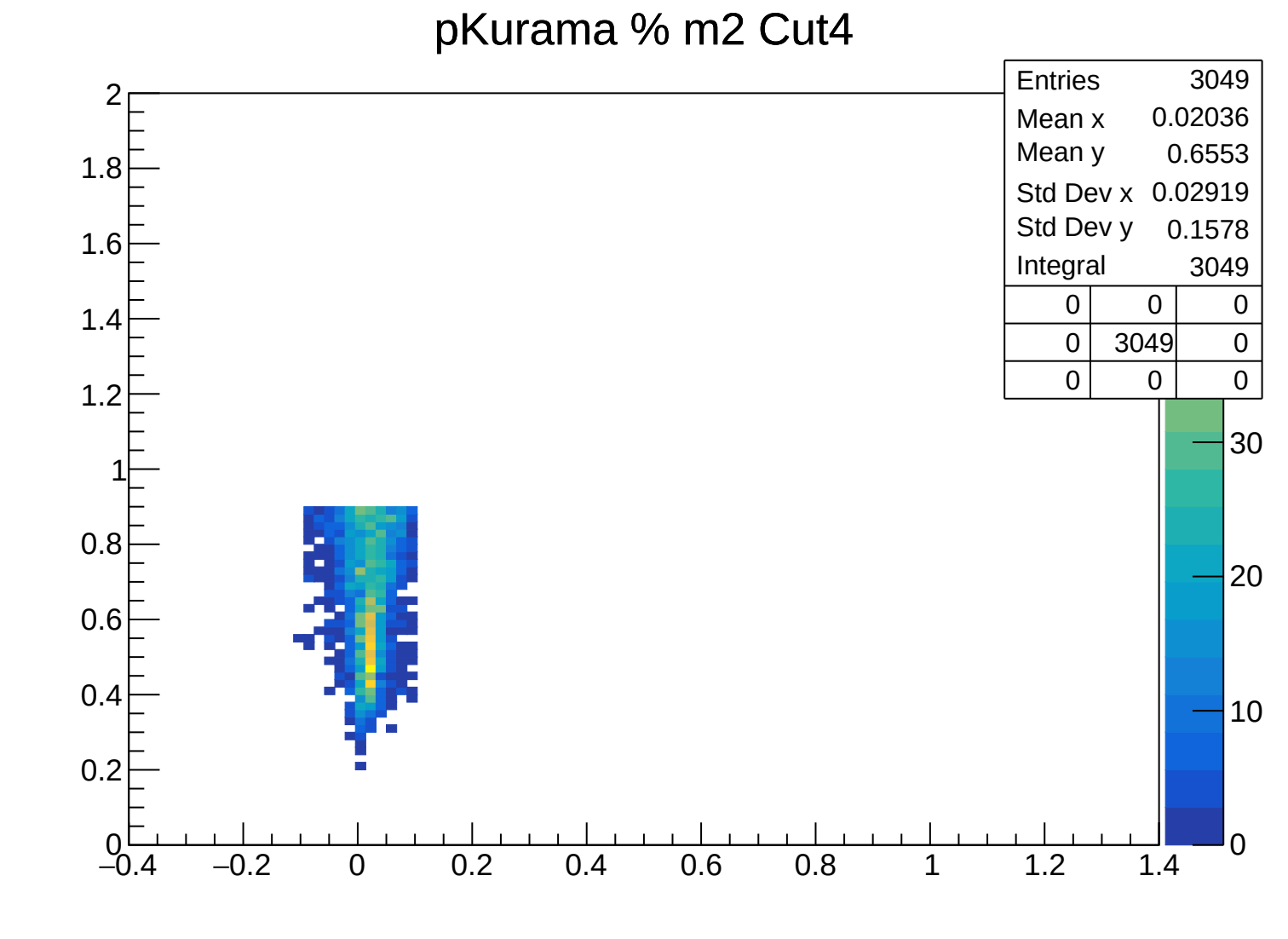

pKurama % m2 Cut1
Entries 16077
Mean x 0.5309
Mean y 1.027
Std Dev x 0.4156
Std Dev y 0.3664
Integral 1.496e+04
6 4 25
715 14960 367
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
40
30
20
10
0

