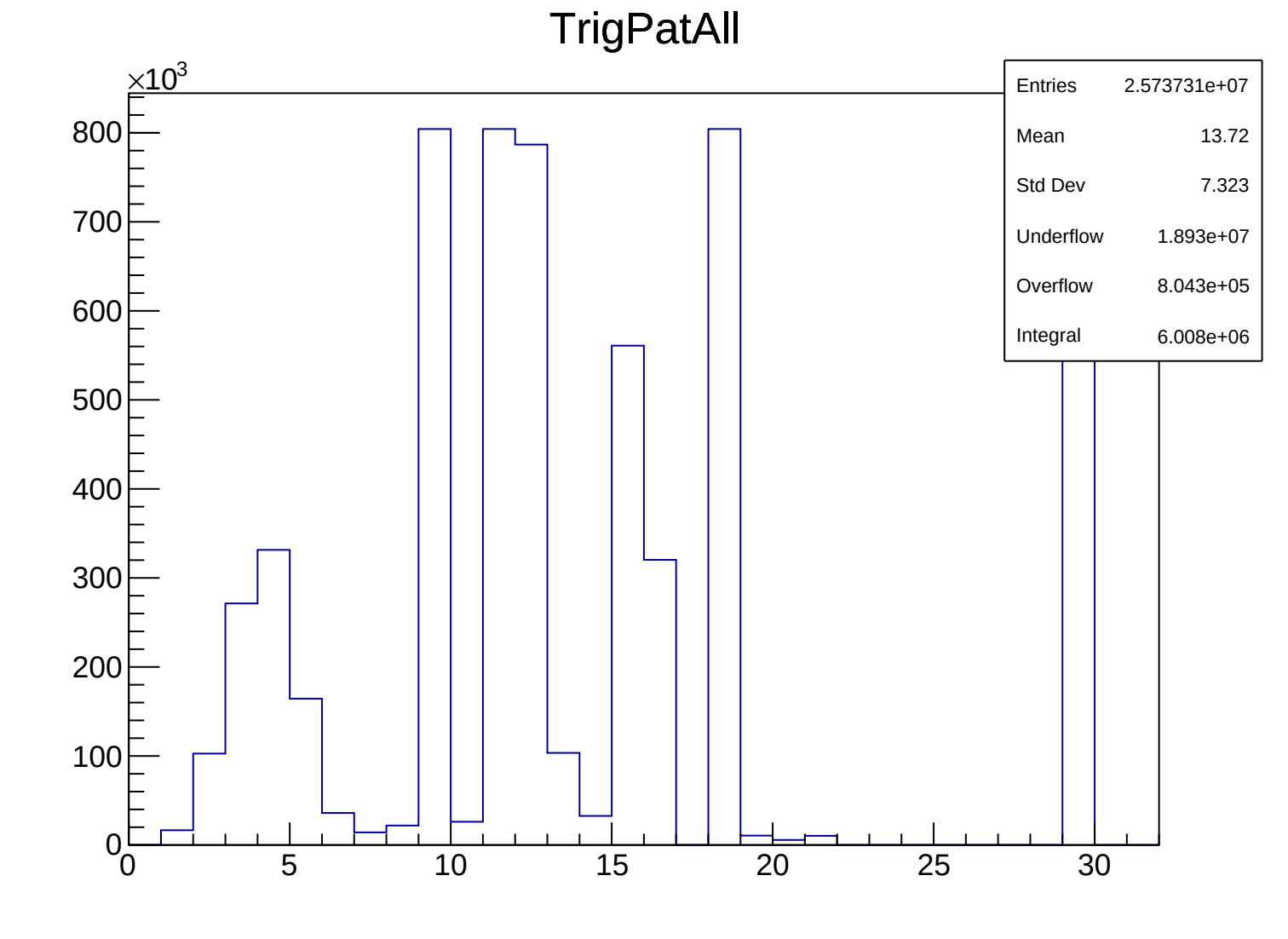
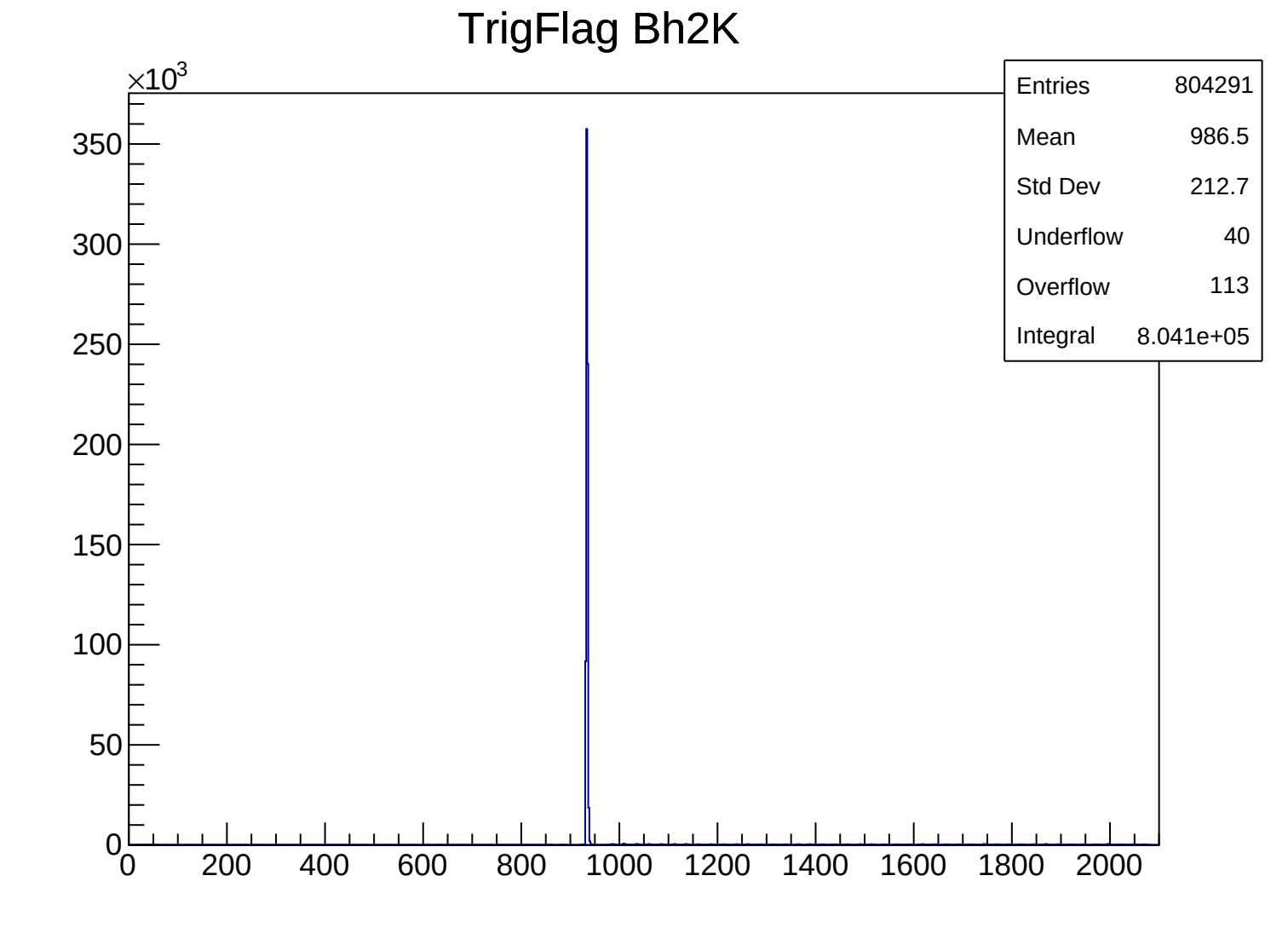
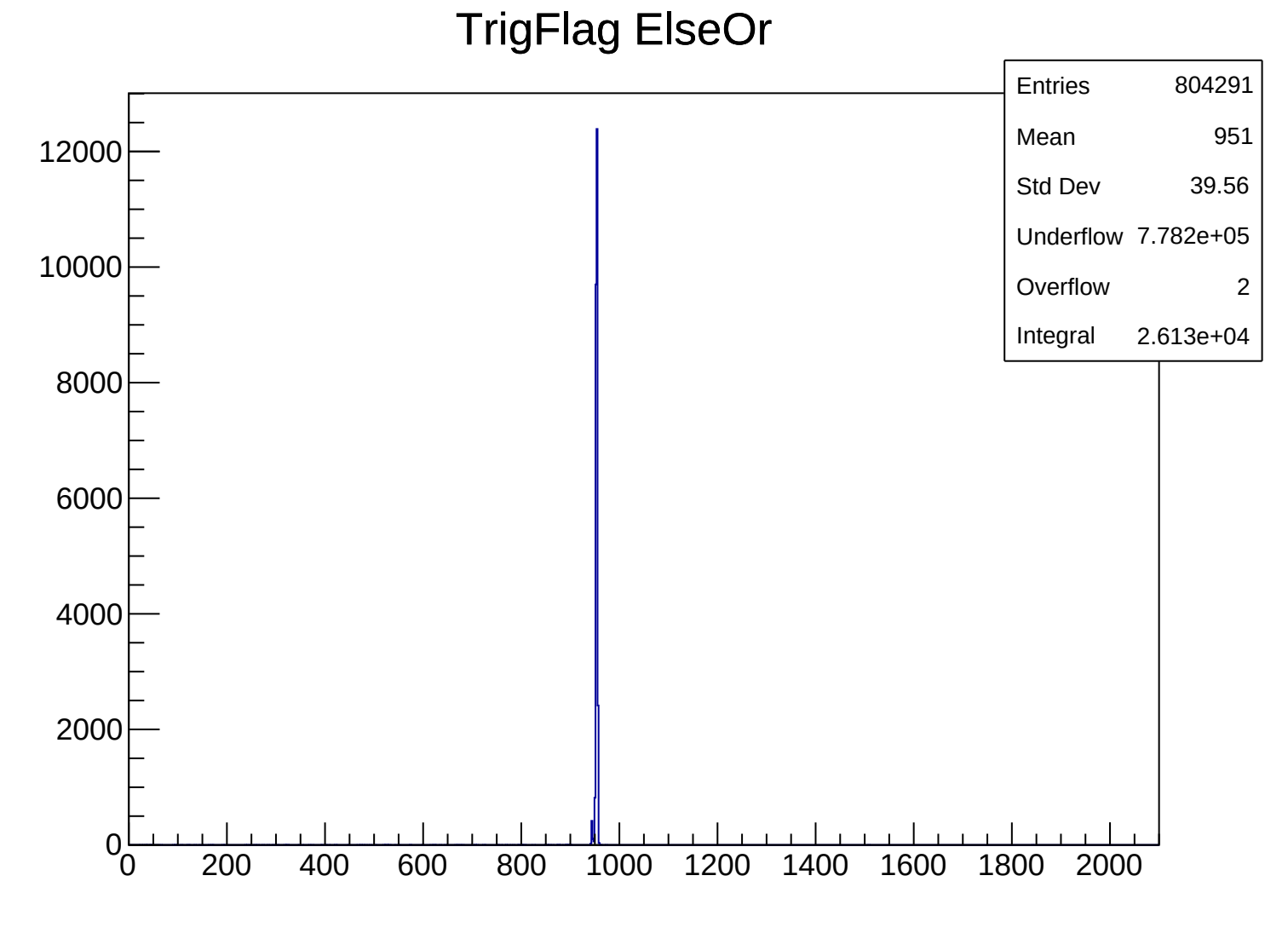
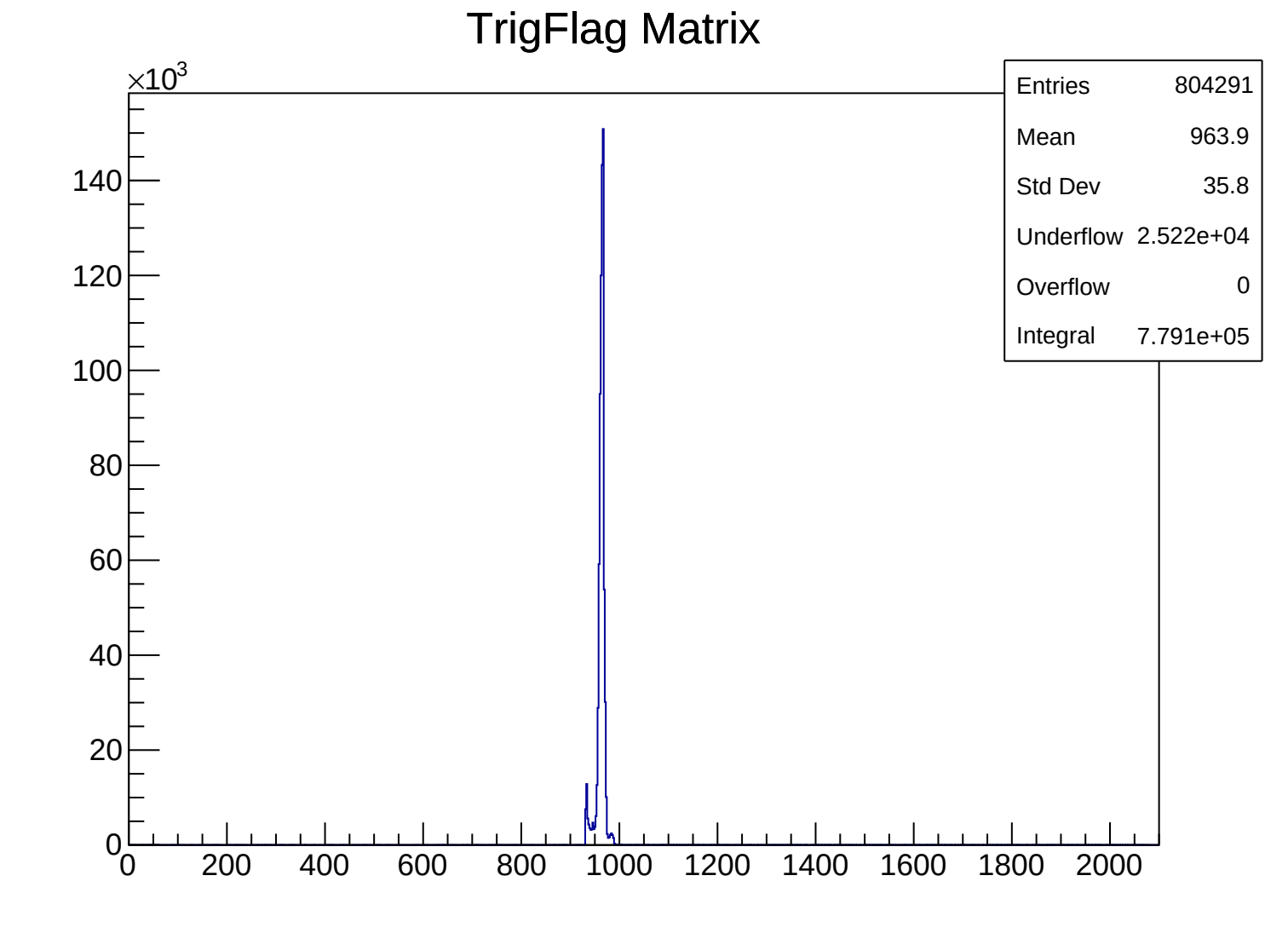
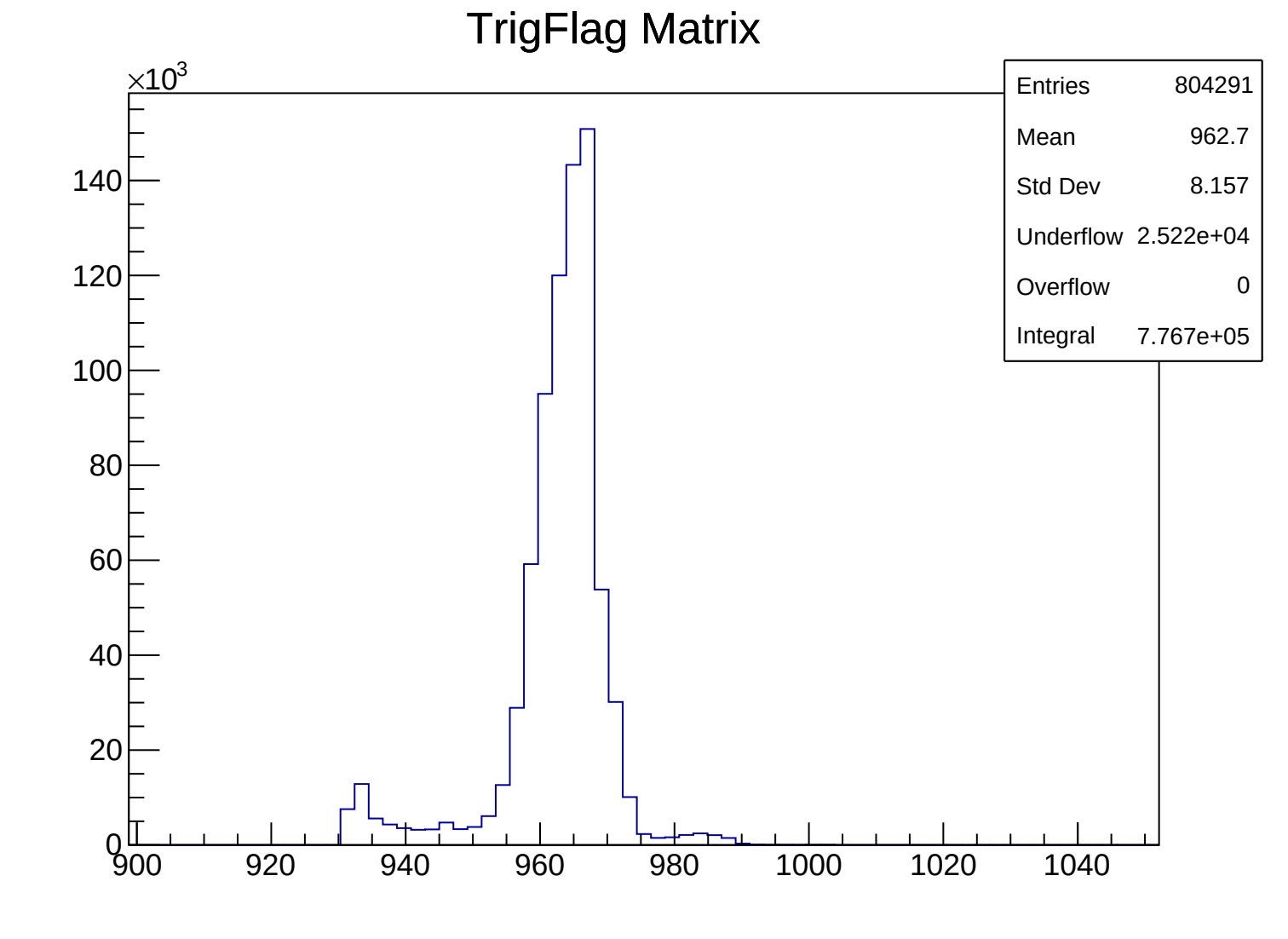
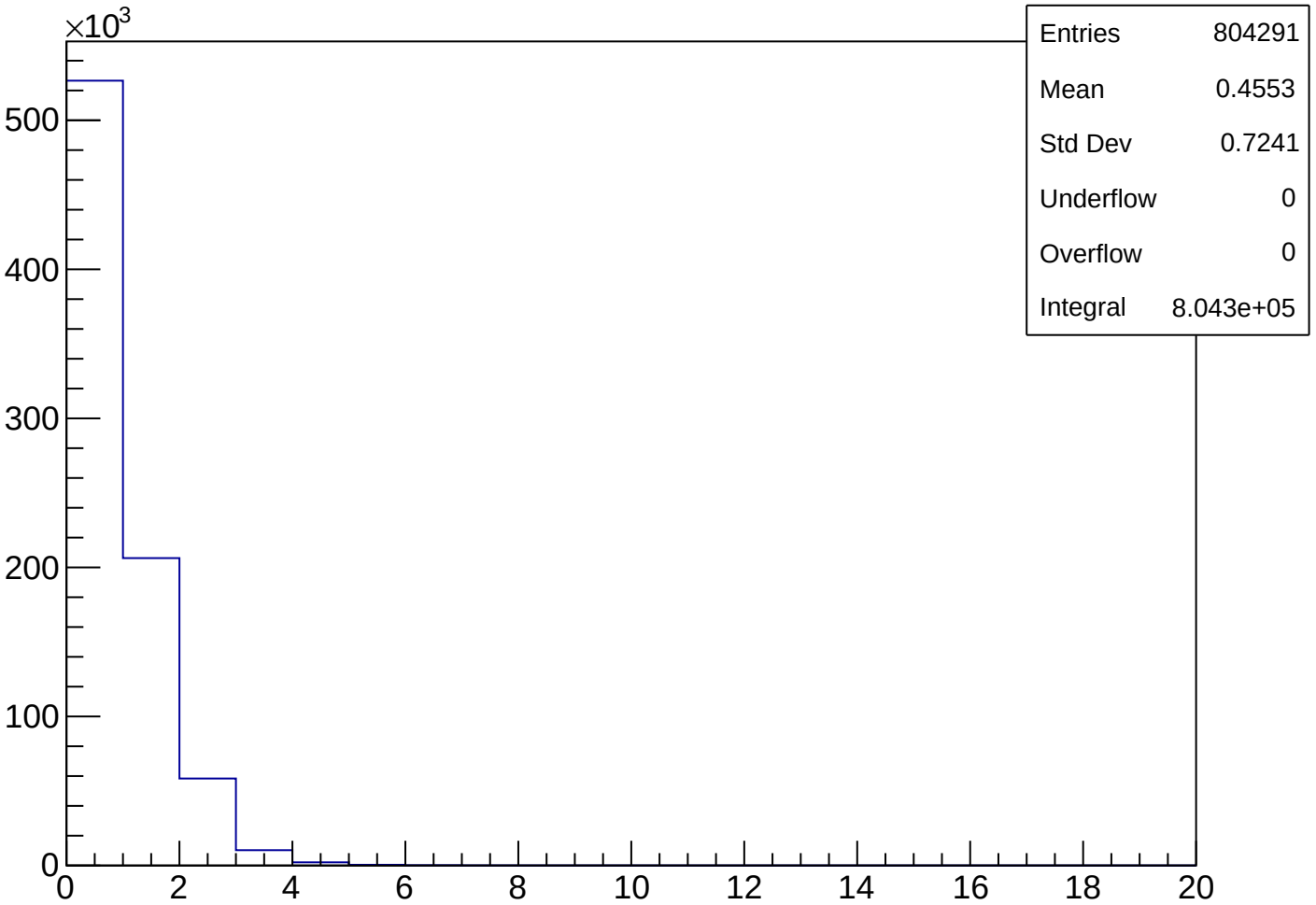

TrigPatAll
×10^3
800
700
600
500
400
300
200
100
0
0
5
10
15
20
25
30
Entries 2.573731e+07
Mean 13.72
Std Dev 7.323
Underflow 1.893e+07
Overflow 8.043e+05
Integral 6.008e+06

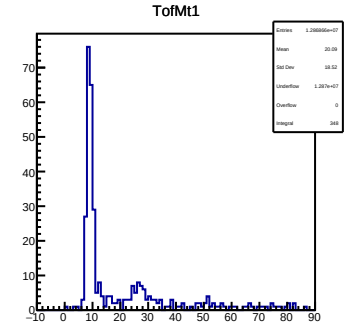

TrigFlag Bh2K
×10^3
350
300
250
200
150
100
50
0
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Entries 804291
Mean 986.5
Std Dev 212.7
Underflow 40
Overflow 113
Integral 8.041e+05

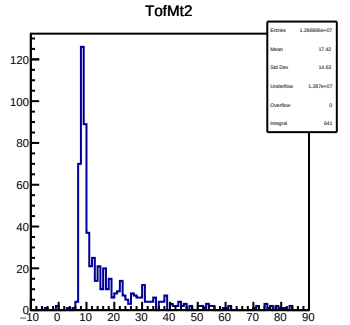

TrigFlag ElseOr
Entries 804291
Mean 951
Std Dev 39.56
Underflow 7.782e+05
Overflow 2
Integral 2.613e+04
12000
10000
8000
6000
4000
2000
0
0
200
400
600
800
1000
1200
1400
1600
1800
2000

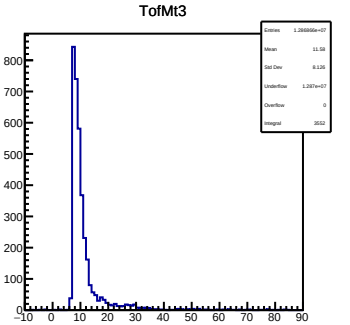

TrigFlag Matrix
×10^3
140
120
100
80
60
40
20
0
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Entries 804291
Mean 963.9
Std Dev 35.8
Underflow 2.522e+04
Overflow 0
Integral 7.791e+05

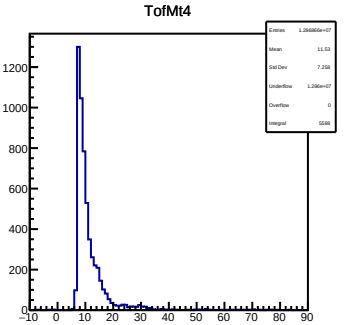

TrigFlag Matrix
×10^3
140
120
100
80
60
40
20
0
900
920
940
960
980
1000
1020
1040
Entries 804291
Mean 962.7
Std Dev 8.157
Underflow 2.522e+04
Overflow 0
Integral 7.767e+05

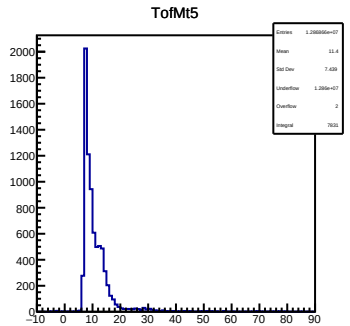

TofNhits
×10^3
500
400
300
200
100
0
0
2
4
6
8
10
12
14
16
18
20
Entries 804291
Mean 0.4553
Std Dev 0.7241
Underflow 0
Overflow 0
Integral 8.043e+05

