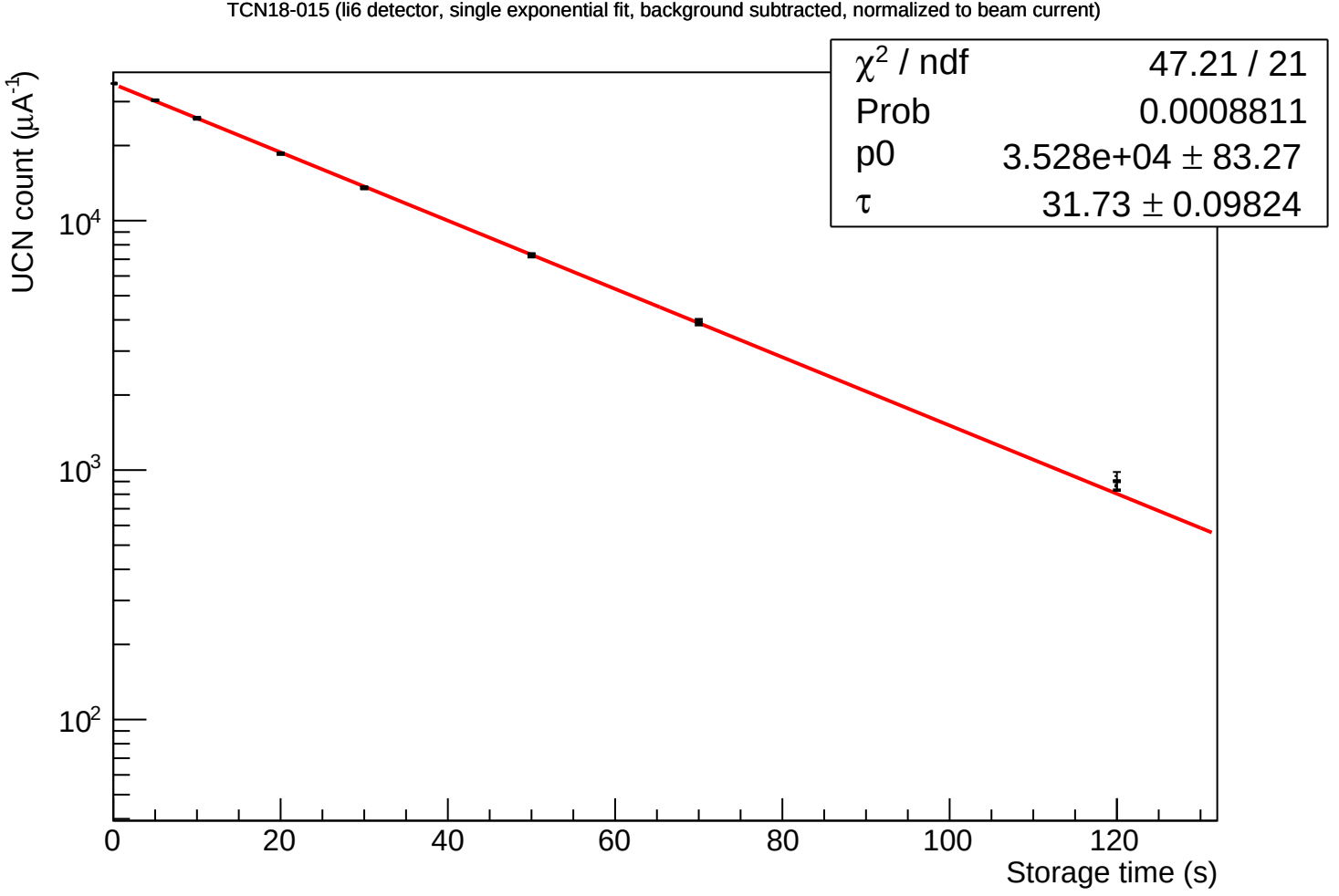
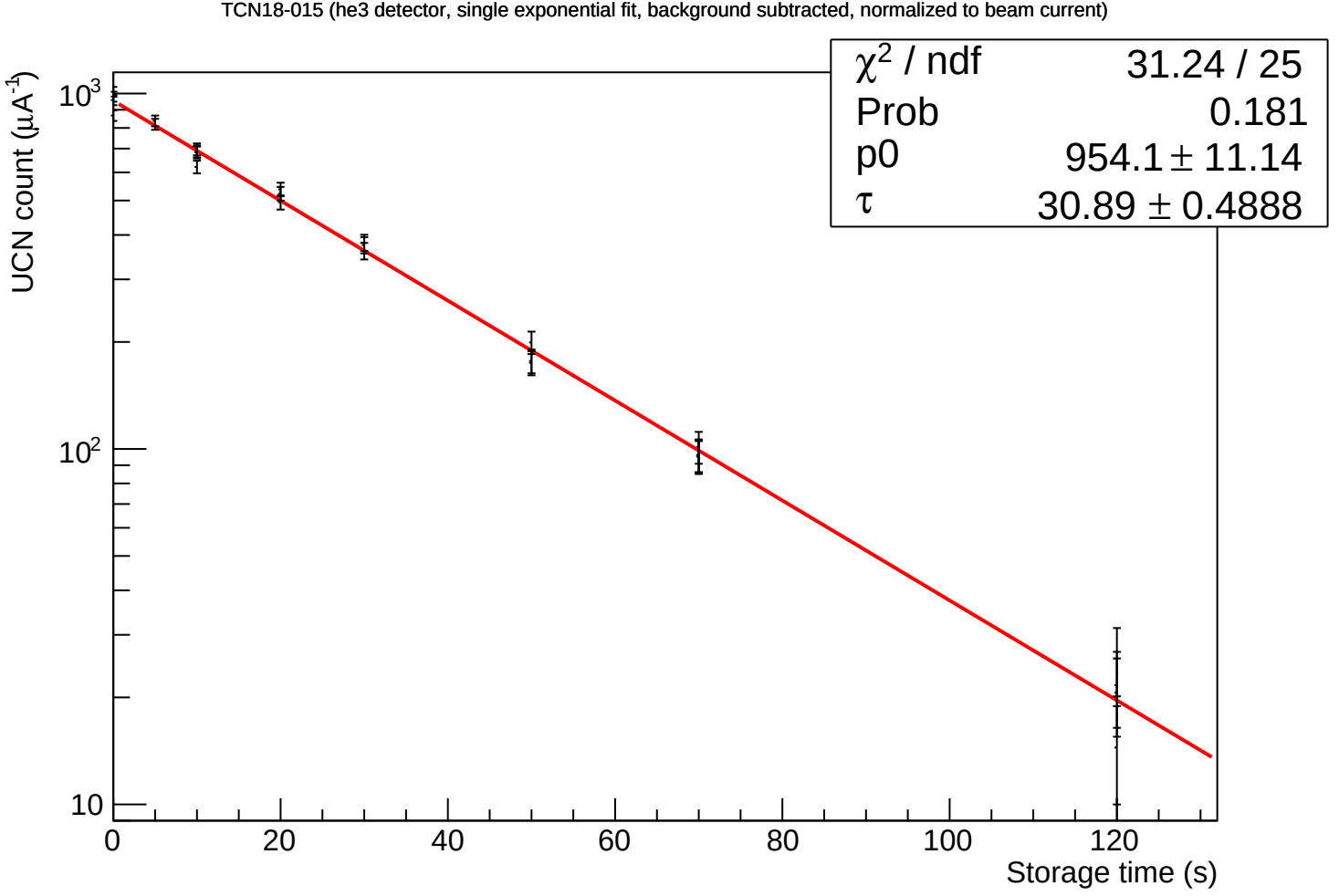
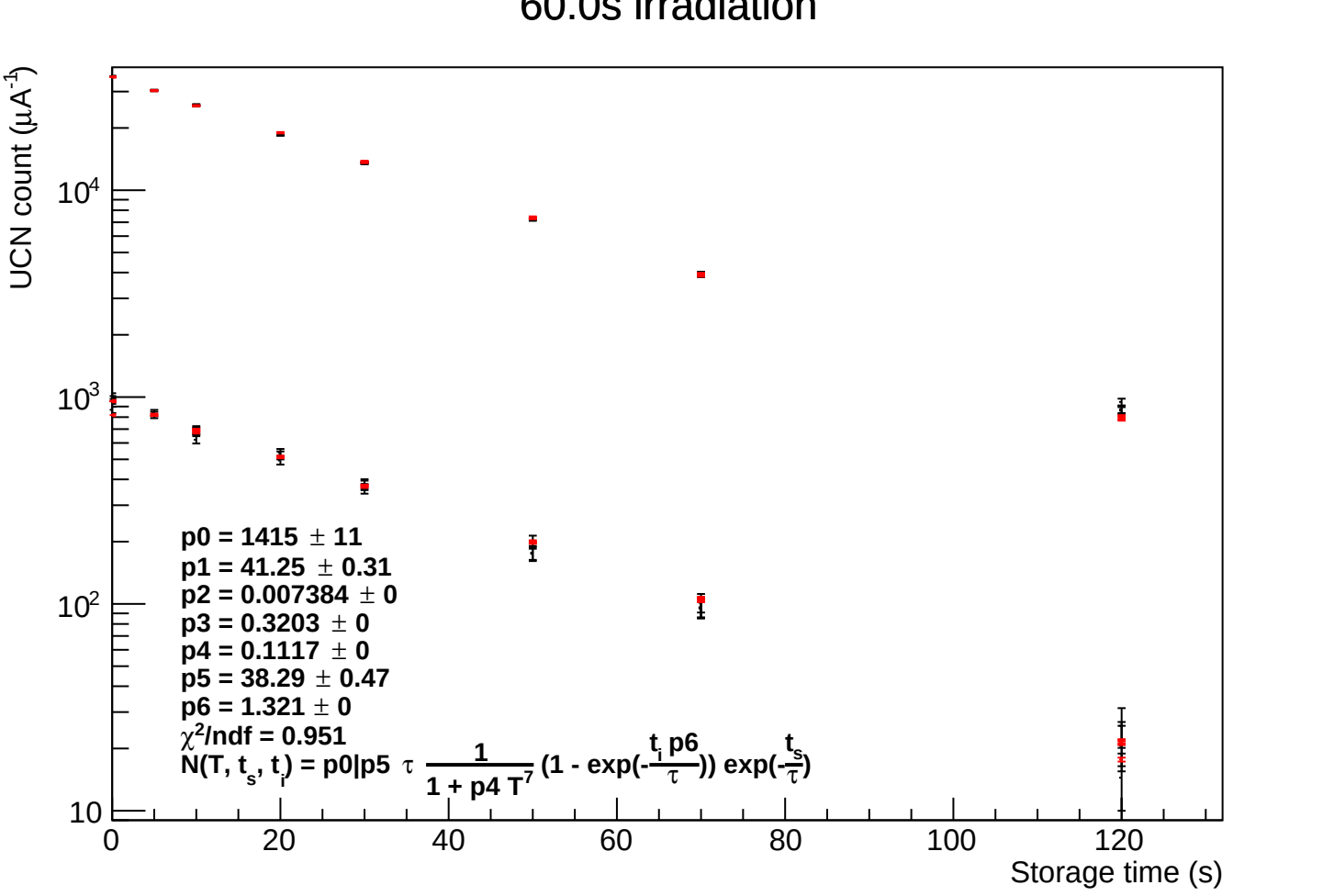