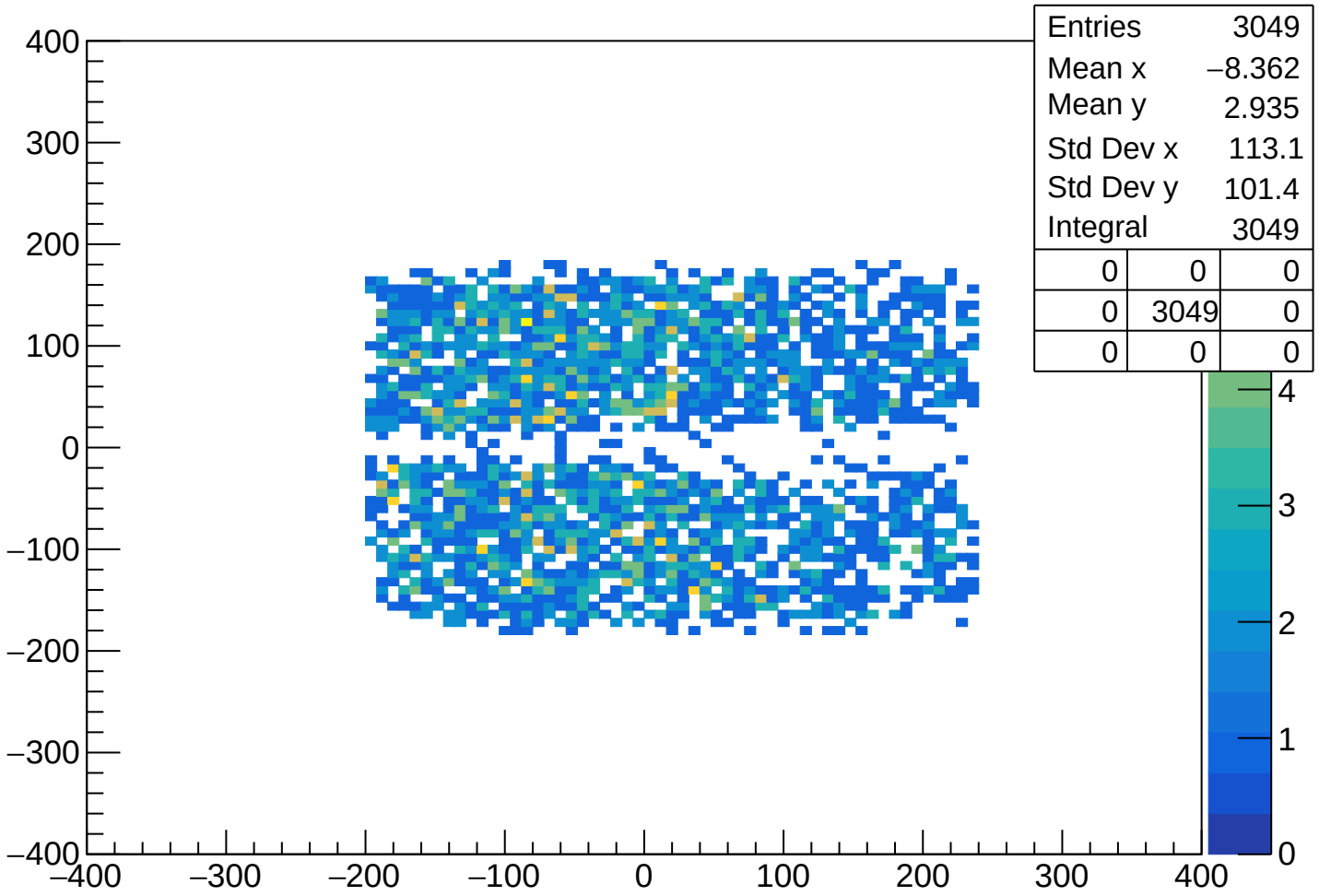

ysacKurama % xsacKurama
Entries 98544
Mean x −113.4
Mean y −1.644
Std Dev x 82.69
Std Dev y 75.55
Integral 9.854e+04
0 0 0
0 98544 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
200
150
100
50
0