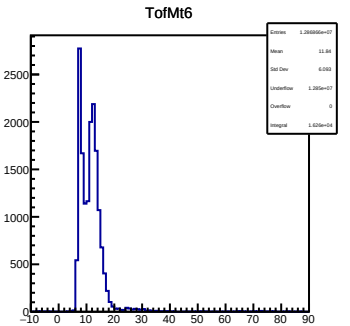

TofMt1

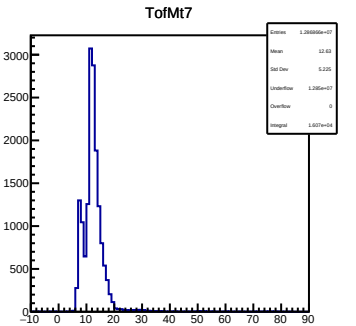

TofMt2

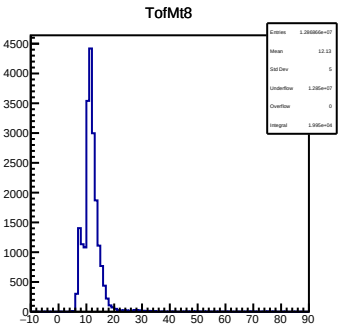

TofMt3

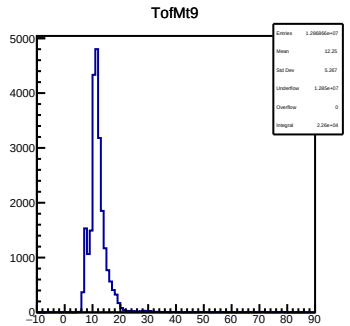

TofMt4

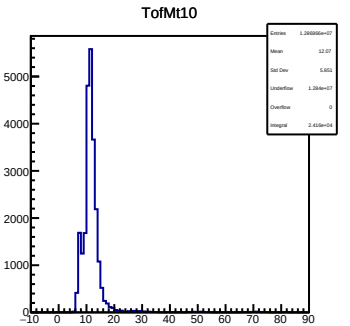

TofMt5

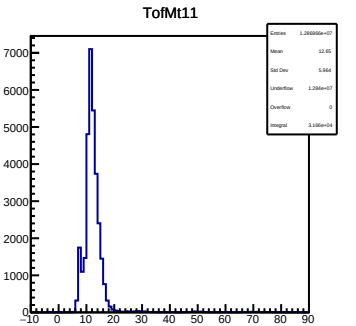

TofMt6

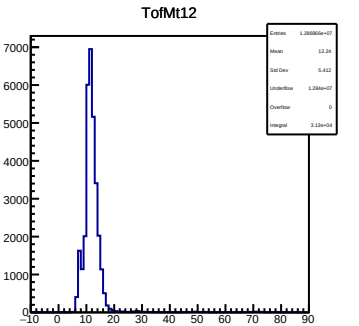

TofMt7

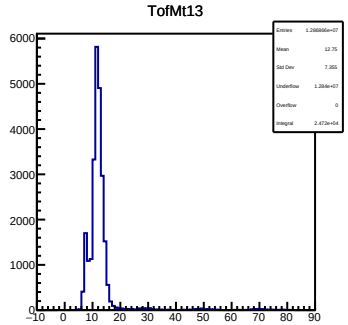

TofMt8

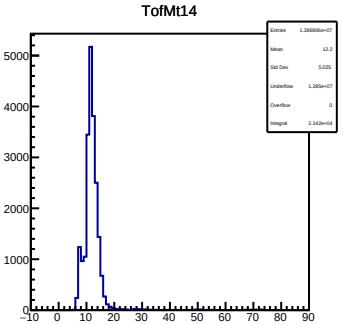

TofMt9

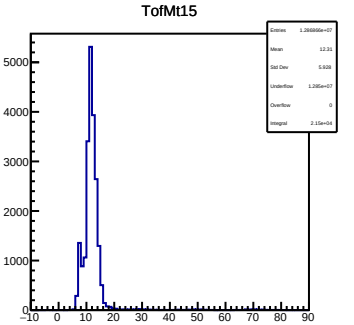

TofMt10

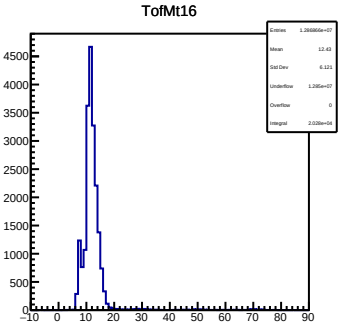

TofMt11

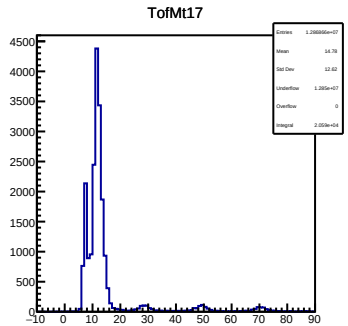

TofMt12

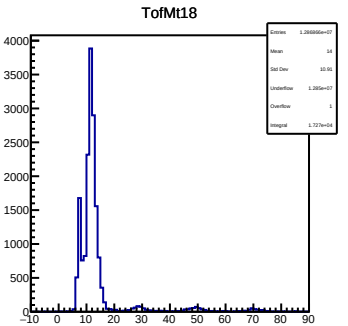

TofMt13

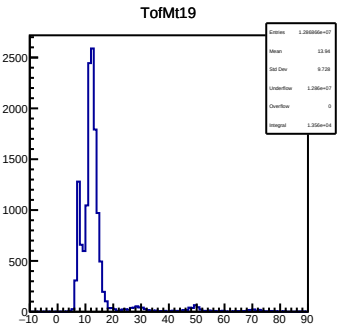

TofMt14

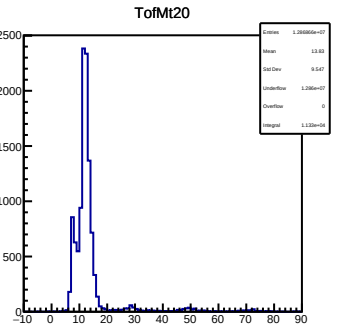

TofMt15

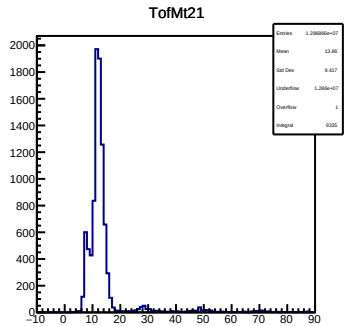

TofMt16

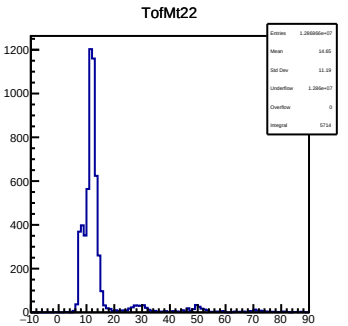

TofMt17

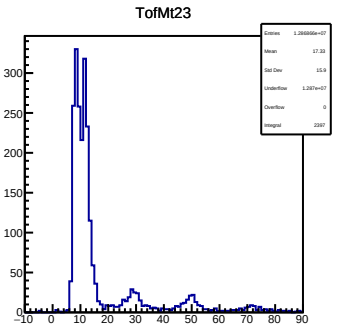

TofMt18

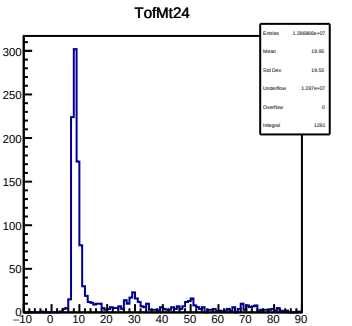

TofMt19

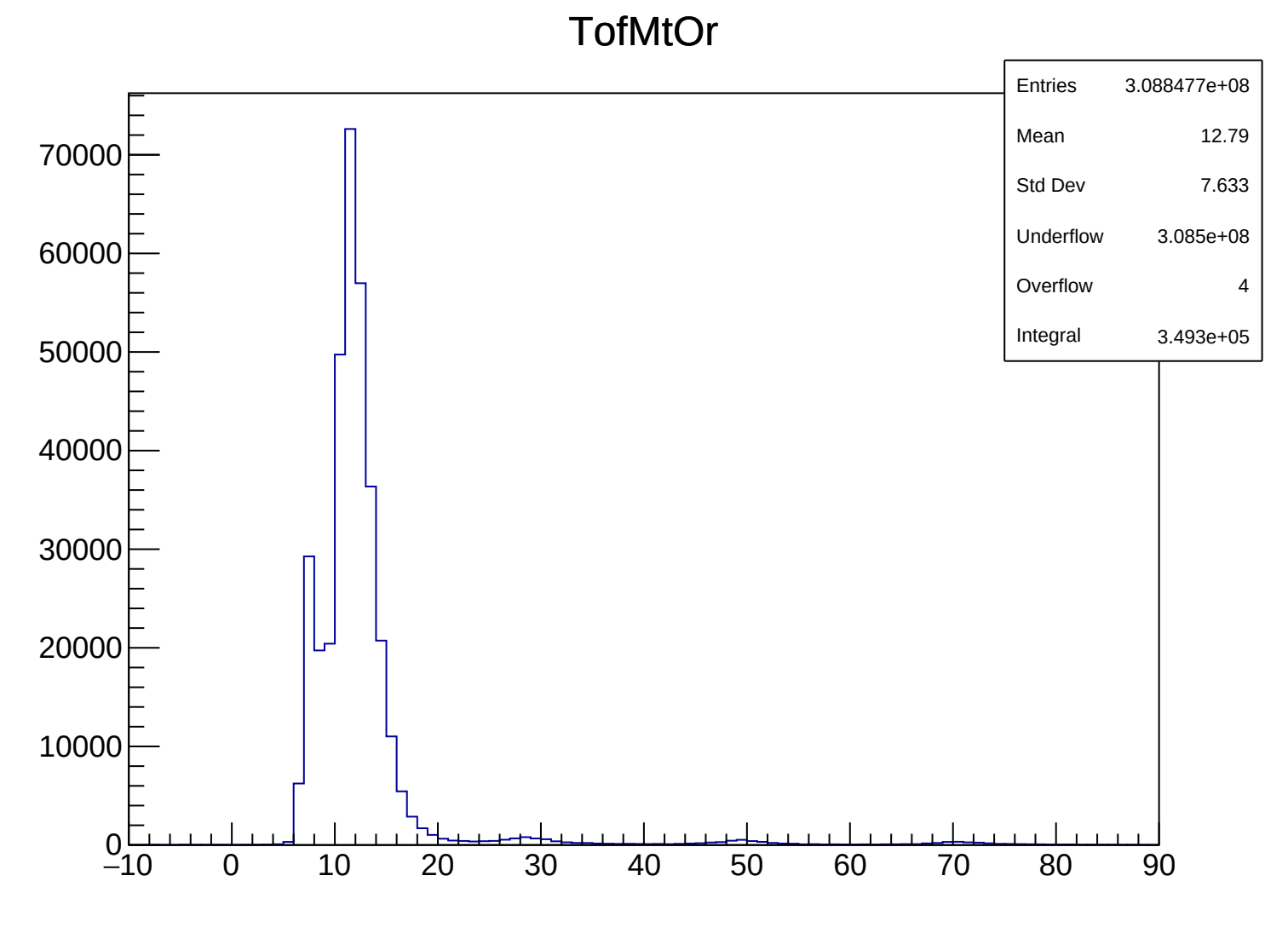

TofMt20

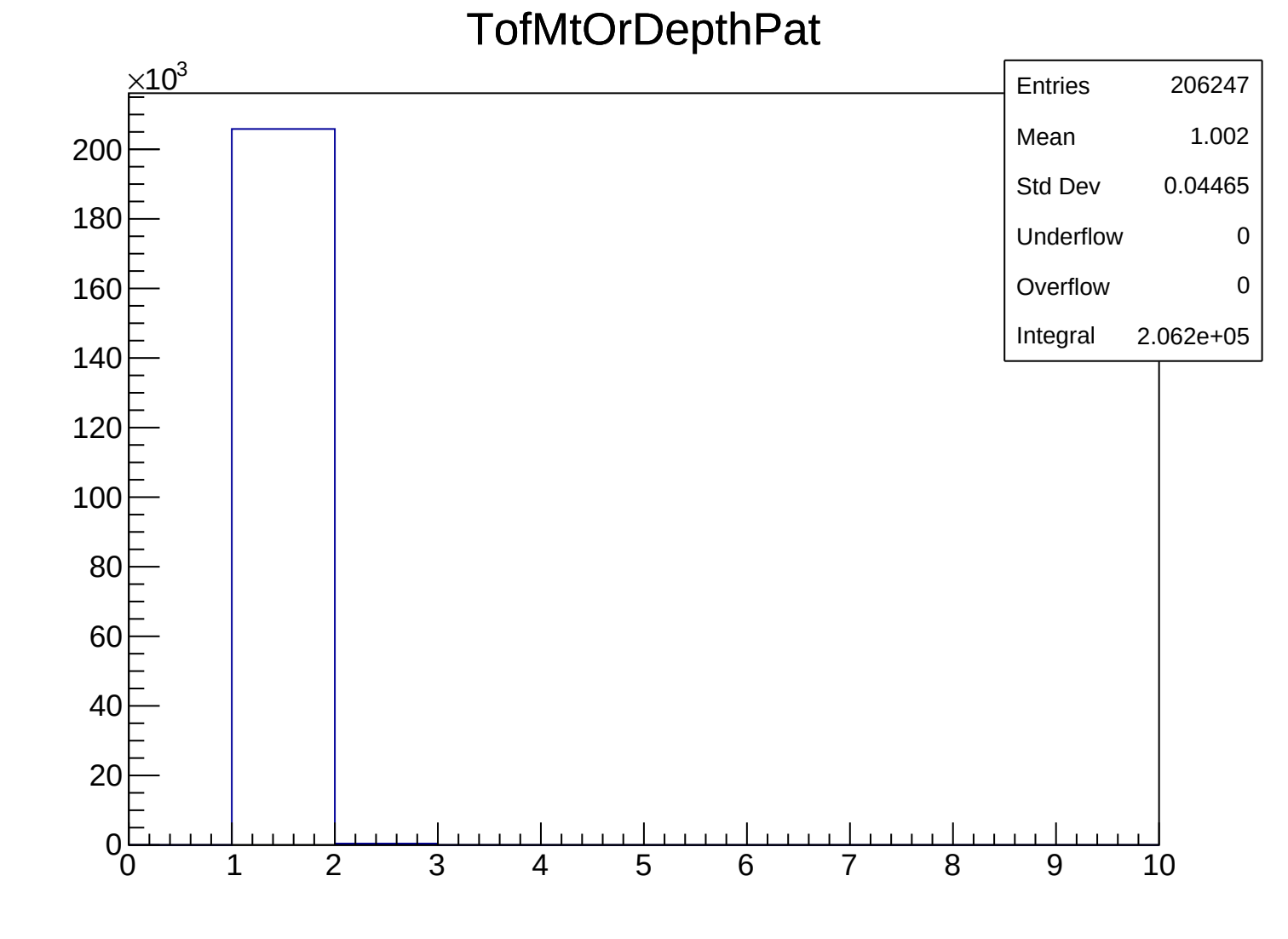

TofMt21

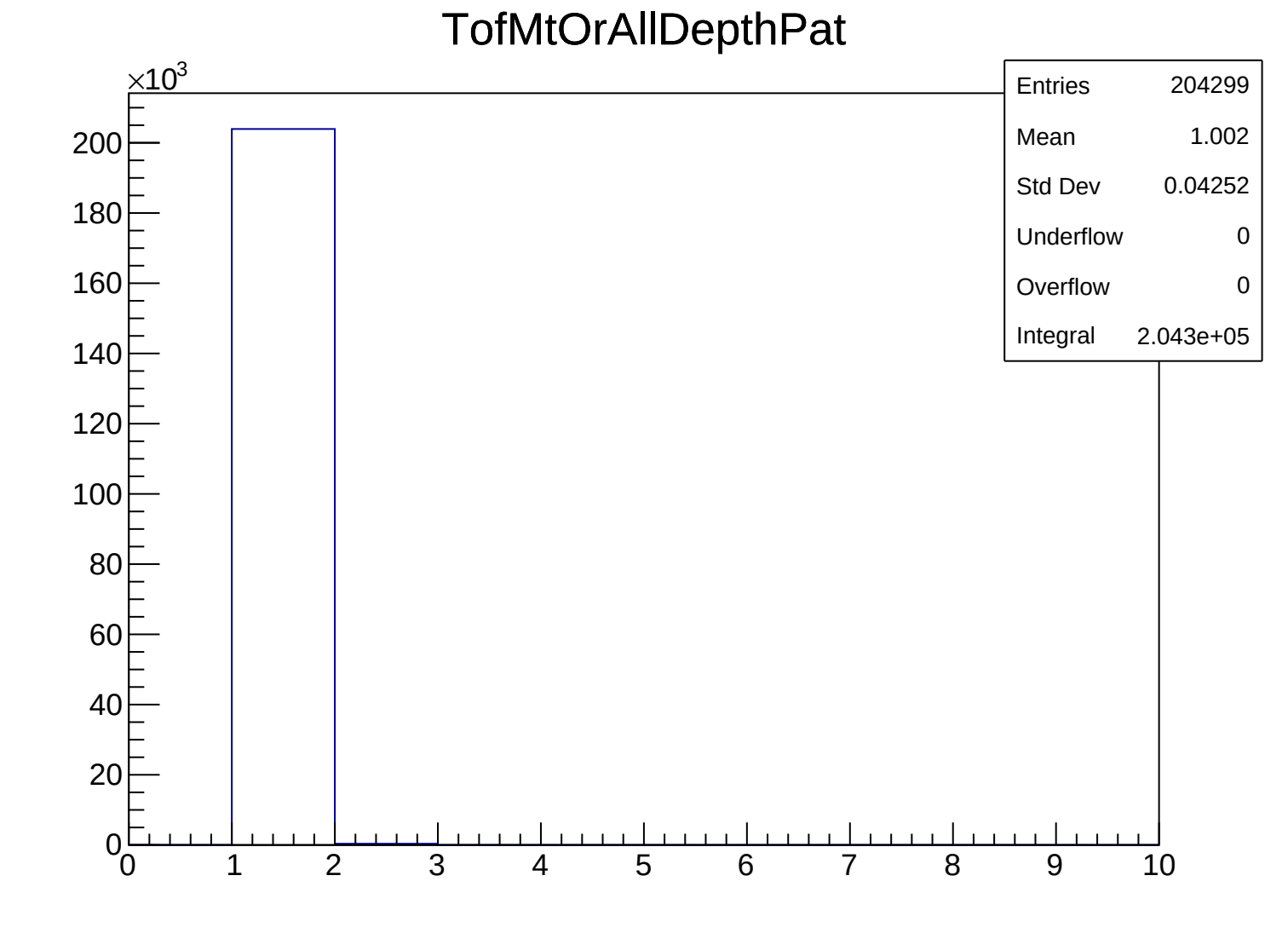

TofMt22

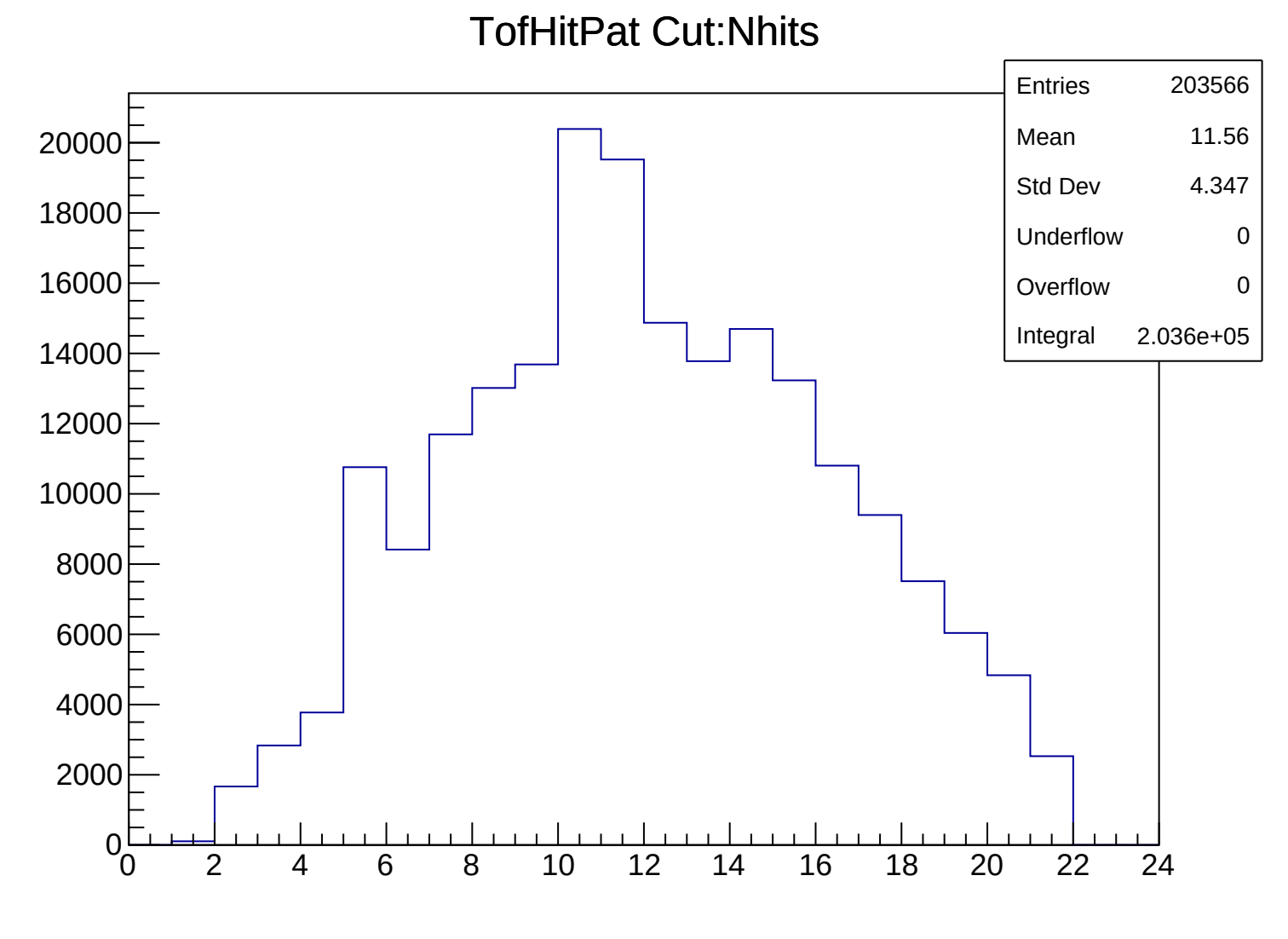

TofMt23


TofMt24


TofMtOr
Entries 3.088477e+08
Mean 12.79
Std Dev 7.633
Underflow 3.085e+08
Overflow 4
Integral 3.493e+05
70000
60000
50000
40000
30000
20000
10000
0
−10
0
10
20
30
40
50
60
70
80
90


TofMtOrDepthPat
×10^3
200
180
160
140
120
100
80
60
40
20
0
0
1
2
3
4
5
6
7
8
9
10
Entries 206247
Mean 1.002
Std Dev 0.04465
Underflow 0
Overflow 0
Integral 2.062e+05


TofMtOrAllDepthPat
×10^3
200
180
160
140
120
100
80
60
40
20
0
0
1
2
3
4
5
6
7
8
9
10
Entries 204299
Mean 1.002
Std Dev 0.04252
Underflow 0
Overflow 0
Integral 2.043e+05


TofHitPat Cut:Nhits
Entries 203566
Mean 11.56
Std Dev 4.347
Underflow 0
Overflow 0
Integral 2.036e+05
20000
18000
16000
14000
12000
10000
8000
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4000
2000
0
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2
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6
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10
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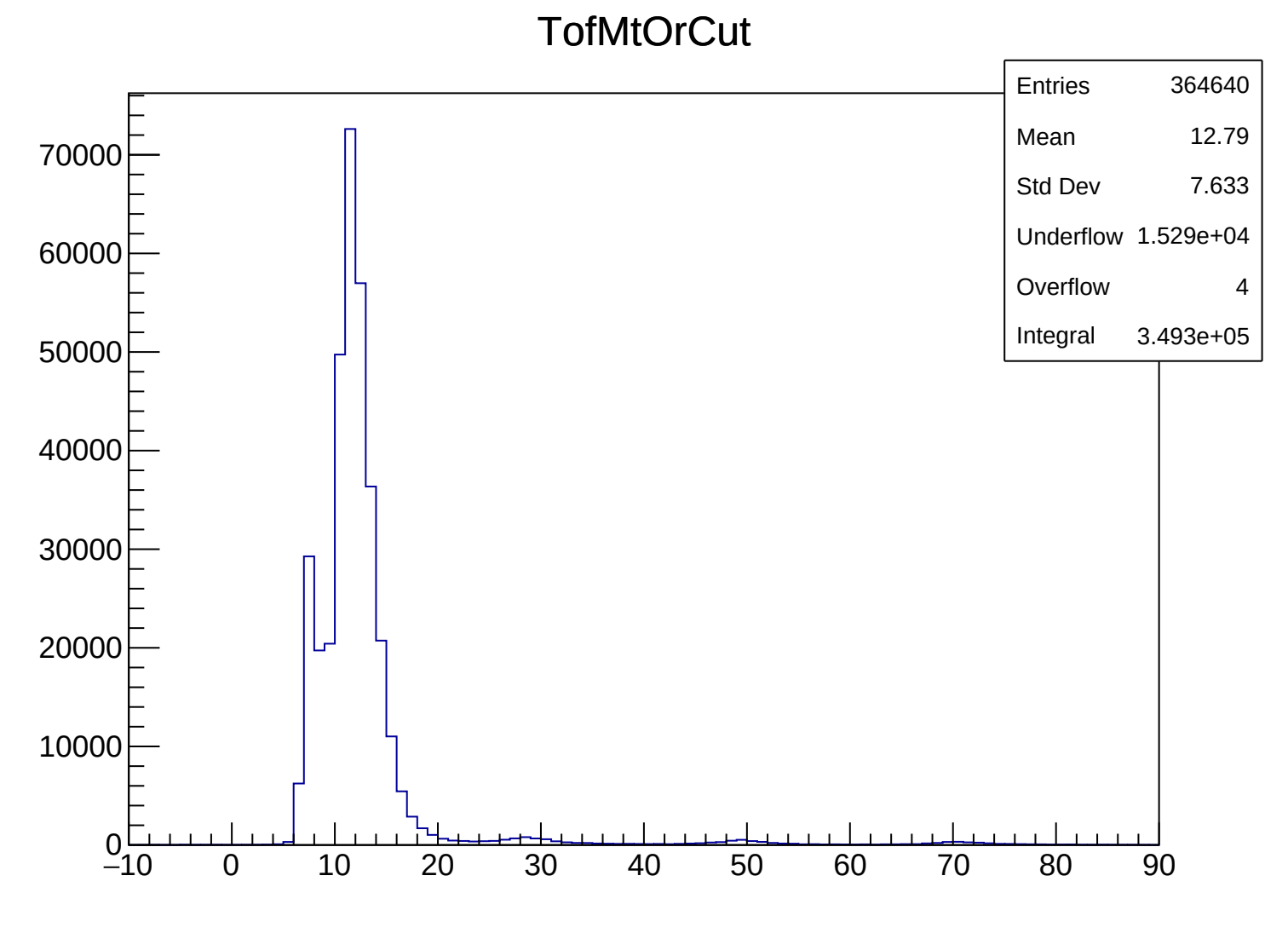
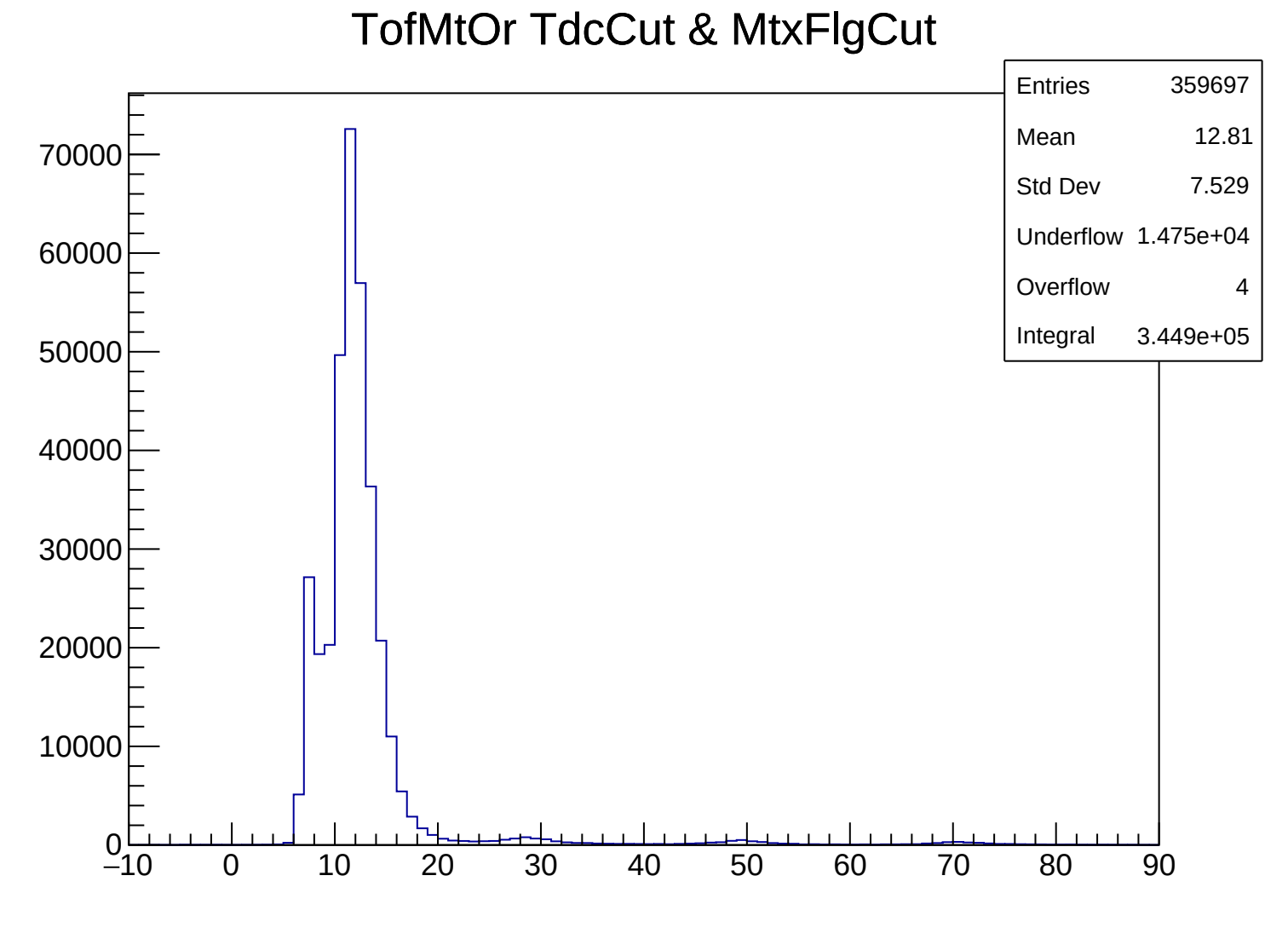
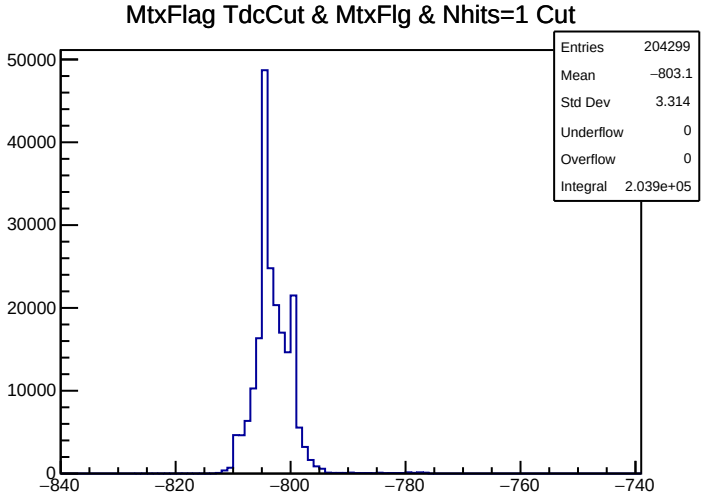
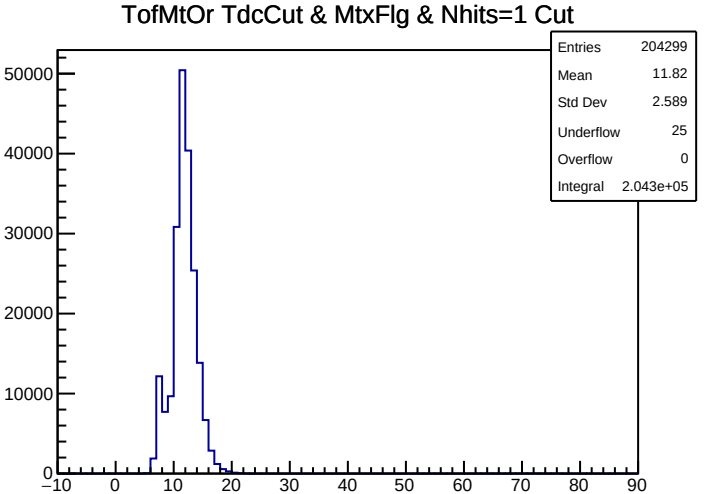
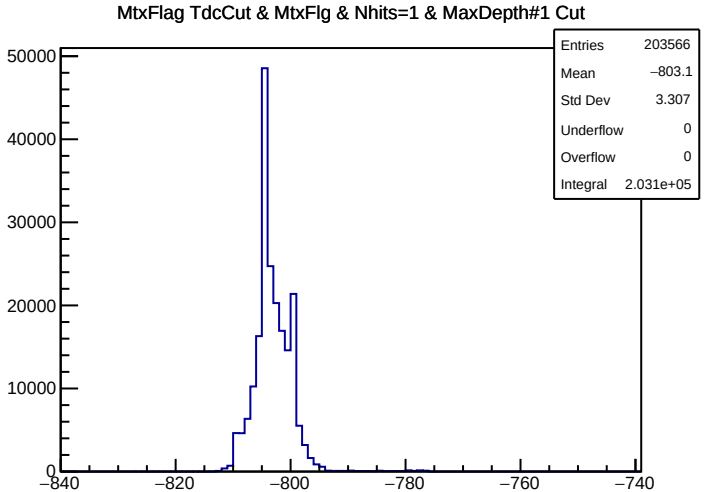
18
20
22
24

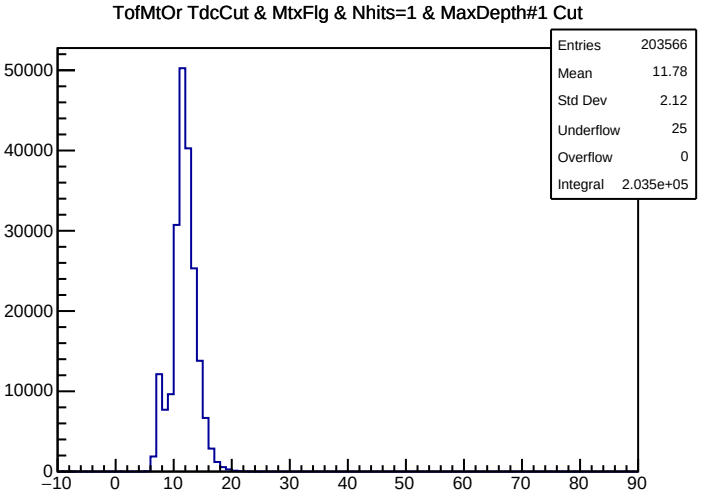

TofMtOrCut
Entries 364640
Mean 12.79
Std Dev 7.633
Underflow 1.529e+04
Overflow 4
Integral 3.493e+05
70000
60000
50000
40000
30000
20000
10000
0
−10
0
10
20
30
40
50
60
70
80
90

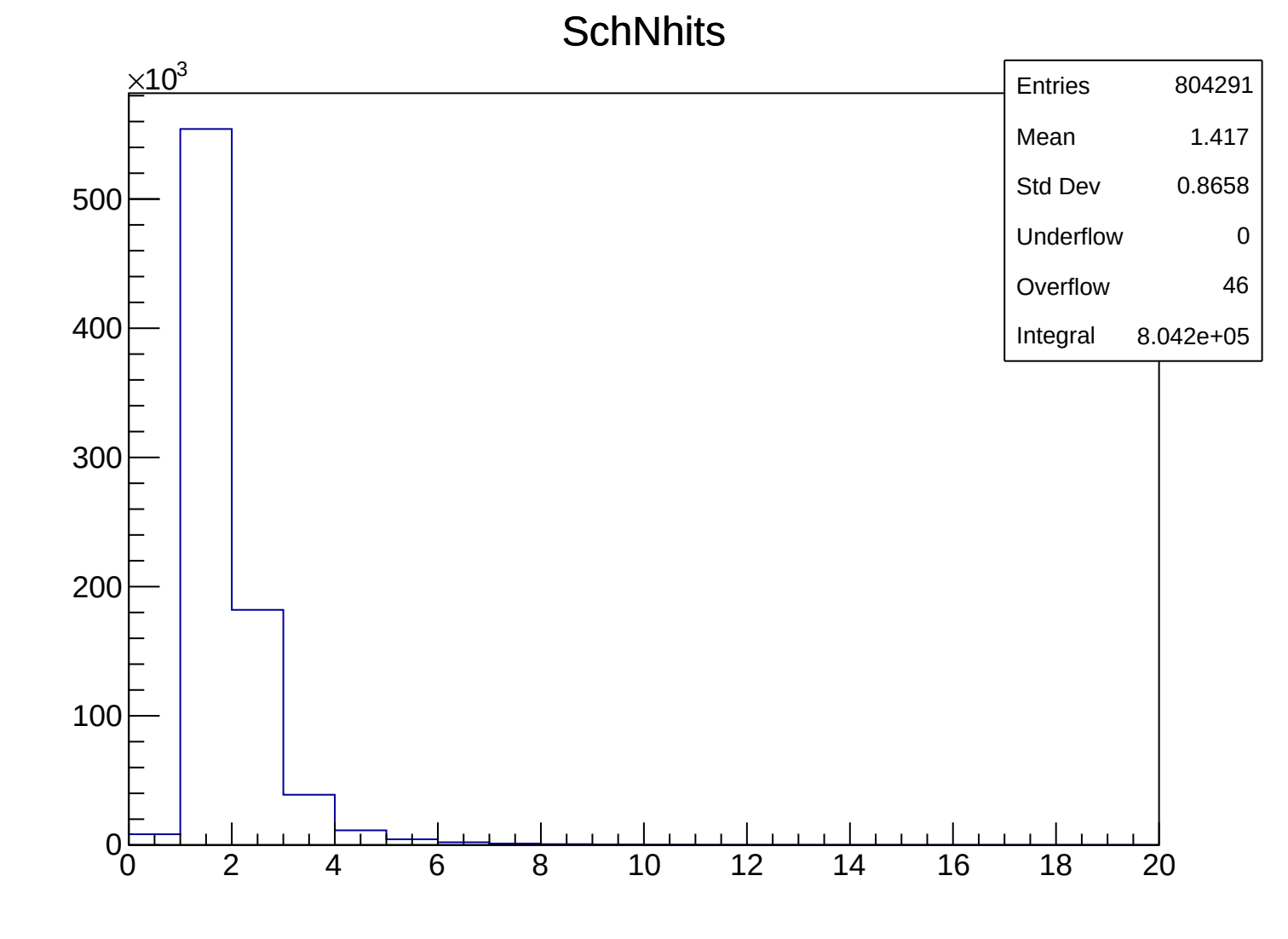

TofMtOr TdcCut & MtxFlgCut
Entries 359697
Mean 12.81
Std Dev 7.529
Underflow 1.475e+04
Overflow 4
Integral 3.449e+05
70000
60000
50000
40000
30000
20000
10000
0
−10
0
10
20
30
40
50
60
70
80
90

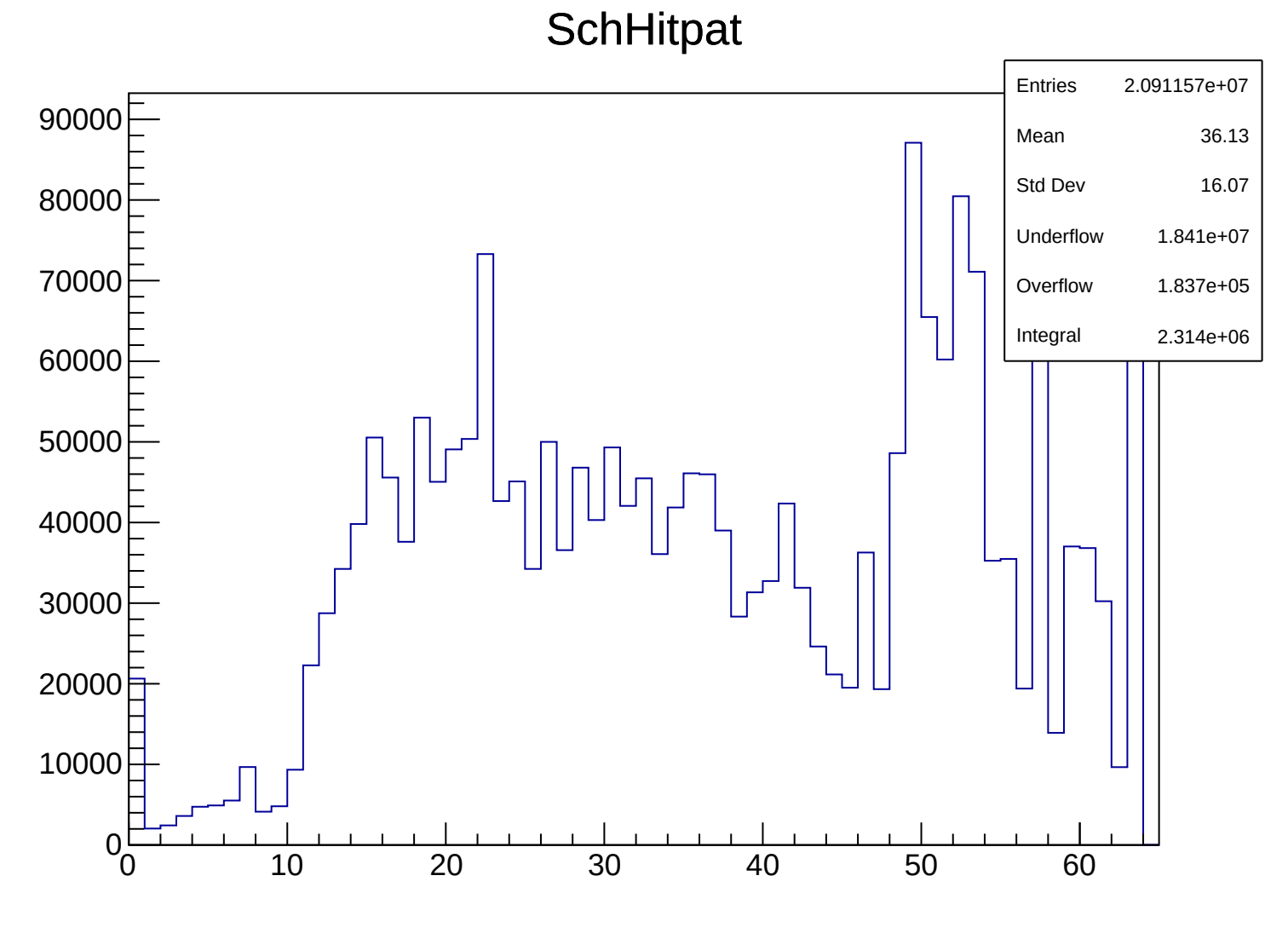

MtxFlag TdcCut & MtxFlg & Nhits=1 Cut
Entries 204299
Mean −803.1
Std Dev 3.314
Underflow 0
Overflow 0
Integral 2.039e+05
50000
40000
30000
20000
10000
0
−840
−820
−800
−780
−760
−740

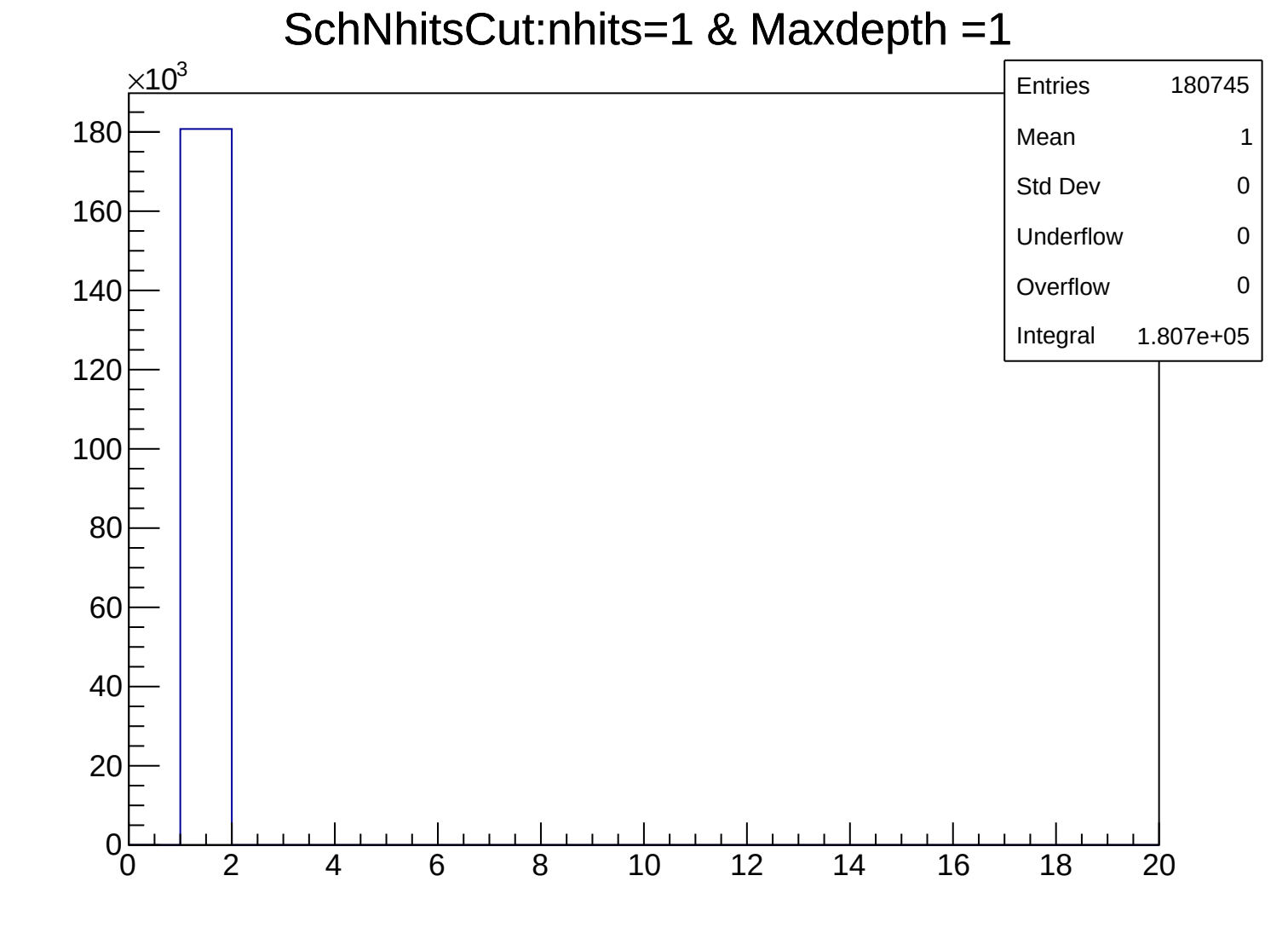

TofMtOr TdcCut & MtxFlg & Nhits=1 Cut
Entries 204299
Mean 11.82
Std Dev 2.589
Underflow 25
Overflow 0
Integral 2.043e+05
50000
40000
30000
20000
10000
0
−10
0
10
20
30
40
50
60
70
80
90

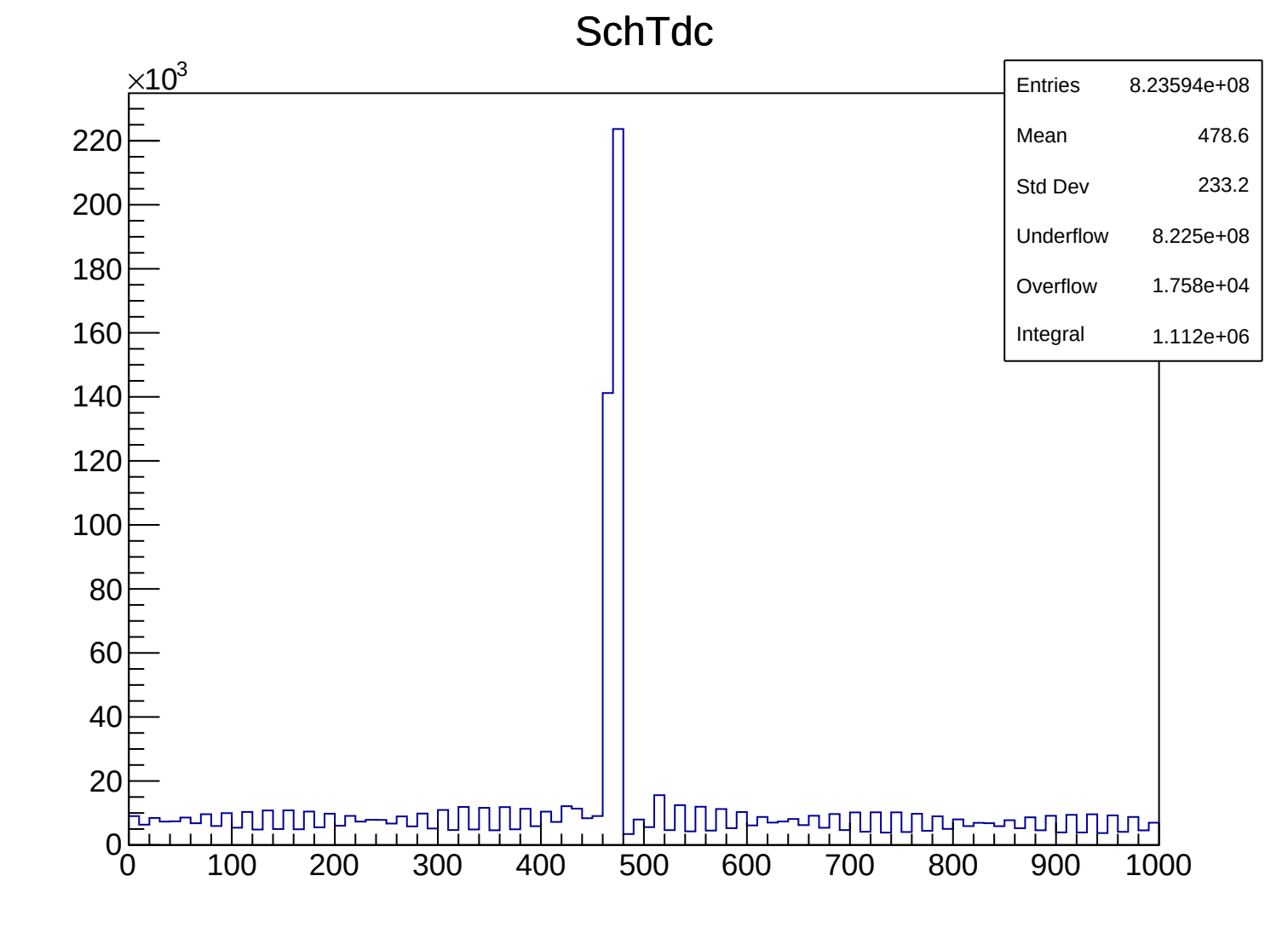

MtxFlag TdcCut & MtxFlg & Nhits=1 & MaxDepth#1 Cut
Entries 203566
Mean −803.1
Std Dev 3.307
Underflow 0
Overflow 0
Integral 2.031e+05
50000
40000
30000
20000
10000
0
−840
−820
−800
−780
−760
−740

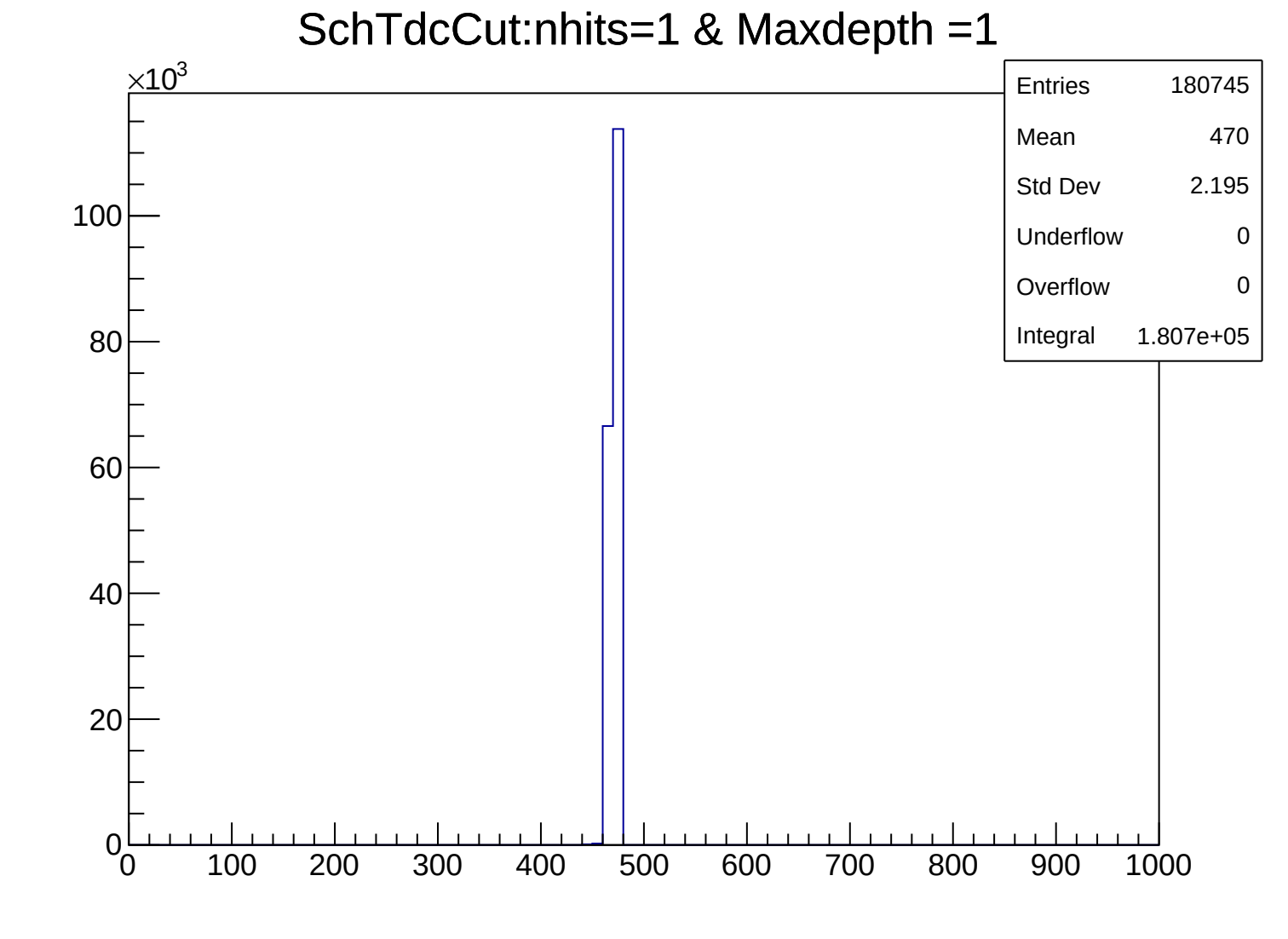

TofMtOr TdcCut & MtxFlg & Nhits=1 & MaxDepth#1 Cut
Entries 203566
Mean 11.78
Std Dev 2.12
Underflow 25
Overflow 0
Integral 2.035e+05
50000
40000
30000
20000
10000
0
−10
0
10
20
30
40
50
60
70
80
90