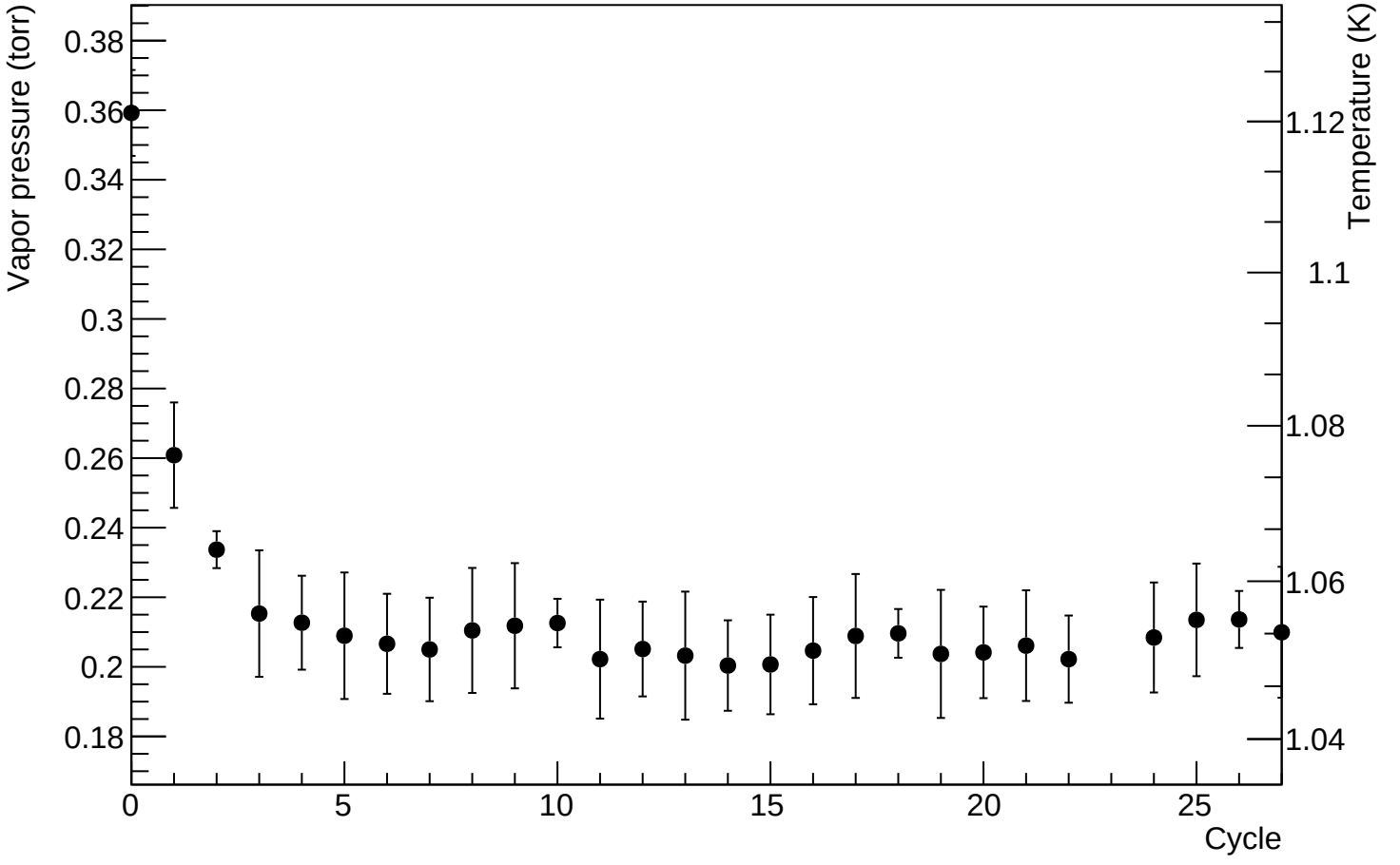
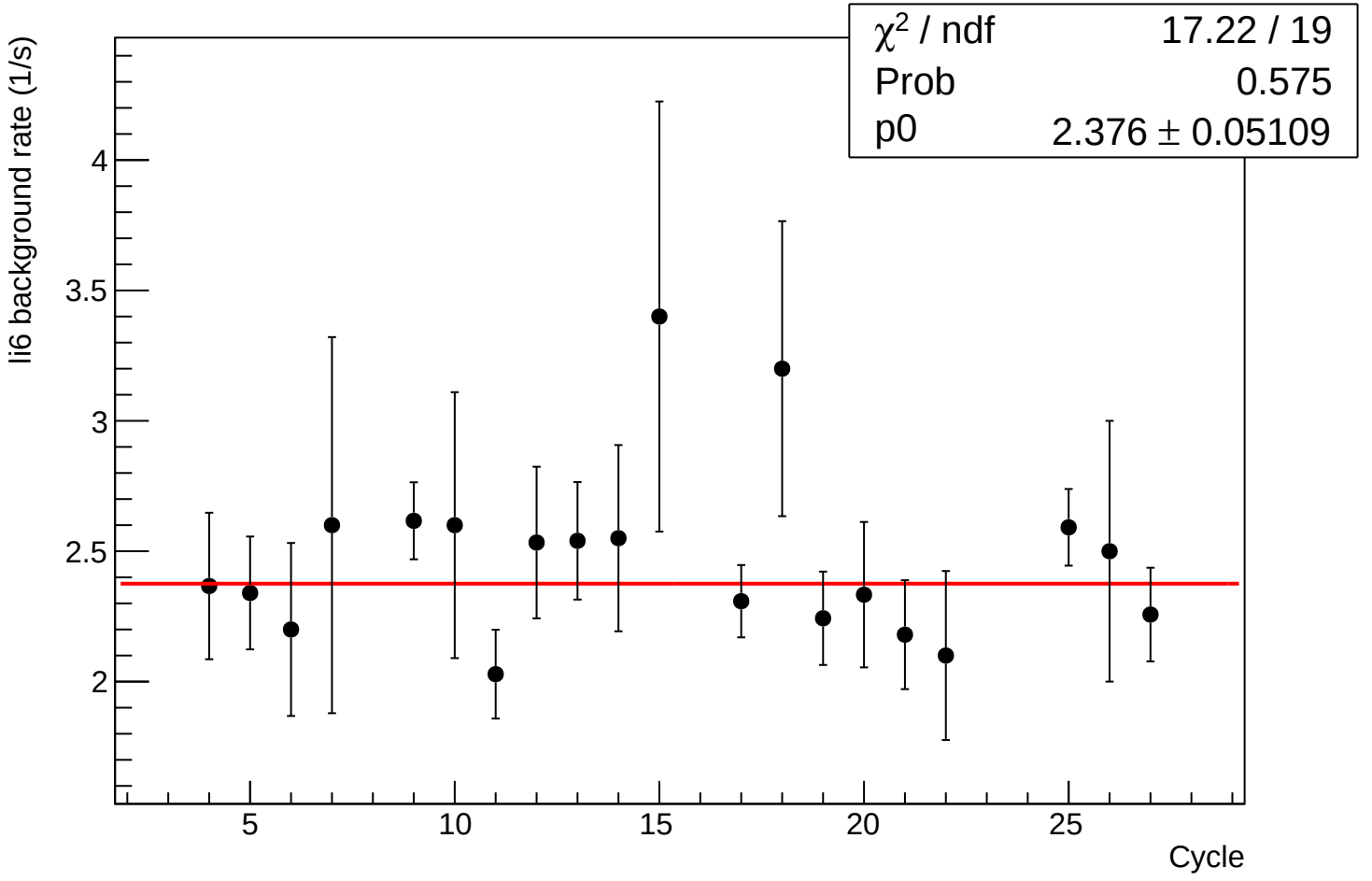
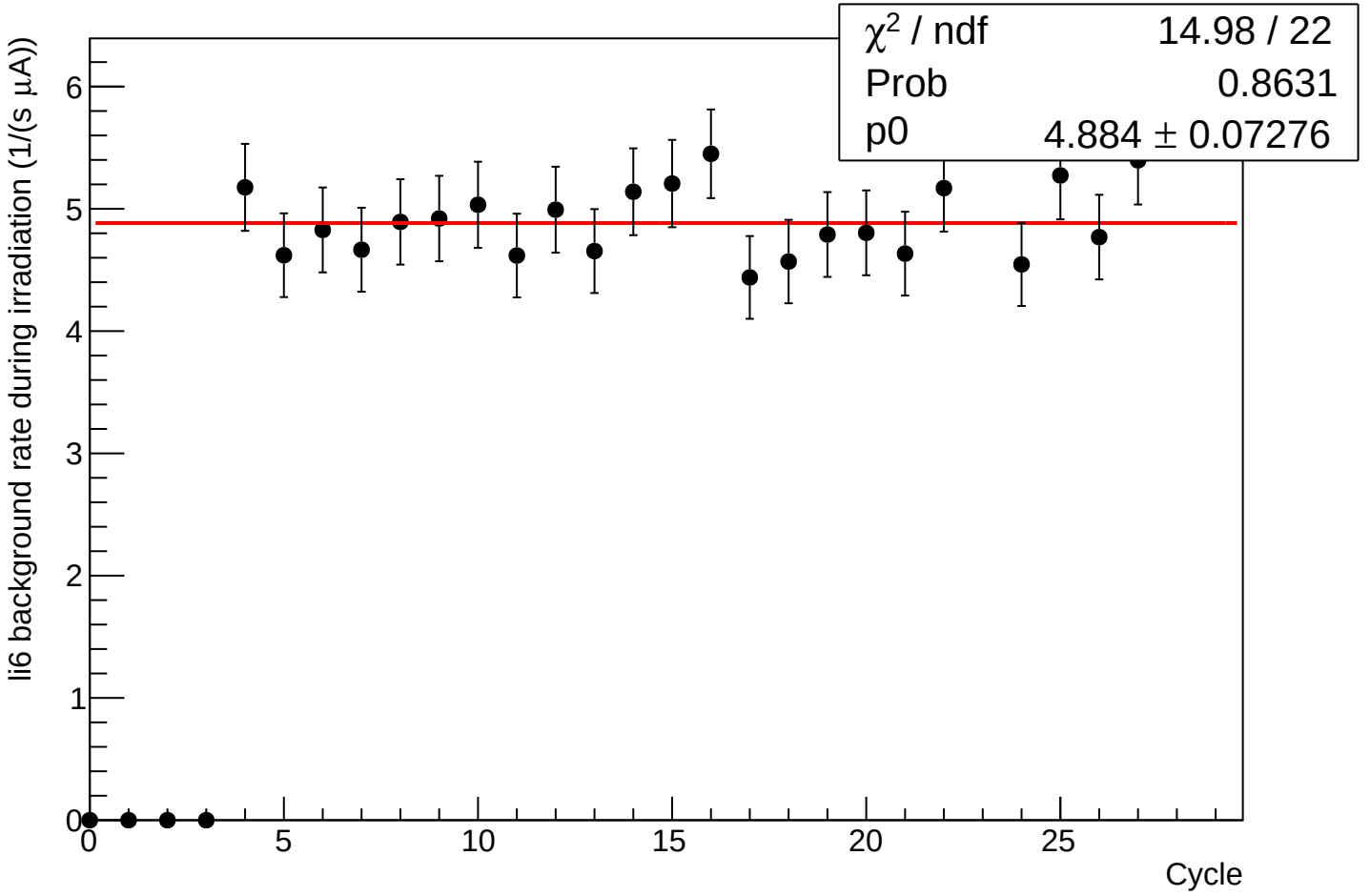