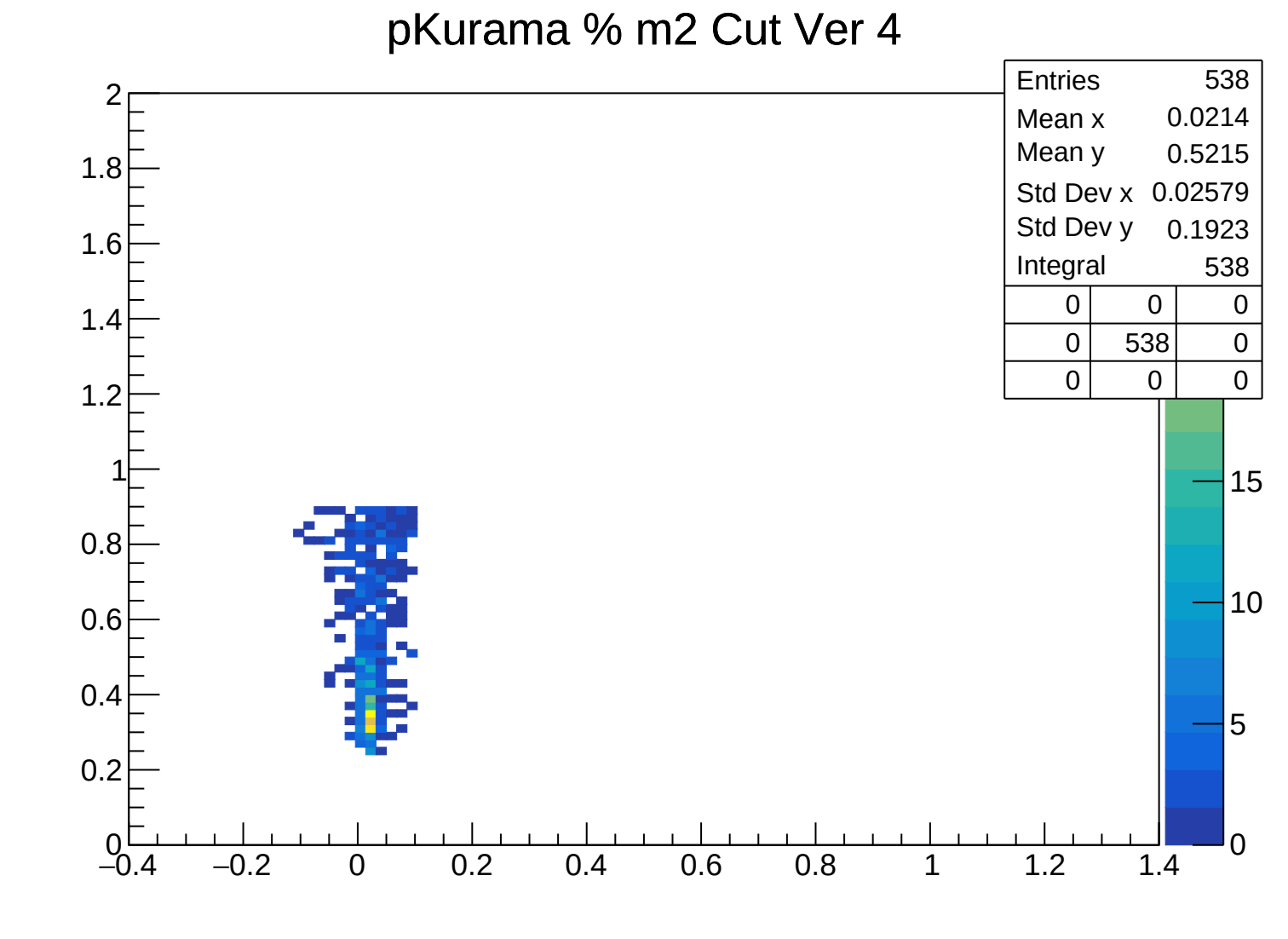

ysacKurama % xsacKurama Cut1
Entries 16077
Mean x –37.26
Mean y –0.5775
Std Dev x 110.5
Std Dev y 98.39
Integral 1.608e+04
0 0 0
0 16077 0
0 0 0
400
300
200
100
0
–100
–200
–300
–400
–400 –300 –200 –100 0 100 200 300 400
14
12
10
8
6
4
2
0