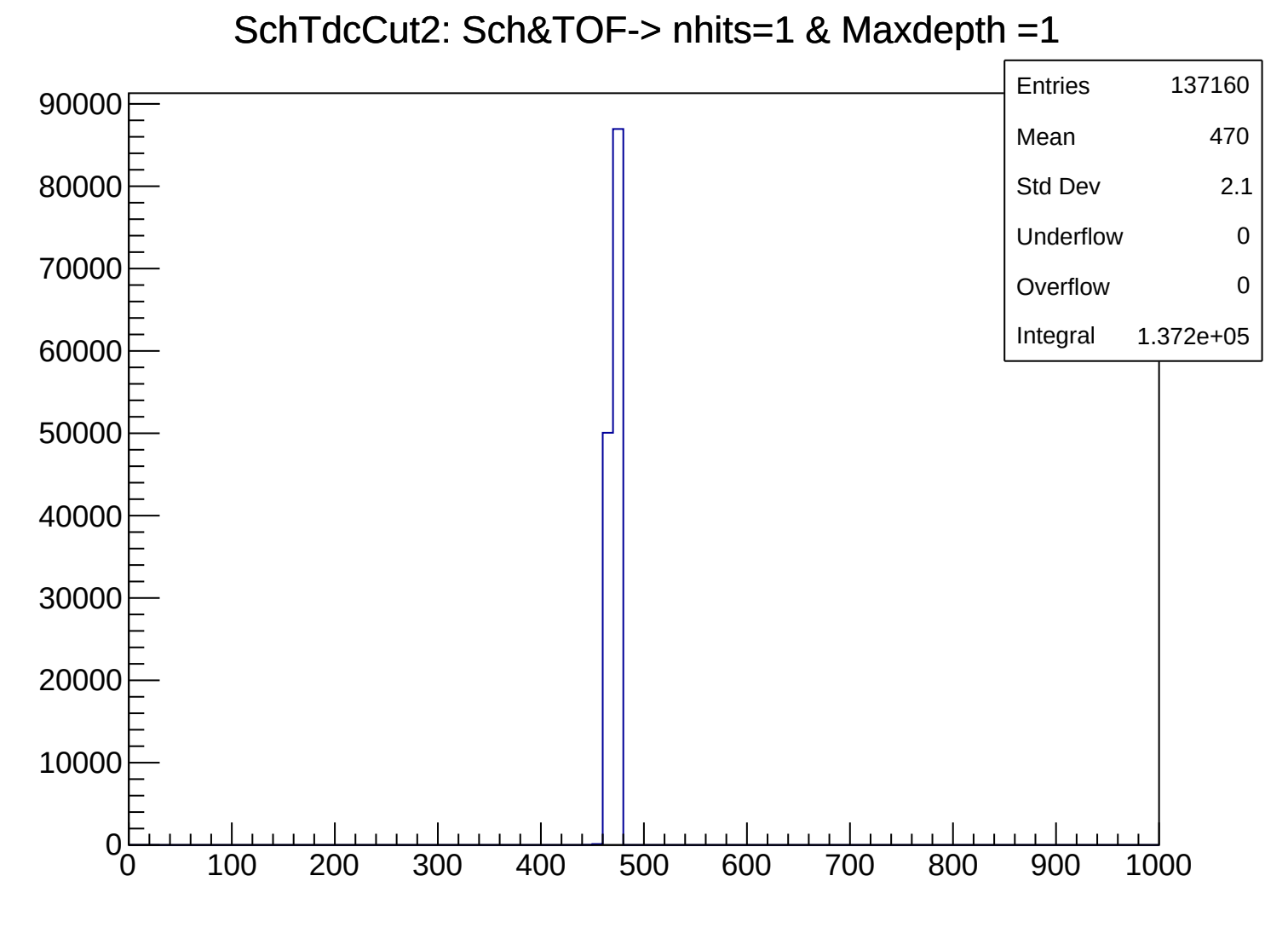

SchNhits
×10^3
500
400
300
200
100
0
0
2
4
6
8
10
12
14
16
18
20
Entries 804291
Mean 1.417
Std Dev 0.8658
Underflow 0
Overflow 46
Integral 8.042e+05

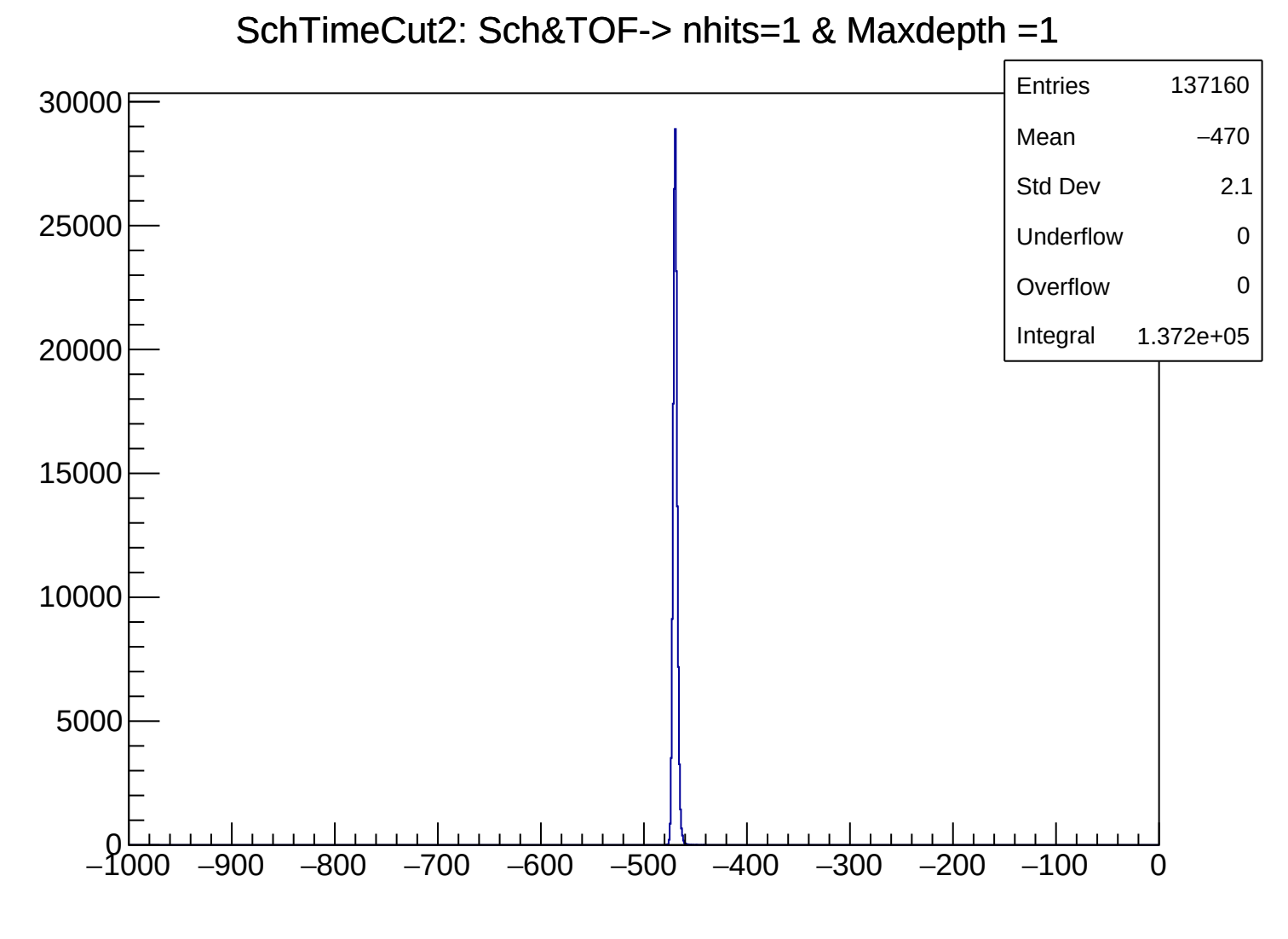

SchHitpat
Entries 2.091157e+07
Mean 36.13
Std Dev 16.07
Underflow 1.841e+07
Overflow 1.837e+05
Integral 2.314e+06
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
0
10
20
30
40
50
60

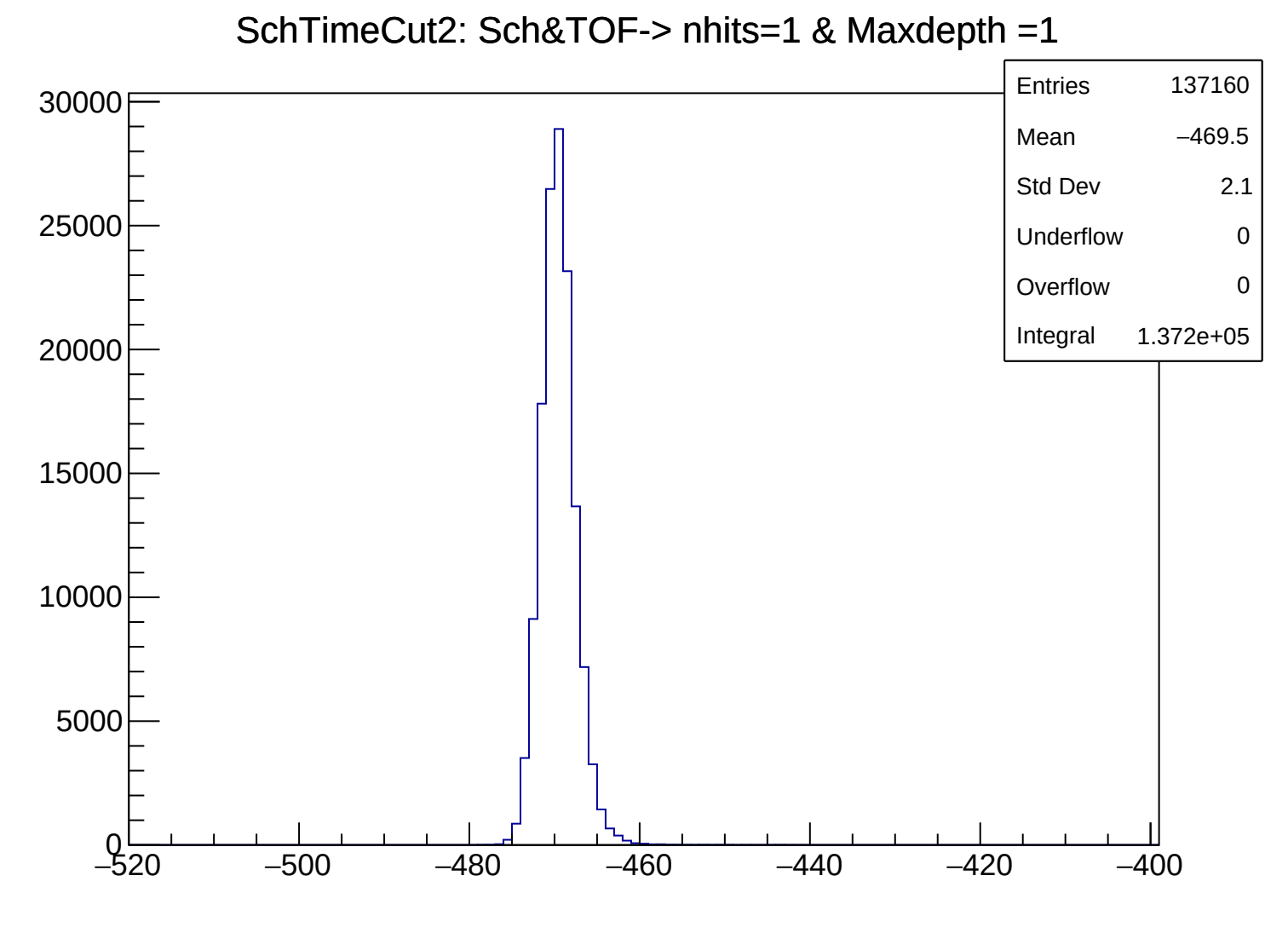

SchNhitsCut:nhits=1 & Maxdepth =1
×10^3
180
160
140
120
100
80
60
40
20
0
0
2
4
6
8
10
12
14
16
18
20
Entries 180745
Mean 1
Std Dev 0
Underflow 0
Overflow 0
Integral 1.807e+05

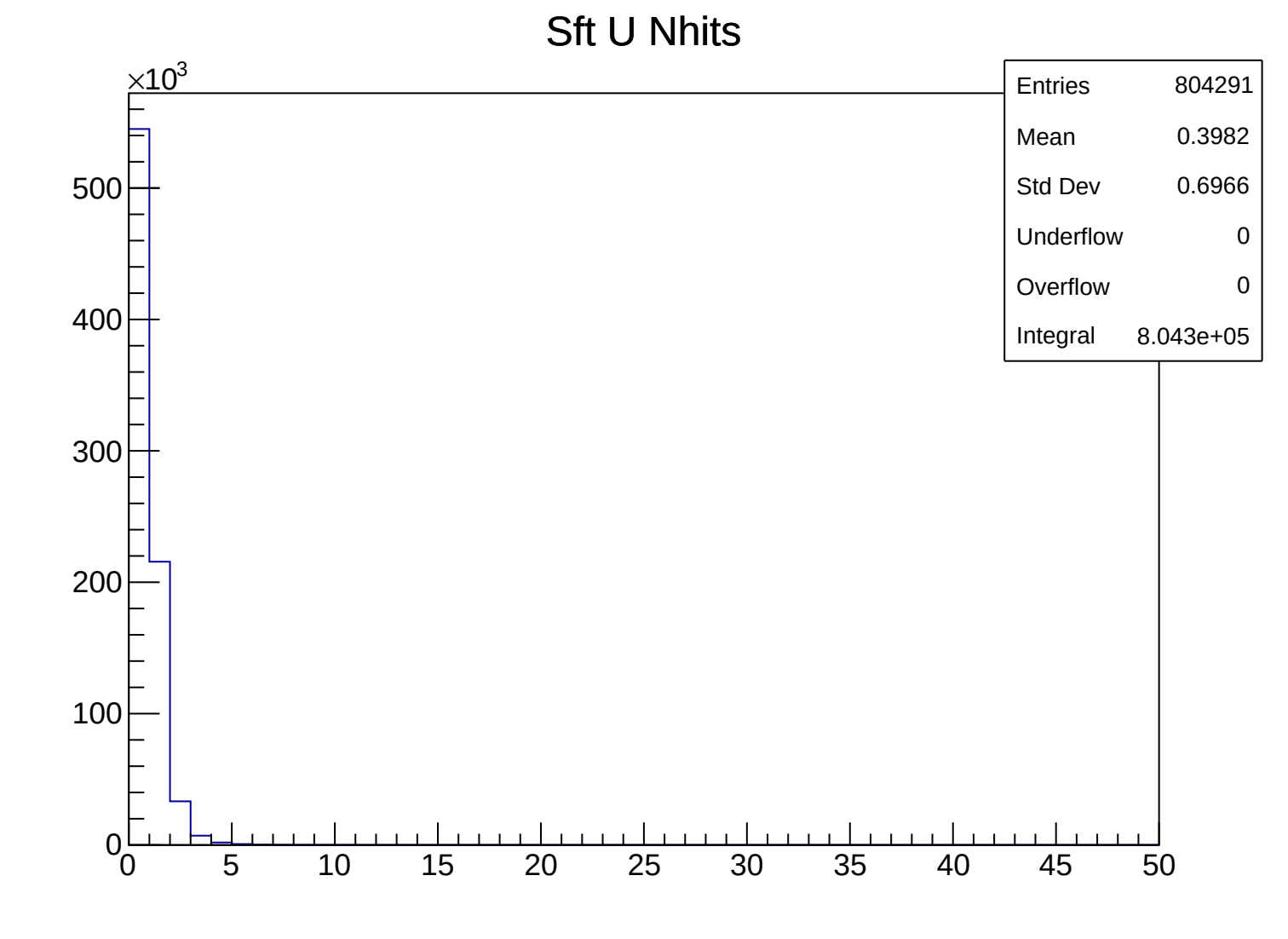

SchTdc
×10^3
220
200
180
160
140
120
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
Entries 8.23594e+08
Mean 478.6
Std Dev 233.2
Underflow 8.225e+08
Overflow 1.758e+04
Integral 1.112e+06

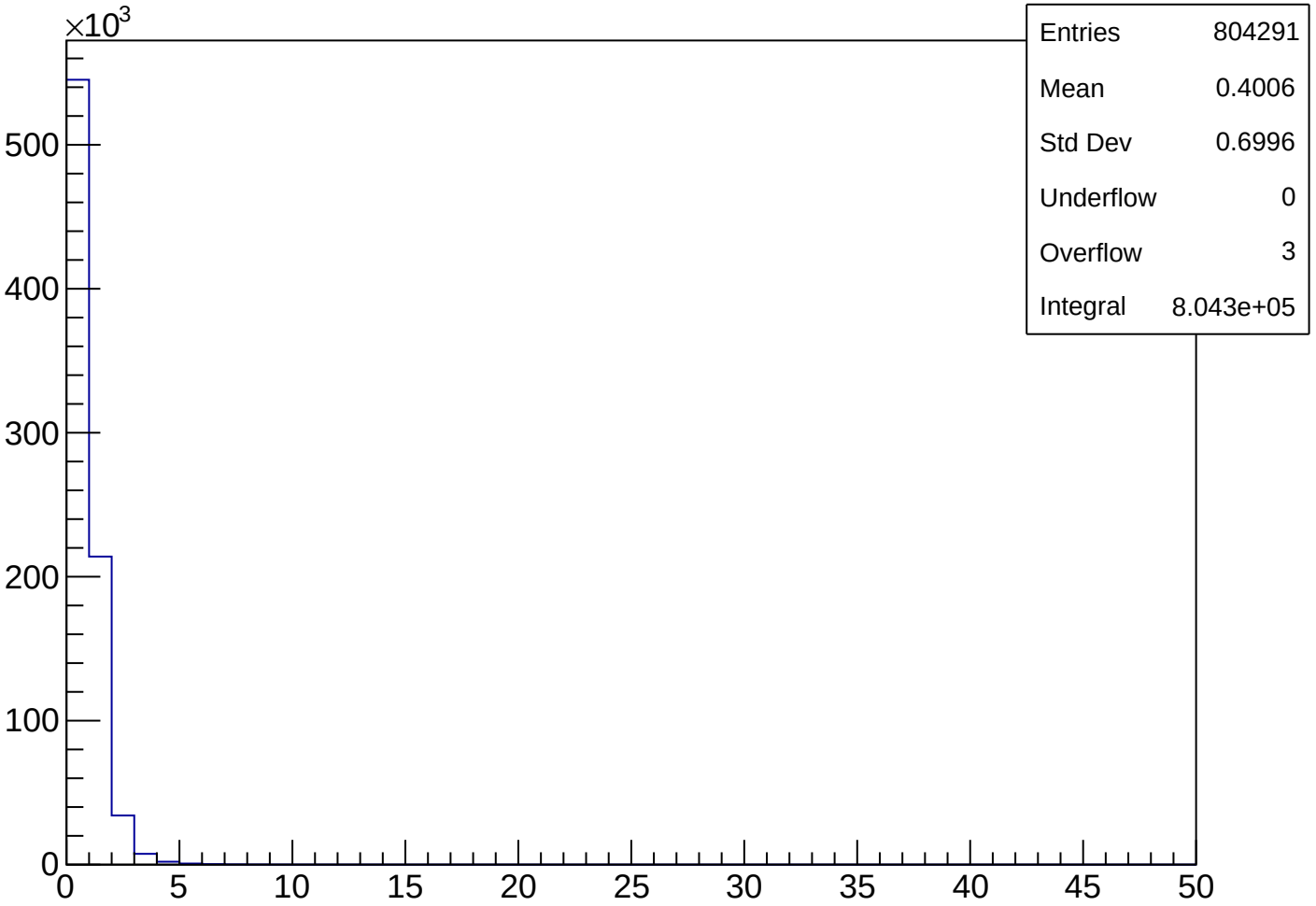

SchTdcCut:nhits=1 & Maxdepth =1
×10^3
100
80
60
40
20
0
0
100
200
300
400
500
600
700
800
900
1000
Entries 180745
Mean 470
Std Dev 2.195
Underflow 0
Overflow 0
Integral 1.807e+05

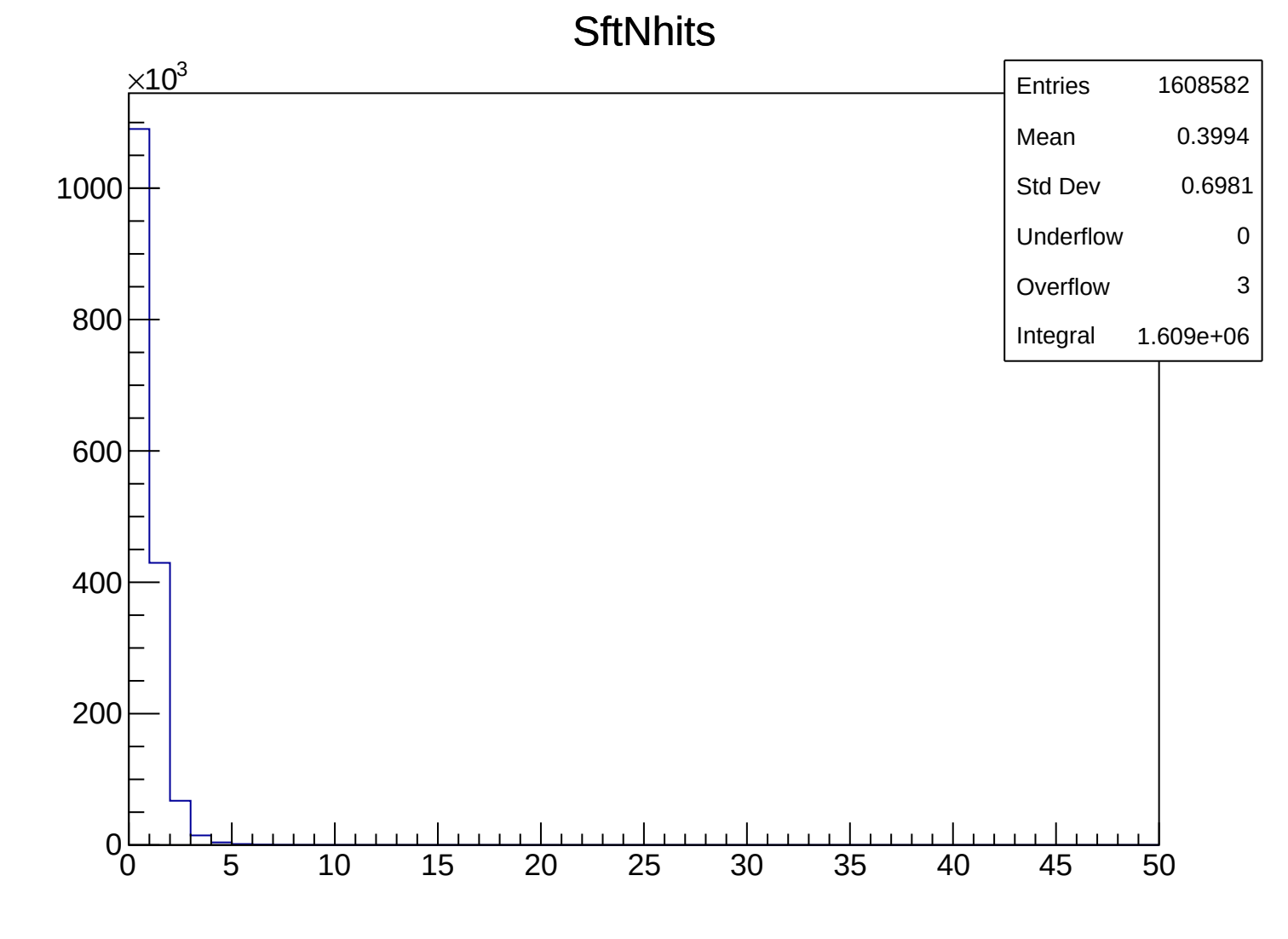

SchTdcCut2: Sch&TOF-> nhits=1 & Maxdepth =1
Entries 137160
Mean 470
Std Dev 2.1
Underflow 0
Overflow 0
Integral 1.372e+05
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
0
100
200
300
400
500
600
700
800
900
1000


SchTimeCut2: Sch&TOF-> nhits=1 & Maxdepth =1
Entries 137160
Mean −470
Std Dev 2.1
Underflow 0
Overflow 0
Integral 1.372e+05
30000
25000
20000
15000
10000
5000
0
−1000
−900
−800
−700
−600
−500
−400
−300
−200
−100
0

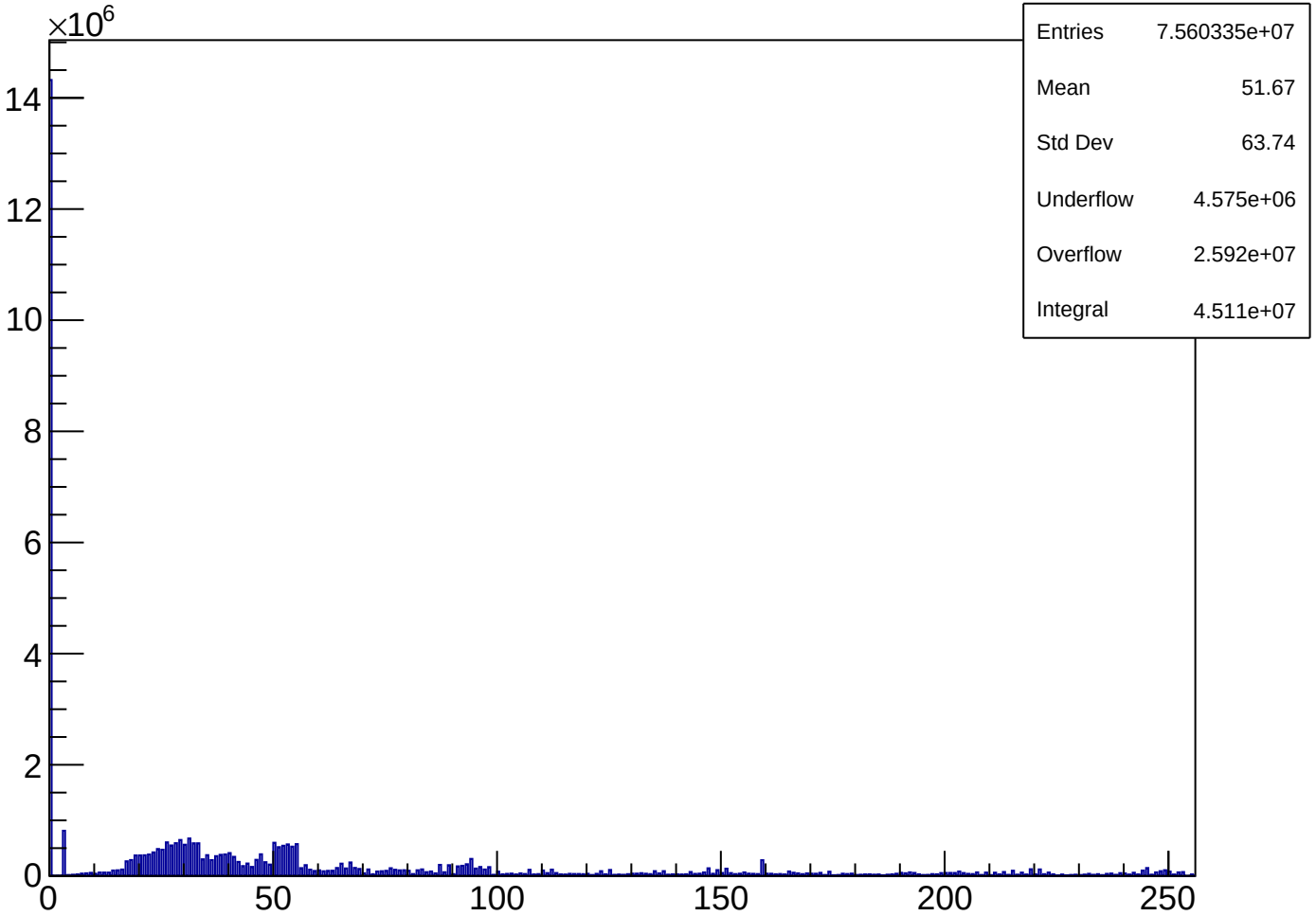

SchTimeCut2: Sch&TOF-> nhits=1 & Maxdepth =1
Entries 137160
Mean −469.5
Std Dev 2.1
Underflow 0
Overflow 0
Integral 1.372e+05
30000
25000
20000
15000
10000
5000
0
−520
−500
−480
−460
−440
−420
−400


Sft U Nhits
×10^3
500
400
300
200
100
0
0
5
10
15
20
25
30
35
40
45
50
Entries 804291
Mean 0.3982
Std Dev 0.6966
Underflow 0
Overflow 0
Integral 8.043e+05

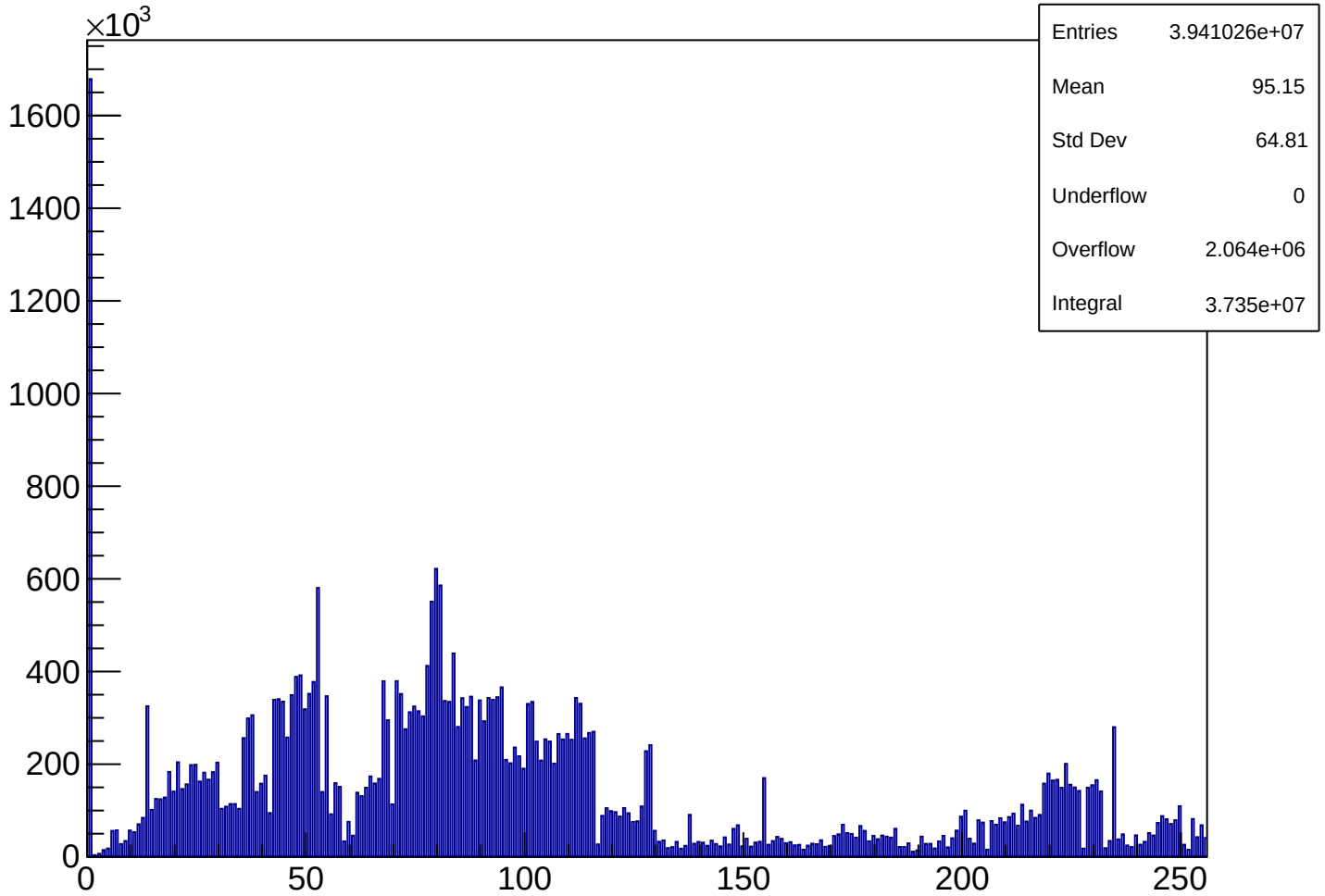

Sft D Nhits
×10^3
500
400
300
200
100
0
0
5
10
15
20
25
30
35
40
45
50
Entries 804291
Mean 0.4006
Std Dev 0.6996
Underflow 0
Overflow 3
Integral 8.043e+05

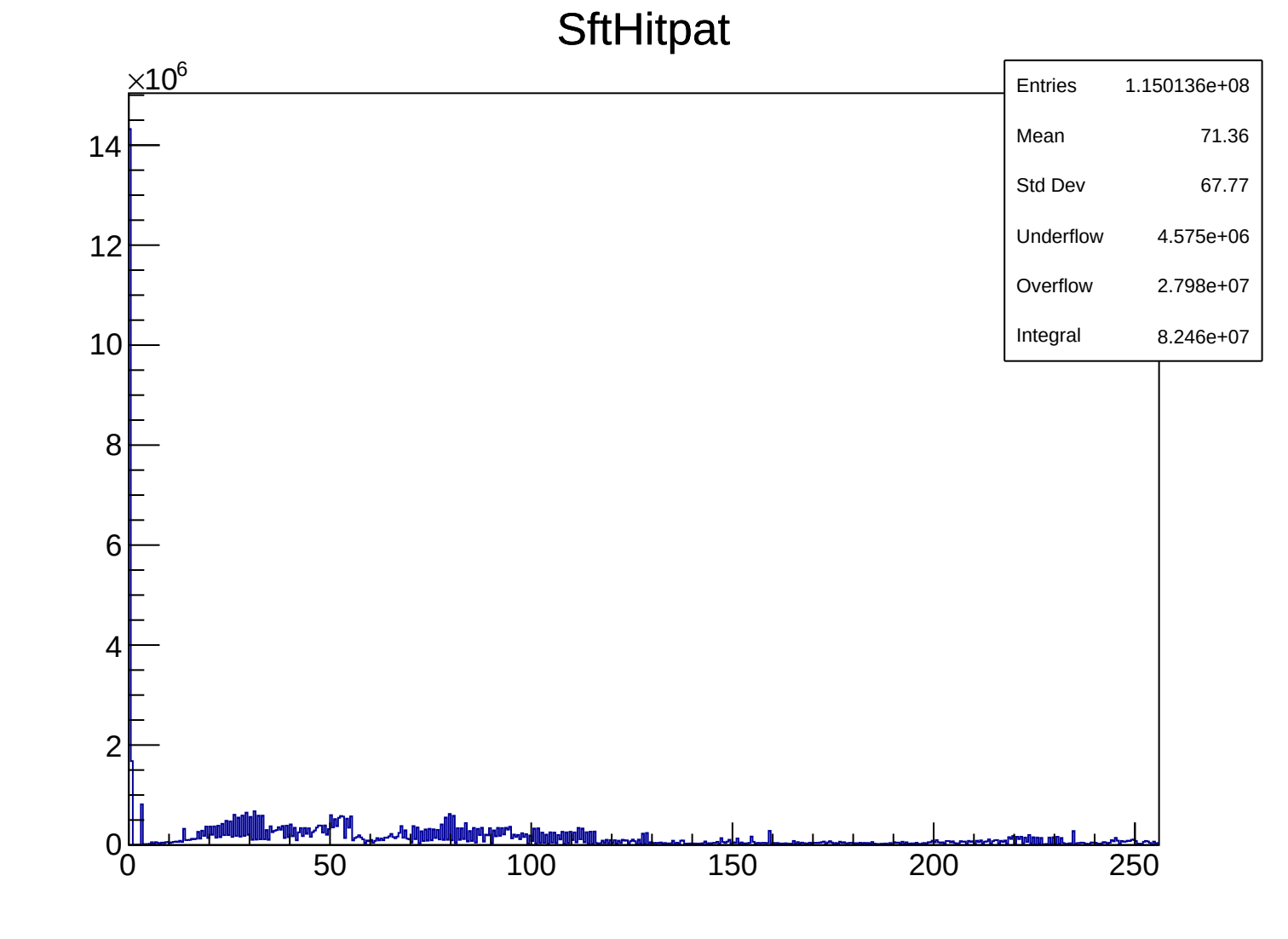

SftNhits
×10^3
1000
800
600
400
200
0
0
5
10
15
20
25
30
35
40
45
50
Entries 1608582
Mean 0.3994
Std Dev 0.6981
Underflow 0
Overflow 3
Integral 1.609e+06

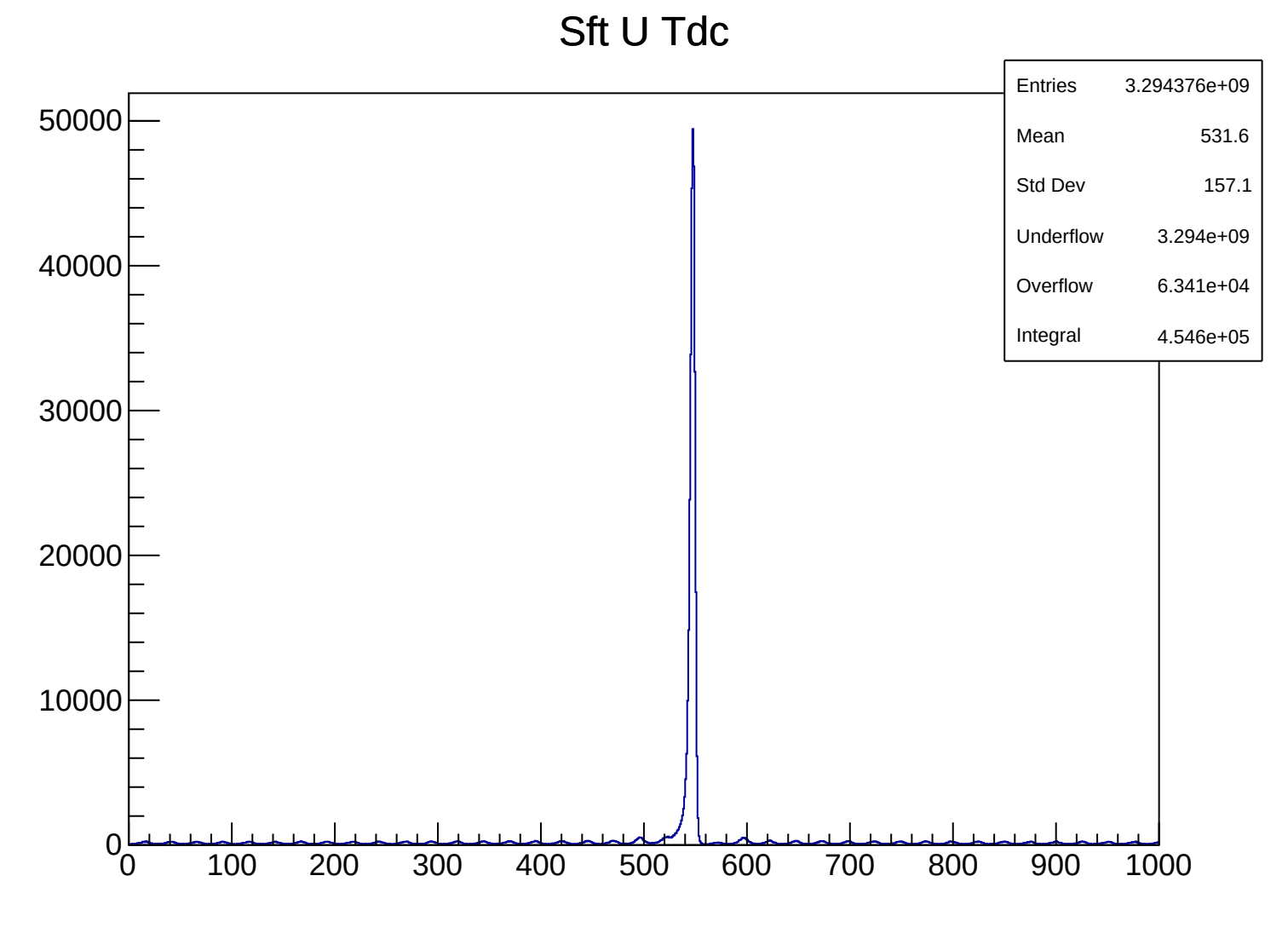
Sft U Hitpat

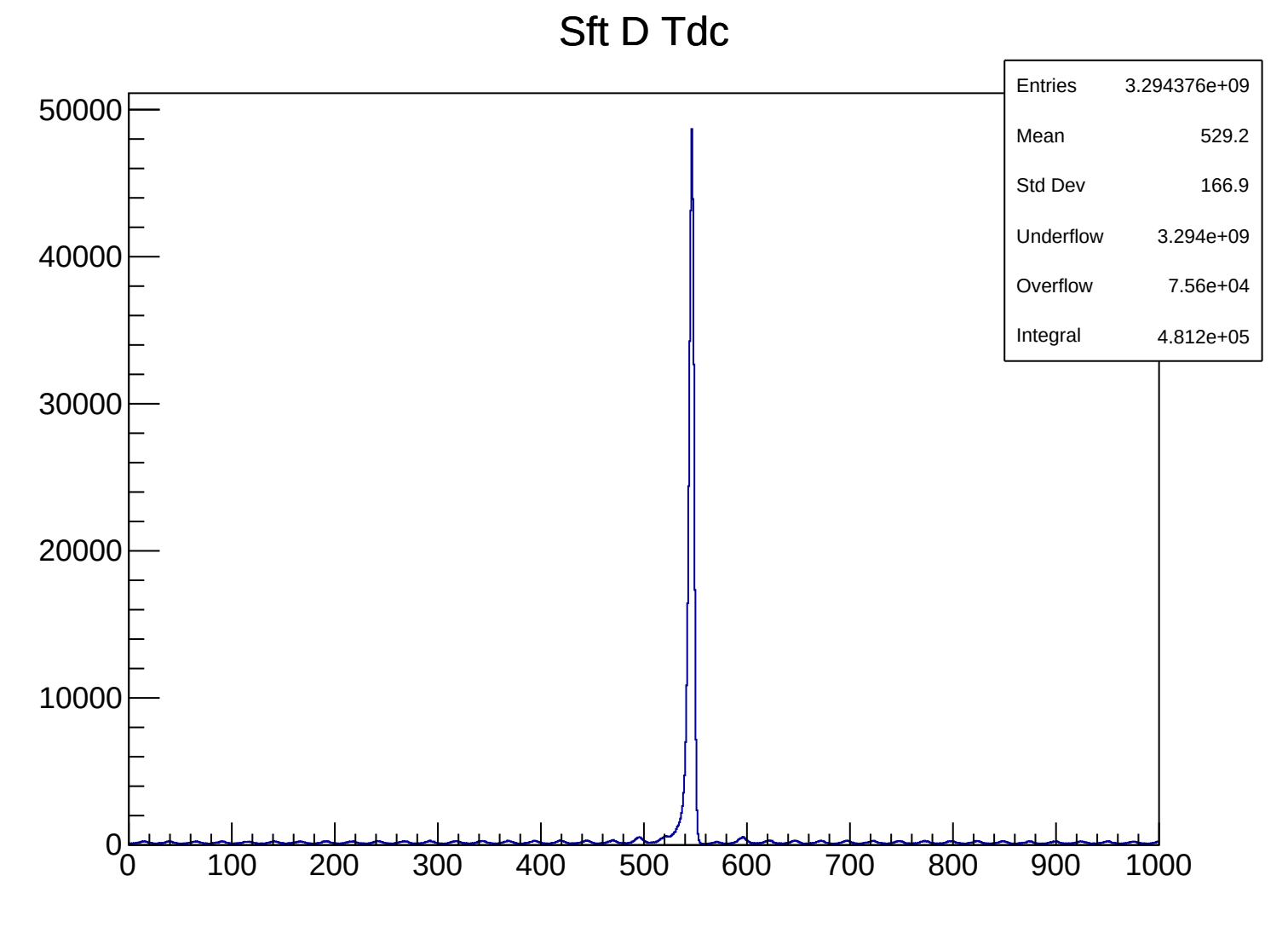

×10^6
14
12
10
8
6
4
2
0
0
50
100
150
200
250
Entries 7.560335e+07
Mean 51.67
Std Dev 63.74
Underflow 4.575e+06
Overflow 2.592e+07
Integral 4.511e+07