TCN18-015 (li6 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 47.21 / 21
Prob 0.0008811
p0 3.528e+04 ± 83.27
τ 31.73 ± 0.09824
UCN count (μA⁻¹)
10⁴
10³
10²
0
20
40
60
80
100
120
Storage time (s)

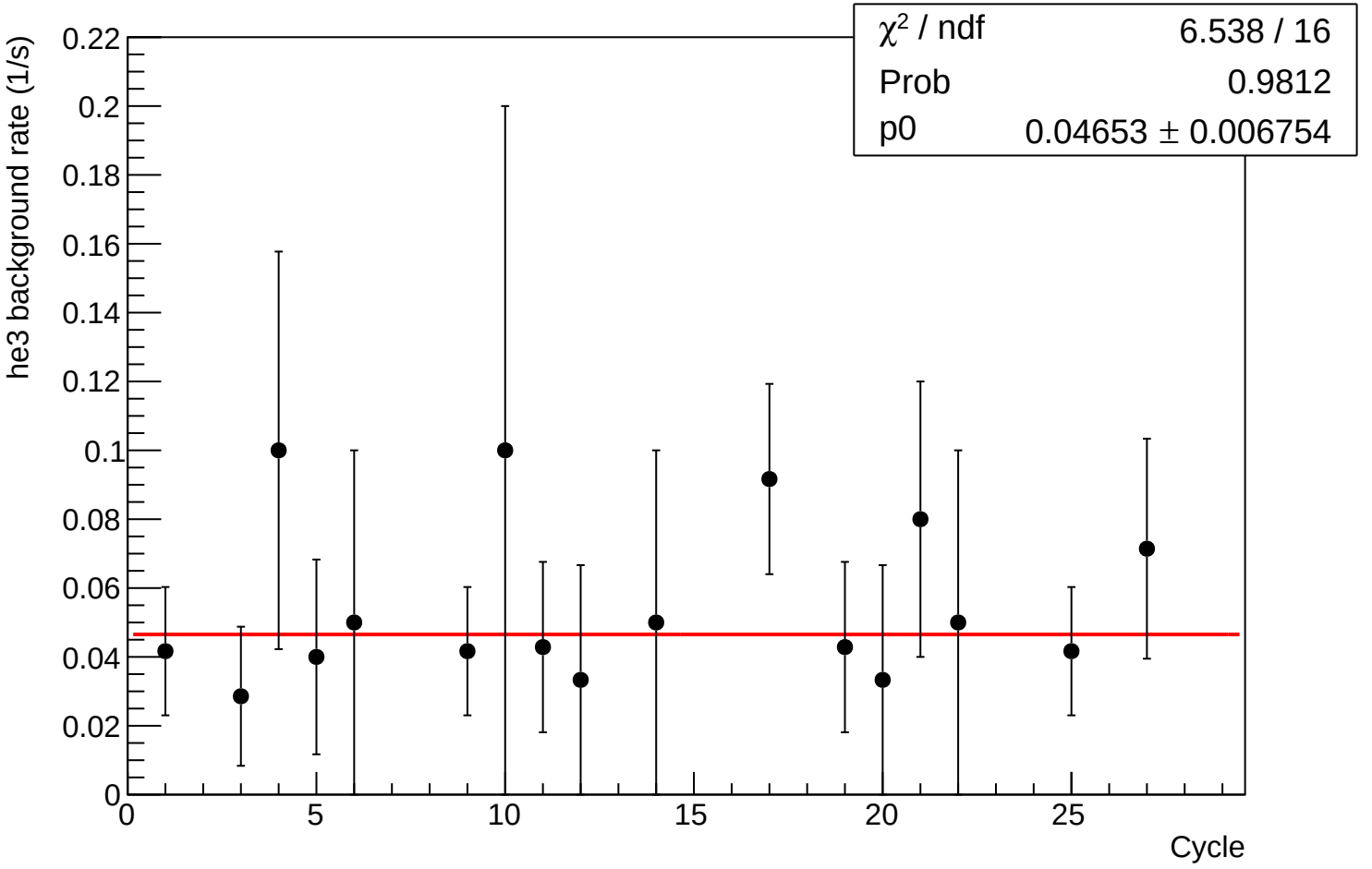

TCN18-015 (he3 detector, single exponential fit, background subtracted, normalized to beam current)
χ2 / ndf 31.24 / 25
Prob 0.181
p0 954.1 ± 11.14
τ 30.89 ± 0.4888
UCN count (μA-1)
10^3
10^2
10
0
20
40
60
80
100
120
Storage time (s)