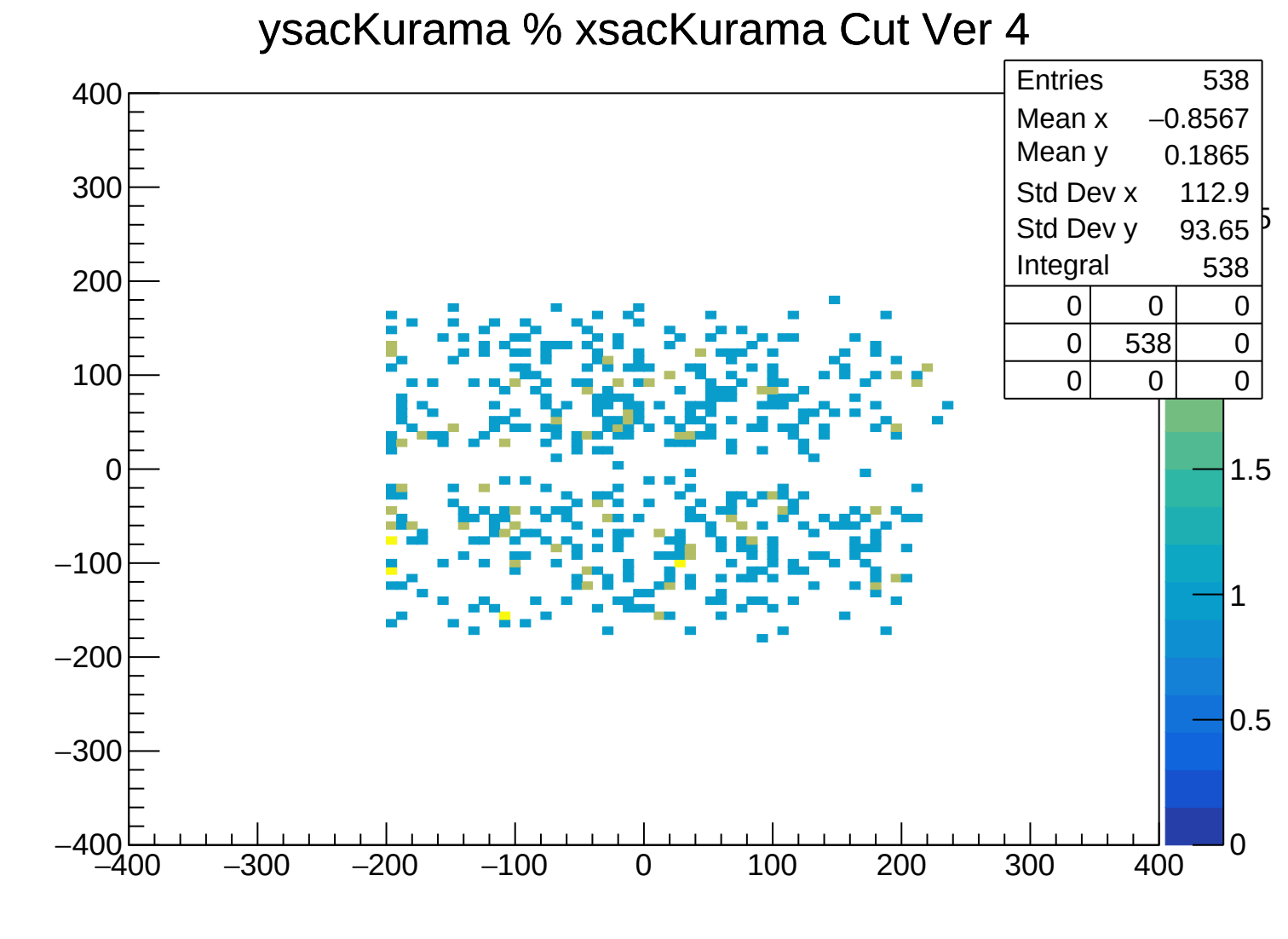

pKurama % m2 Cut3
Entries 3587
Mean x 0.02051
Mean y 0.6352
Std Dev x 0.02871
Std Dev y 0.1703
Integral 3587
0 0 0
0 3587 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
40
30
20
10
0