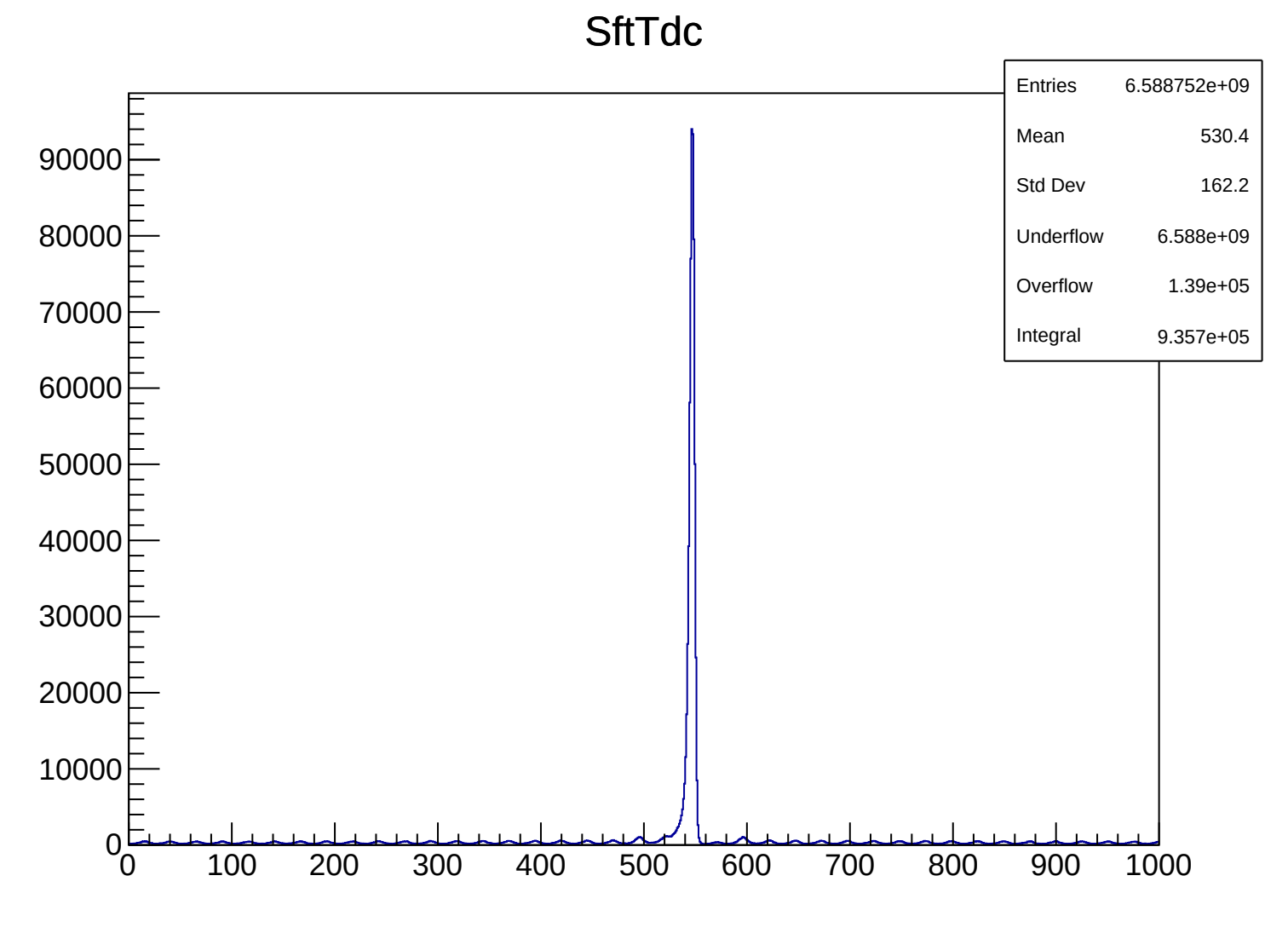
Sft D Hitpat

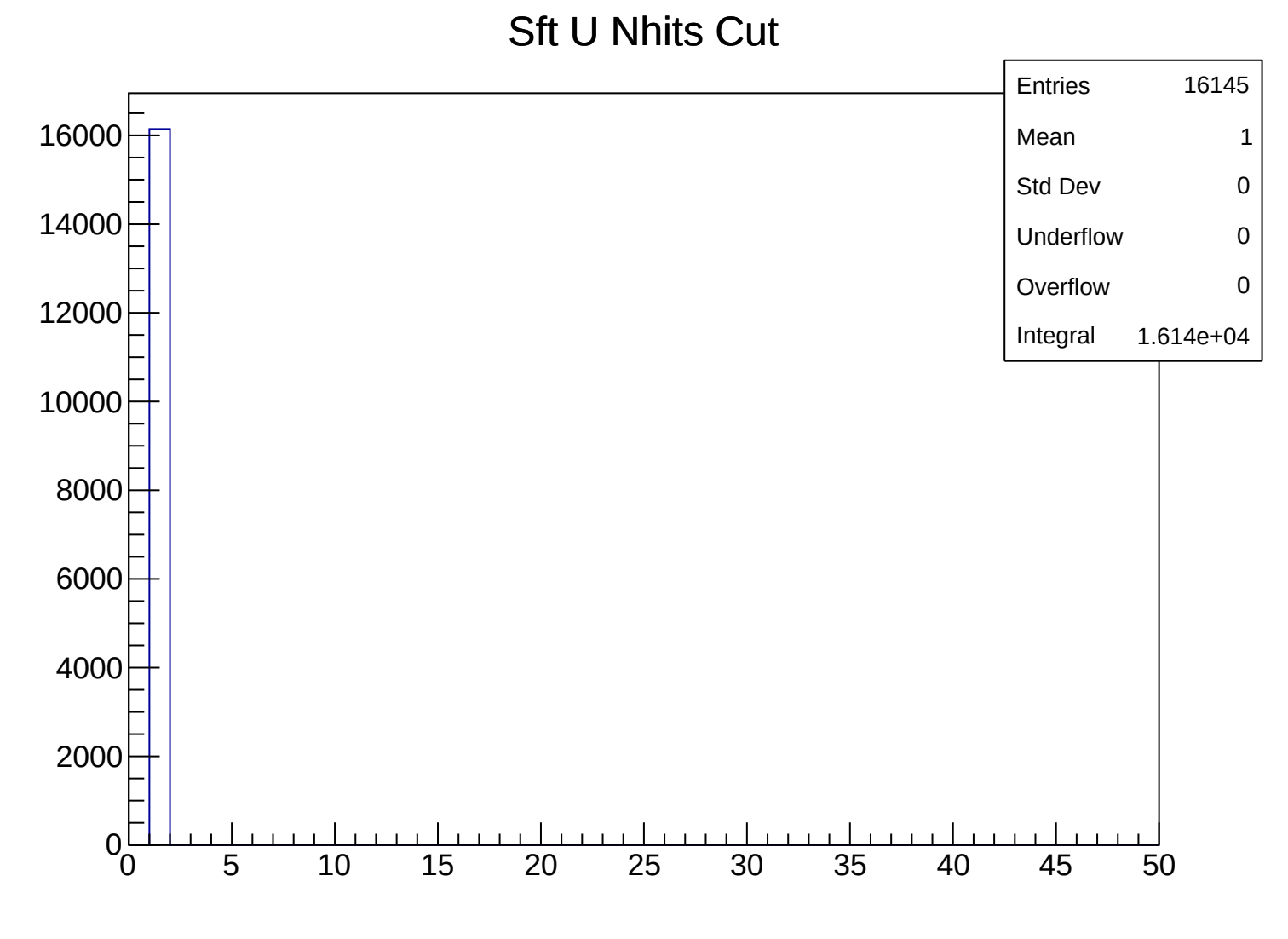

×10^3
1600
1400
1200
1000
800
600
400
200
0
0
50
100
150
200
250
Entries 3.941026e+07
Mean 95.15
Std Dev 64.81
Underflow 0
Overflow 2.064e+06
Integral 3.735e+07

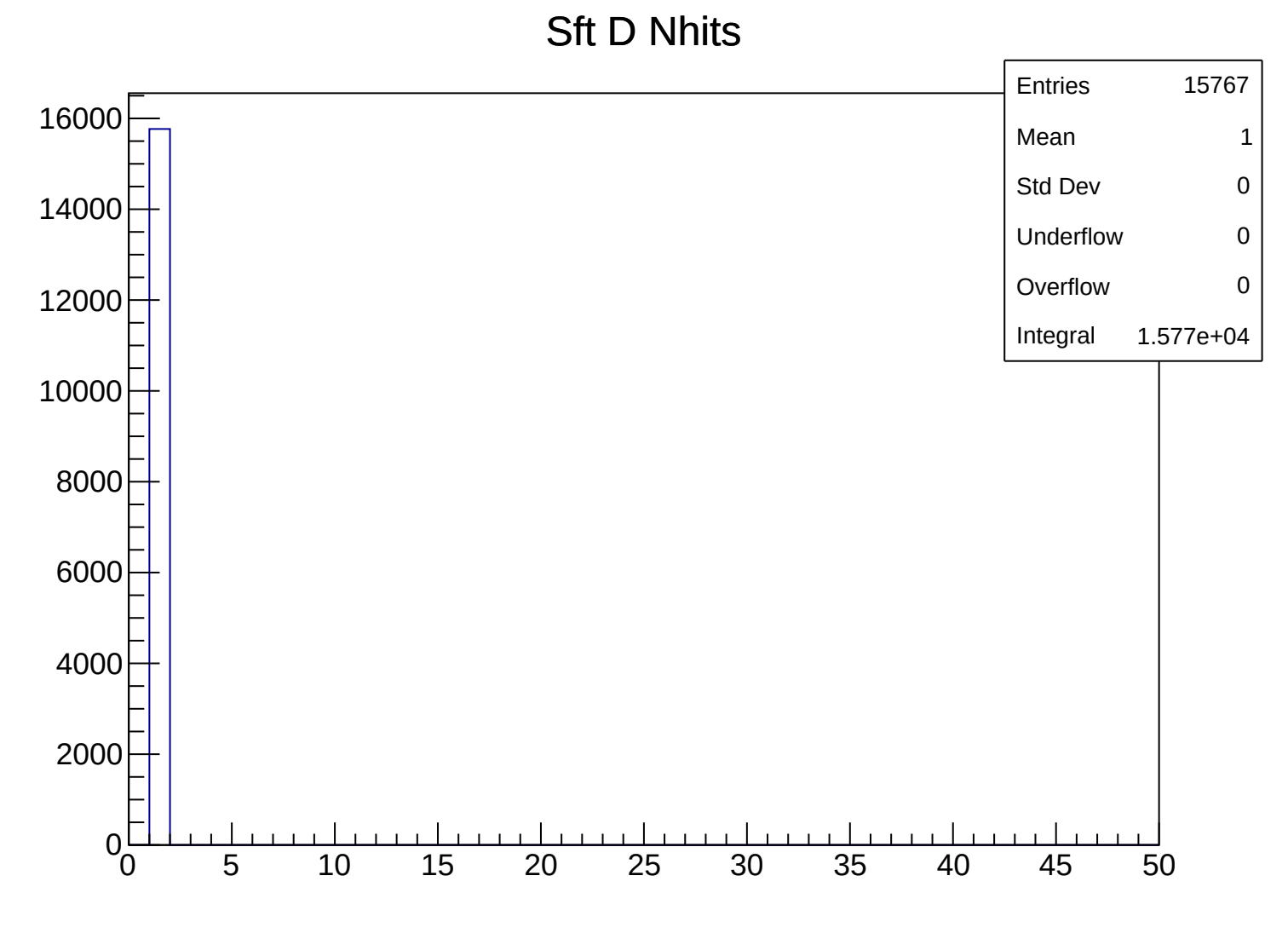

SftHitpat
×10^6
14
12
10
8
6
4
2
0
0
50
100
150
200
250
Entries 1.150136e+08
Mean 71.36
Std Dev 67.77
Underflow 4.575e+06
Overflow 2.798e+07
Integral 8.246e+07

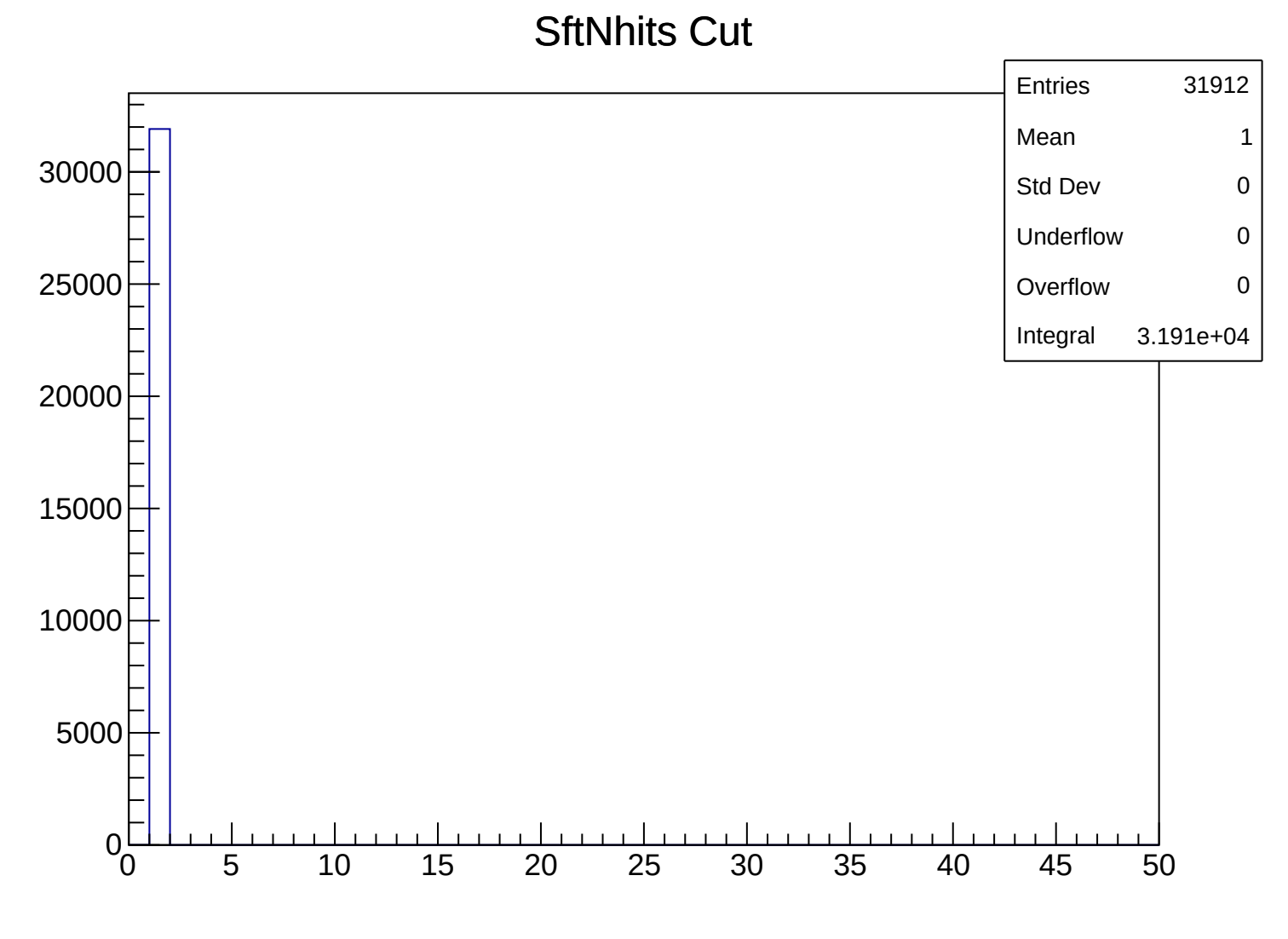

Sft U Tdc
Entries 3.294376e+09
Mean 531.6
Std Dev 157.1
Underflow 3.294e+09
Overflow 6.341e+04
Integral 4.546e+05
50000
40000
30000
20000
10000
0
0
100
200
300
400
500
600
700
800
900
1000

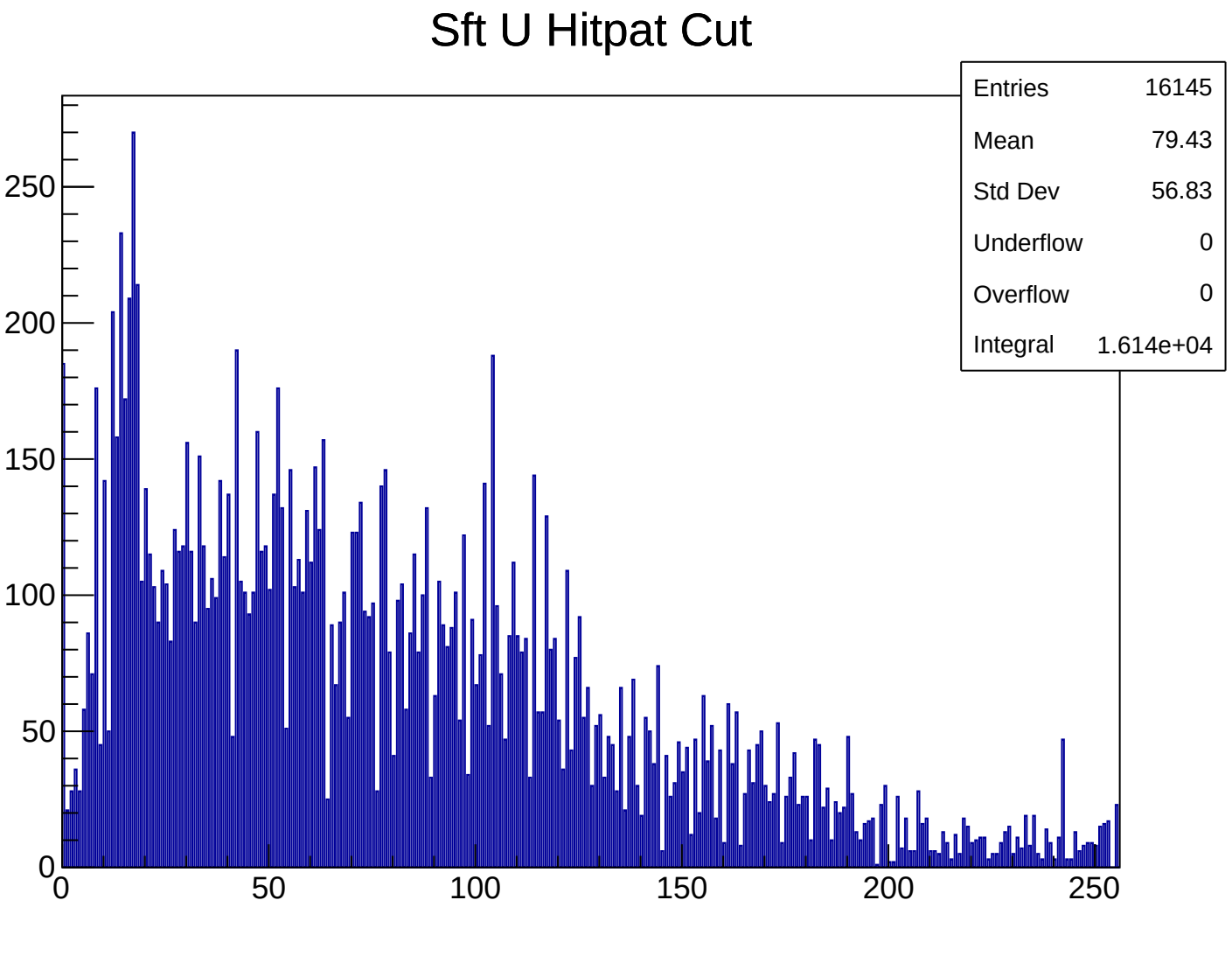

Sft D Tdc
Entries 3.294376e+09
Mean 529.2
Std Dev 166.9
Underflow 3.294e+09
Overflow 7.56e+04
Integral 4.812e+05
50000
40000
30000
20000
10000
0
0
100
200
300
400
500
600
700
800
900
1000

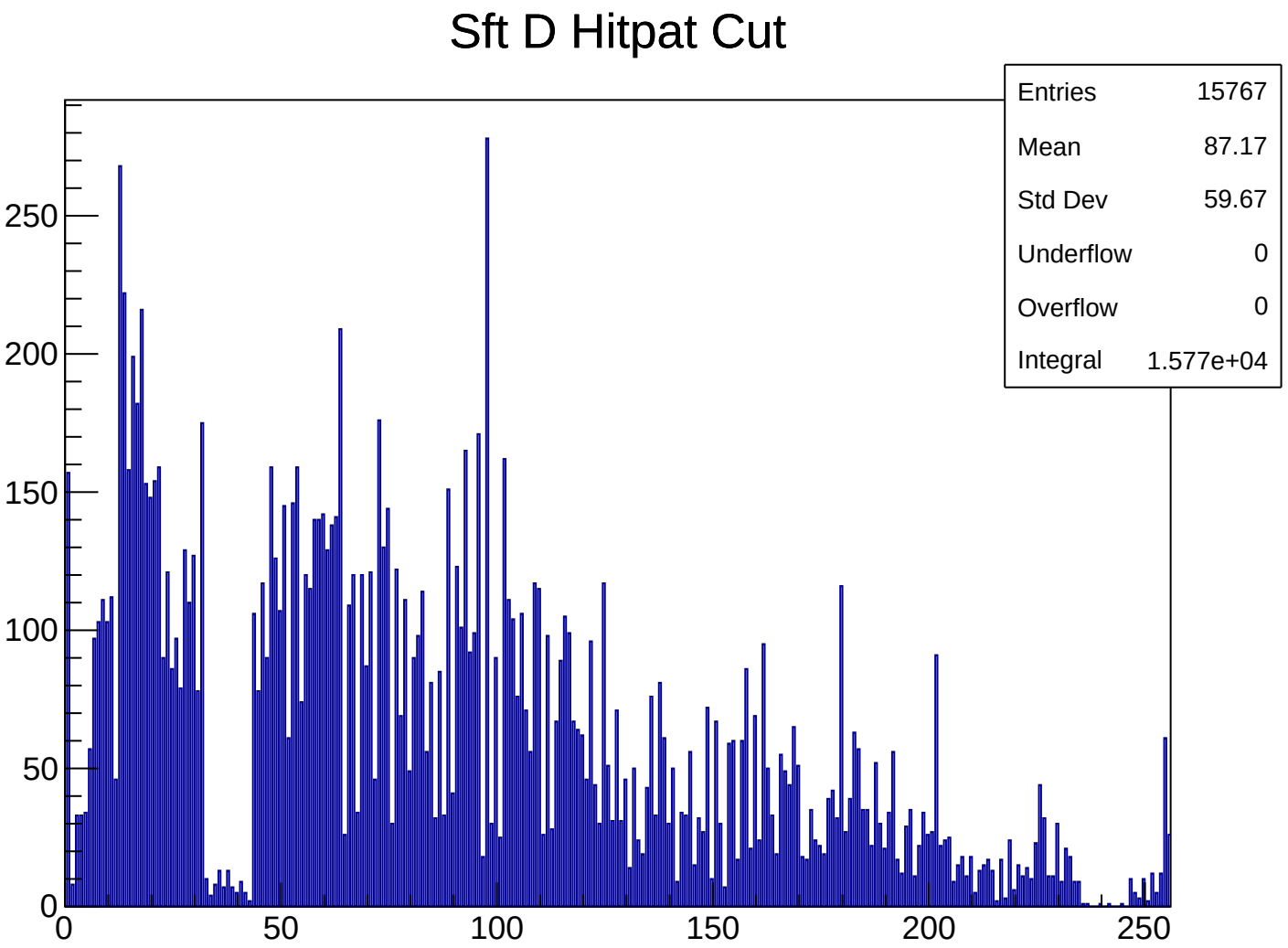

SftTdc
Entries 6.588752e+09
Mean 530.4
Std Dev 162.2
Underflow 6.588e+09
Overflow 1.39e+05
Integral 9.357e+05
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
0
100
200
300
400
500
600
700
800
900
1000

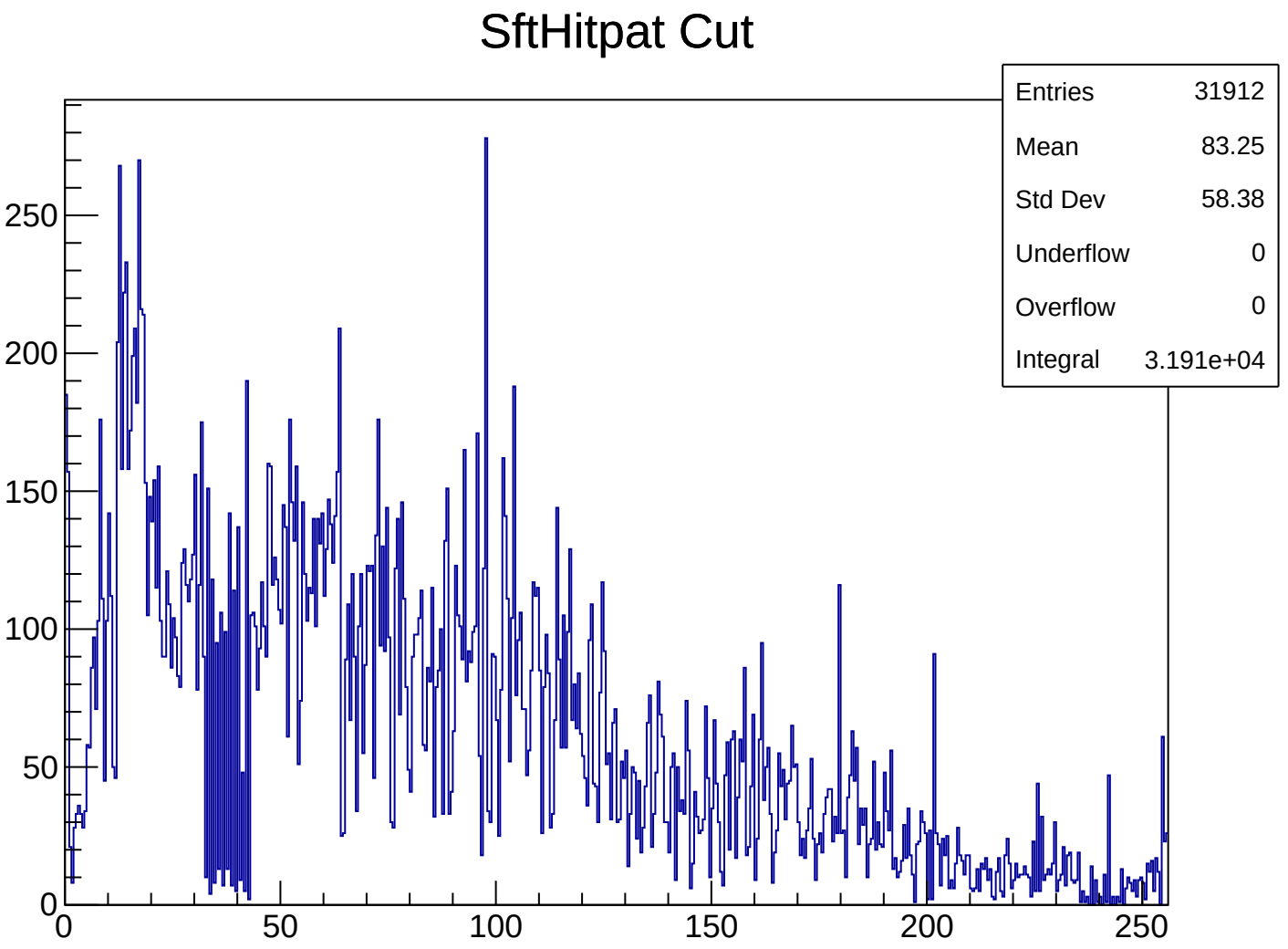

Sft U Nhits Cut
Entries 16145
Mean 1
Std Dev 0
Underflow 0
Overflow 0
Integral 1.614e+04
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35
40
45
50

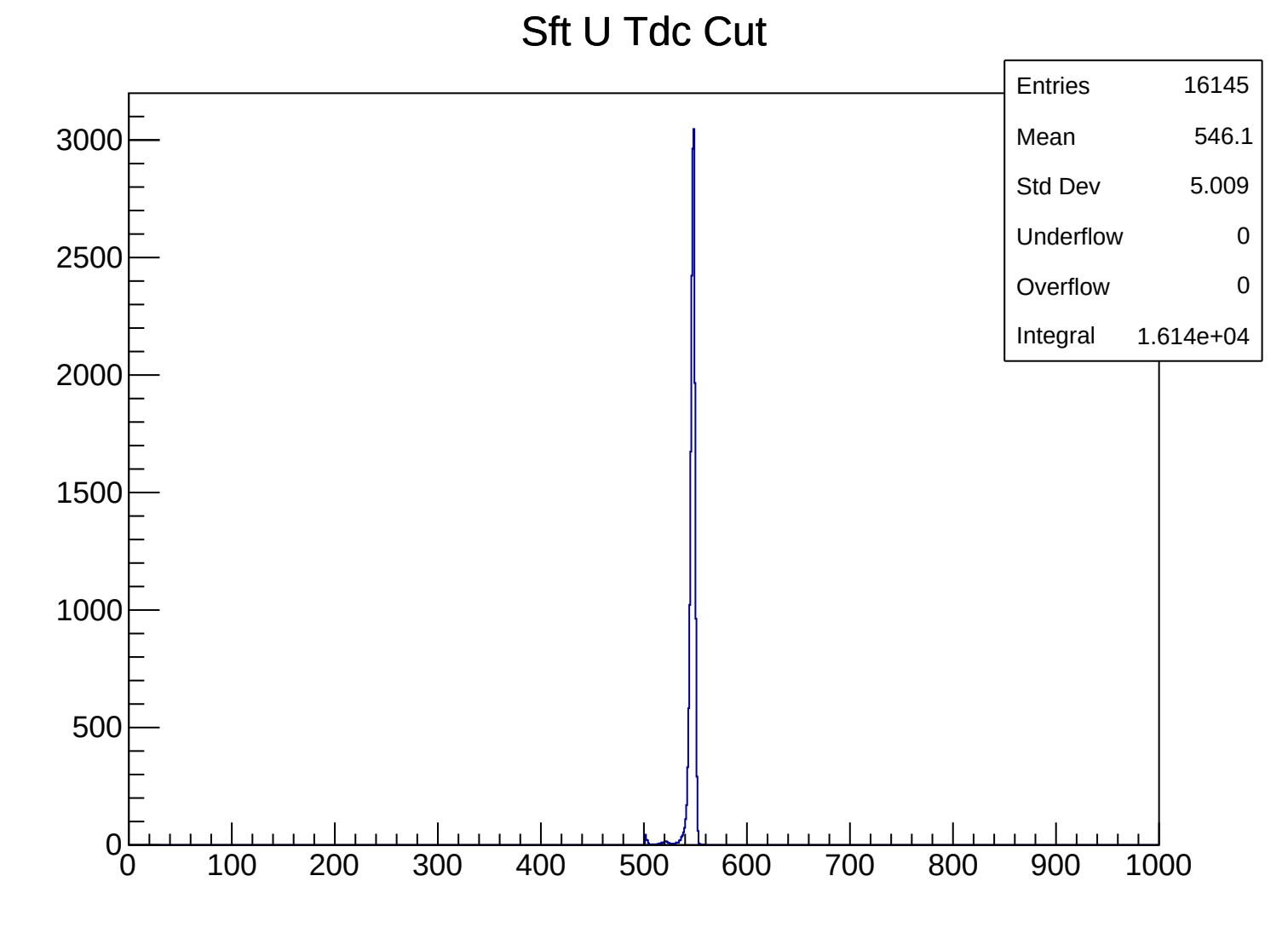

Sft D Nhits
Entries 15767
Mean 1
Std Dev 0
Underflow 0
Overflow 0
Integral 1.577e+04
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35
40
45
50

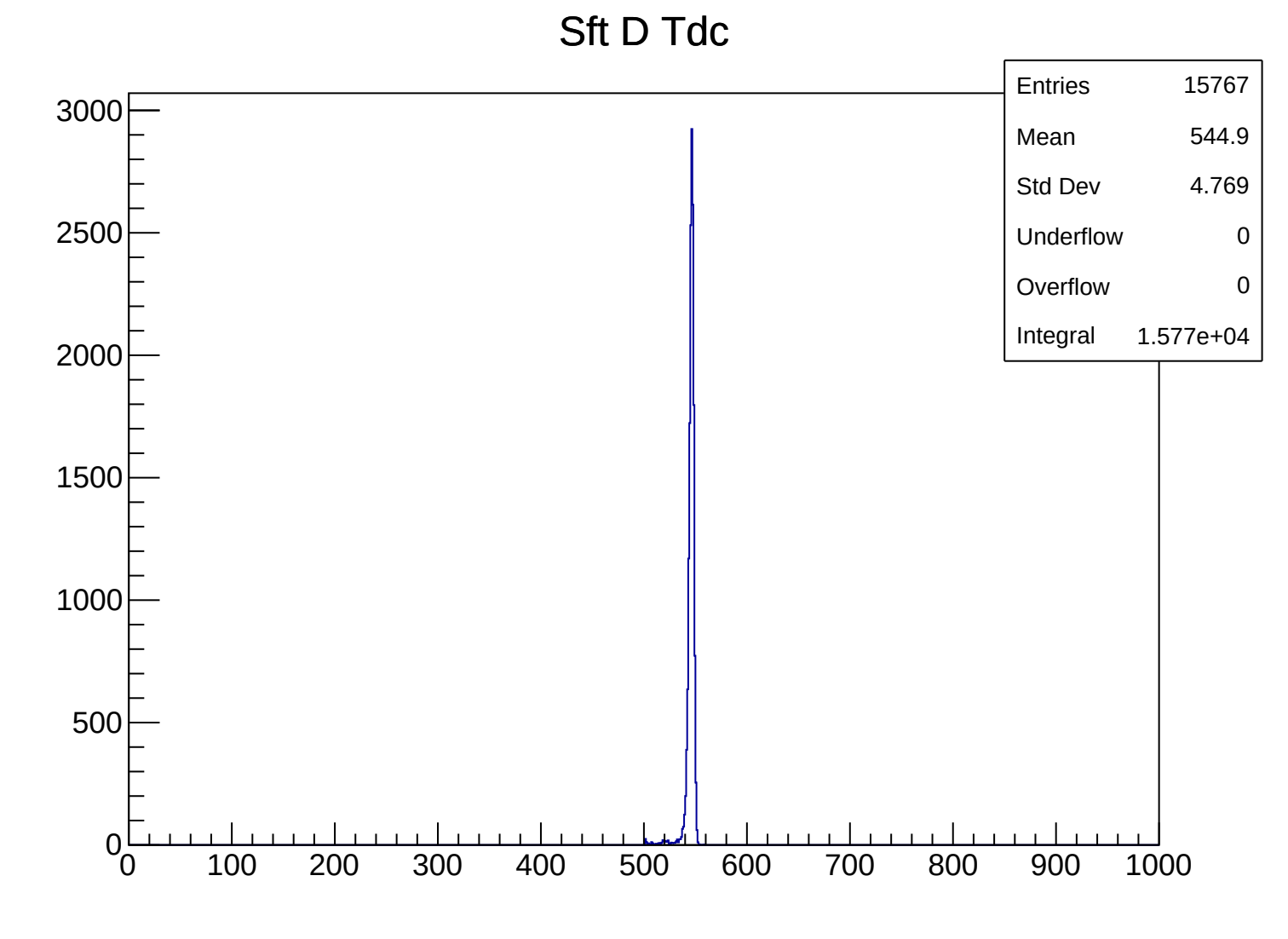

SftNhits Cut
Entries 31912
Mean 1
Std Dev 0
Underflow 0
Overflow 0
Integral 3.191e+04
30000
25000
20000
15000
10000
5000
0
0
5
10
15
20
25
30
35
40
45
50

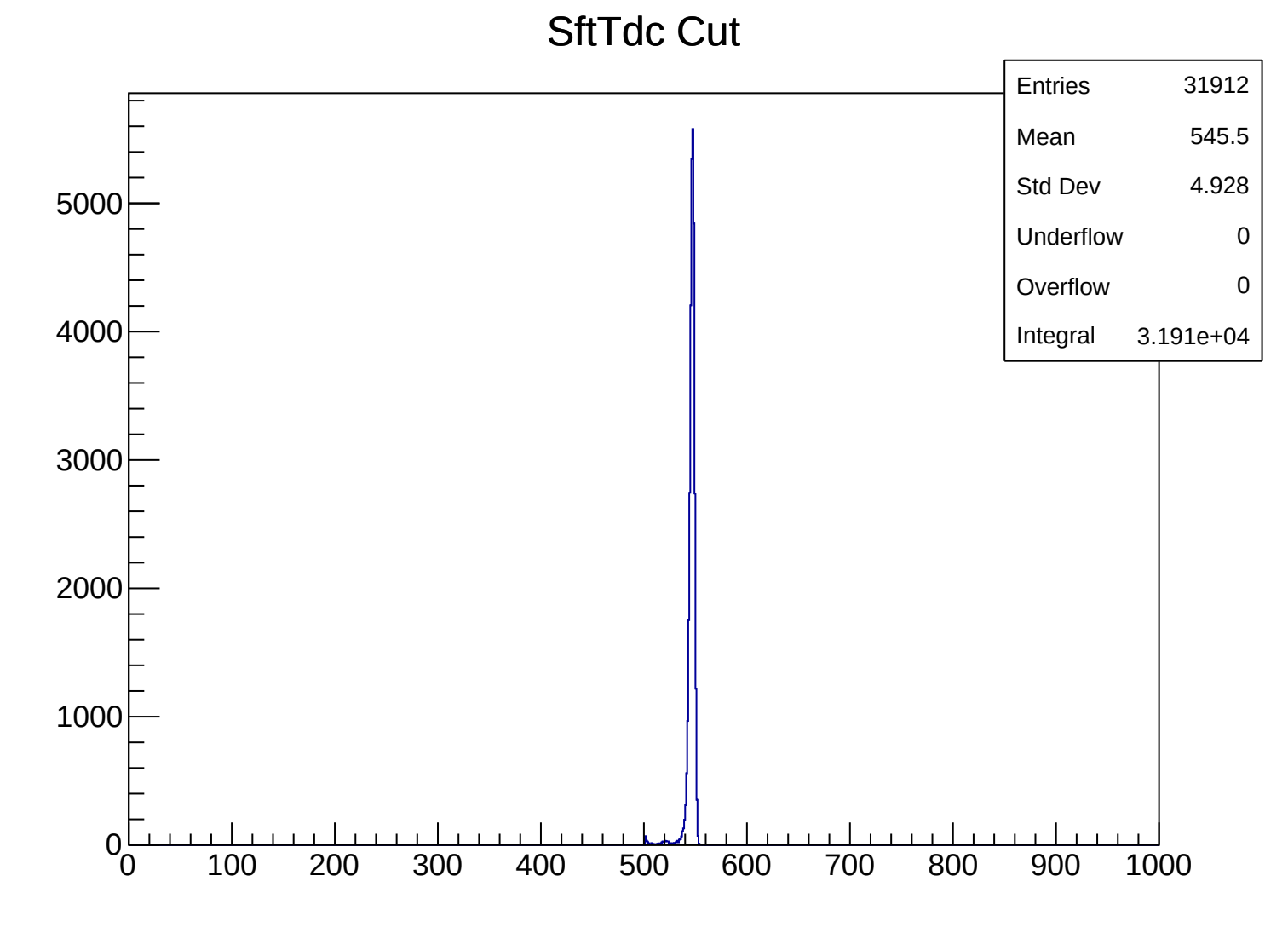

Sft U Hitpat Cut
Entries 16145
Mean 79.43
Std Dev 56.83
Underflow 0
Overflow 0
Integral 1.614e+04
0
50
100
150
200
250