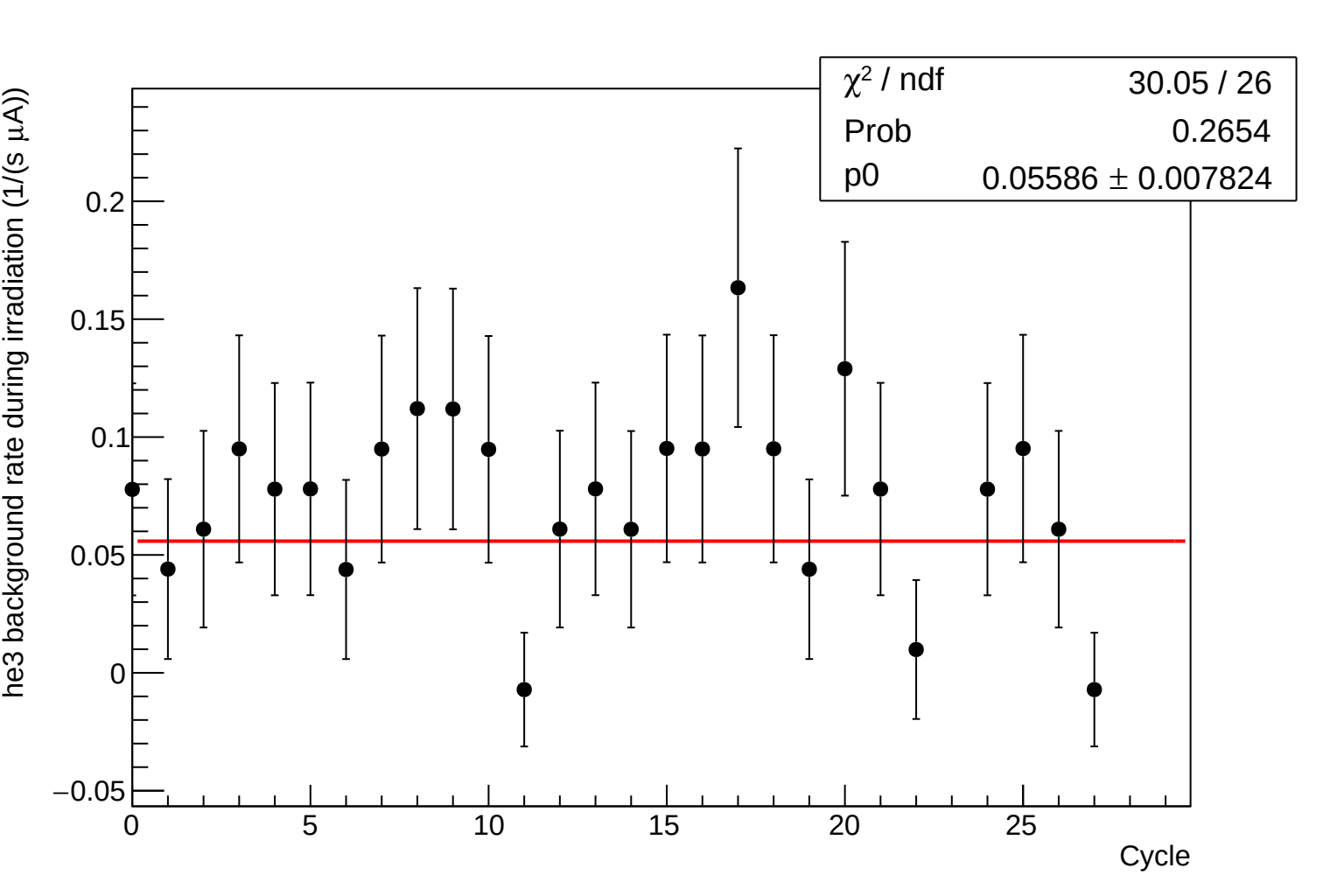

60.0s irradiation
UCN count (μA-1)
Storage time (s)
p0 = 1415 ± 11
p1 = 41.25 ± 0.31
p2 = 0.007384 ± 0
p3 = 0.3203 ± 0
p4 = 0.1117 ± 0
p5 = 38.29 ± 0.47
p6 = 1.321 ± 0
χ2/ndf = 0.951
N(T, ts, ti) = p0|p5 τ 1/(1 + p4 T7) (1 - exp(-ti p6/τ)) exp(-ts/τ)

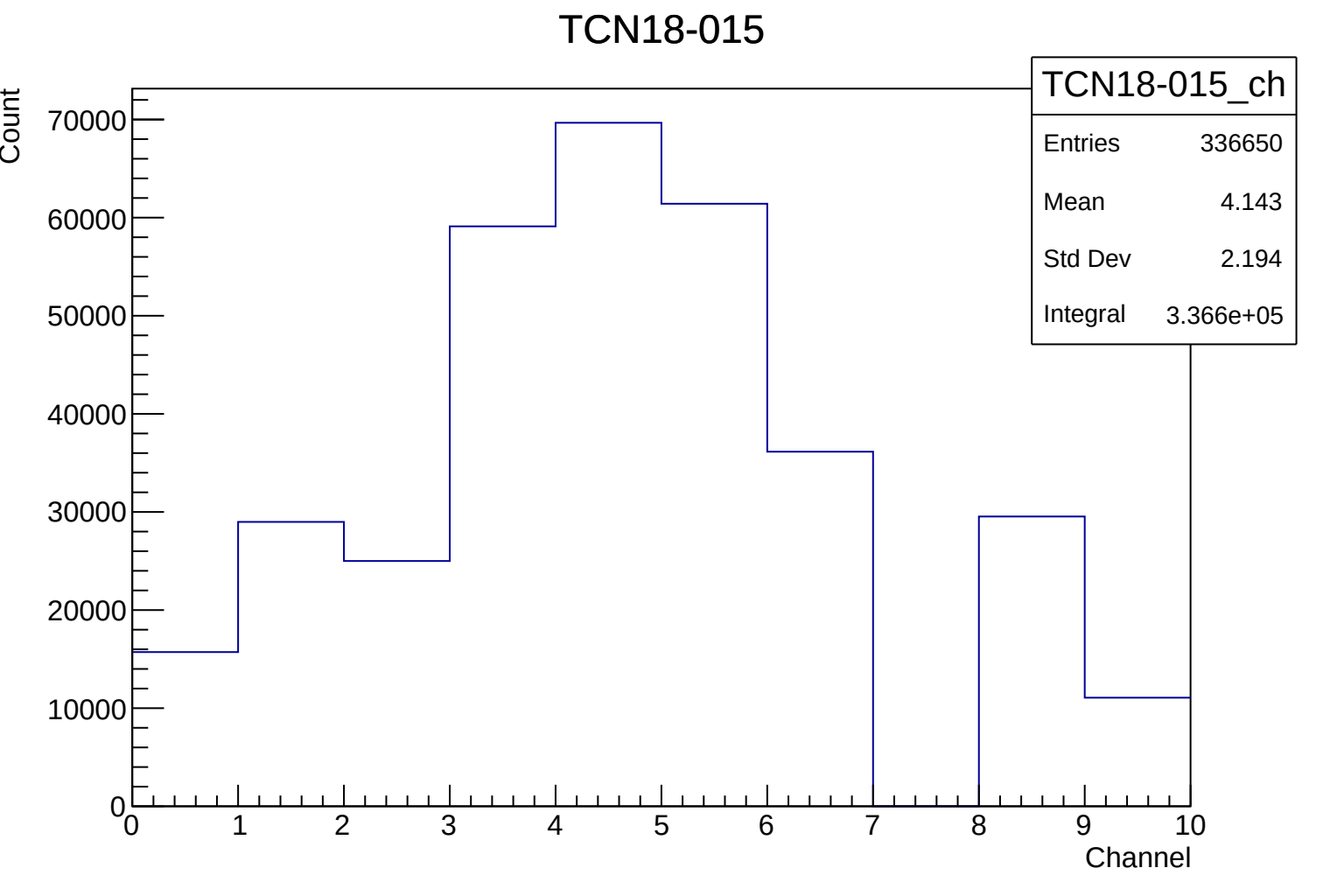

Graph
Vapor pressure (torr)
0.38
0.36
0.34
0.32
0.3
0.28
0.26
0.24
0.22
0.2
0.18
Temperature (K)
1.12
1.1
1.08
1.06
1.04
0
5
10
15
20
25
Cycle