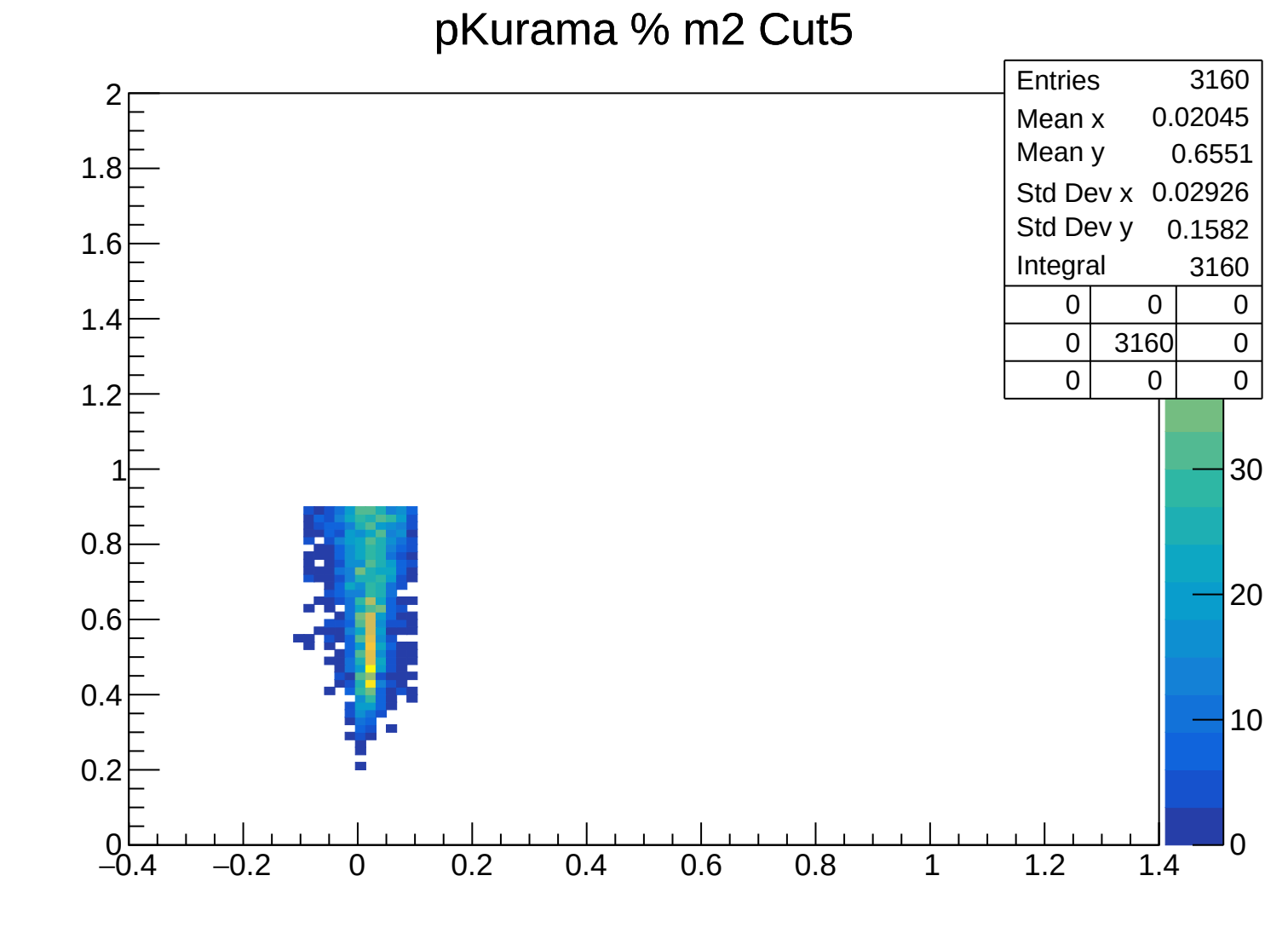

ysacKurama % xsacKurama Cut3
Entries 3587
Mean x −7.237
Mean y 2.523
Std Dev x 113.1
Std Dev y 100.3
Integral 3587
0 0 0
0 3587 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
4
3
2
1
0