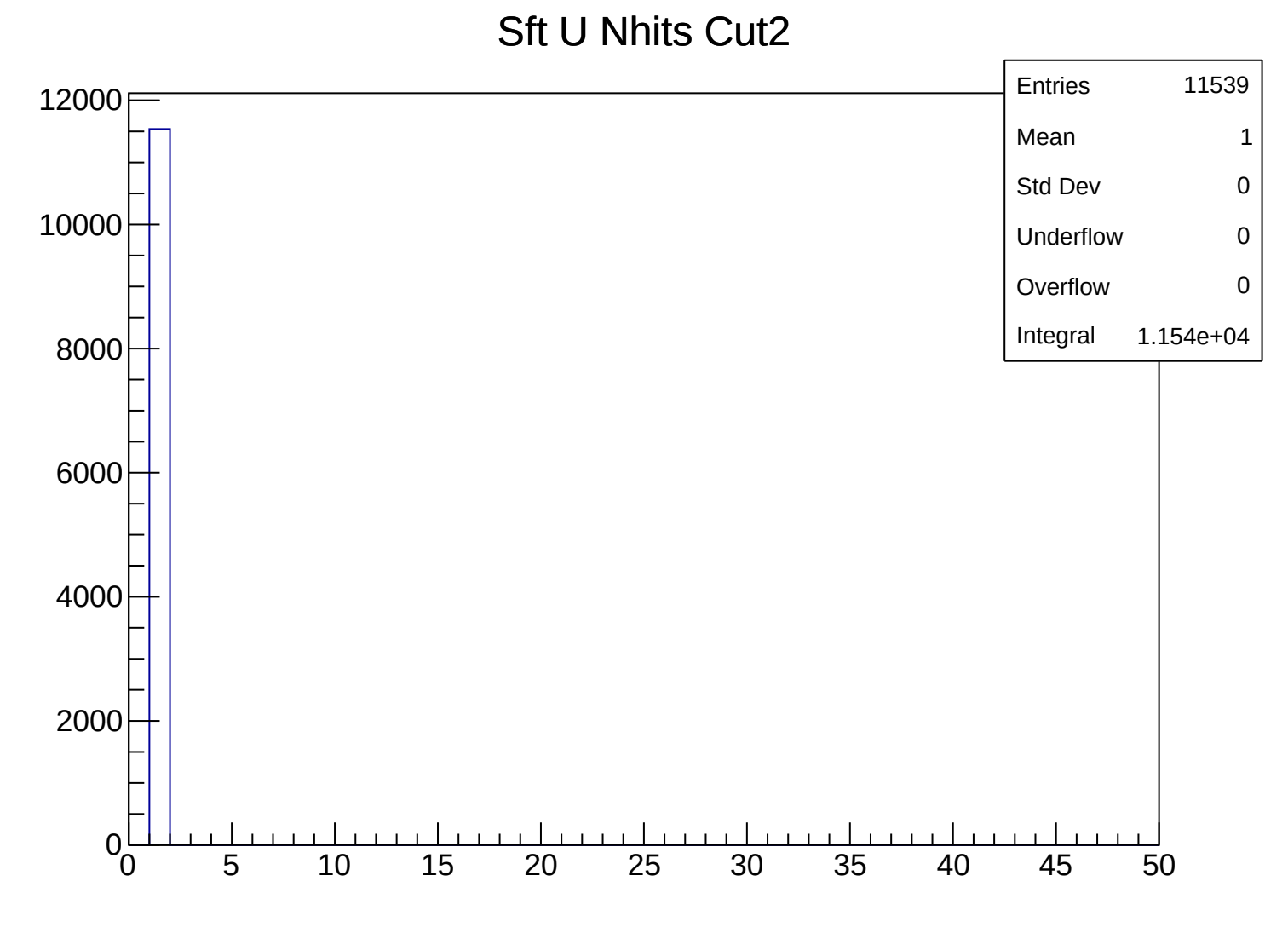

Sft D Hitpat Cut
Entries 15767
Mean 87.17
Std Dev 59.67
Underflow 0
Overflow 0
Integral 1.577e+04
0
50
100
150
200
250

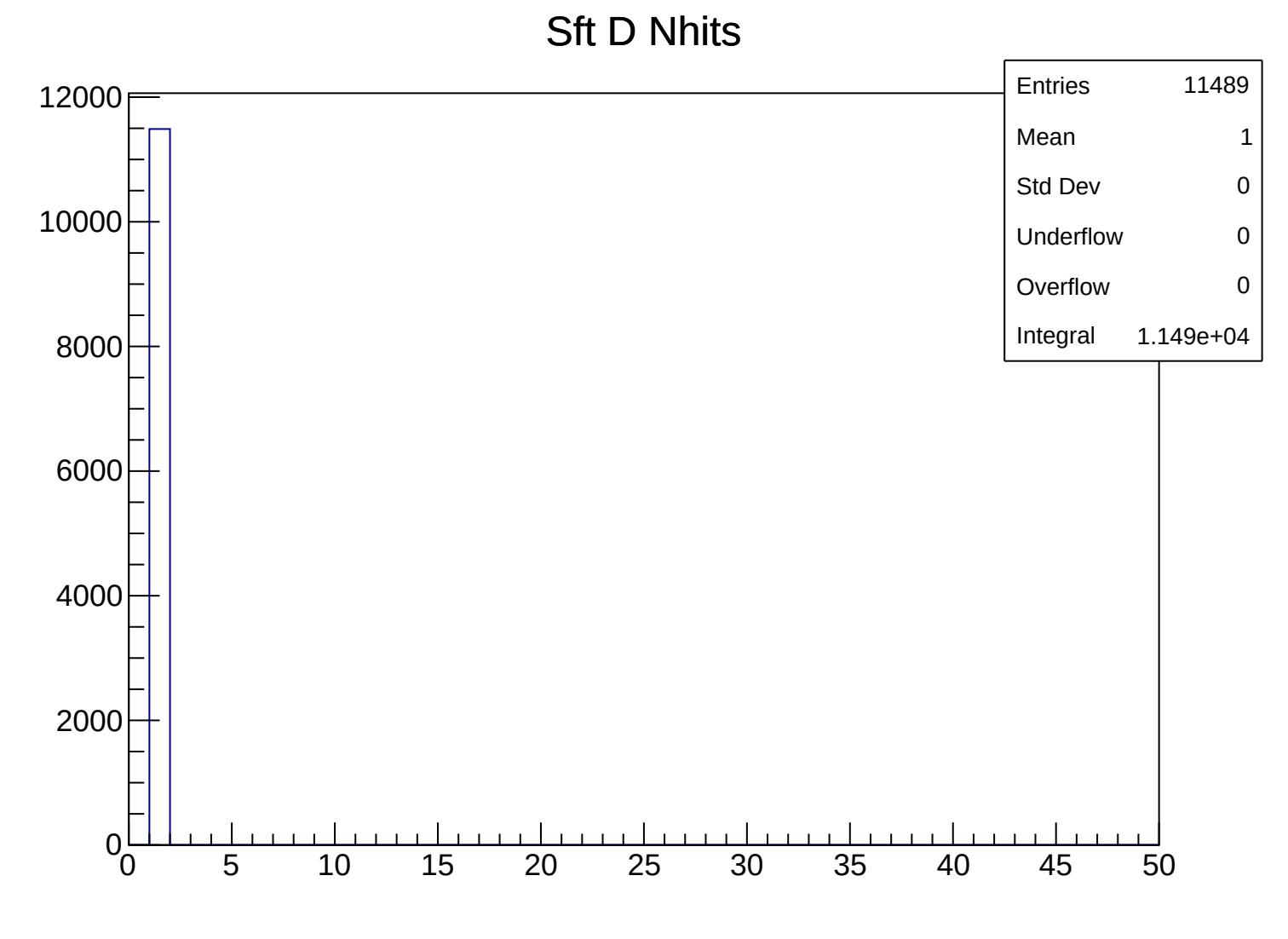

SftHitpat Cut
Entries 31912
Mean 83.25
Std Dev 58.38
Underflow 0
Overflow 0
Integral 3.191e+04
0
50
100
150
200
250

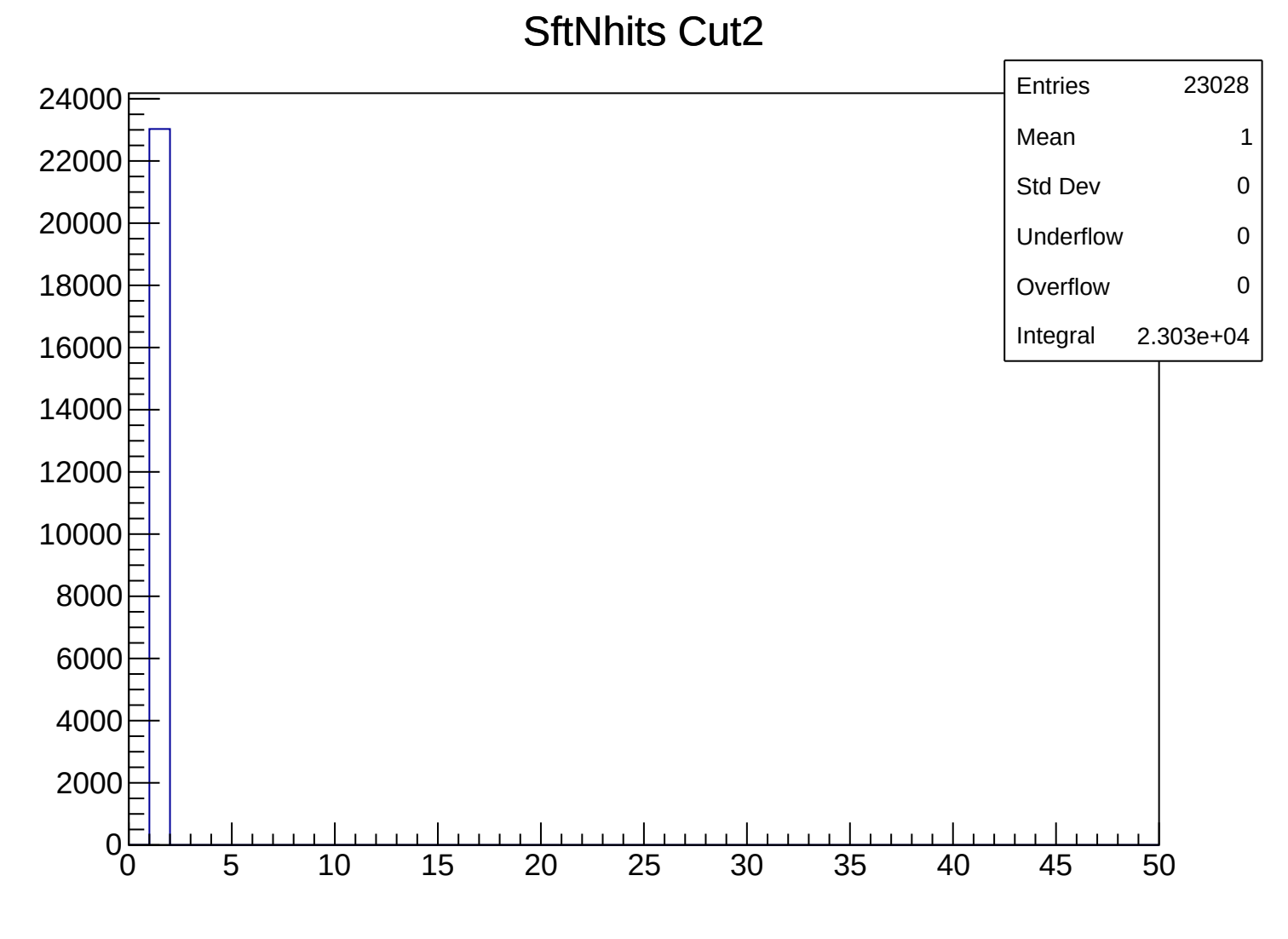

Sft U Tdc Cut
Entries 16145
Mean 546.1
Std Dev 5.009
Underflow 0
Overflow 0
Integral 1.614e+04
3000
2500
2000
1500
1000
500
0
0
100
200
300
400
500
600
700
800
900
1000

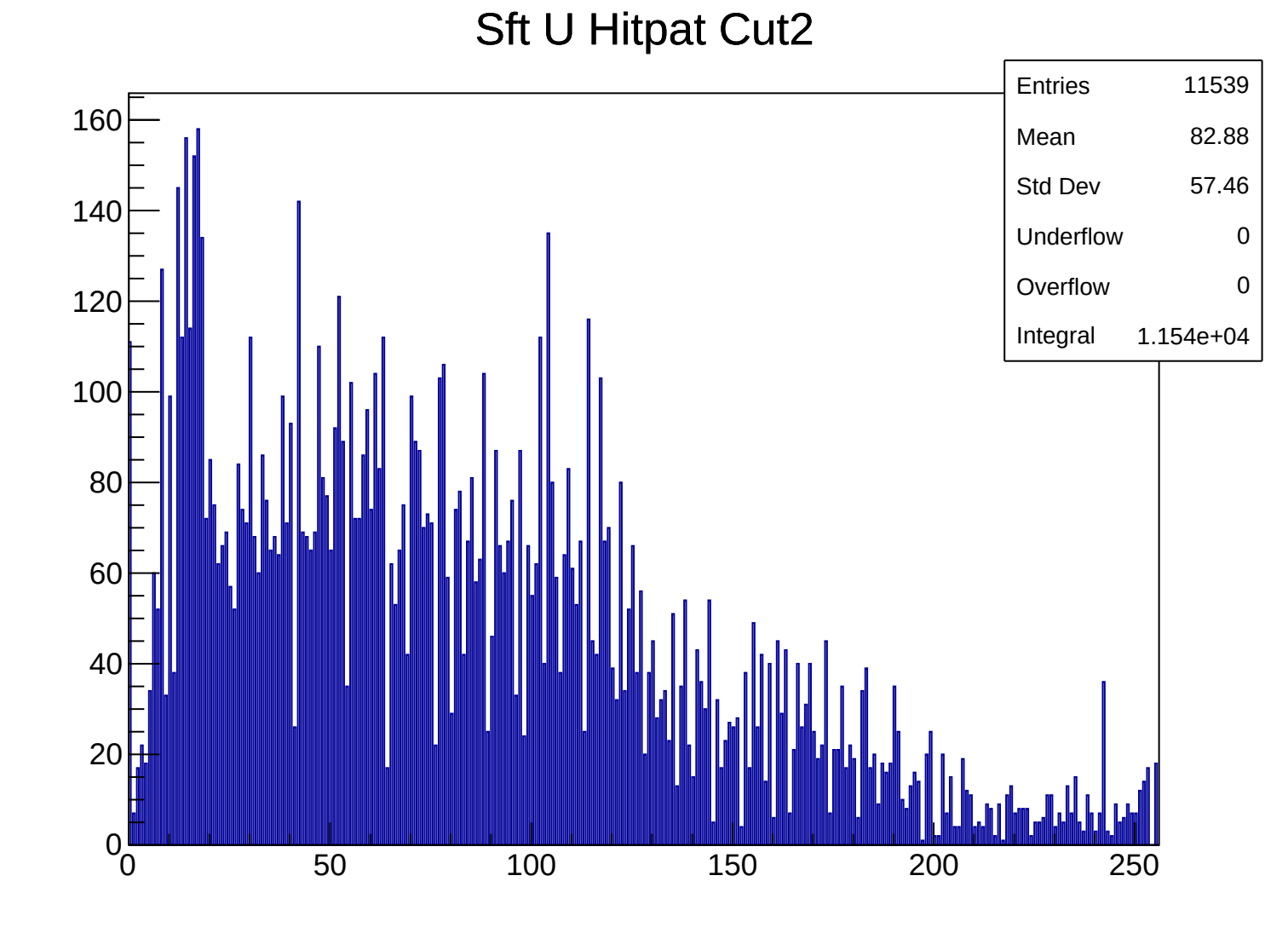

Sft D Tdc
Entries 15767
Mean 544.9
Std Dev 4.769
Underflow 0
Overflow 0
Integral 1.577e+04
3000
2500
2000
1500
1000
500
0
0
100
200
300
400
500
600
700
800
900
1000

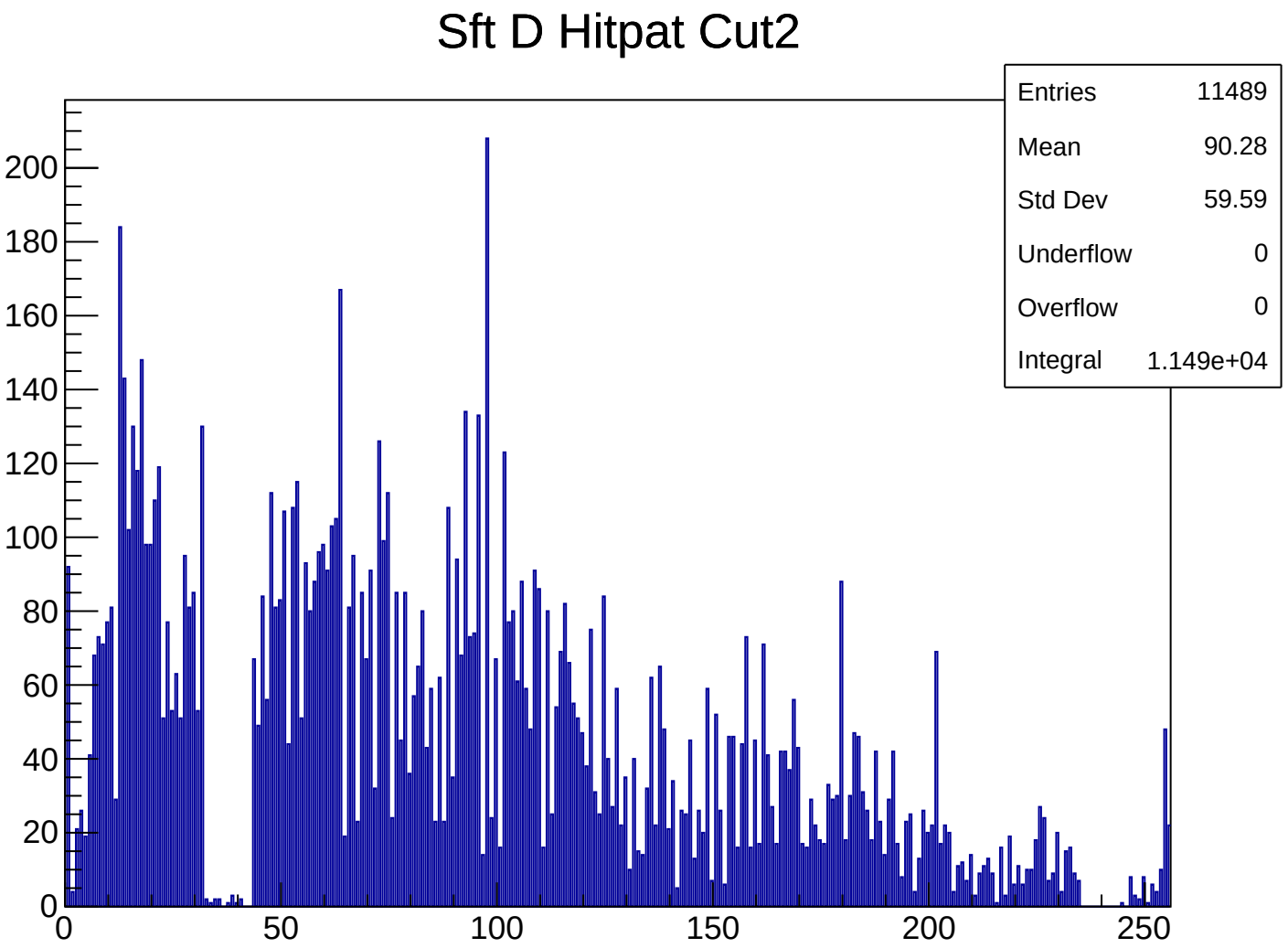

SftTdc Cut
Entries 31912
Mean 545.5
Std Dev 4.928
Underflow 0
Overflow 0
Integral 3.191e+04
5000
4000
3000
2000
1000
0
0
100
200
300
400
500
600
700
800
900
1000

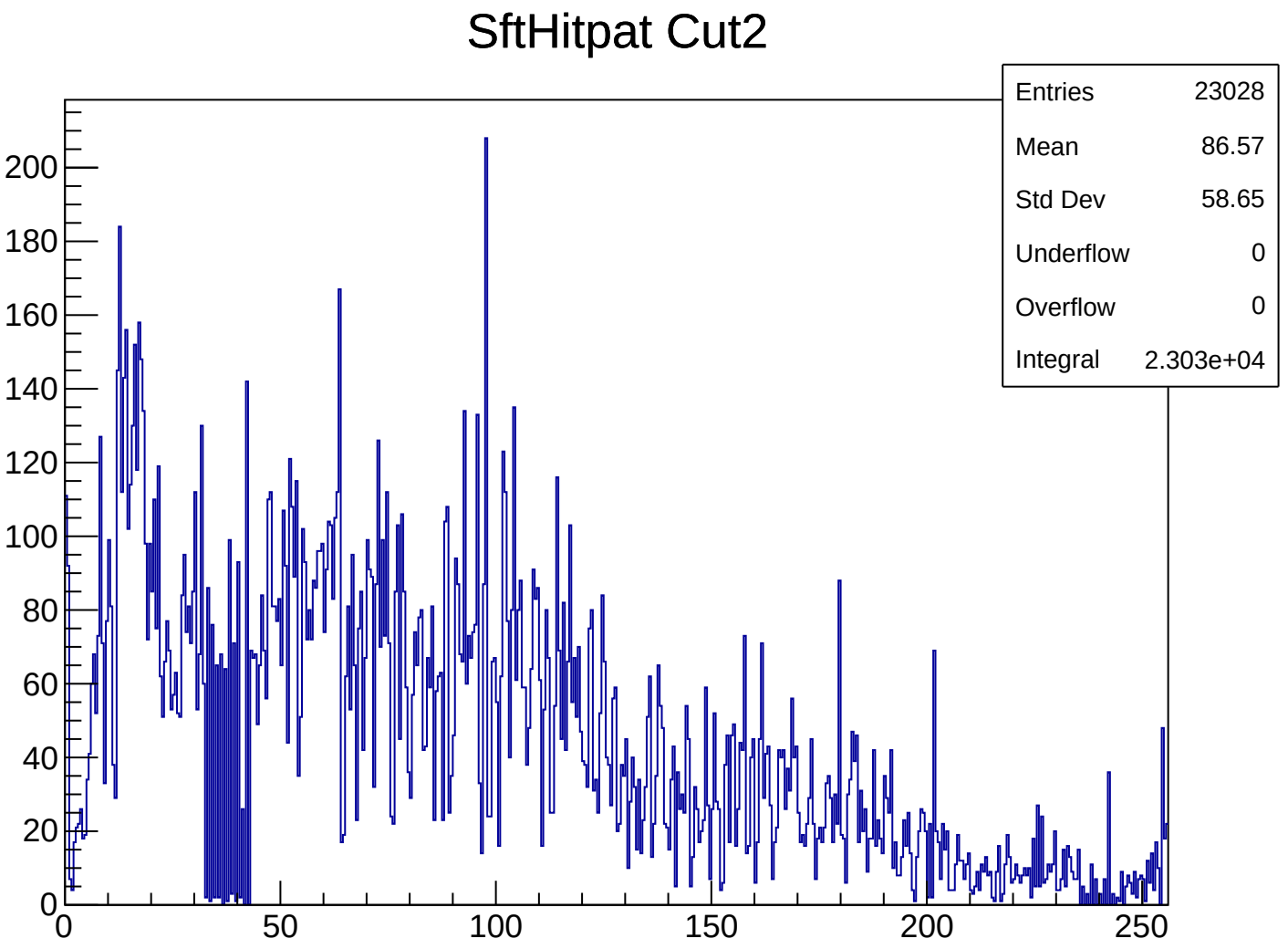

Sft U Nhits Cut2
Entries 11539
Mean 1
Std Dev 0
Underflow 0
Overflow 0
Integral 1.154e+04
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35
40
45
50

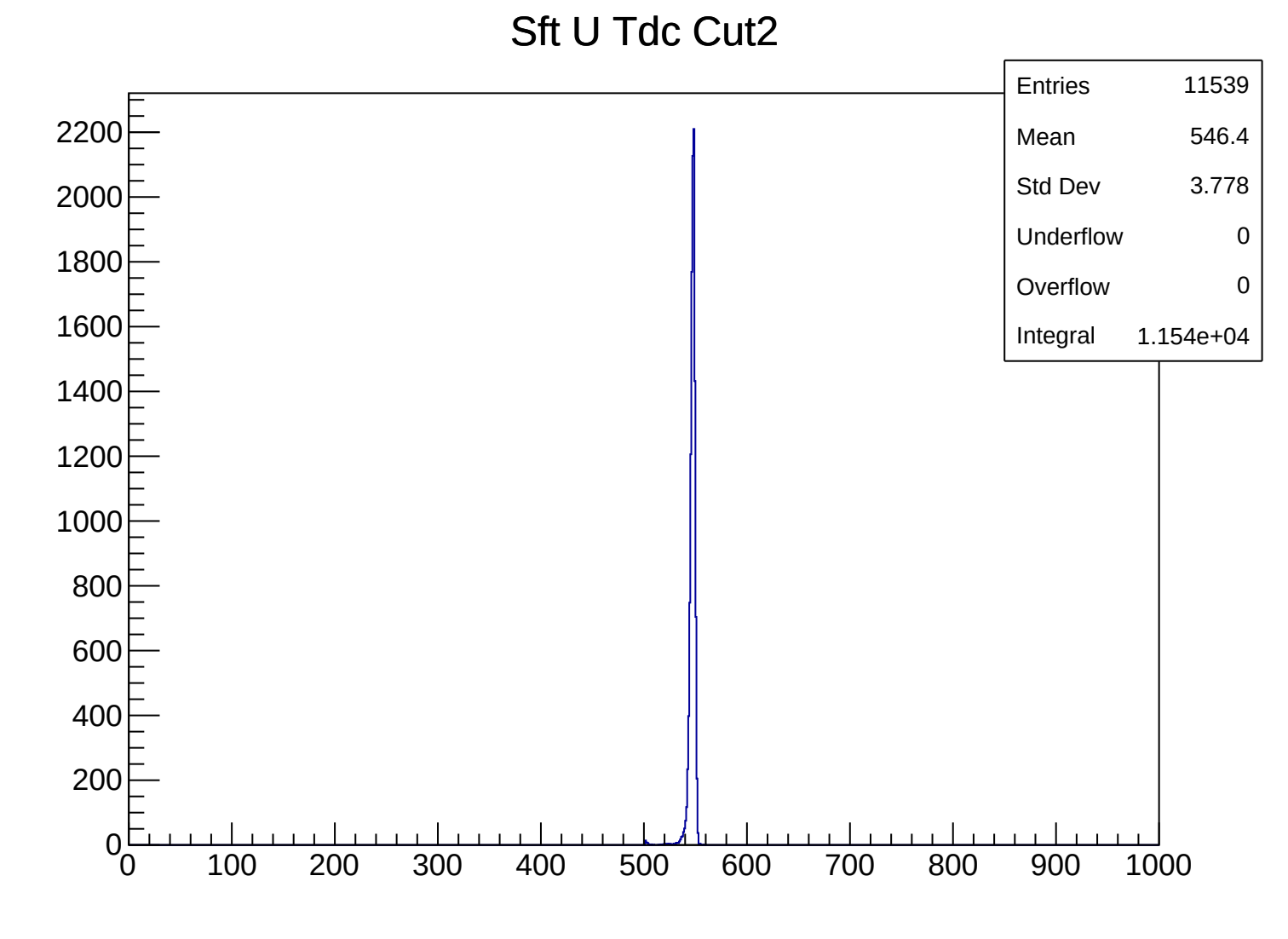

Sft D Nhits
Entries 11489
Mean 1
Std Dev 0
Underflow 0
Overflow 0
Integral 1.149e+04
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35
40
45
50

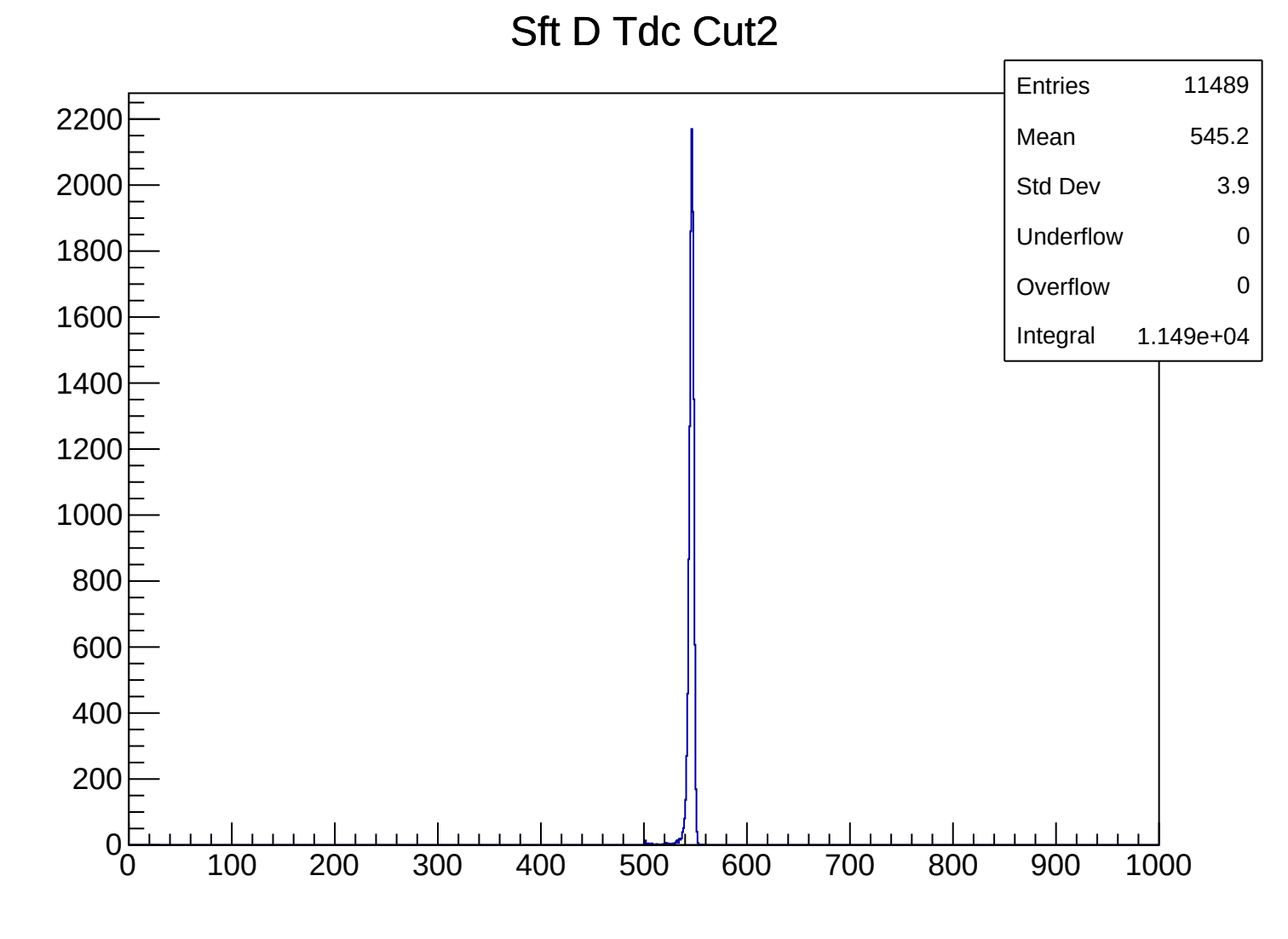

SftNhits Cut2
Entries 23028
Mean 1
Std Dev 0
Underflow 0
Overflow 0
Integral 2.303e+04
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35
40
45
50

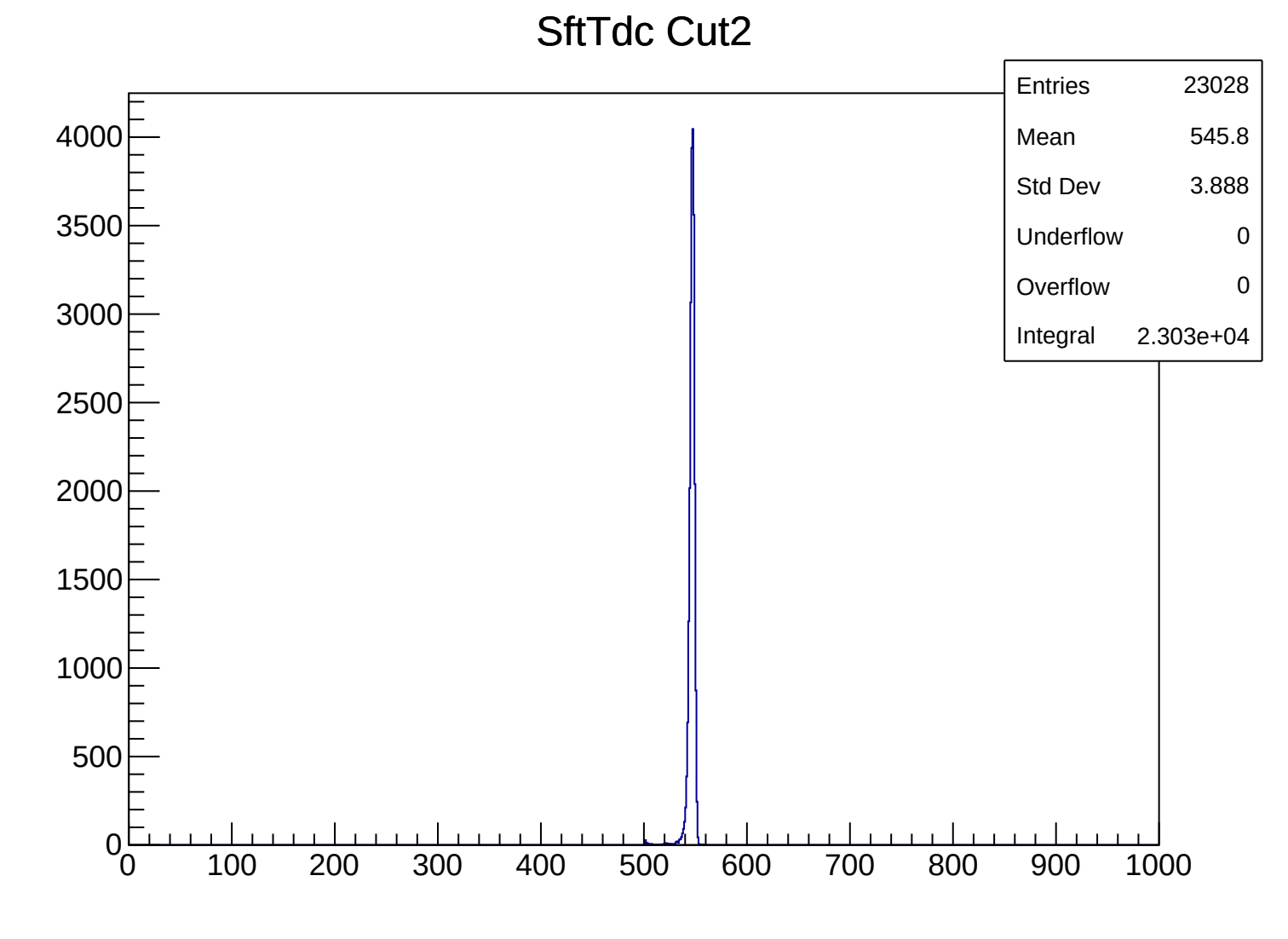

Sft U Hitpat Cut2
Entries 11539
Mean 82.88
Std Dev 57.46
Underflow 0
Overflow 0
Integral 1.154e+04
160
140
120
100
80
60
40
20
0
0
50
100
150
200
250

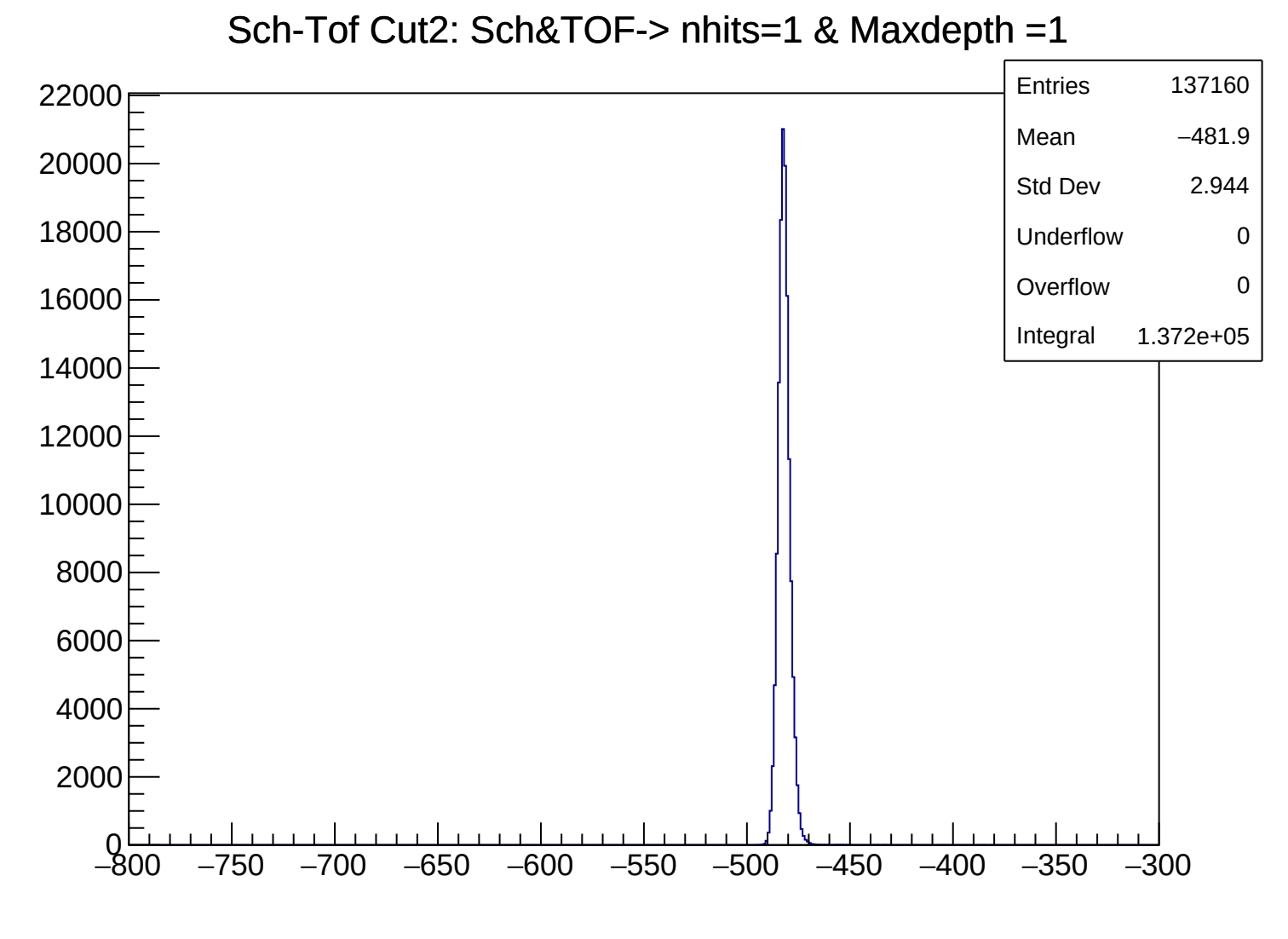

Sft D Hitpat Cut2
Entries 11489
Mean 90.28
Std Dev 59.59
Underflow 0
Overflow 0
Integral 1.149e+04
0
20
40
60
80
100
120
140
160
180
200
0
50
100
150
200
250

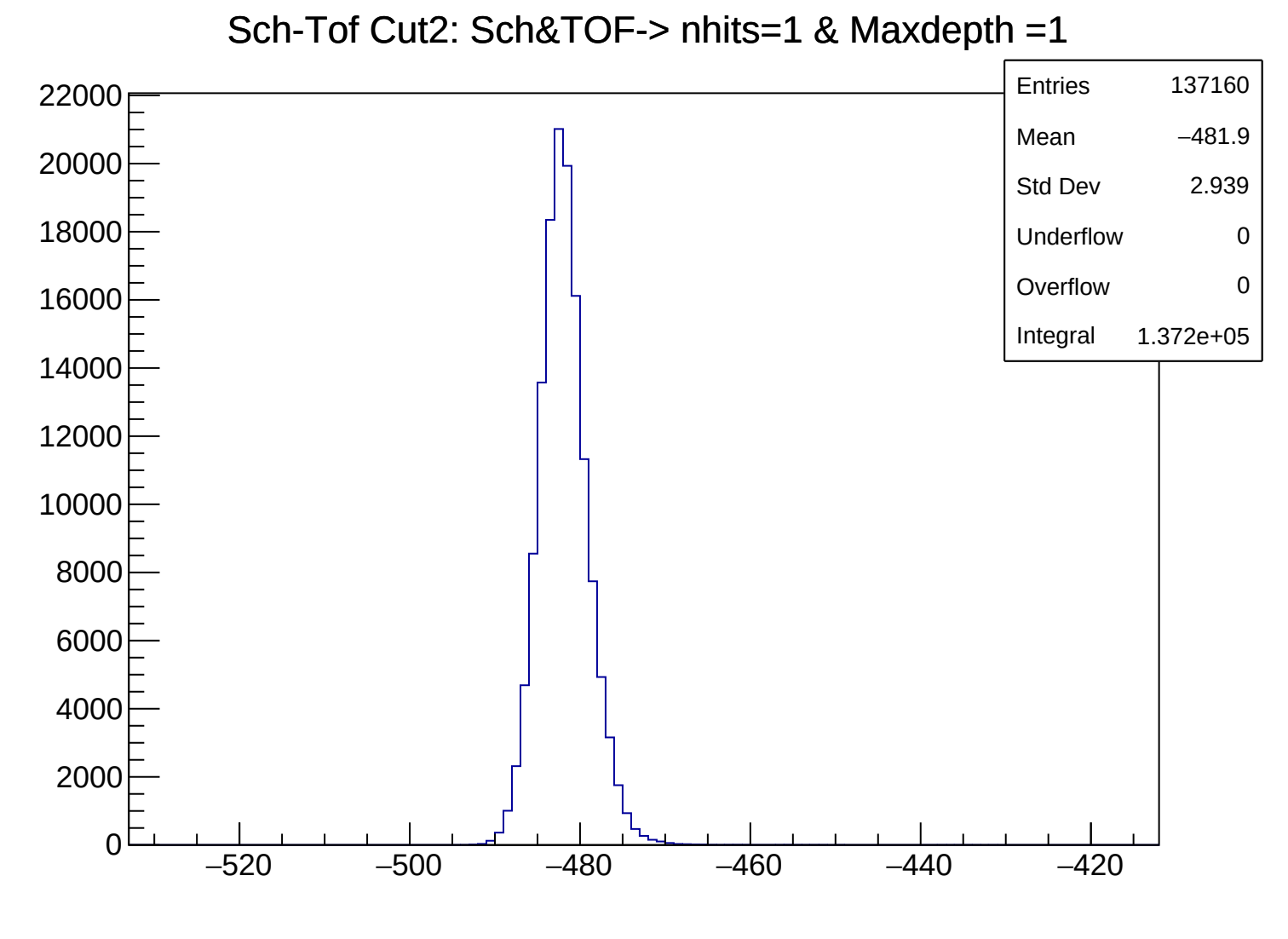

SftHitpat Cut2
Entries 23028
Mean 86.57
Std Dev 58.65
Underflow 0
Overflow 0
Integral 2.303e+04
0
20
40
60
80
100
120
140
160
180
200
0
50
100
150
200
250