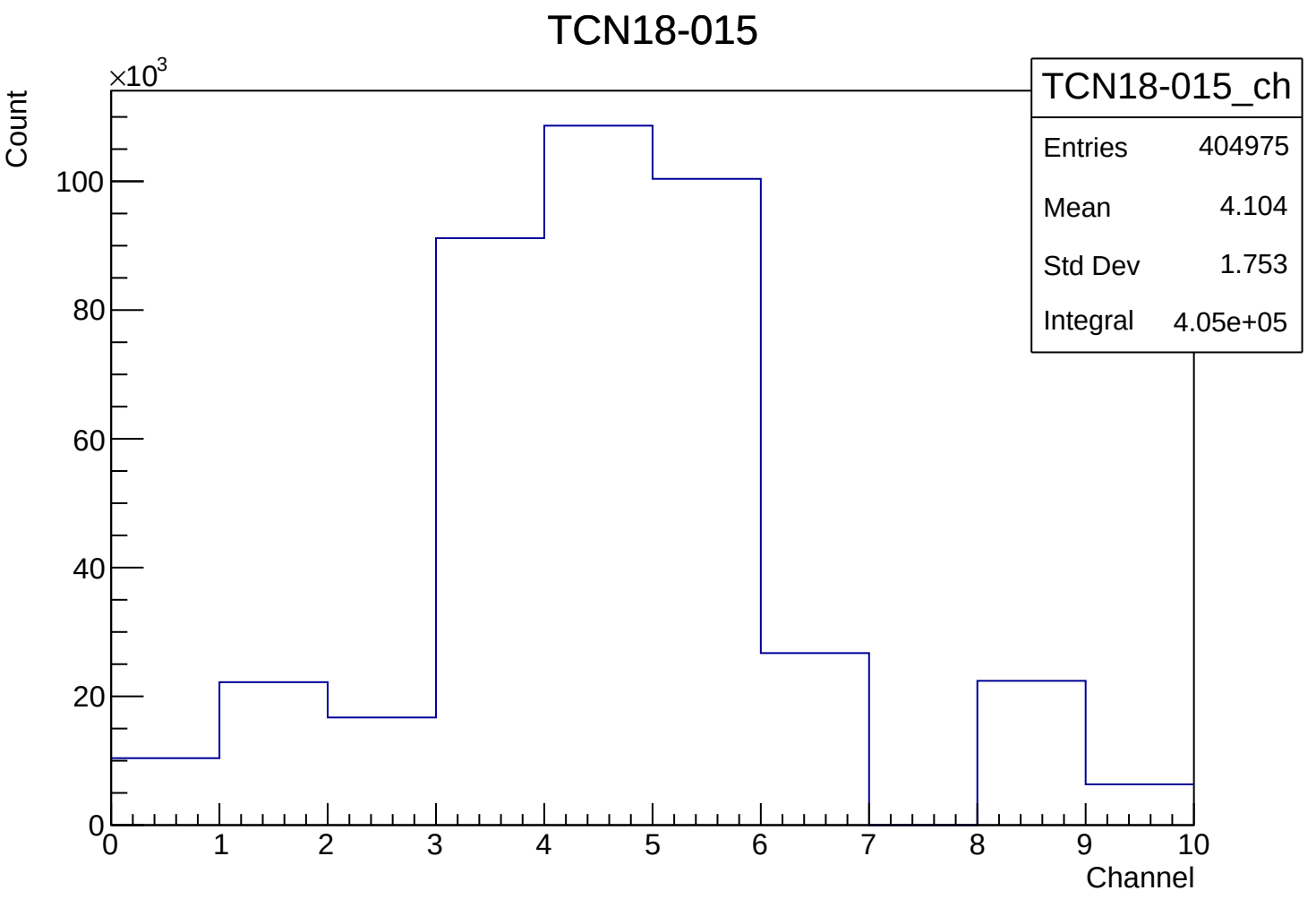

χ^2 / ndf 17.22 / 19
Prob 0.575
p0 2.376 ± 0.05109
li6 background rate (1/s)
4
3.5
3
2.5
2
5
10
15
20
25
Cycle

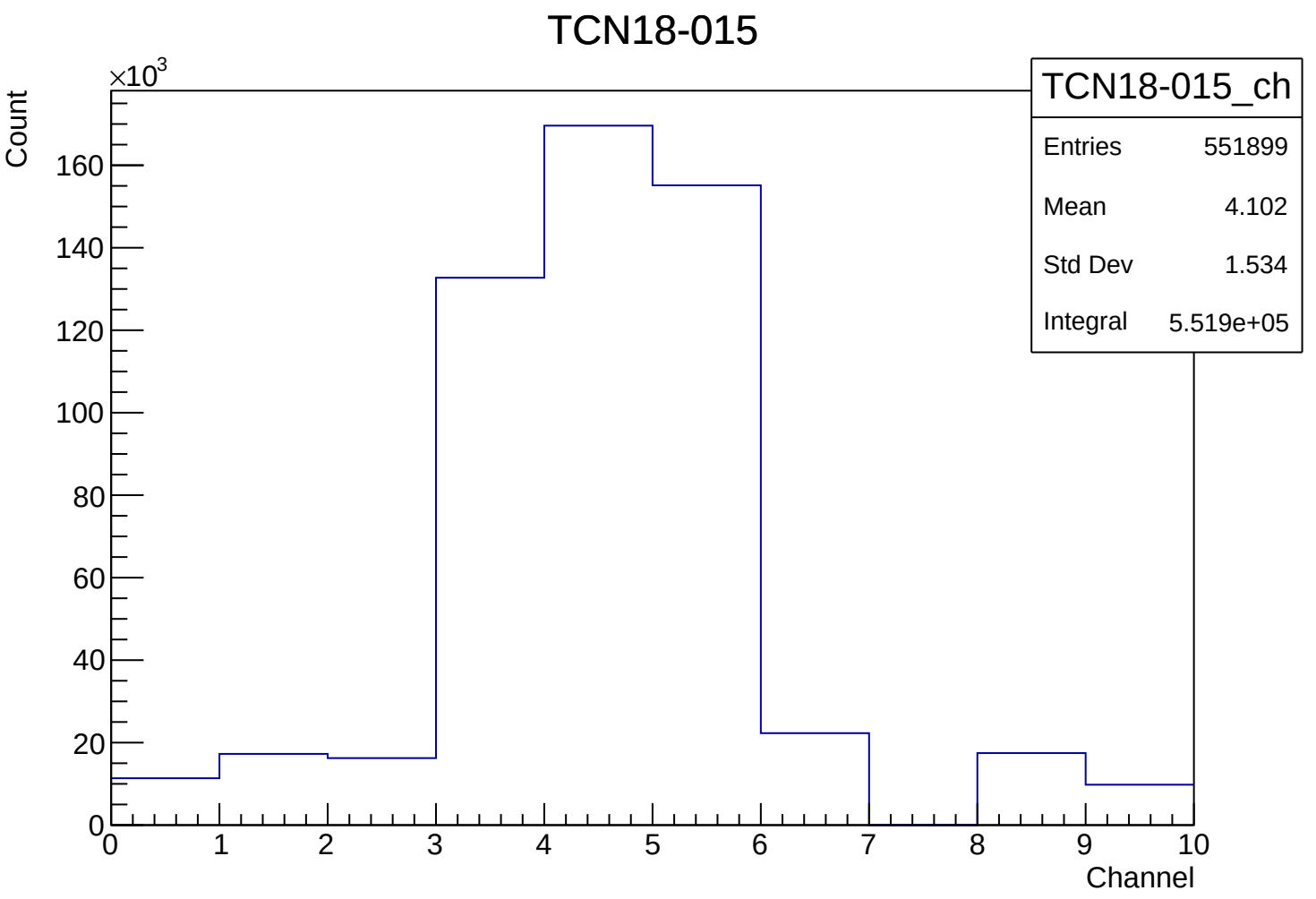

χ² / ndf 14.98 / 22
Prob 0.8631
p0 4.884 ± 0.07276
li6 background rate during irradiation (1/(s μA))
Cycle
0
1
2
3
4
5
6
0
5
10
15
20
25

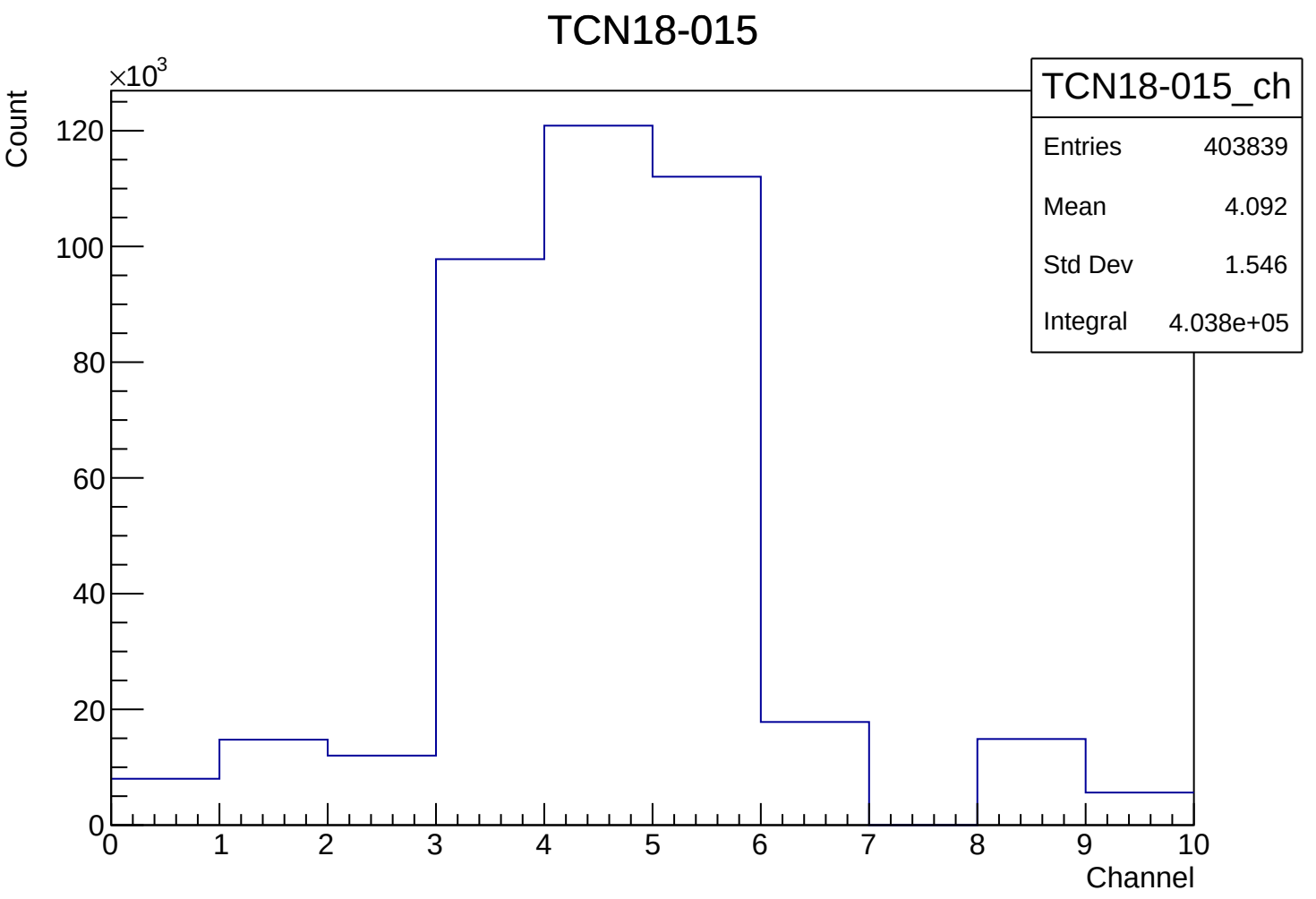

χ² / ndf 6.538 / 16
Prob 0.9812
p0 0.04653 ± 0.006754
he3 background rate (1/s)
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0
5
10
15
20
25
Cycle