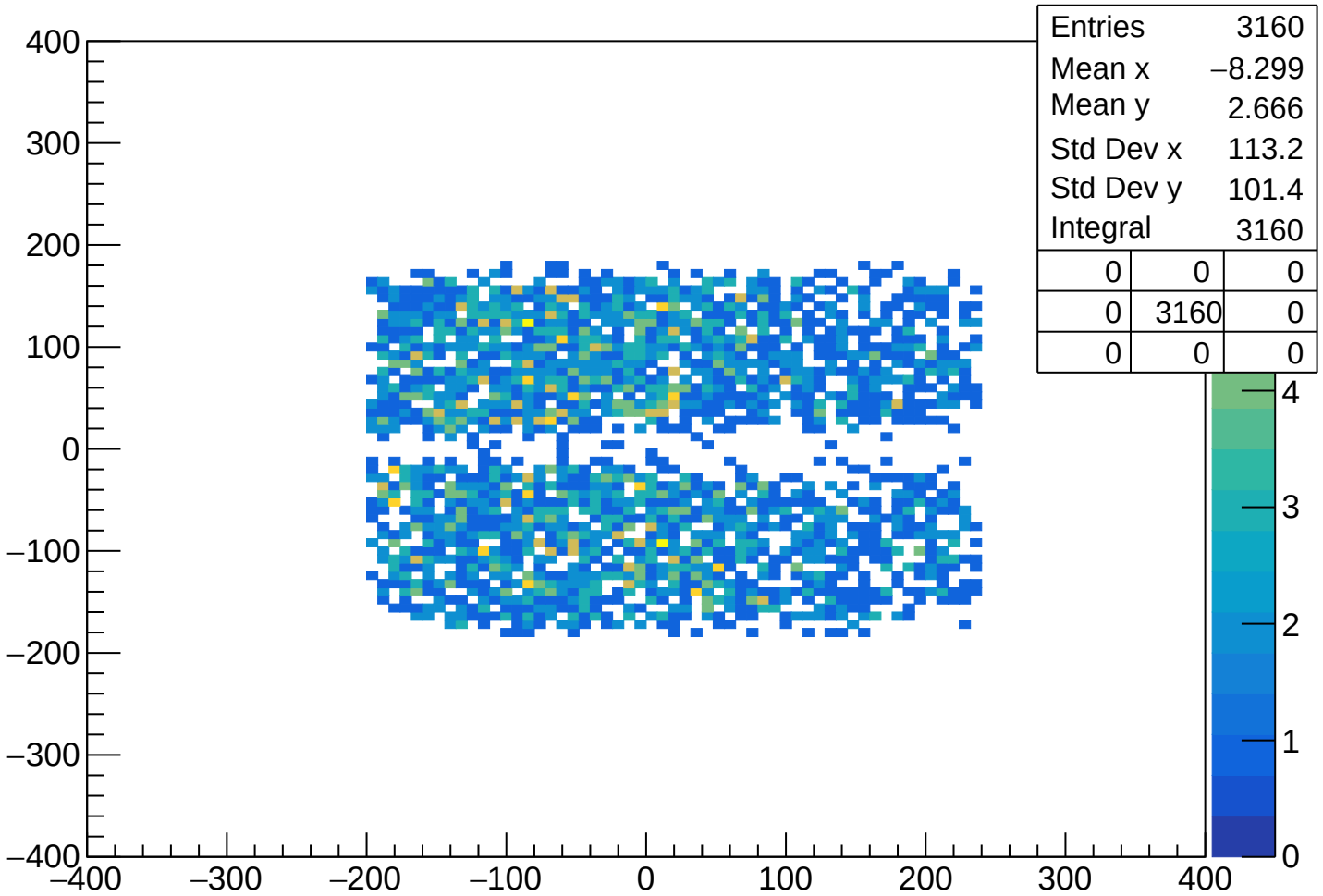

pKurama % m2 Cut4
Entries 3049
Mean x 0.02036
Mean y 0.6553
Std Dev x 0.02919
Std Dev y 0.1578
Integral 3049
0 0 0
0 3049 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
30
20
10
0