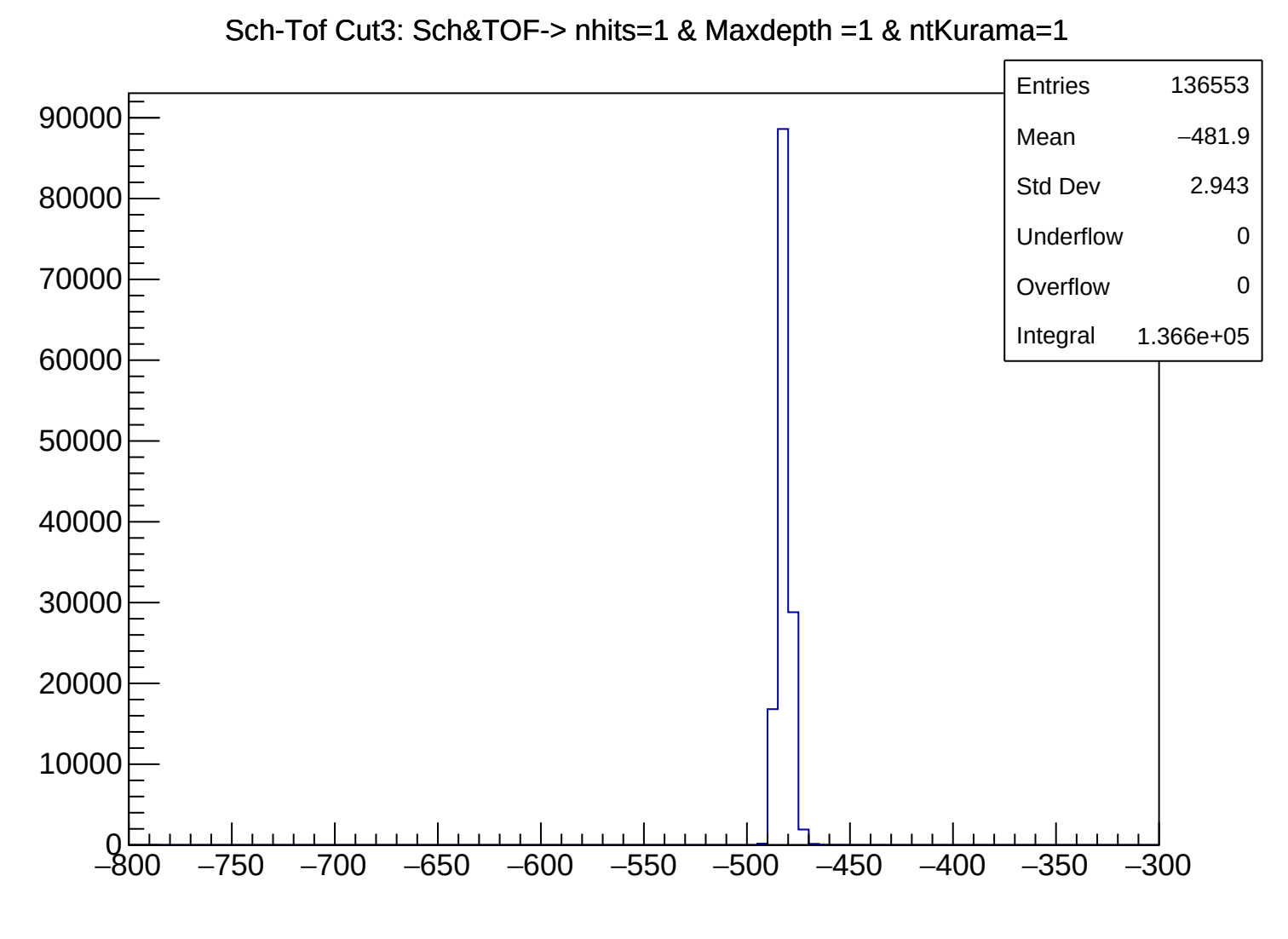

Sft U Tdc Cut2
Entries 11539
Mean 546.4
Std Dev 3.778
Underflow 0
Overflow 0
Integral 1.154e+04
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0
100
200
300
400
500
600
700
800
900
1000

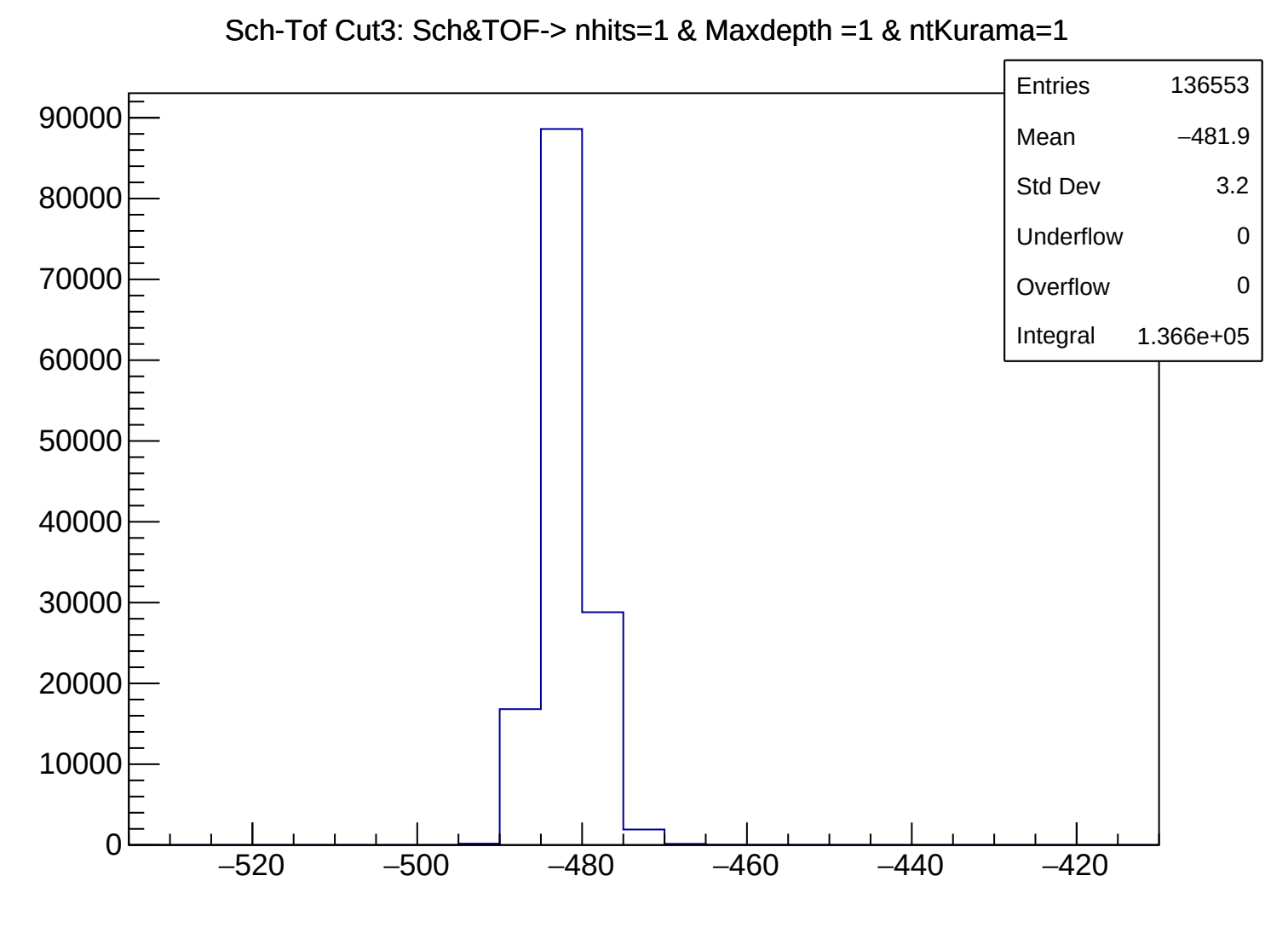

Sft D Tdc Cut2
Entries 11489
Mean 545.2
Std Dev 3.9
Underflow 0
Overflow 0
Integral 1.149e+04
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0
100
200
300
400
500
600
700
800
900
1000

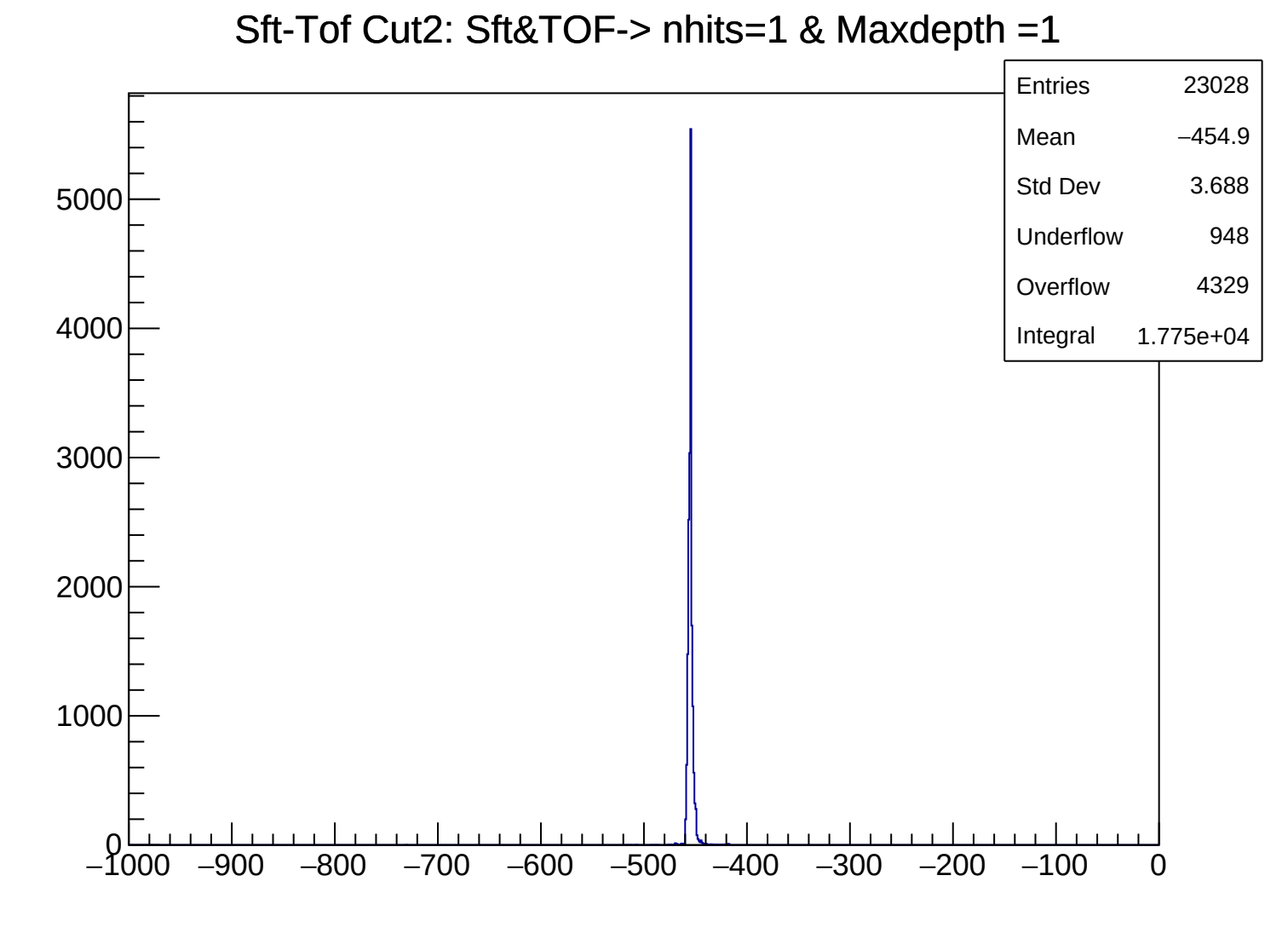

SftTdc Cut2
Entries 23028
Mean 545.8
Std Dev 3.888
Underflow 0
Overflow 0
Integral 2.303e+04
4000
3500
3000
2500
2000
1500
1000
500
0
0
100
200
300
400
500
600
700
800
900
1000

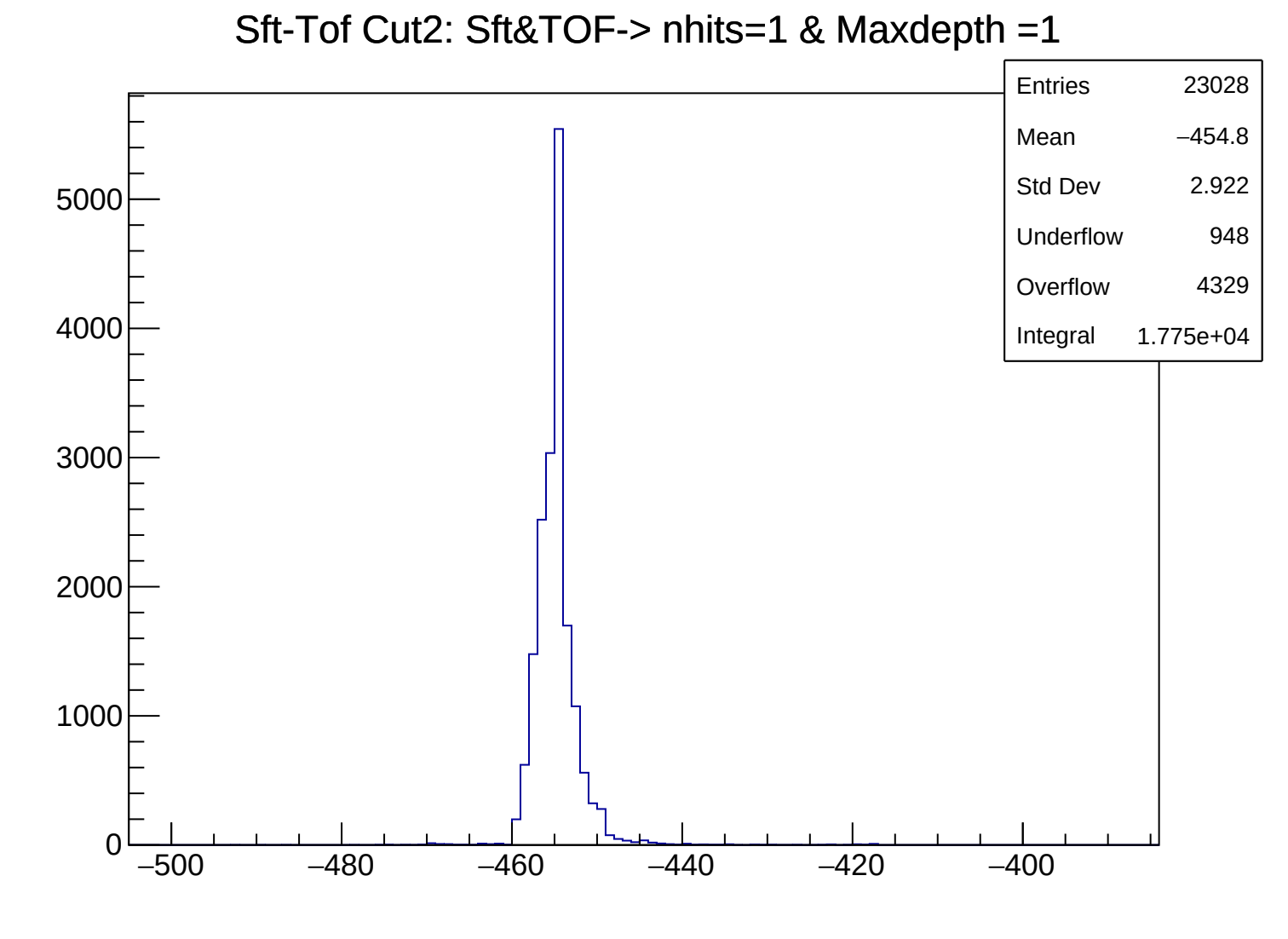

Sch-Tof Cut2: Sch&TOF-> nhits=1 & Maxdepth =1
Entries 137160
Mean −481.9
Std Dev 2.944
Underflow 0
Overflow 0
Integral 1.372e+05
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
−800
−750
−700
−650
−600
−550
−500
−450
−400
−350
−300

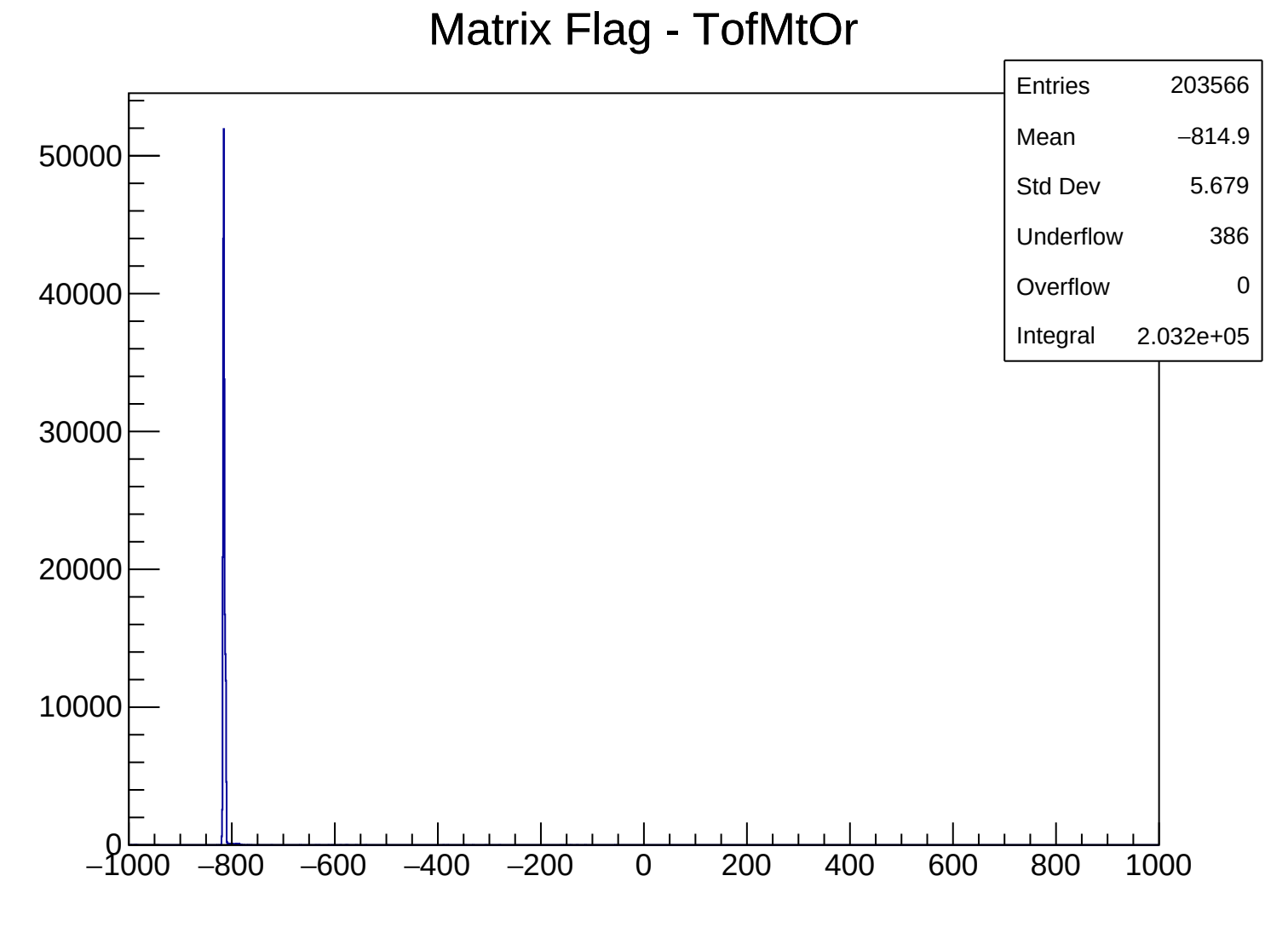

Sch-Tof Cut2: Sch&TOF-> nhits=1 & Maxdepth =1
Entries 137160
Mean −481.9
Std Dev 2.939
Underflow 0
Overflow 0
Integral 1.372e+05
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
−520
−500
−480
−460
−440
−420

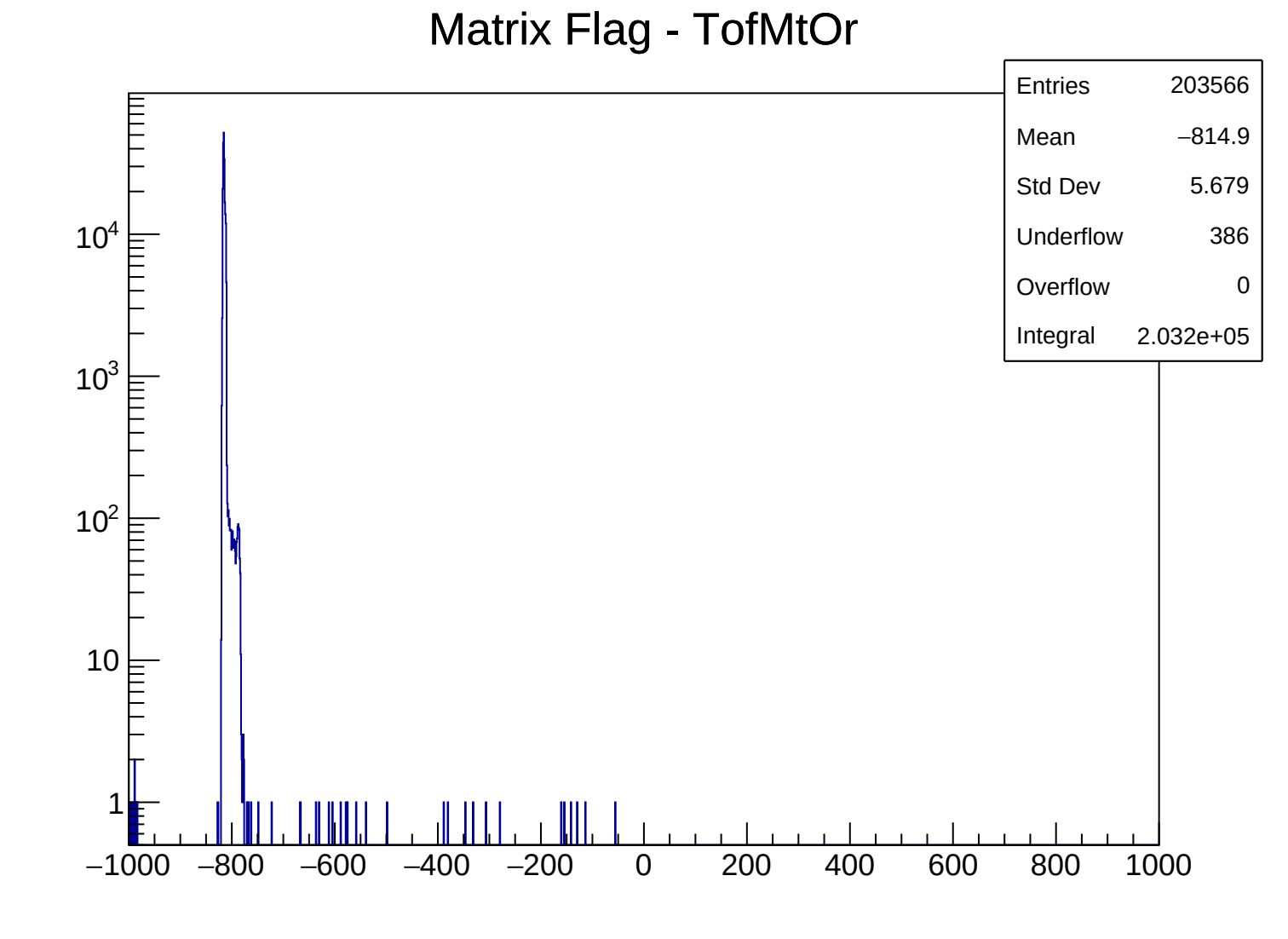

Sch-Tof Cut3: Sch&TOF-> nhits=1 & Maxdepth =1 & ntKurama=1
Entries 136553
Mean −481.9
Std Dev 2.943
Underflow 0
Overflow 0
Integral 1.366e+05
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
−800
−750
−700
−650
−600
−550
−500
−450
−400
−350
−300

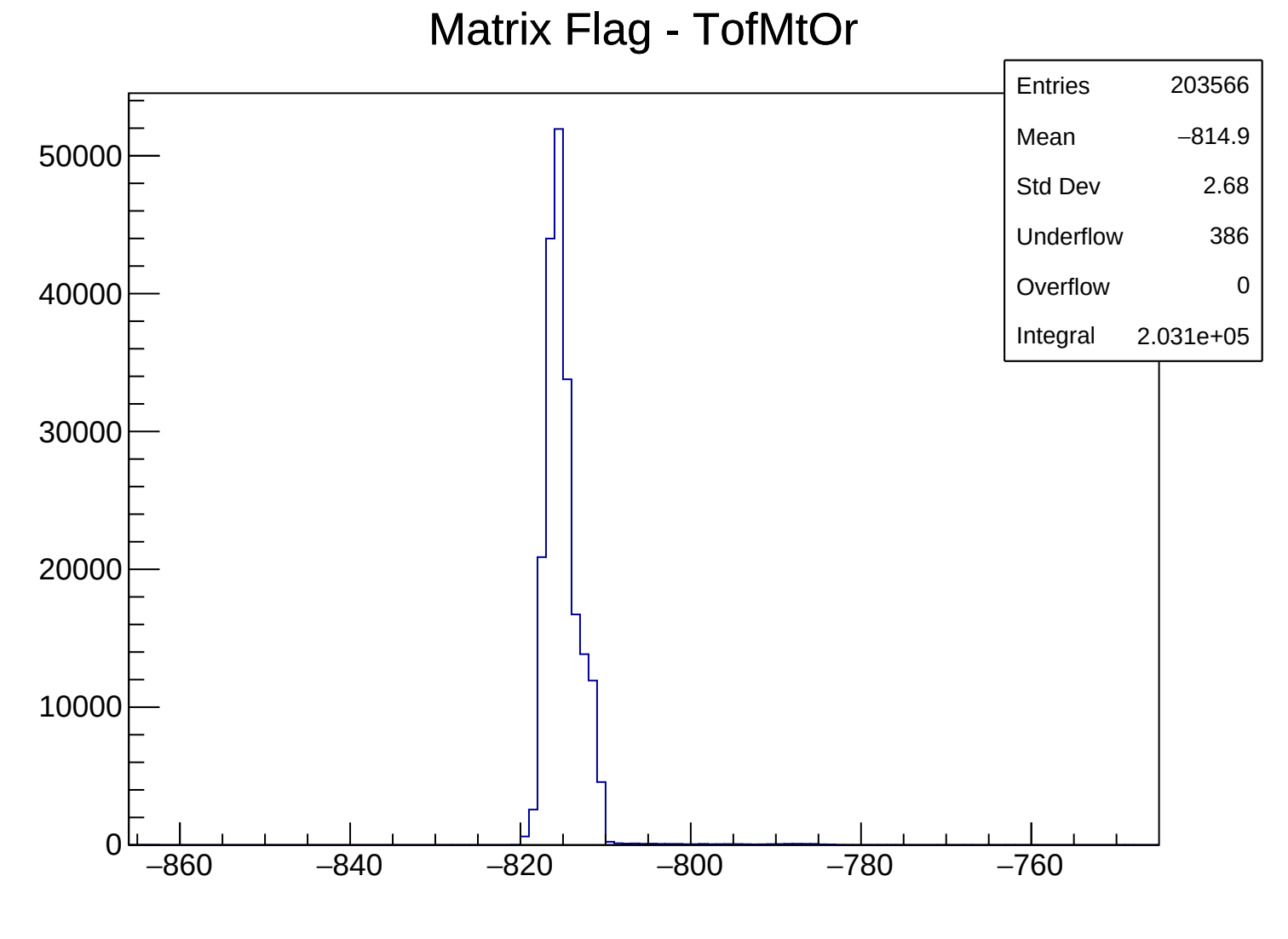

Sch-Tof Cut3: Sch&TOF-> nhits=1 & Maxdepth =1 & ntKurama=1
Entries 136553
Mean −481.9
Std Dev 3.2
Underflow 0
Overflow 0
Integral 1.366e+05
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
−520
−500
−480
−460
−440
−420

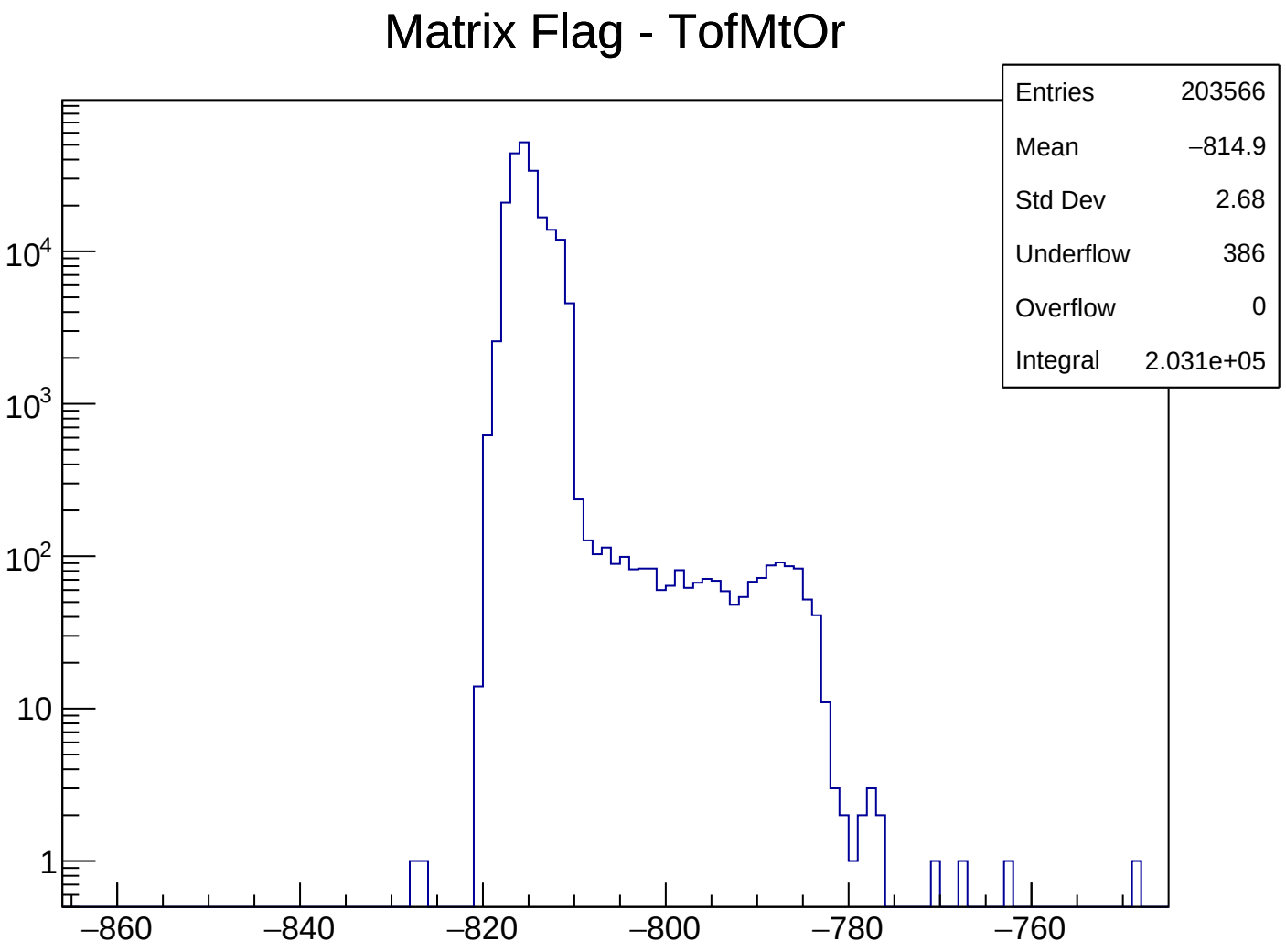

Sft-Tof Cut2: Sft&TOF-> nhits=1 & Maxdepth =1
Entries 23028
Mean −454.9
Std Dev 3.688
Underflow 948
Overflow 4329
Integral 1.775e+04
5000
4000
3000
2000
1000
0
−1000 −900 −800 −700 −600 −500 −400 −300 −200 −100 0

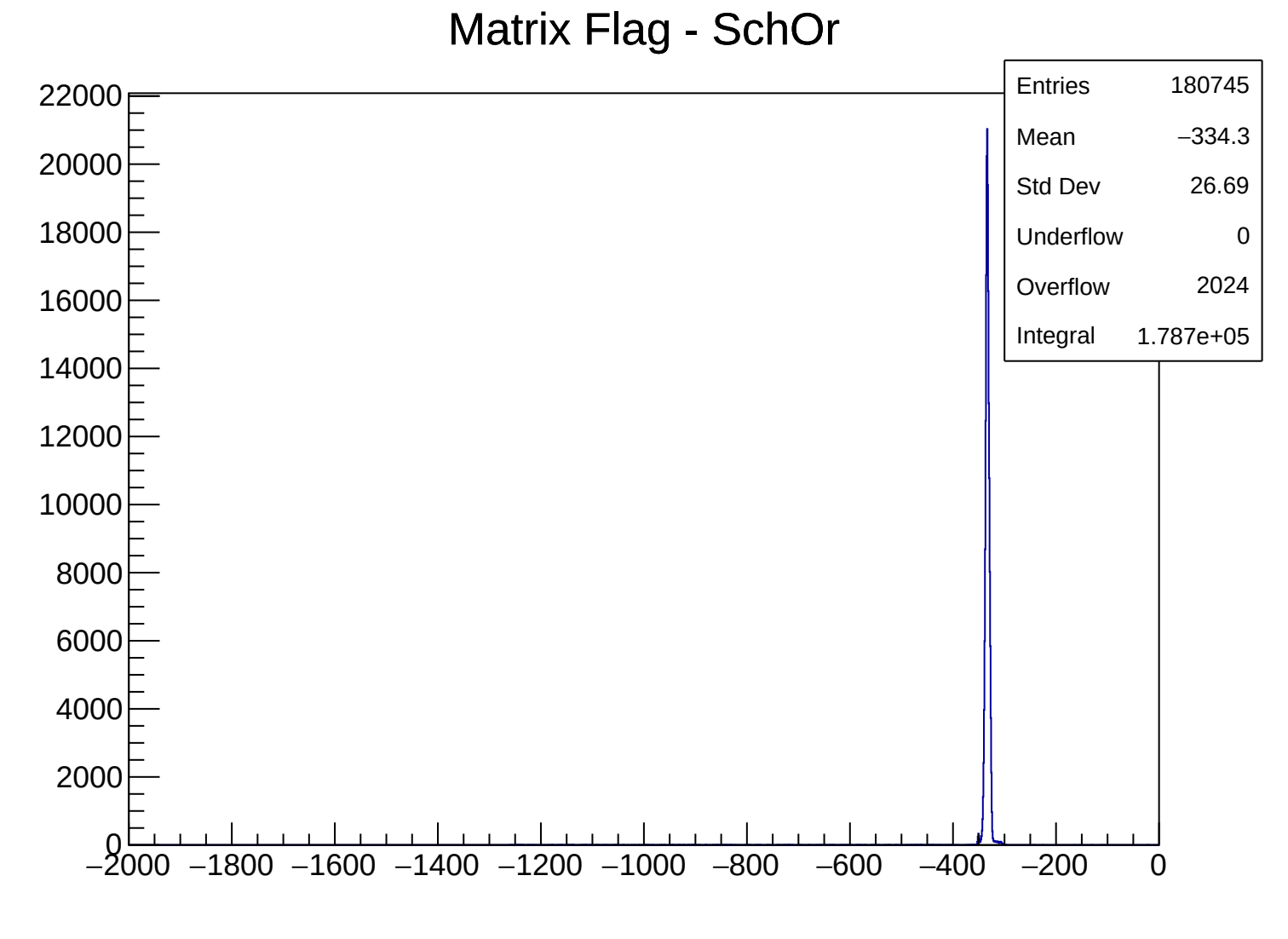

Sft-Tof Cut2: Sft&TOF-> nhits=1 & Maxdepth =1
Entries 23028
Mean −454.8
Std Dev 2.922
Underflow 948
Overflow 4329
Integral 1.775e+04
5000
4000
3000
2000
1000
0
−500
−480
−460
−440
−420
−400

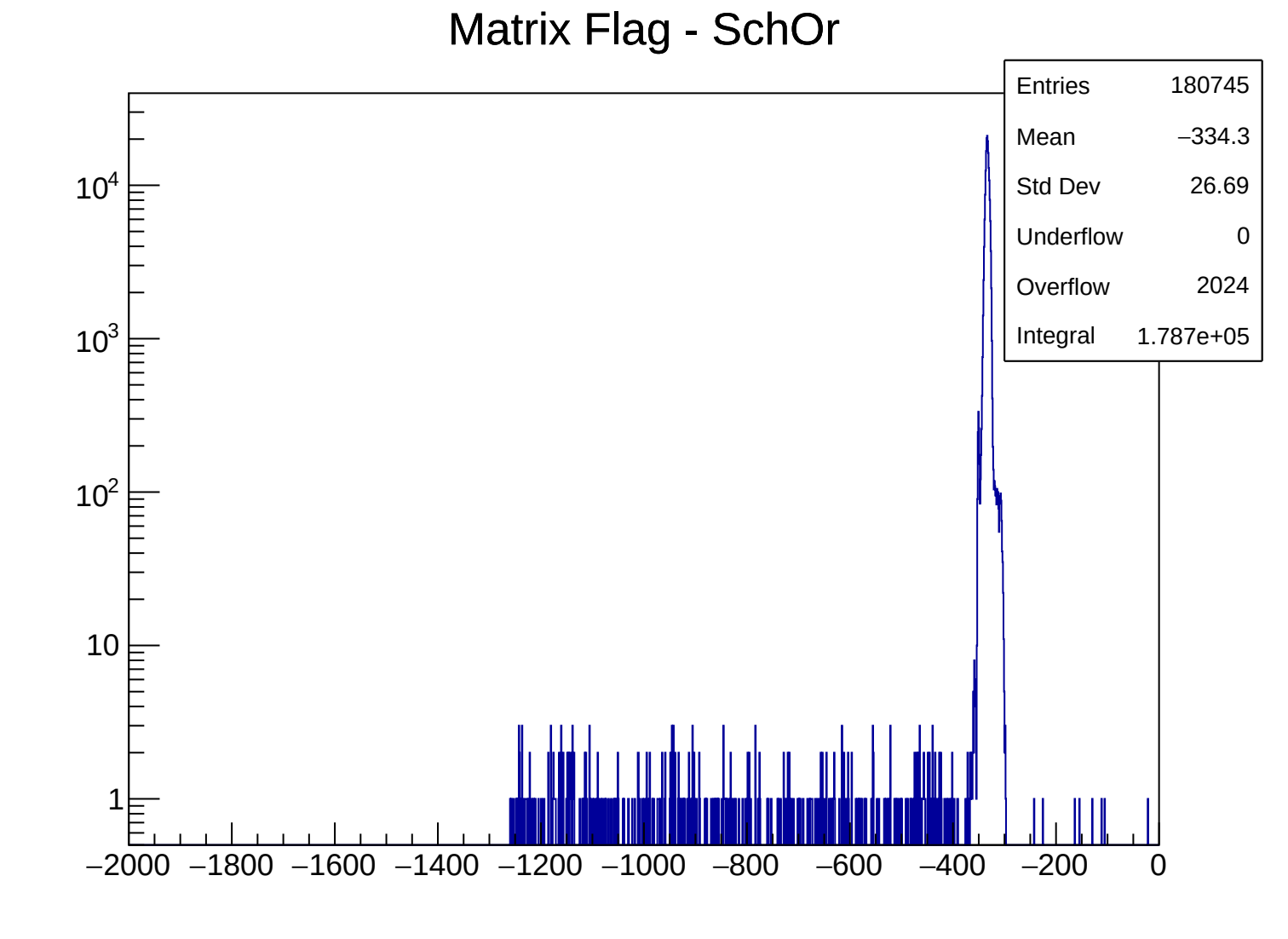

Matrix Flag - TofMtOr
Entries 203566
Mean −814.9
Std Dev 5.679
Underflow 386
Overflow 0
Integral 2.032e+05
50000
40000
30000
20000
10000
0
−1000
−800
−600
−400
−200
0
200
400
600
800
1000