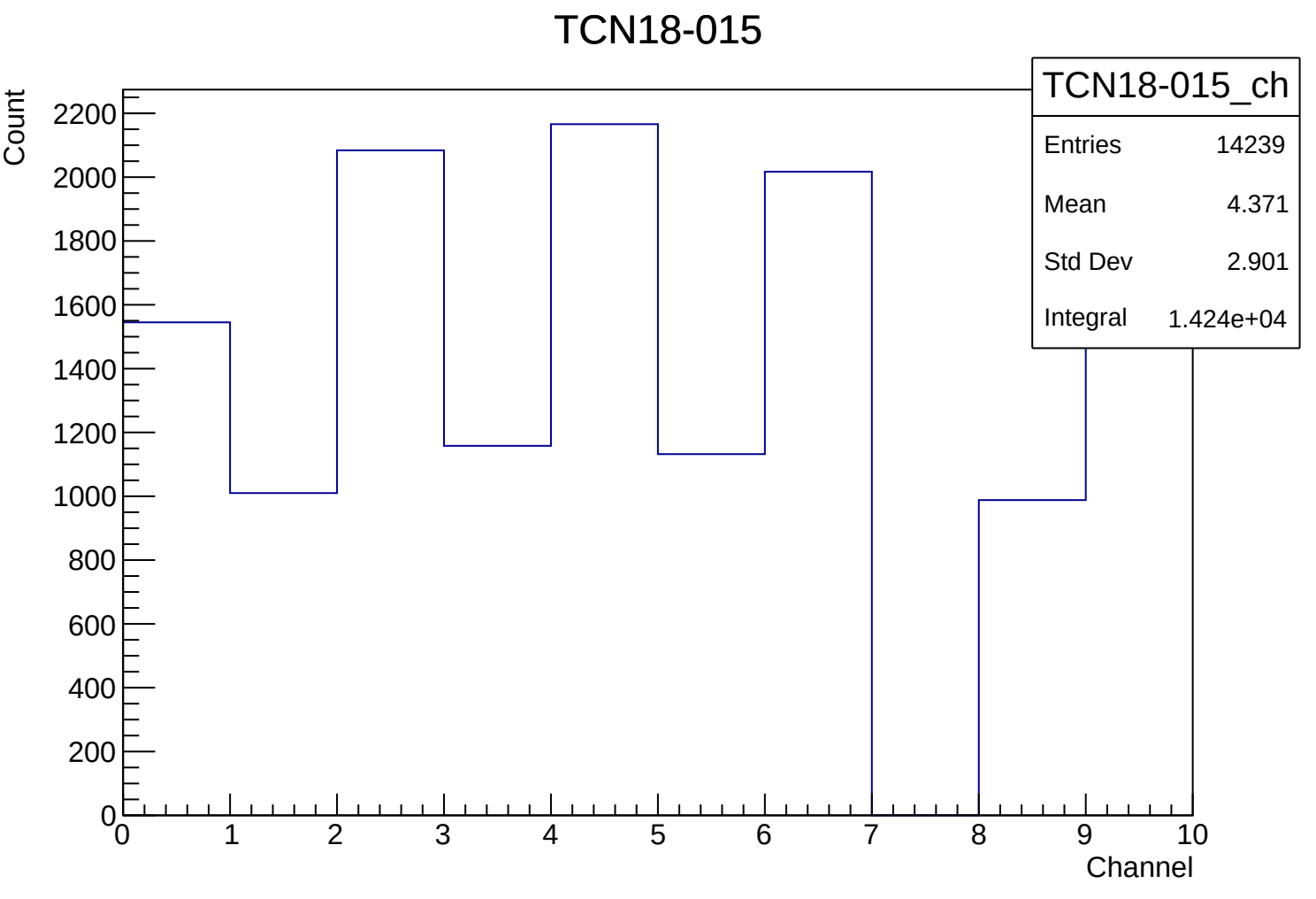

χ² / ndf 30.05 / 26
Prob 0.2654
p0 0.05586 ± 0.007824
he3 background rate during irradiation (1/(s μA))
0.2
0.15
0.1
0.05
0
−0.05
0
5
10
15
20
25
Cycle

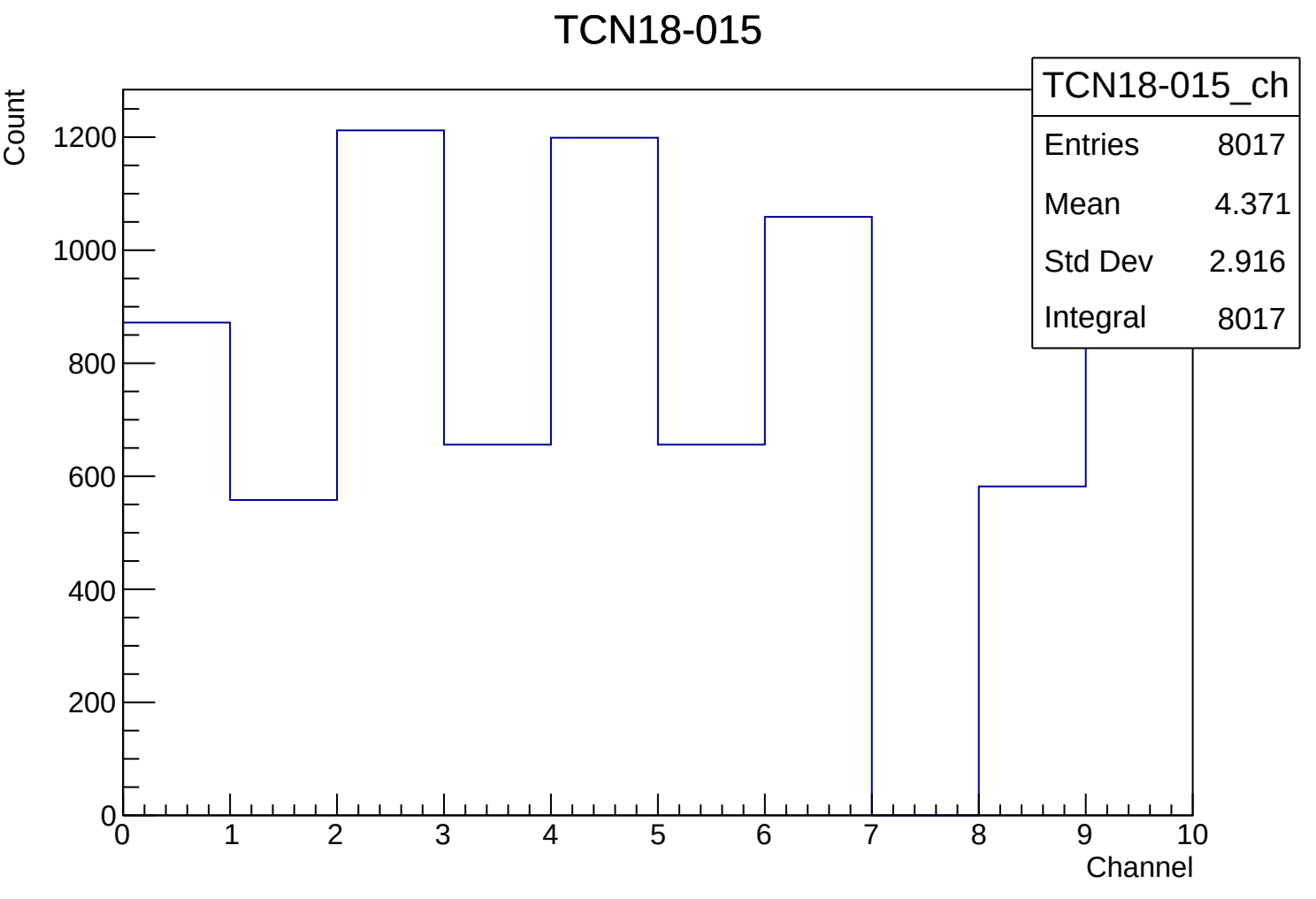

TCN18-015
TCN18-015_ch
Entries 336650
Mean 4.143
Std Dev 2.194
Integral 3.366e+05
Count
70000
60000
50000
40000
30000
20000
10000
0
0 1 2 3 4 5 6 7 8 9 10
Channel