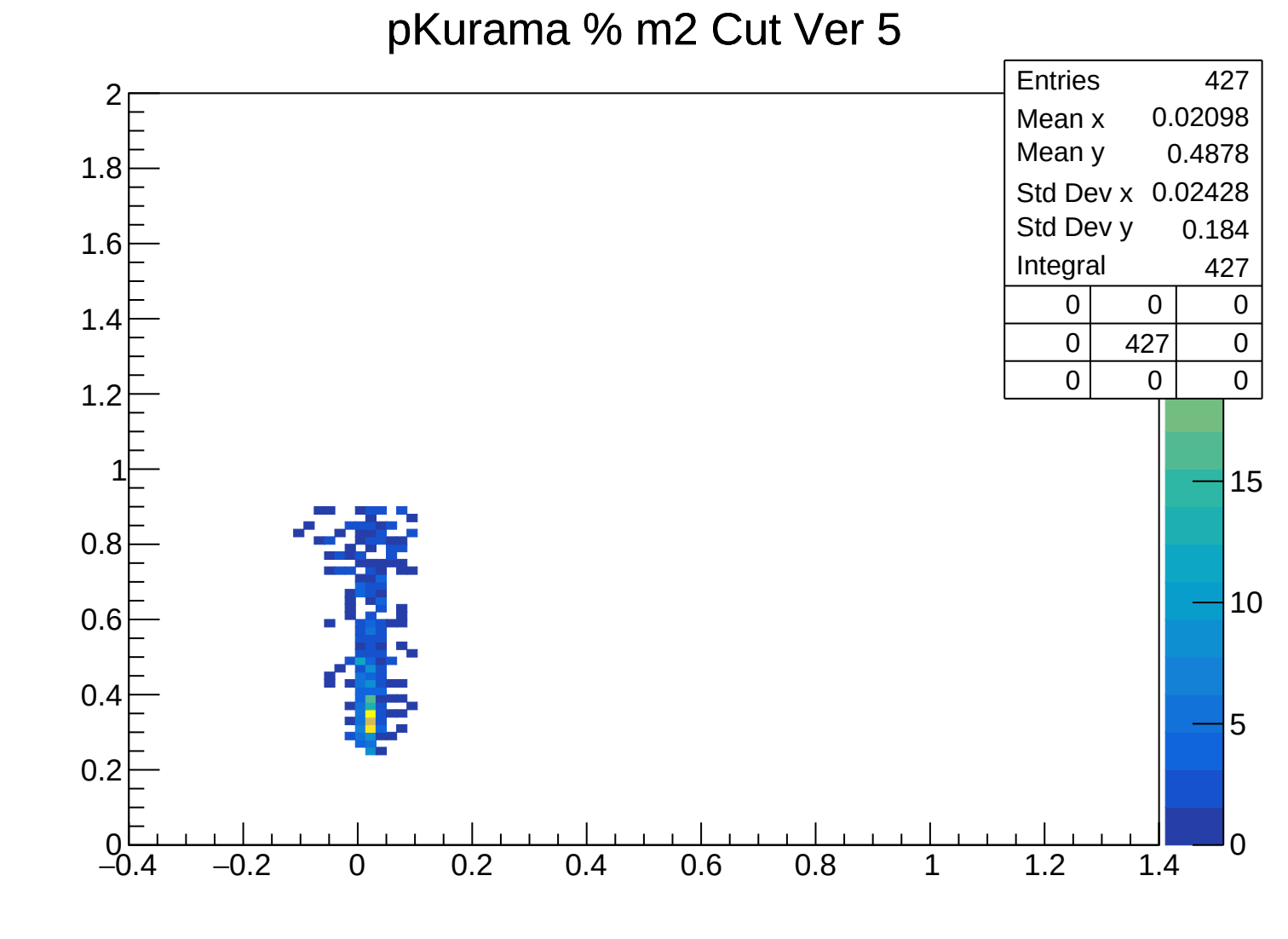

ysacKurama % xsacKurama Cut4
Entries 3049
Mean x −8.362
Mean y 2.935
Std Dev x 113.1
Std Dev y 101.4
Integral 3049
0 0 0
0 3049 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
4
3
2
1
0