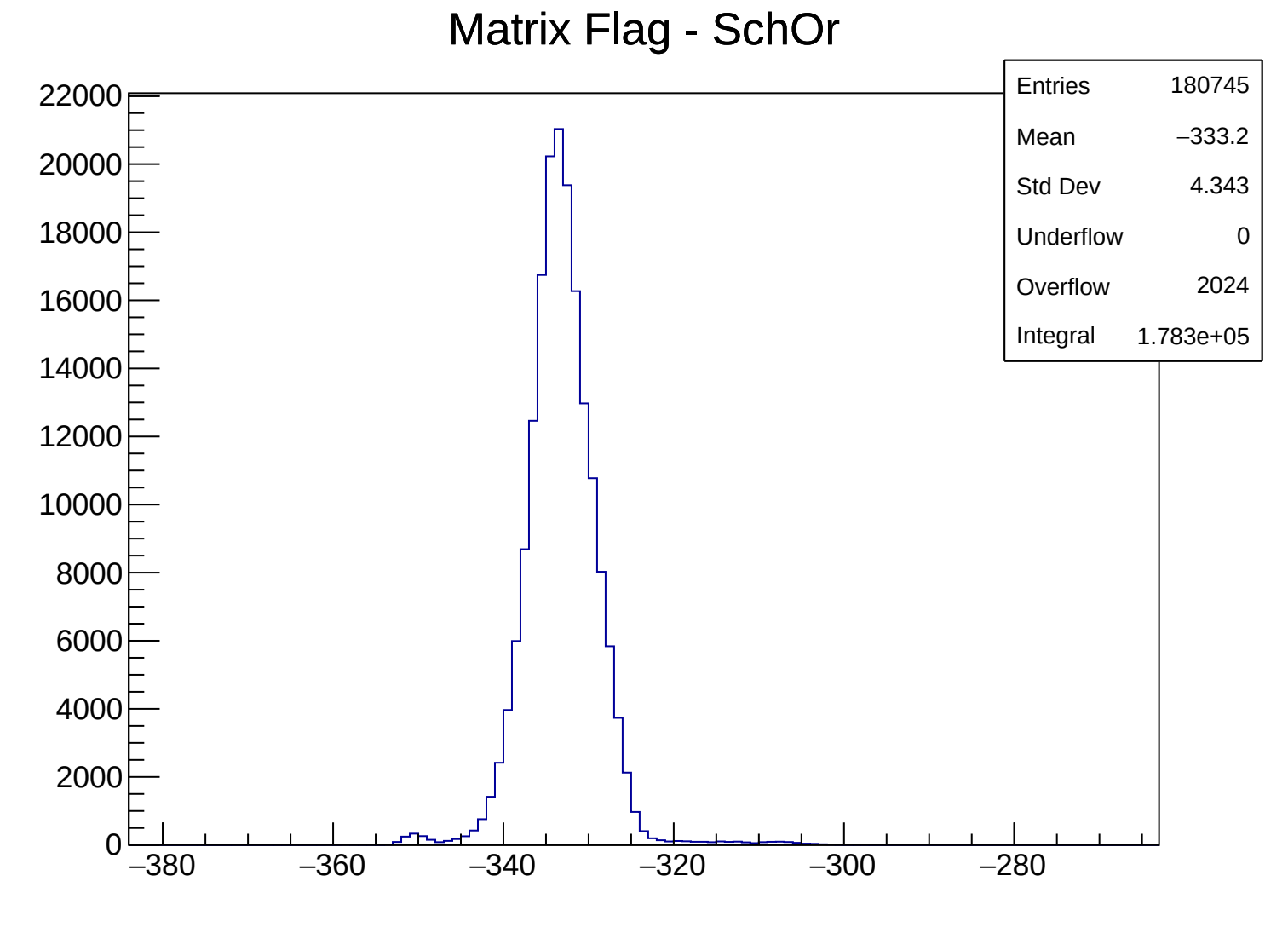

Matrix Flag - TofMtOr
Entries 203566
Mean −814.9
Std Dev 5.679
Underflow 386
Overflow 0
Integral 2.032e+05
10^4
10^3
10^2
10
1
−1000 −800 −600 −400 −200 0 200 400 600 800 1000

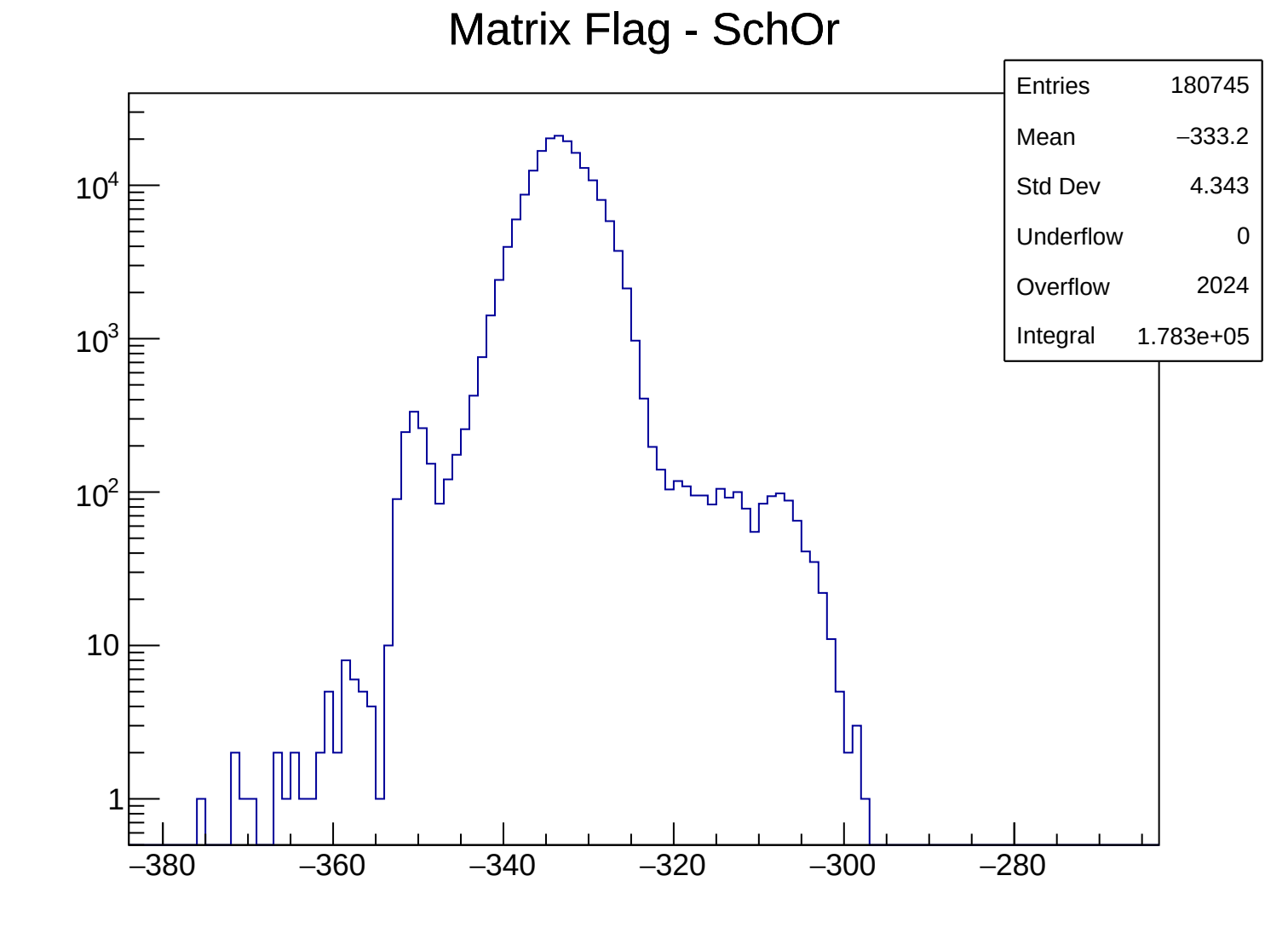

Matrix Flag - TofMtOr
Entries 203566
Mean −814.9
Std Dev 2.68
Underflow 386
Overflow 0
Integral 2.031e+05
50000
40000
30000
20000
10000
0
−860
−840
−820
−800
−780
−760

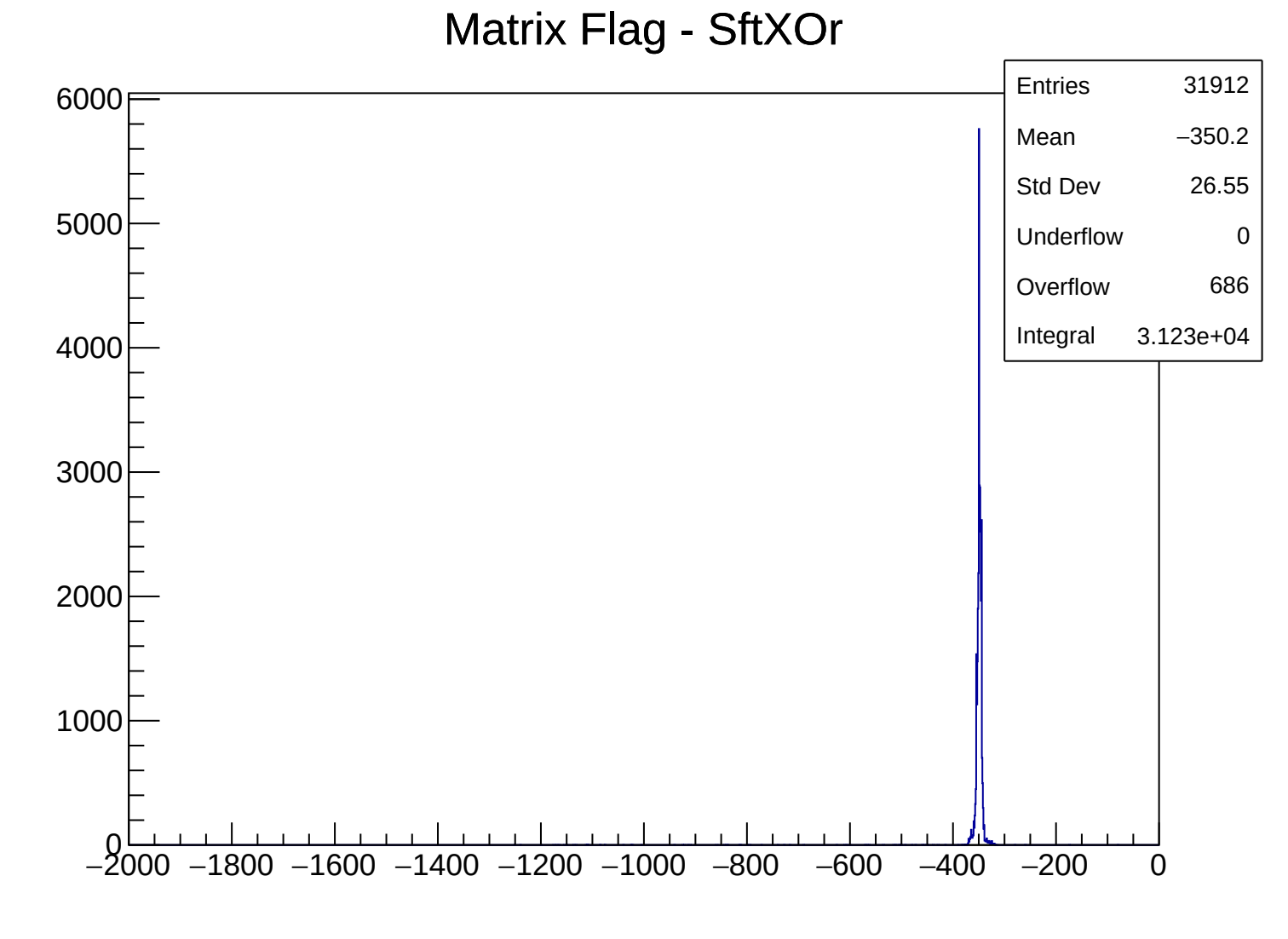

Matrix Flag - TofMtOr
Entries 203566
Mean −814.9
Std Dev 2.68
Underflow 386
Overflow 0
Integral 2.031e+05
10^4
10^3
10^2
10
1
−860
−840
−820
−800
−780
−760

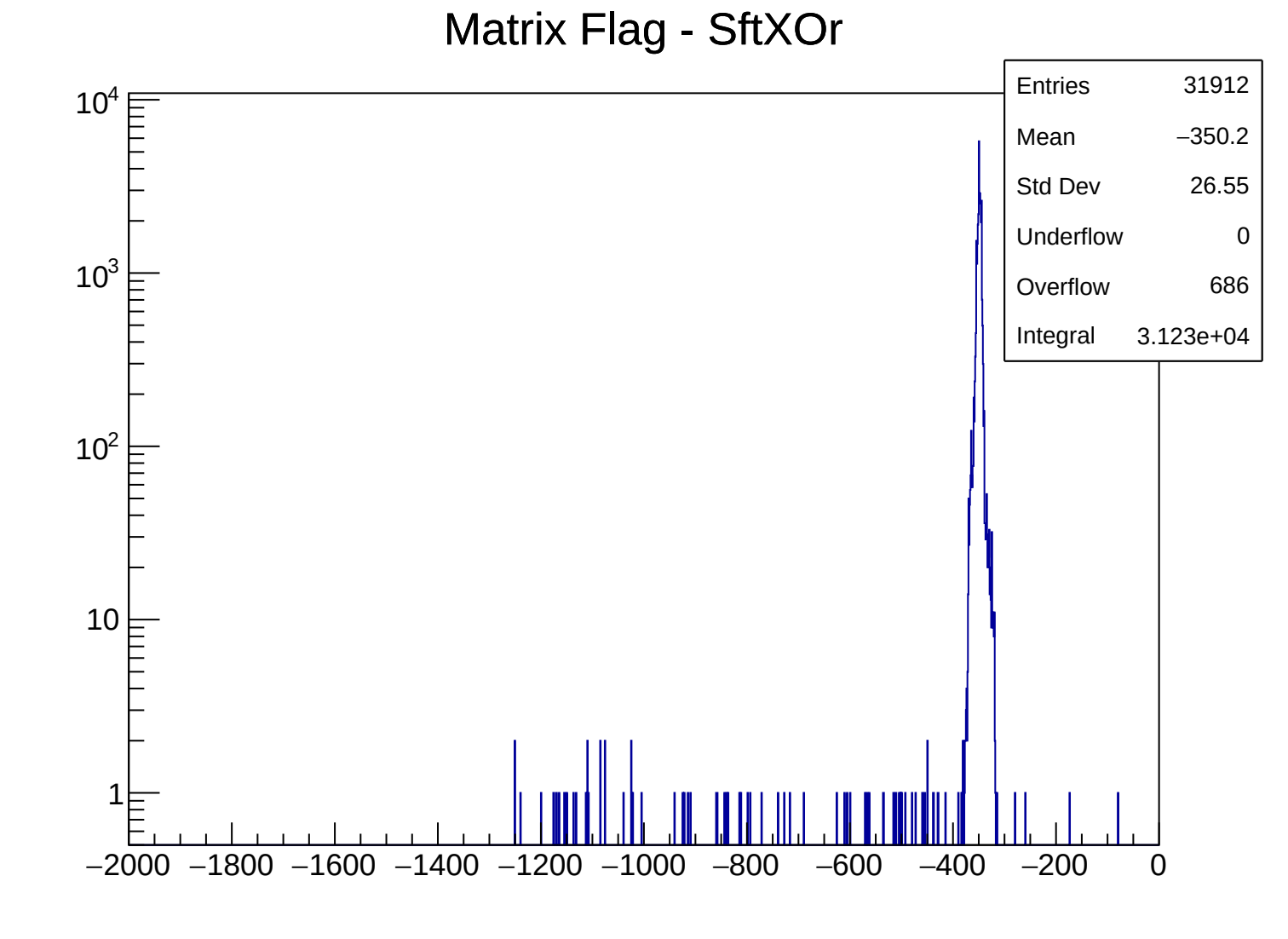

Matrix Flag - SchOr
Entries 180745
Mean −334.3
Std Dev 26.69
Underflow 0
Overflow 2024
Integral 1.787e+05
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
−2000
−1800
−1600
−1400
−1200
−1000
−800
−600
−400
−200
0

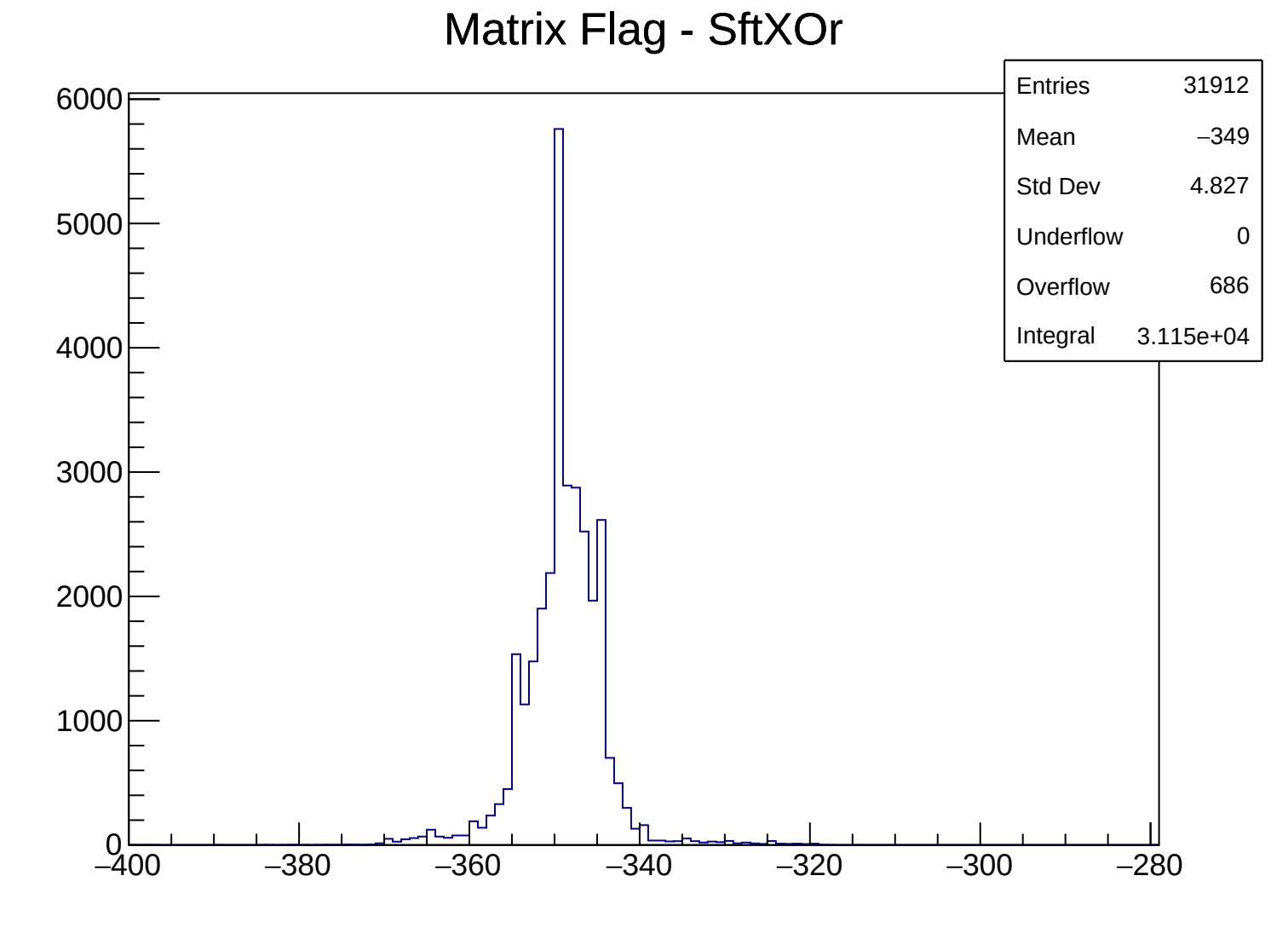

Matrix Flag - SchOr
Entries 180745
Mean −334.3
Std Dev 26.69
Underflow 0
Overflow 2024
Integral 1.787e+05
10^4
10^3
10^2
10
1
−2000 −1800 −1600 −1400 −1200 −1000 −800 −600 −400 −200 0

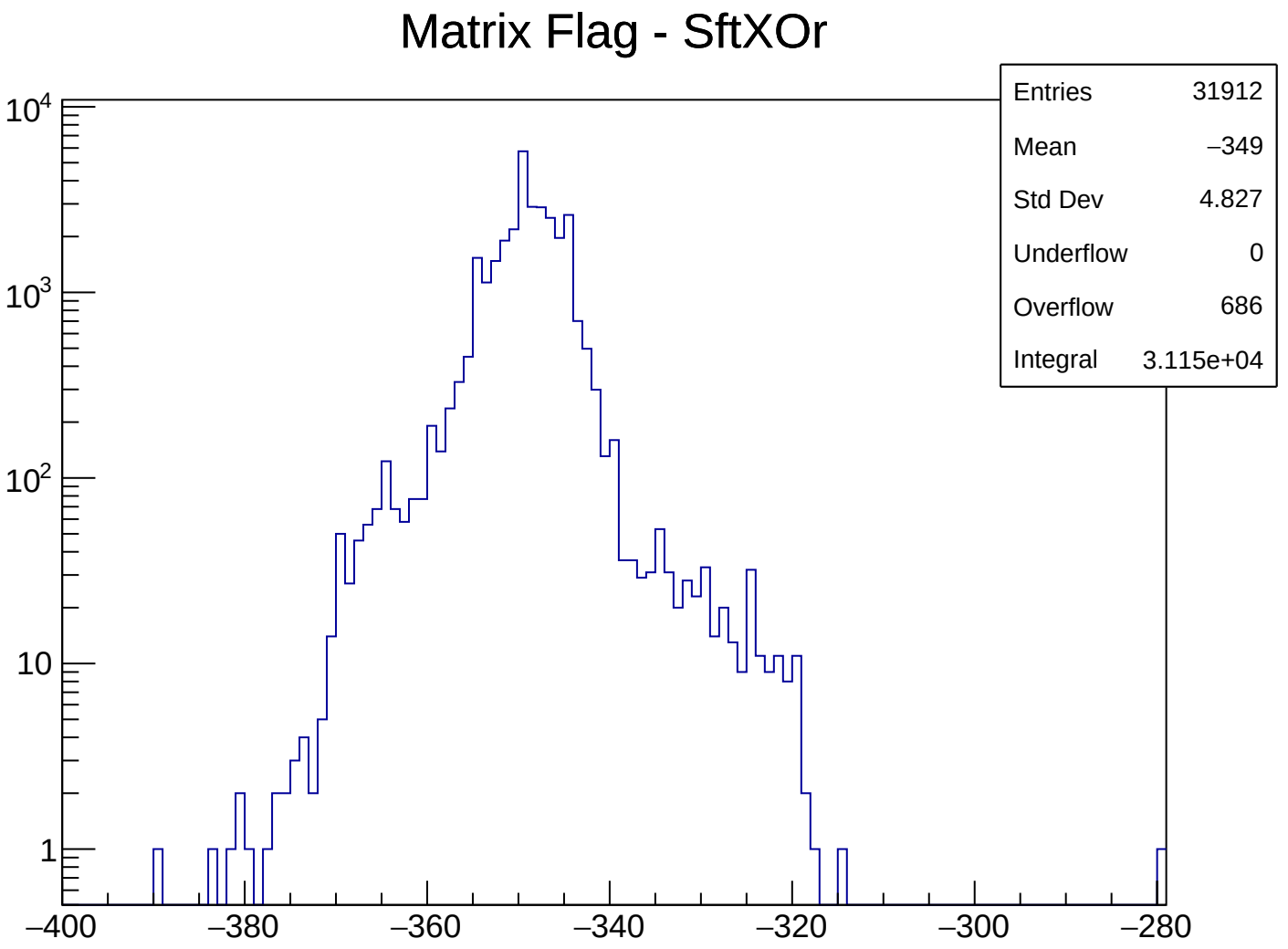

Matrix Flag - SchOr
Entries 180745
Mean −333.2
Std Dev 4.343
Underflow 0
Overflow 2024
Integral 1.783e+05
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
−380
−360
−340
−320
−300
−280

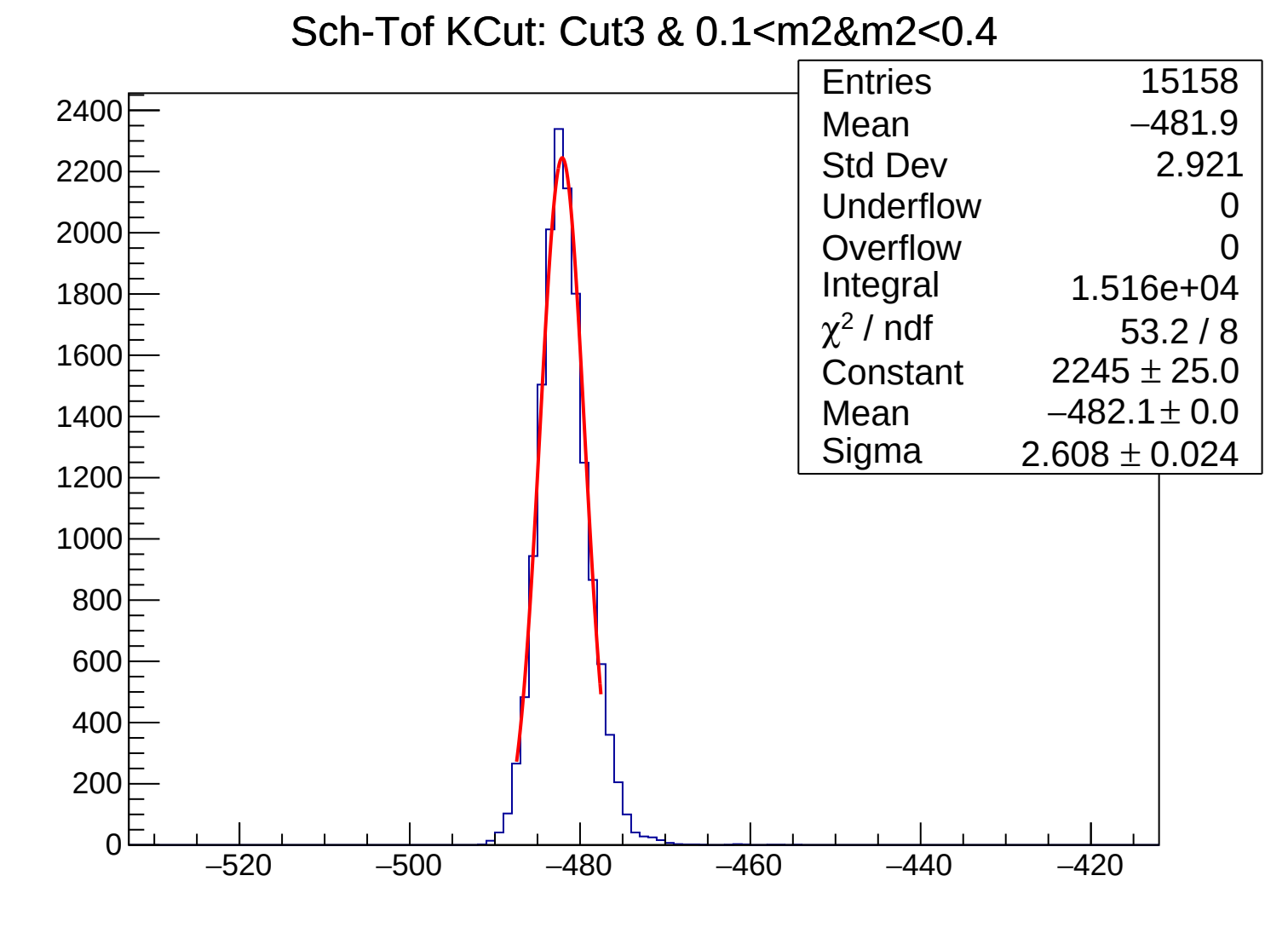

Matrix Flag - SchOr
Entries 180745
Mean −333.2
Std Dev 4.343
Underflow 0
Overflow 2024
Integral 1.783e+05
10^4
10^3
10^2
10
1
−380
−360
−340
−320
−300
−280

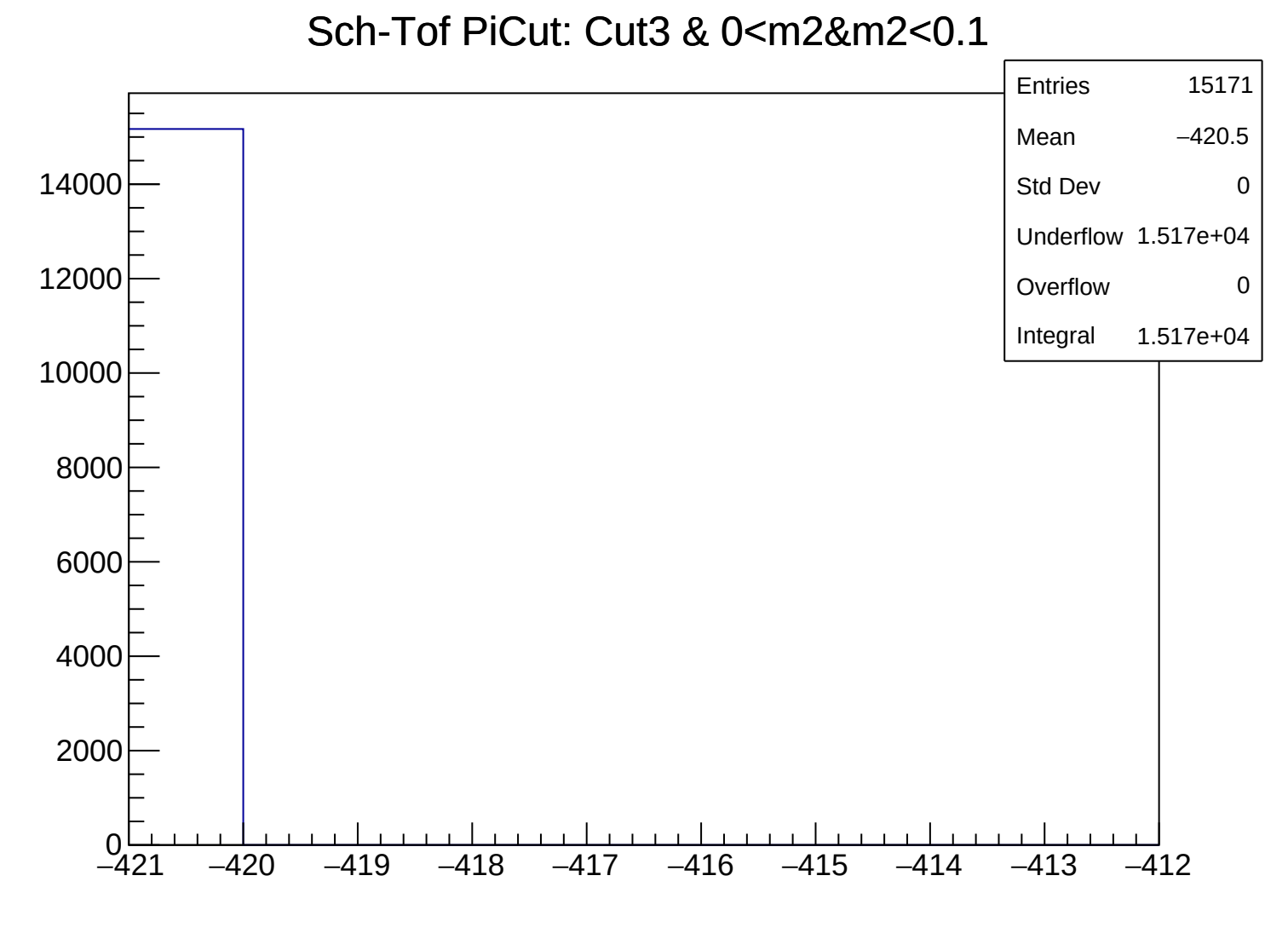

Matrix Flag - SftXOr
Entries 31912
Mean −350.2
Std Dev 26.55
Underflow 0
Overflow 686
Integral 3.123e+04
6000
5000
4000
3000
2000
1000
0
−2000
−1800
−1600
−1400
−1200
−1000
−800
−600
−400
−200
0

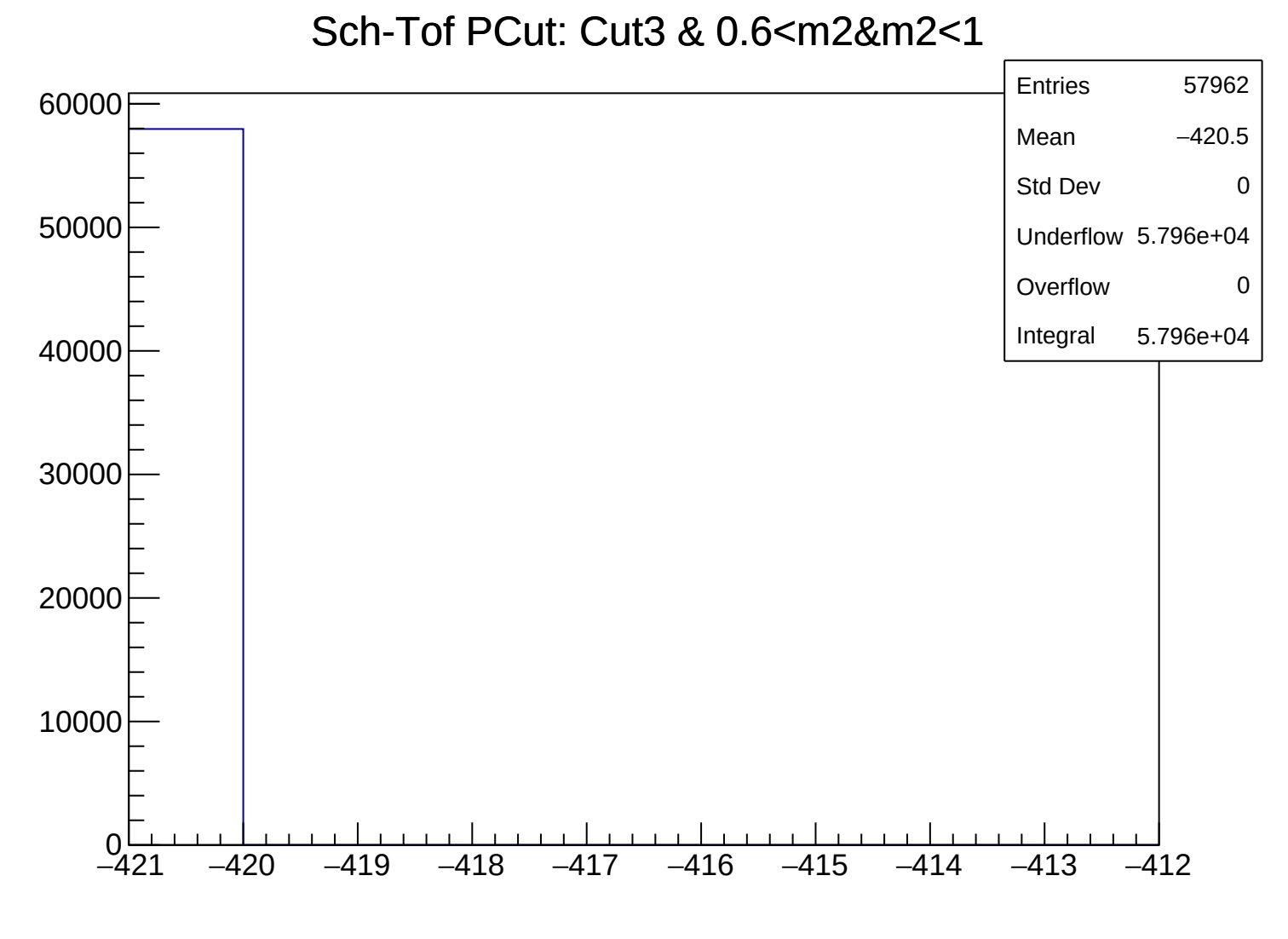

Matrix Flag - SftXOr
Entries 31912
Mean −350.2
Std Dev 26.55
Underflow 0
Overflow 686
Integral 3.123e+04
10^4
10^3
10^2
10
1
−2000 −1800 −1600 −1400 −1200 −1000 −800 −600 −400 −200 0

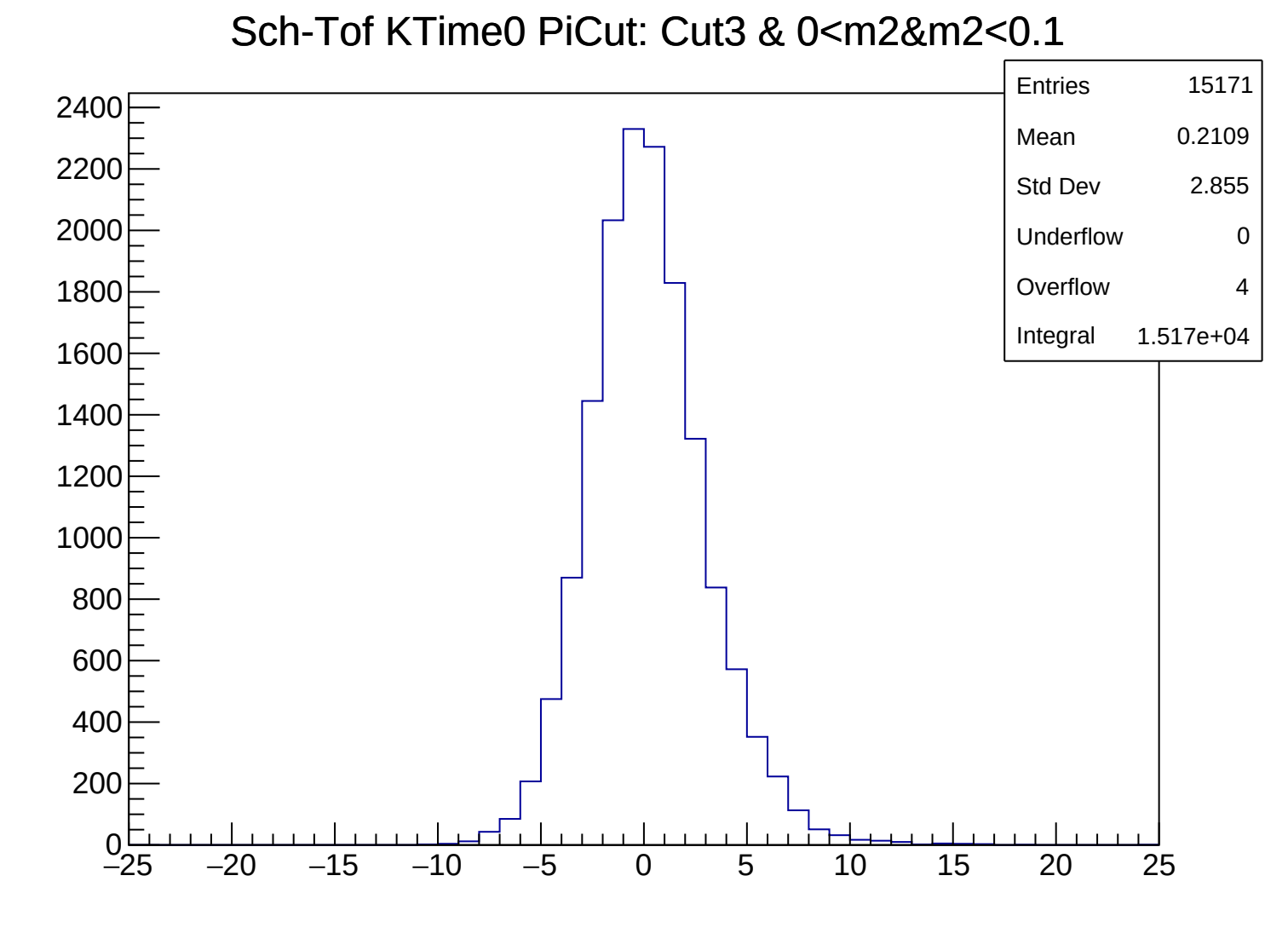

Matrix Flag - SftXOr
Entries 31912
Mean −349
Std Dev 4.827
Underflow 0
Overflow 686
Integral 3.115e+04
6000
5000
4000
3000
2000
1000
0
−400
−380
−360
−340
−320
−300
−280