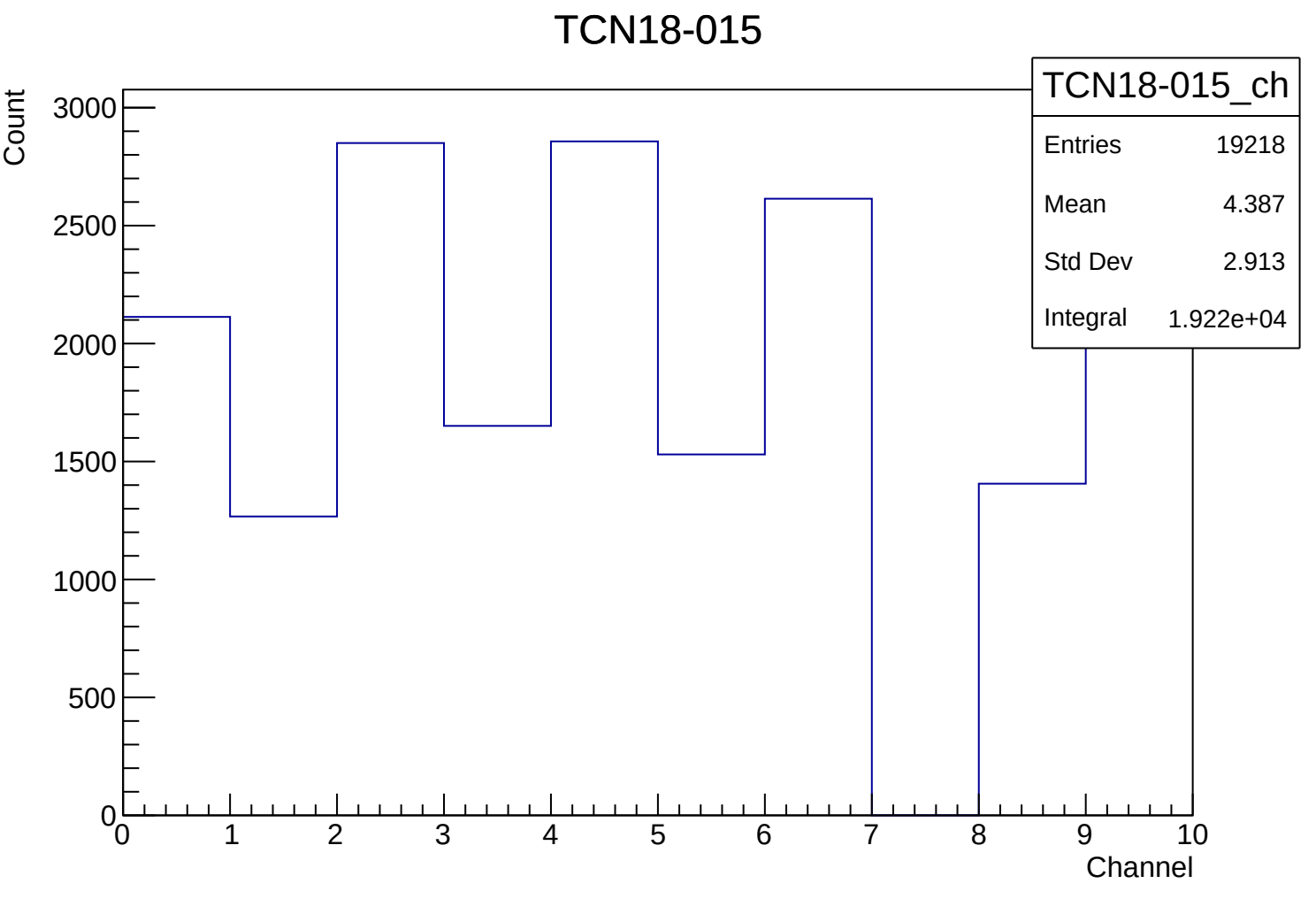

TCN18-015
Count
×10^3
100
80
60
40
20
0
0
1
2
3
4
5
6
7
8
9
10
Channel
TCN18-015_ch
Entries 404975
Mean 4.104
Std Dev 1.753
Integral 4.05e+05

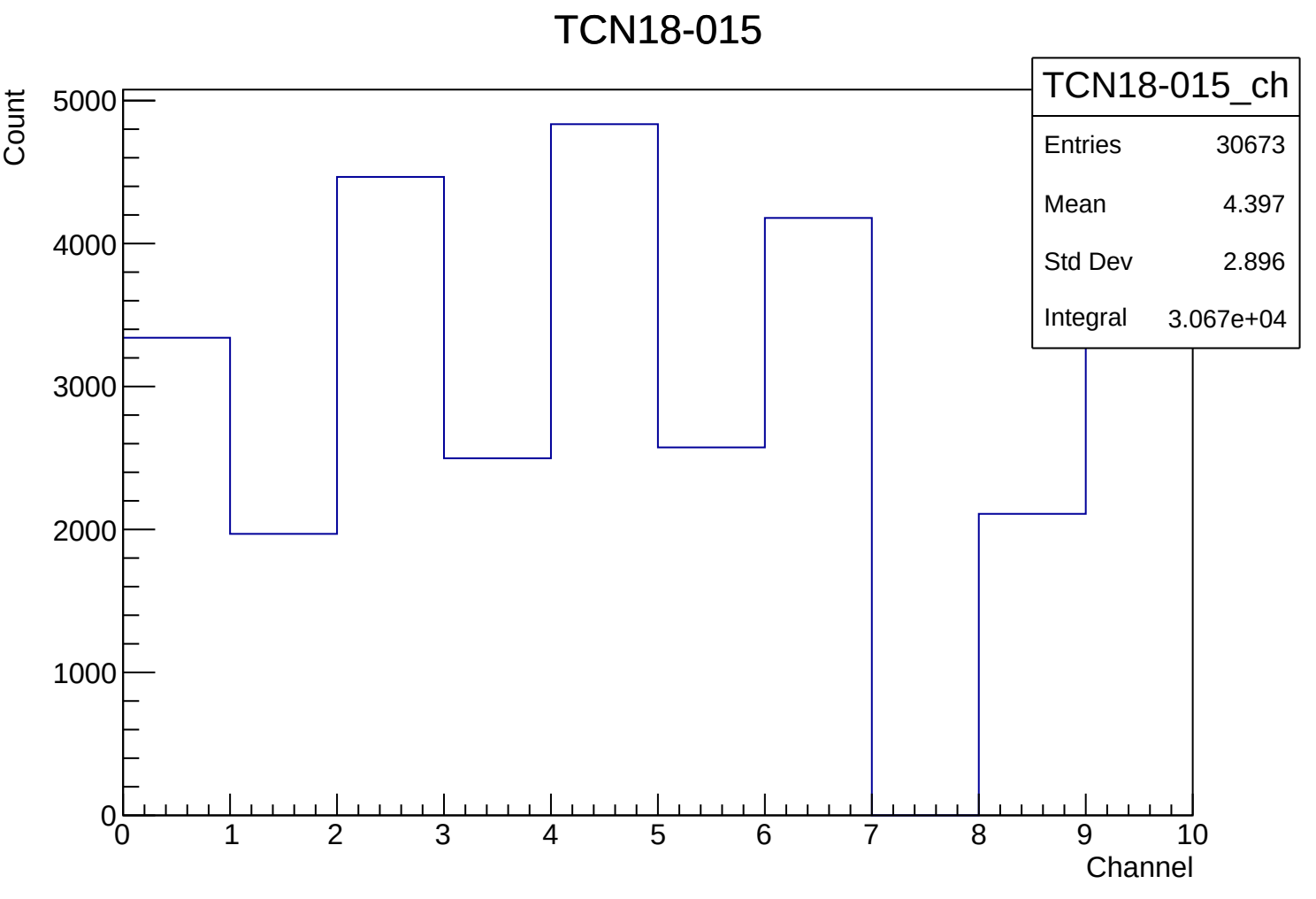

TCN18-015
×10^3
Count
160
140
120
100
80
60
40
20
0
0
1
2
3
4
5
6
7
8
9
10
Channel
TCN18-015_ch
Entries 551899
Mean 4.102
Std Dev 1.534
Integral 5.519e+05