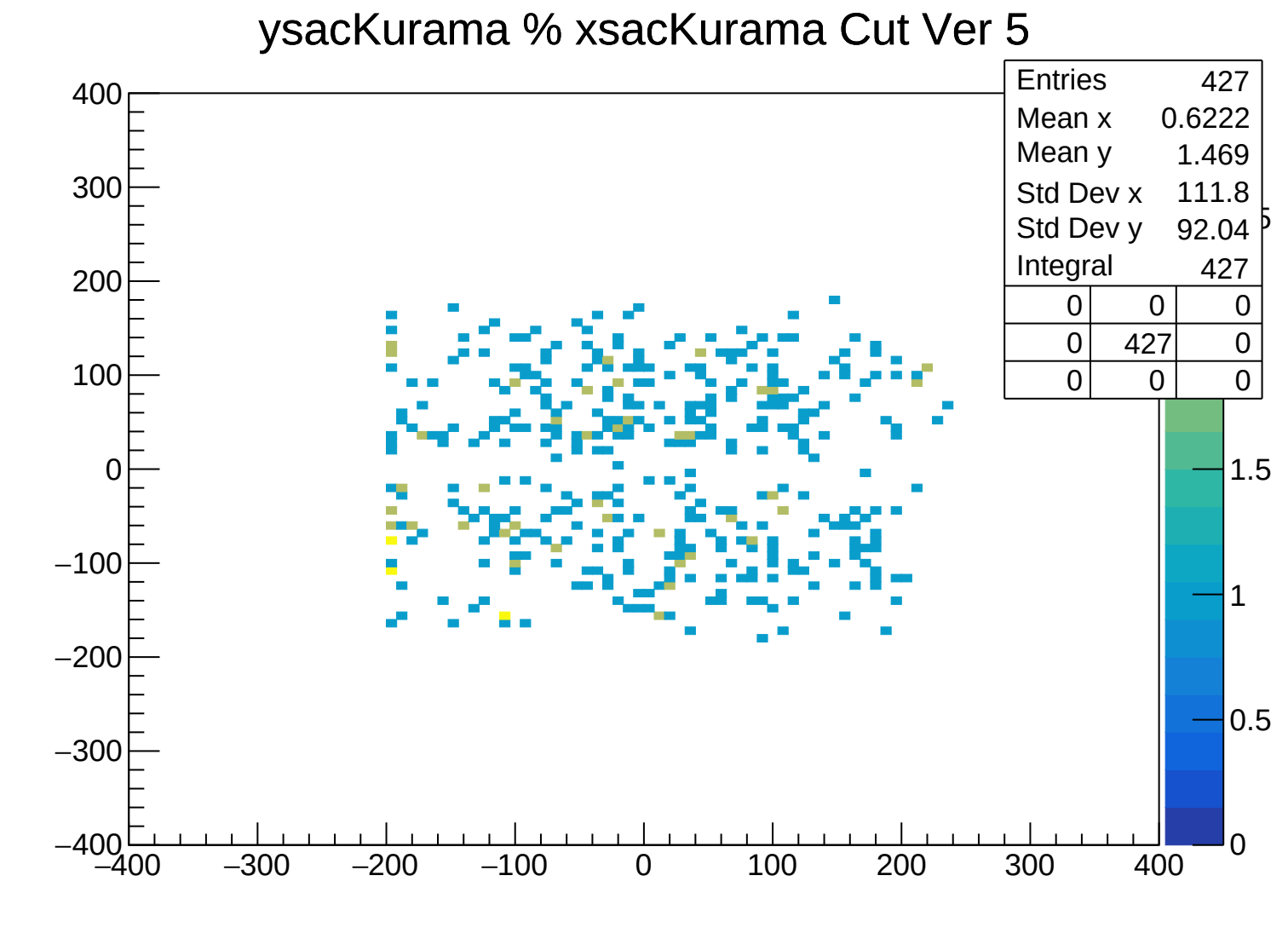

pKurama % m2 Cut Ver 4
Entries 538
Mean x 0.0214
Mean y 0.5215
Std Dev x 0.02579
Std Dev y 0.1923
Integral 538
0 0 0
0 538 0
0 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
15
10
5
0


ysacKurama % xsacKurama Cut Ver 4
Entries 538
Mean x −0.8567
Mean y 0.1865
Std Dev x 112.9
Std Dev y 93.65
Integral 538
0 0 0
0 538 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400
−300
−200
−100
0
100
200
300
400
1.5
1
0.5
0


pKurama % m2 Cut5
Entries 3160
Mean x 0.02045
Mean y 0.6551
Std Dev x 0.02926
Std Dev y 0.1582
Integral 3160
0 0 0
0 3160 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
30
20
10
0


ysacKurama % xsacKurama Cut5
Entries 3160
Mean x −8.299
Mean y 2.666
Std Dev x 113.2
Std Dev y 101.4
Integral 3160
0 0 0
0 3160 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 427
Mean x 0.02098
Mean y 0.4878
Std Dev x 0.02428
Std Dev y 0.184
Integral 427
0 0 0
0 427 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
15
10
5
0


ysacKurama % xsacKurama Cut Ver 5
Entries 427
Mean x 0.6222
Mean y 1.469
Std Dev x 111.8
Std Dev y 92.04
Integral 427
0 0 0
0 427 0
0 0 0
400
300
200
100
0
−100
−200
−300
−400
−400 −300 −200 −100 0 100 200 300 400
1.5
1
0.5
0