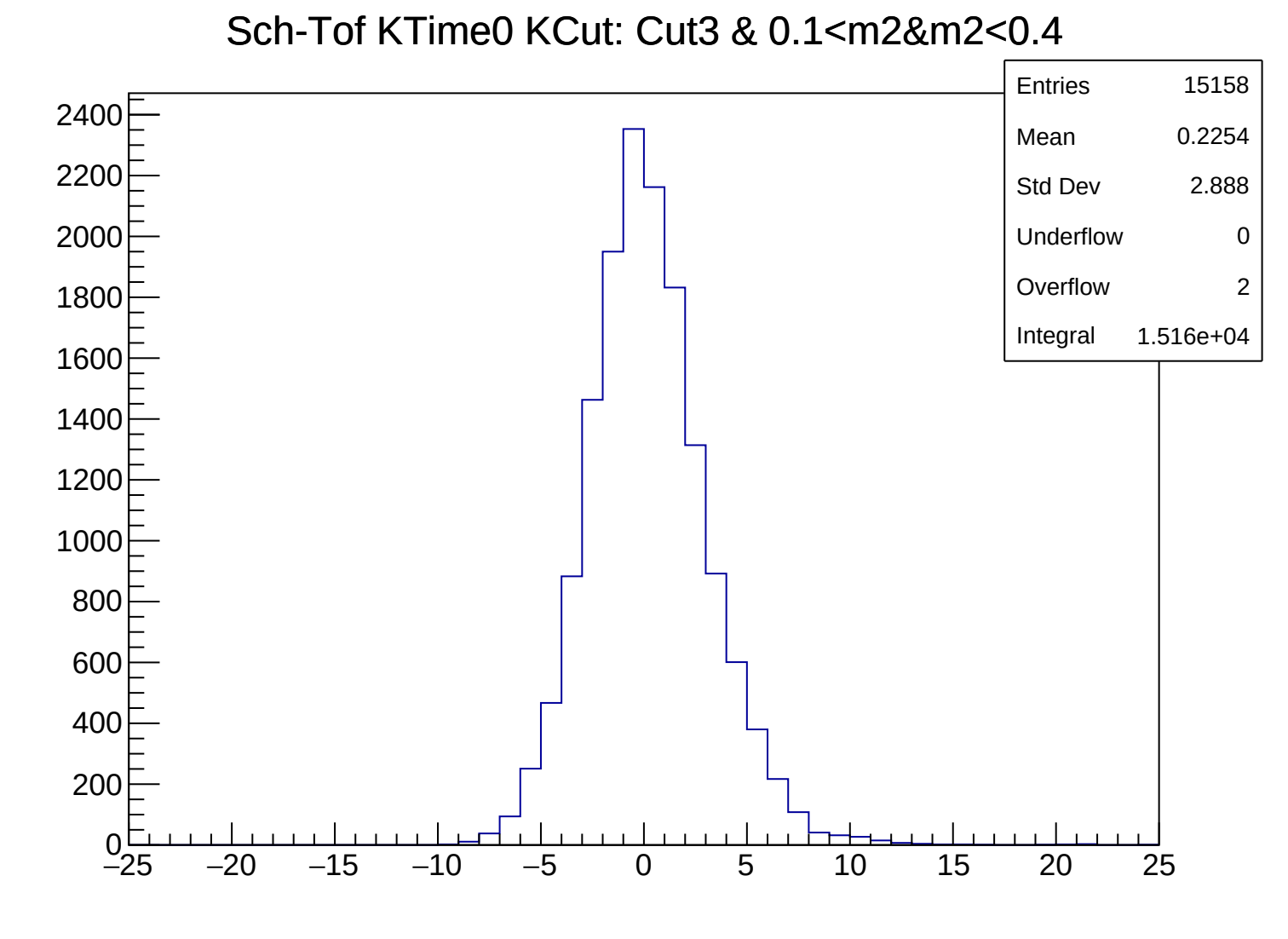

Matrix Flag - SftXOr
Entries 31912
Mean −349
Std Dev 4.827
Underflow 0
Overflow 686
Integral 3.115e+04
10^4
10^3
10^2
10
1
−400
−380
−360
−340
−320
−300
−280

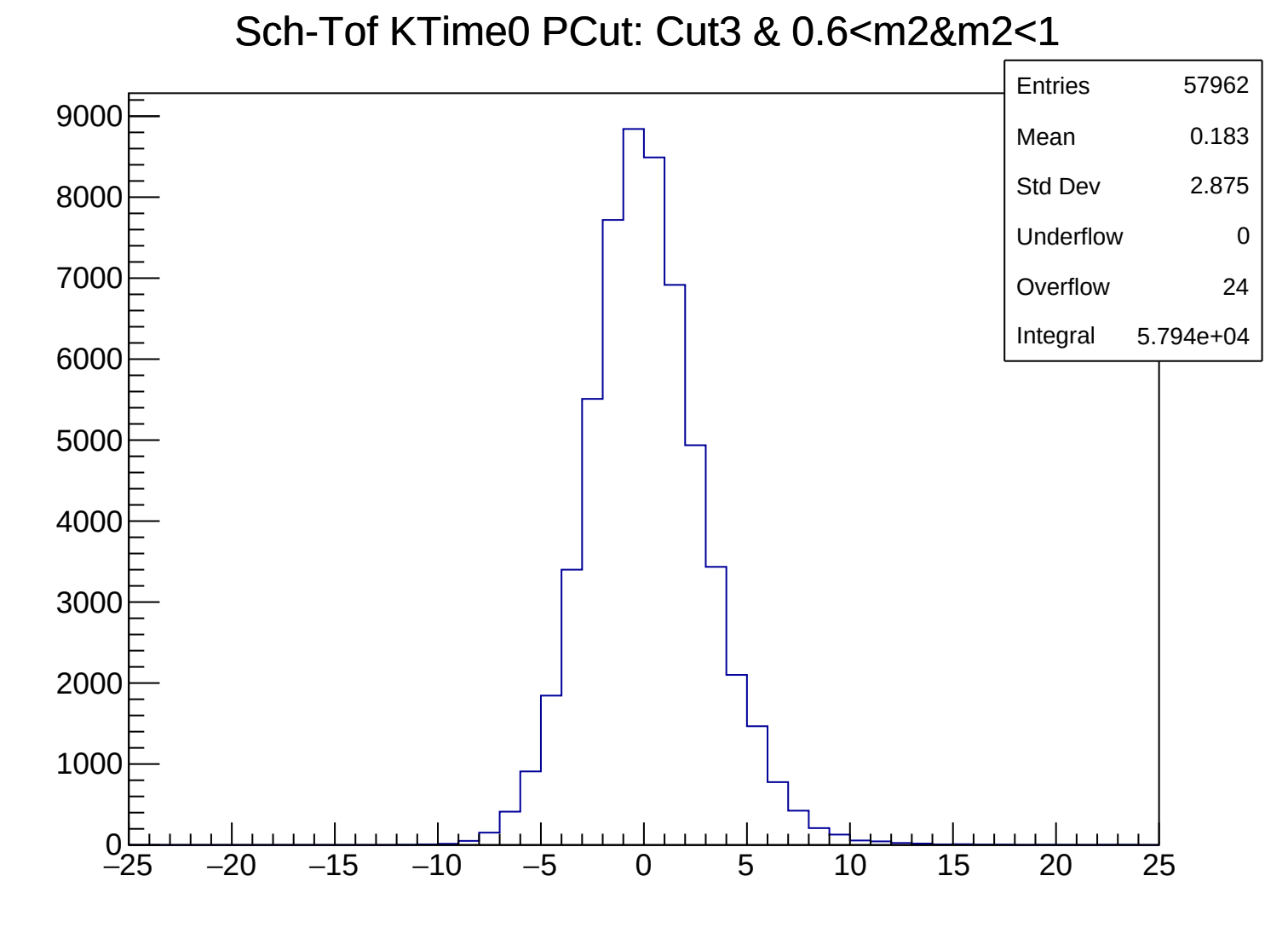

Sch-Tof KCut: Cut3 & 0.1<m2&m2<0.4
Entries 15158
Mean –481.9
Std Dev 2.921
Underflow 0
Overflow 0
Integral 1.516e+04
χ² / ndf 53.2 / 8
Constant 2245 ± 25.0
Mean –482.1 ± 0.0
Sigma 2.608 ± 0.024
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
–520
–500
–480
–460
–440
–420

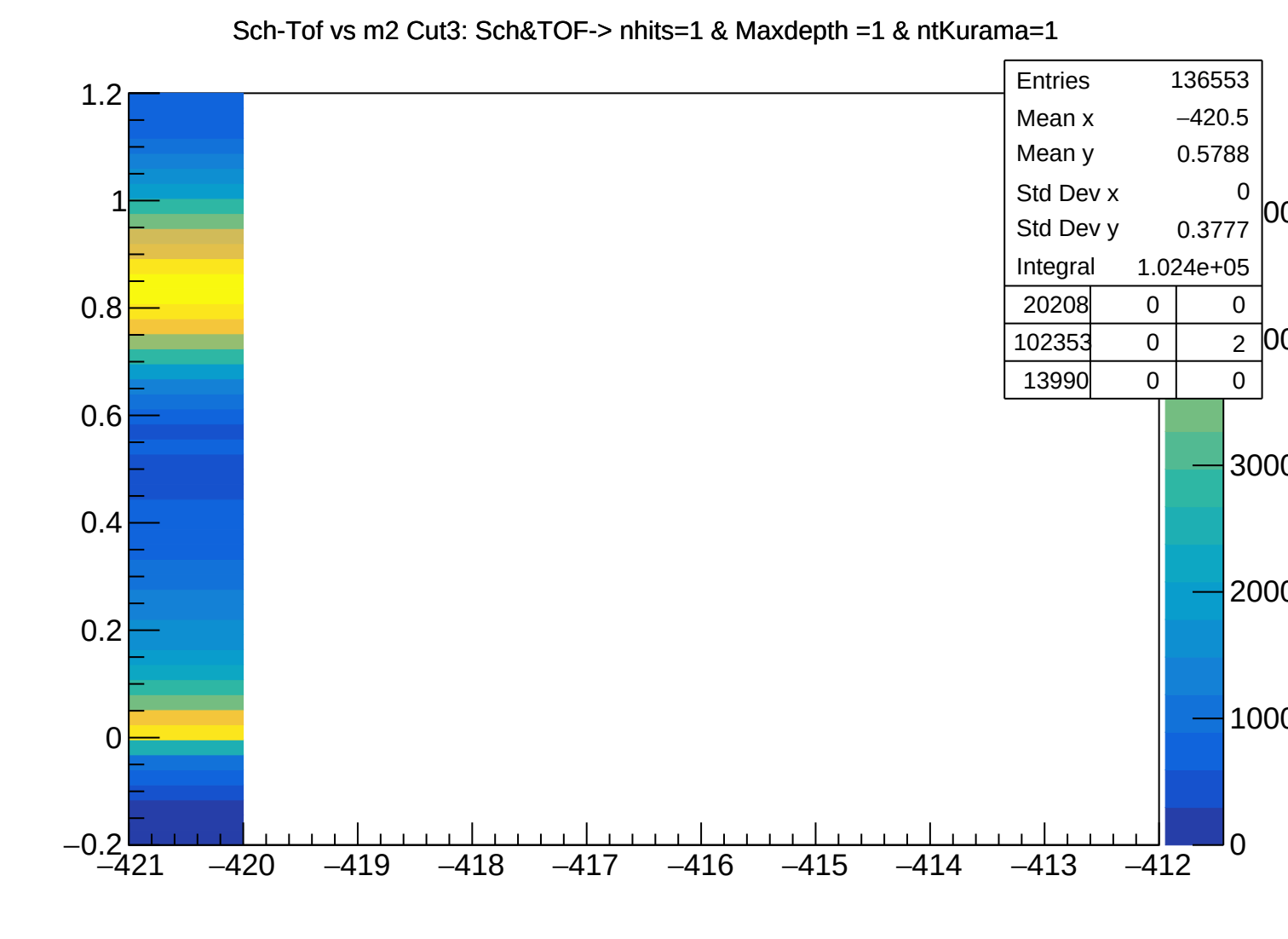

Sch-Tof PiCut: Cut3 & 0<m2&m2<0.1
Entries 15171
Mean −420.5
Std Dev 0
Underflow 1.517e+04
Overflow 0
Integral 1.517e+04
14000
12000
10000
8000
6000
4000
2000
0
−421
−420
−419
−418
−417
−416
−415
−414
−413
−412

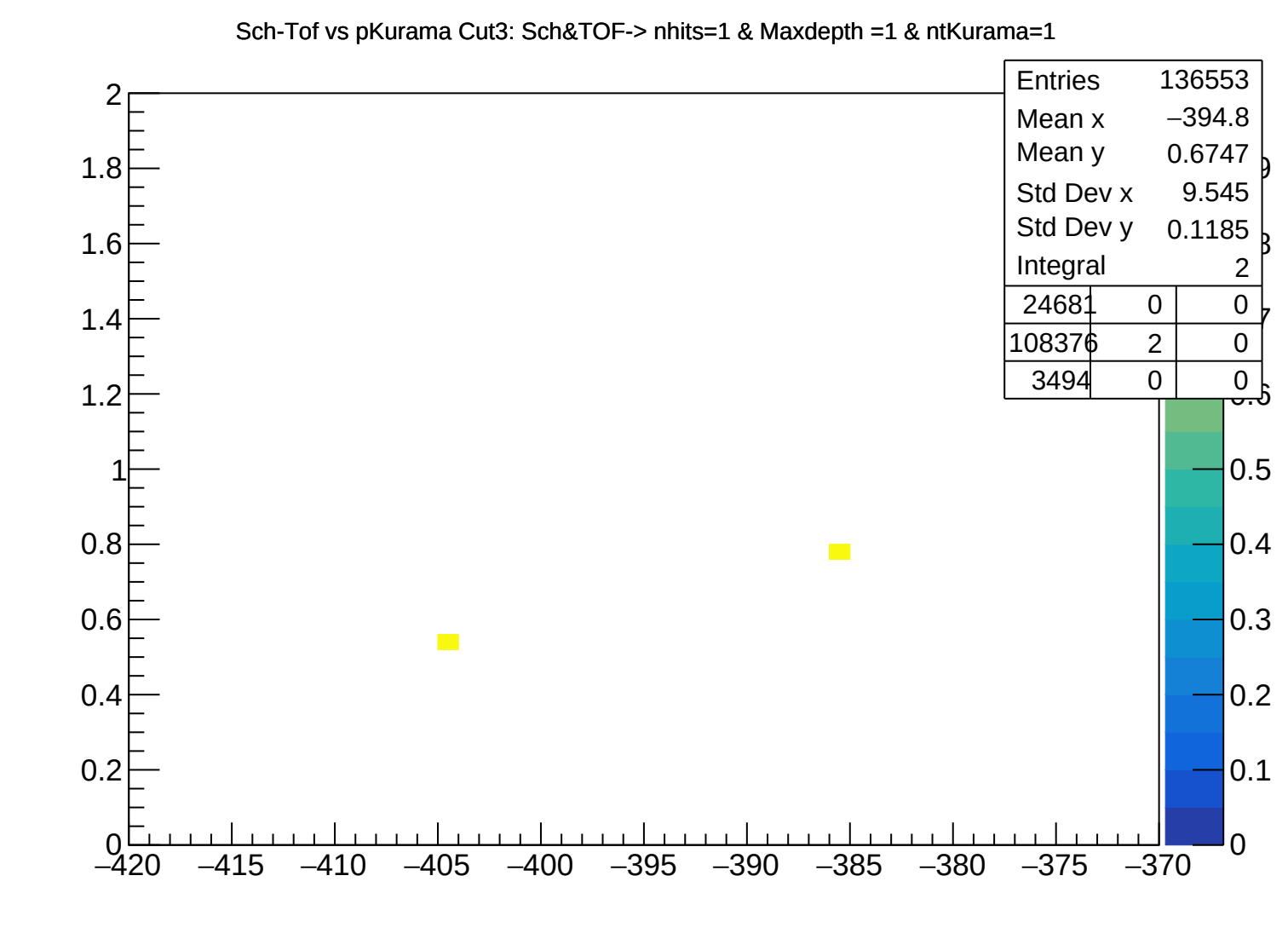

Sch-Tof PCut: Cut3 & 0.6<m2&m2<1
Entries 57962
Mean −420.5
Std Dev 0
Underflow 5.796e+04
Overflow 0
Integral 5.796e+04
60000
50000
40000
30000
20000
10000
0
−421
−420
−419
−418
−417
−416
−415
−414
−413
−412

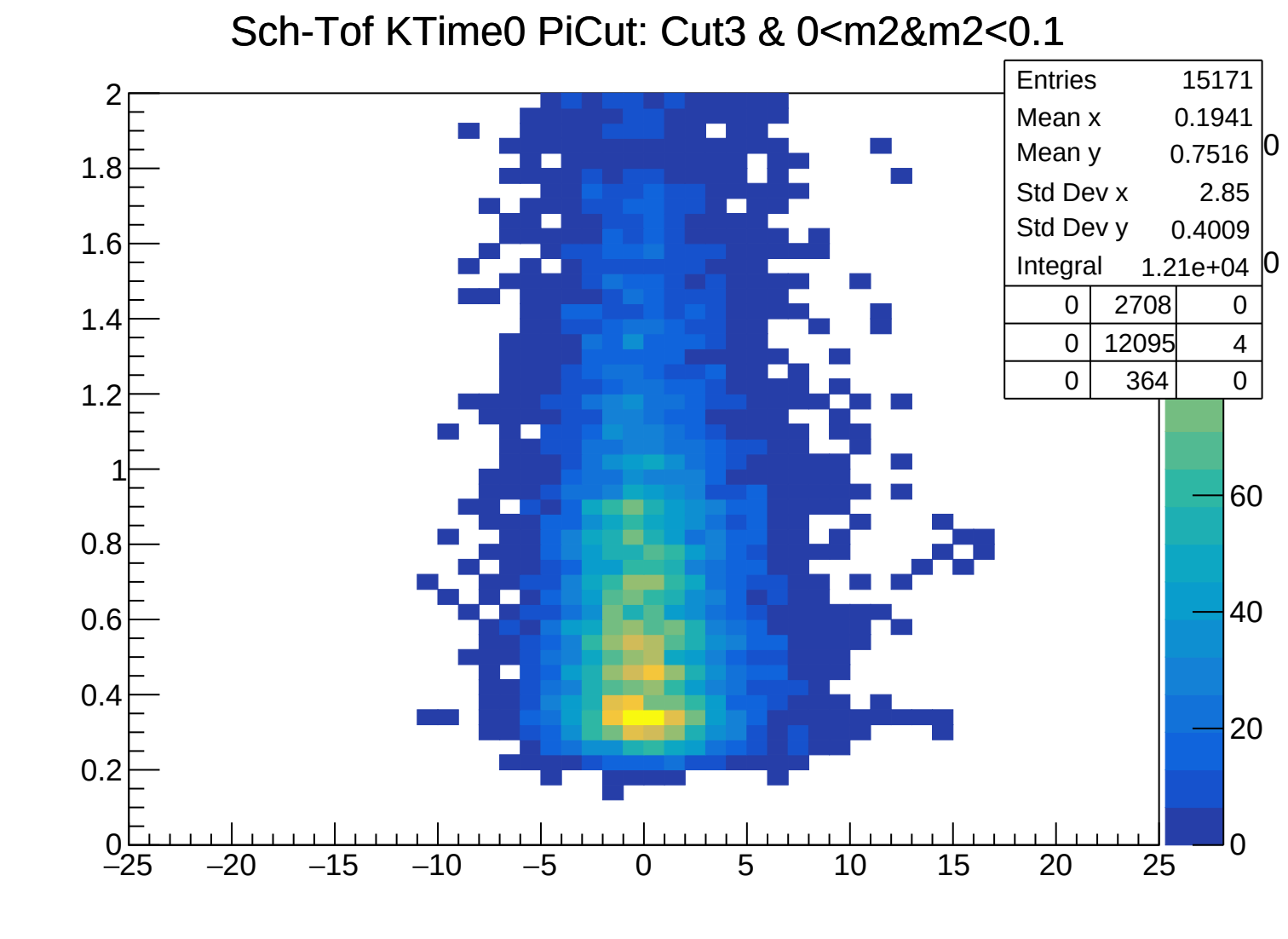

Sch-Tof KTime0 PiCut: Cut3 & 0<m2&m2<0.1
Entries 15171
Mean 0.2109
Std Dev 2.855
Underflow 0
Overflow 4
Integral 1.517e+04
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
−25
−20
−15
−10
−5
0
5
10
15
20
25

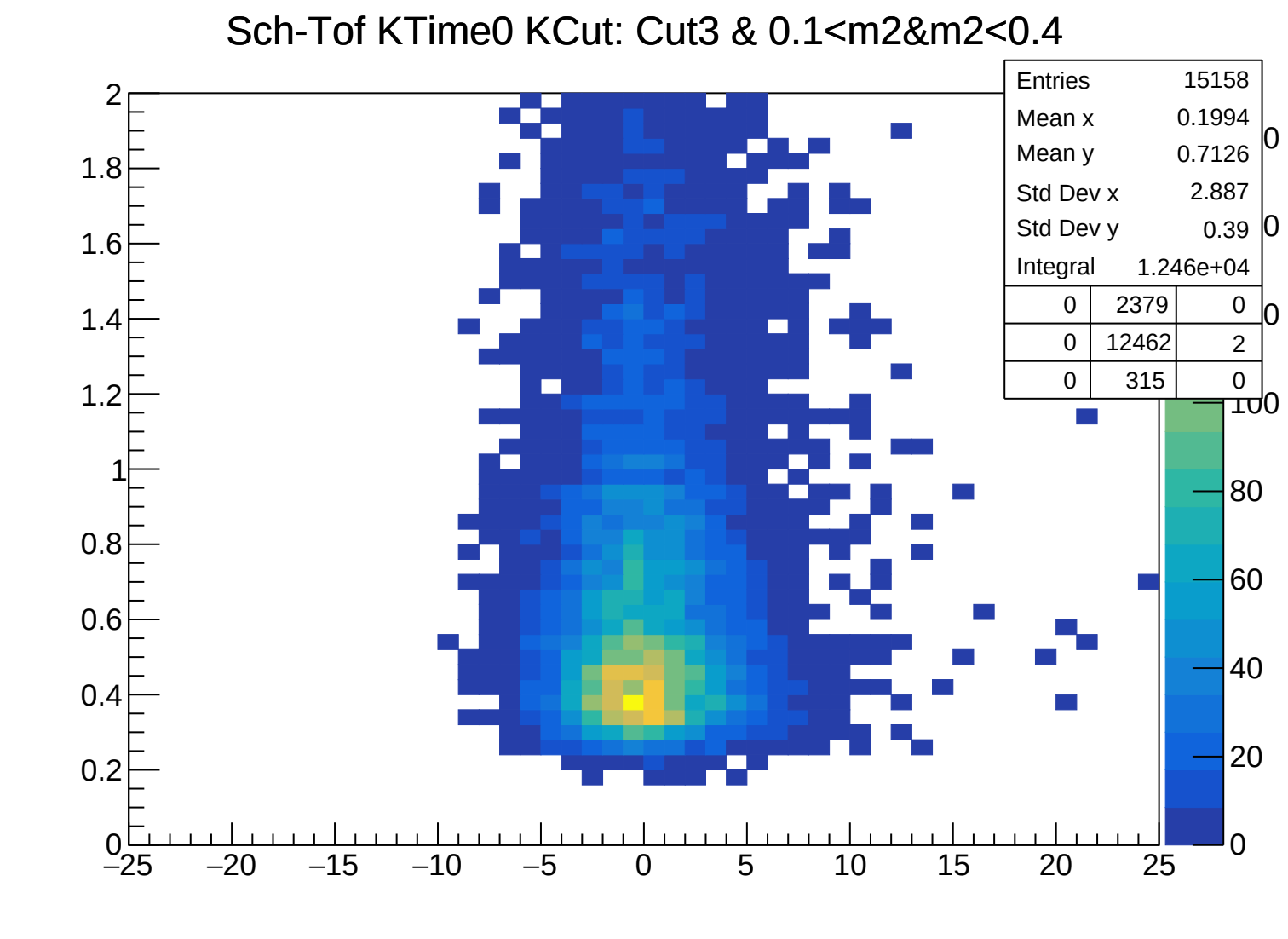

Sch-Tof KTime0 KCut: Cut3 & 0.1<m2&m2<0.4
Entries 15158
Mean 0.2254
Std Dev 2.888
Underflow 0
Overflow 2
Integral 1.516e+04
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
–25
–20
–15
–10
–5
0
5
10
15
20
25

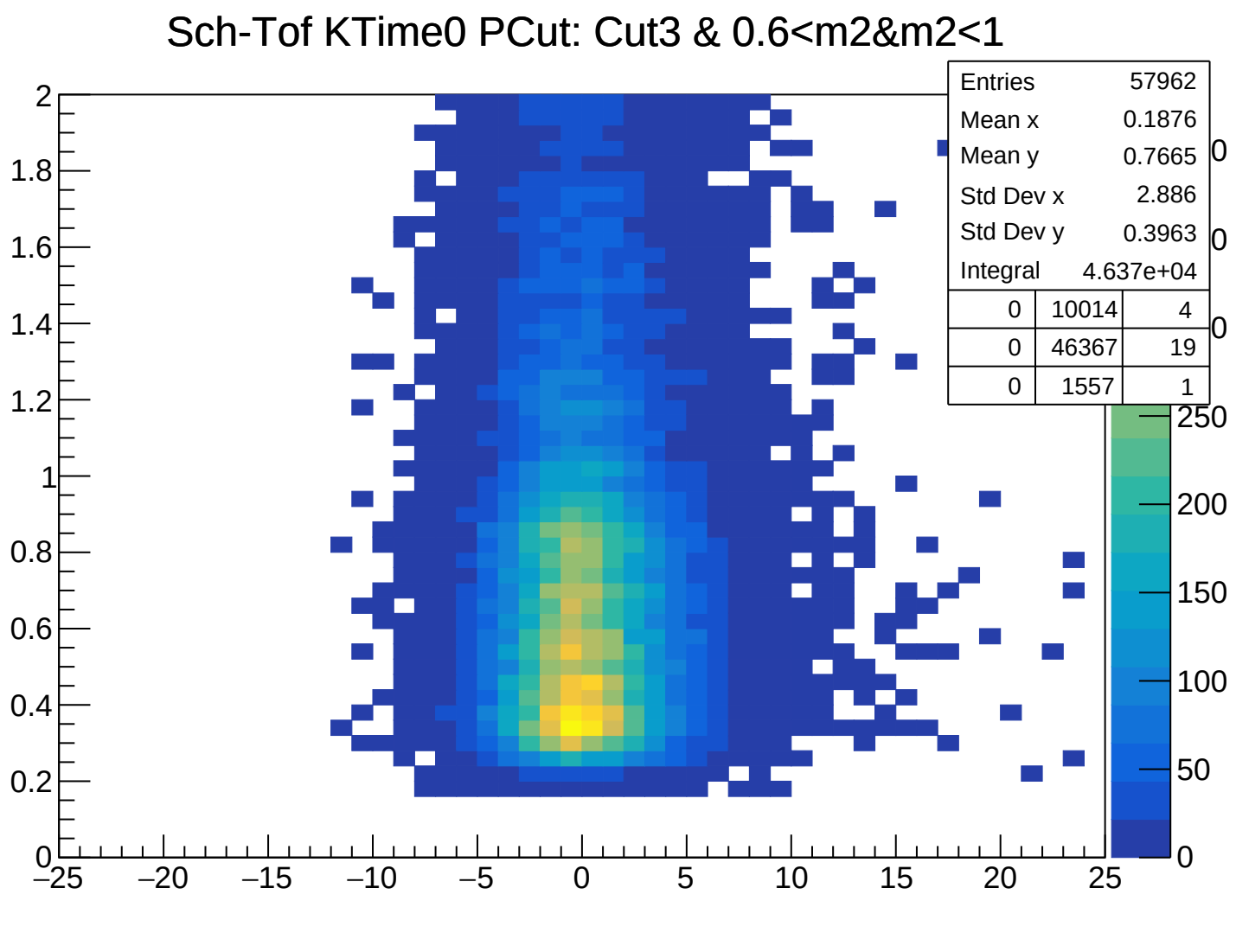

Sch-Tof KTime0 PCut: Cut3 & 0.6<m2&m2<1
Entries 57962
Mean 0.183
Std Dev 2.875
Underflow 0
Overflow 24
Integral 5.794e+04
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
–25
–20
–15
–10
–5
0
5
10
15
20
25

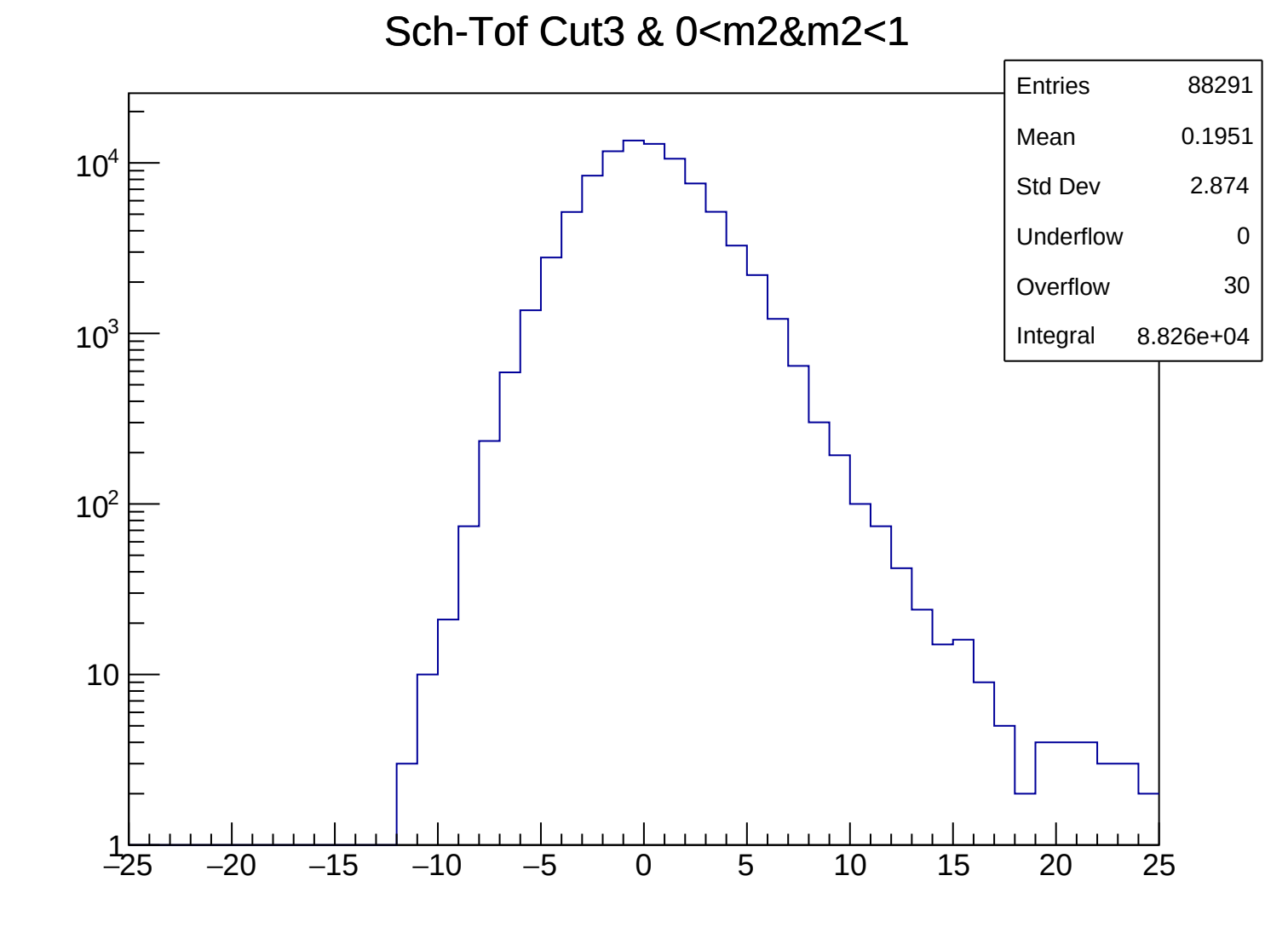

Sch-Tof vs m2 Cut3: Sch&TOF-> nhits=1 & Maxdepth =1 & ntKurama=1
Entries 136553
Mean x −420.5
Mean y 0.5788
Std Dev x 0
Std Dev y 0.3777
Integral 1.024e+05
20208 0 0
102353 0 2
13990 0 0
1.2
1
0.8
0.6
0.4
0.2
0
−0.2
−421
−420
−419
−418
−417
−416
−415
−414
−413
−412
3000
2000
1000
0

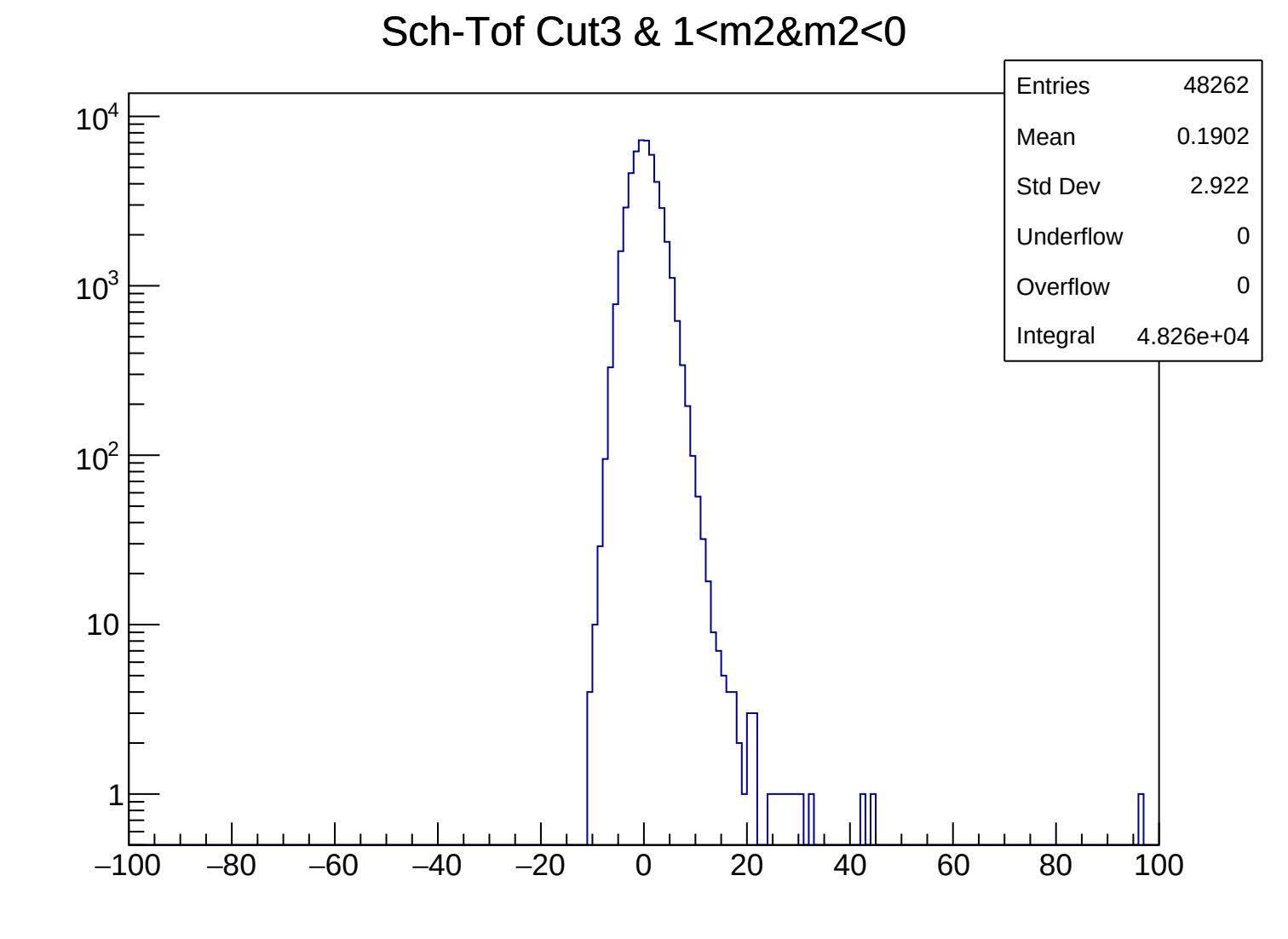

Sch-Tof vs pKurama Cut3: Sch&TOF-> nhits=1 & Maxdepth =1 & ntKurama=1
Entries 136553
Mean x −394.8
Mean y 0.6747
Std Dev x 9.545
Std Dev y 0.1185
Integral 2
24681 0 0
108376 2 0
3494 0 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−420
−415
−410
−405
−400
−395
−390
−385
−380
−375
−370
0.5
0.4
0.3
0.2
0.1
0

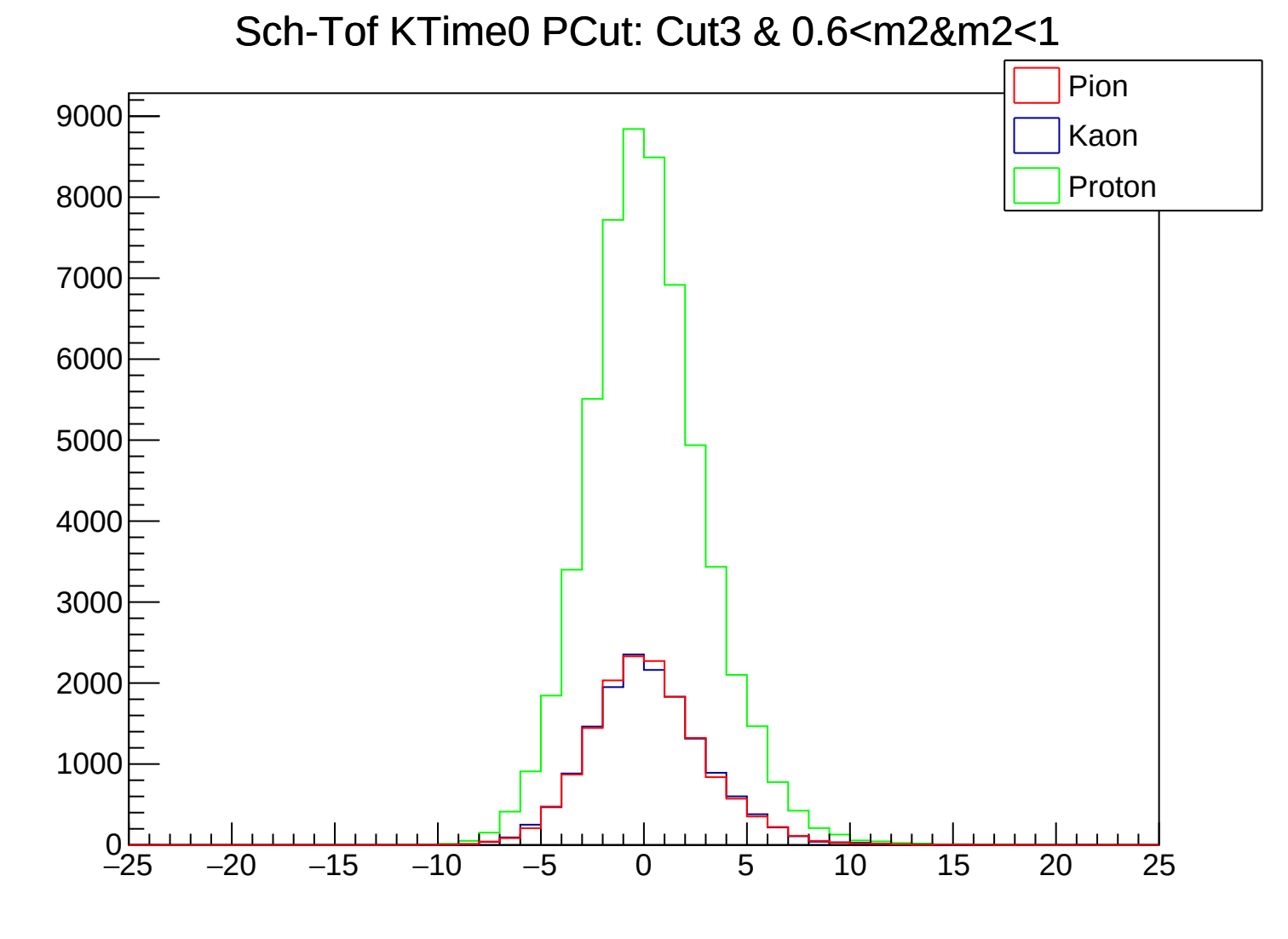

Sch-Tof KTime0 PiCut: Cut3 & 0<m2&m2<0.1
Entries 15171
Mean x 0.1941
Mean y 0.7516
Std Dev x 2.85
Std Dev y 0.4009
Integral 1.21e+04
0 2708 0
0 12095 4
0 364 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–25
–20
–15
–10
–5
0
5
10
15
20
25
60
40
20
0


Sch-Tof KTime0 KCut: Cut3 & 0.1<m2&m2<0.4
Entries 15158
Mean x 0.1994
Mean y 0.7126
Std Dev x 2.887
Std Dev y 0.39
Integral 1.246e+04
0 2379 0
0 12462 2
0 315 0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–25
–20
–15
–10
–5
0
5
10
15
20
25
100
80
60
40
20
0


Sch-Tof KTime0 PCut: Cut3 & 0.6<m2&m2<1
Entries 57962
Mean x 0.1876
Mean y 0.7665
Std Dev x 2.886
Std Dev y 0.3963
Integral 4.637e+04
0 10014 4
0 46367 19
0 1557 1
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
–25
–20
–15
–10
–5
0
5
10
15
20
25
250
200
150
100
50
0


Sch-Tof Cut3 & 0<m2&m2<1
Entries 88291
Mean 0.1951
Std Dev 2.874
Underflow 0
Overflow 30
Integral 8.826e+04
10^4
10^3
10^2
10
1
−25
−20
−15
−10
−5
0
5
10
15
20
25


Sch-Tof Cut3 & 1<m2&m2<0
Entries 48262
Mean 0.1902
Std Dev 2.922
Underflow 0
Overflow 0
Integral 4.826e+04
10^4
10^3
10^2
10
1
–100
–80
–60
–40
–20
0
20
40
60
80
100


Sch-Tof KTime0 PCut: Cut3 & 0.6<m2&m2<1
Pion
Kaon
Proton
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
–25
–20
–15
–10
–5
0
5
10
15
20
25