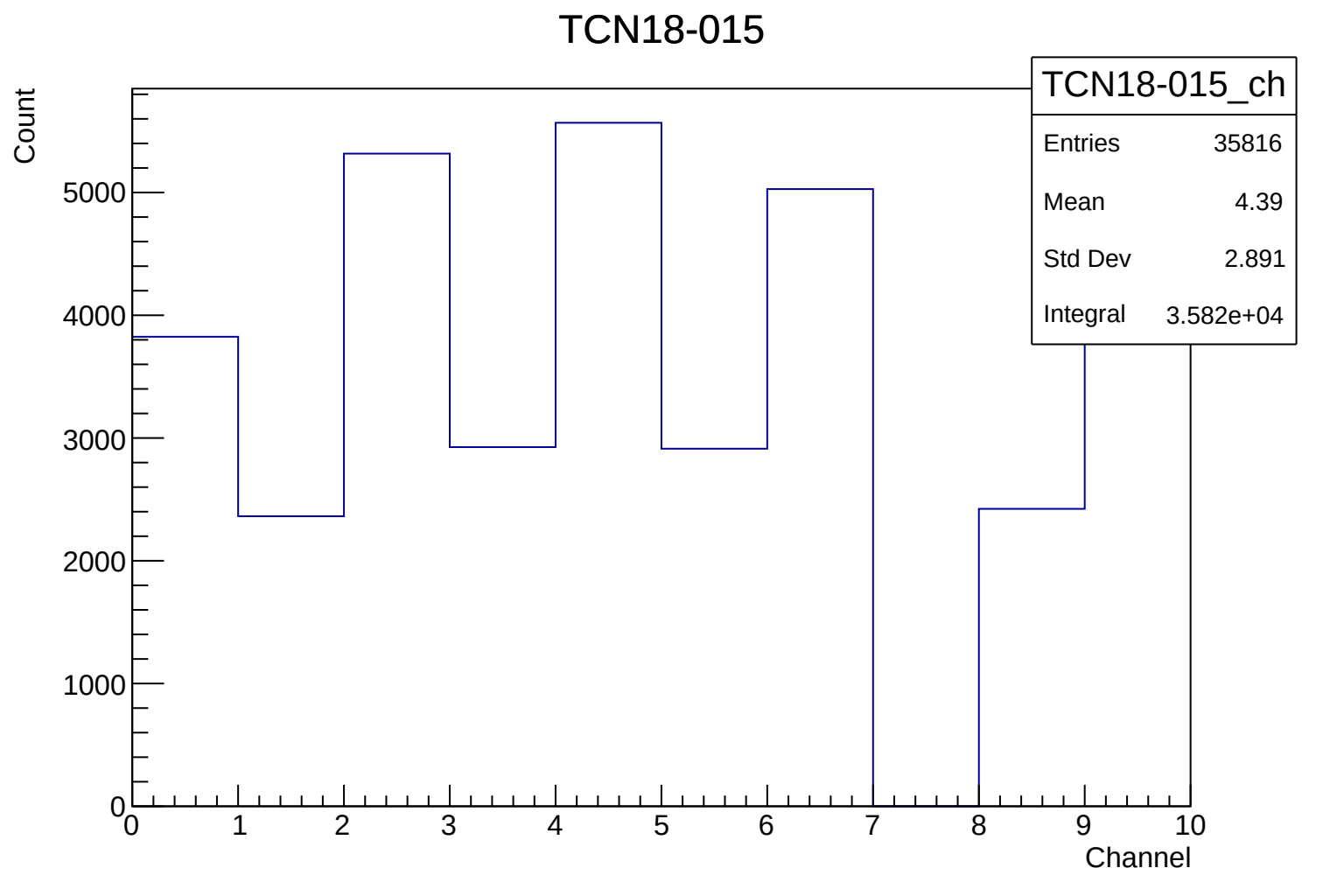

TCN18-015
×10^3
Count
120
100
80
60
40
20
0
0
1
2
3
4
5
6
7
8
9
10
Channel
TCN18-015_ch
Entries 403839
Mean 4.092
Std Dev 1.546
Integral 4.038e+05

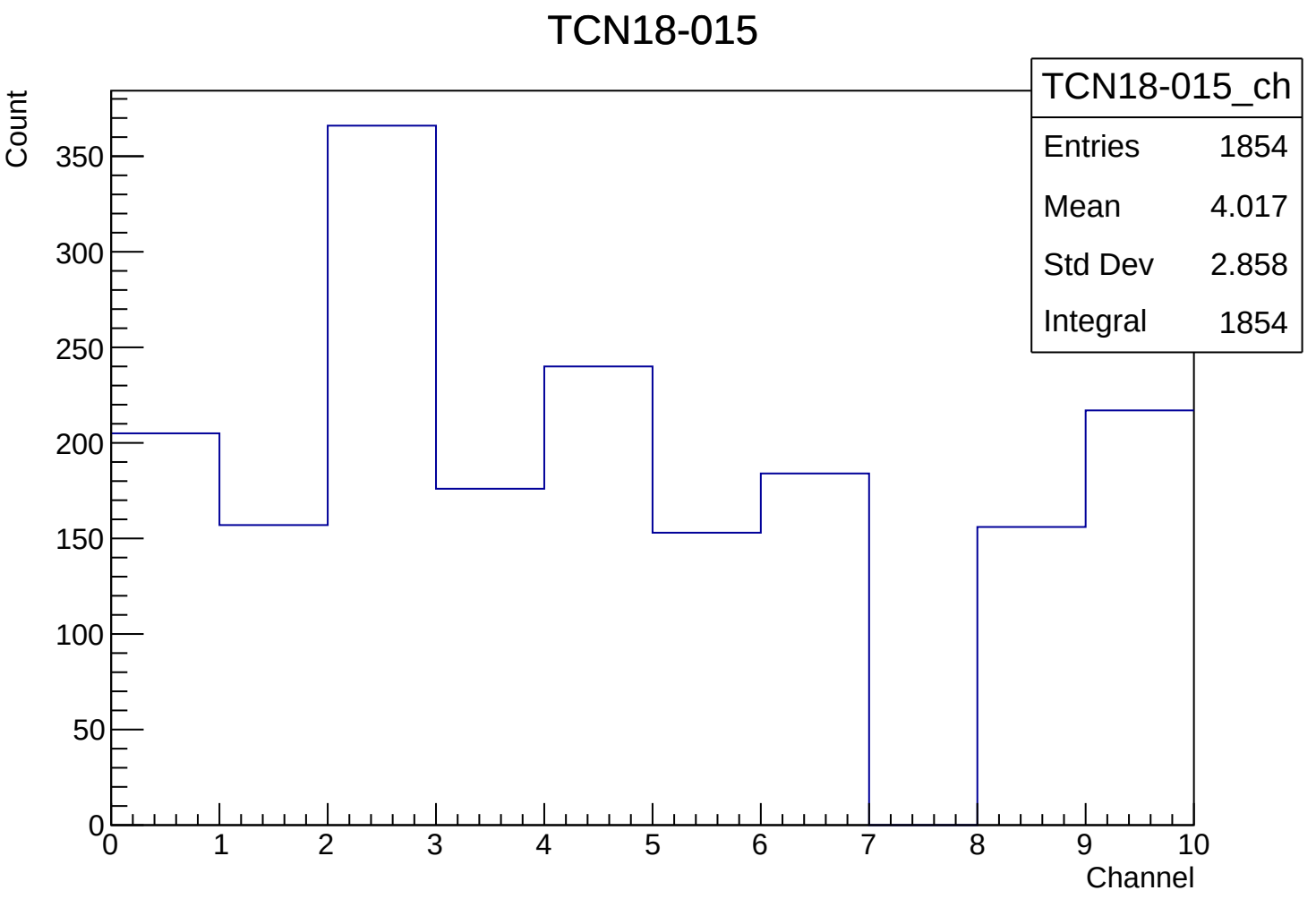

TCN18-015
TCN18-015_ch
Entries 14239
Mean 4.371
Std Dev 2.901
Integral 1.424e+04
Count
Channel
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
0
1
2
3
4
5
6
7
8
9
10

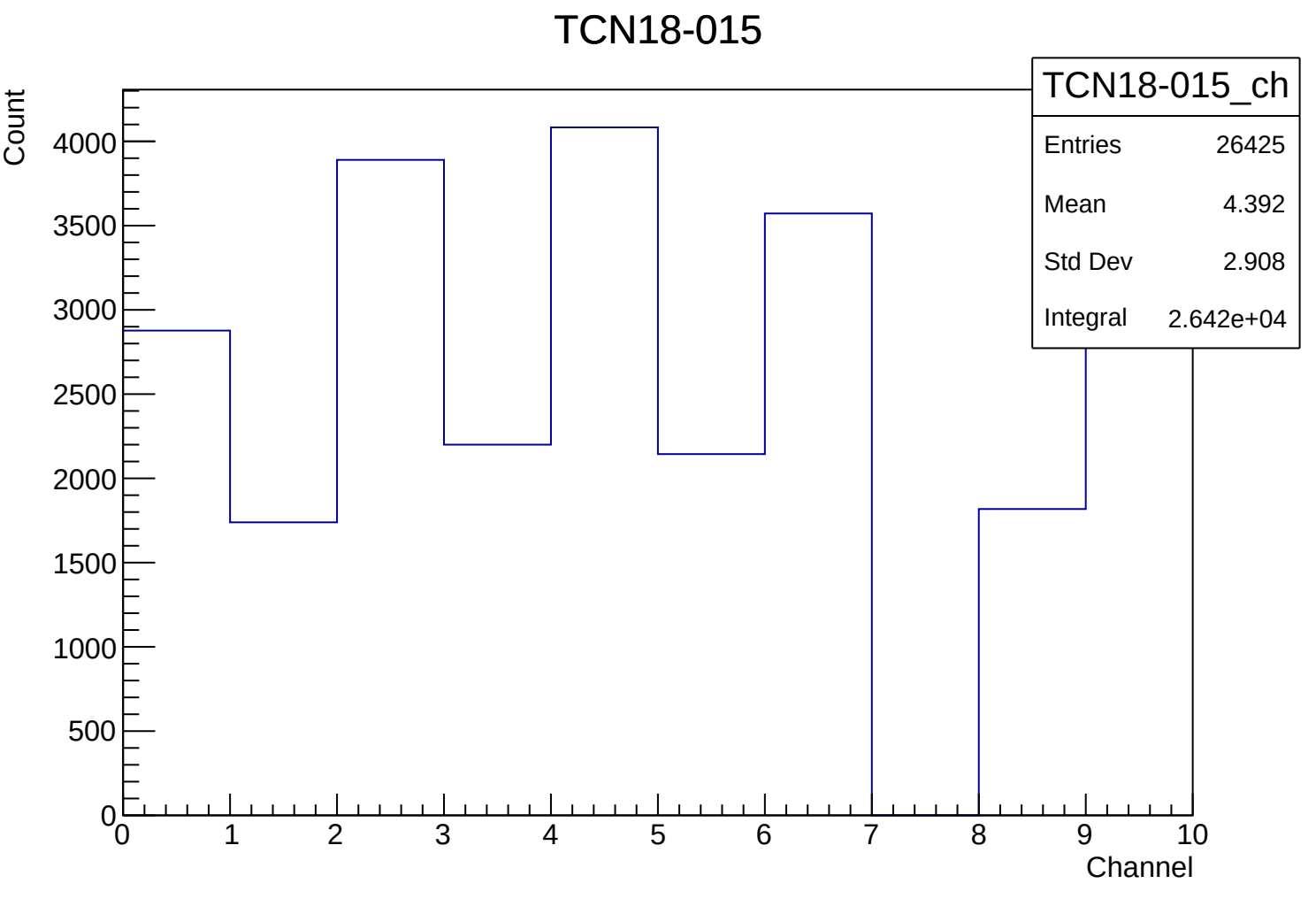

TCN18-015
TCN18-015_ch
Entries 8017
Mean 4.371
Std Dev 2.916
Integral 8017
Count
0
200
400
600
800
1000
1200
0
1
2
3
4
5
6
7
8
9
10
Channel

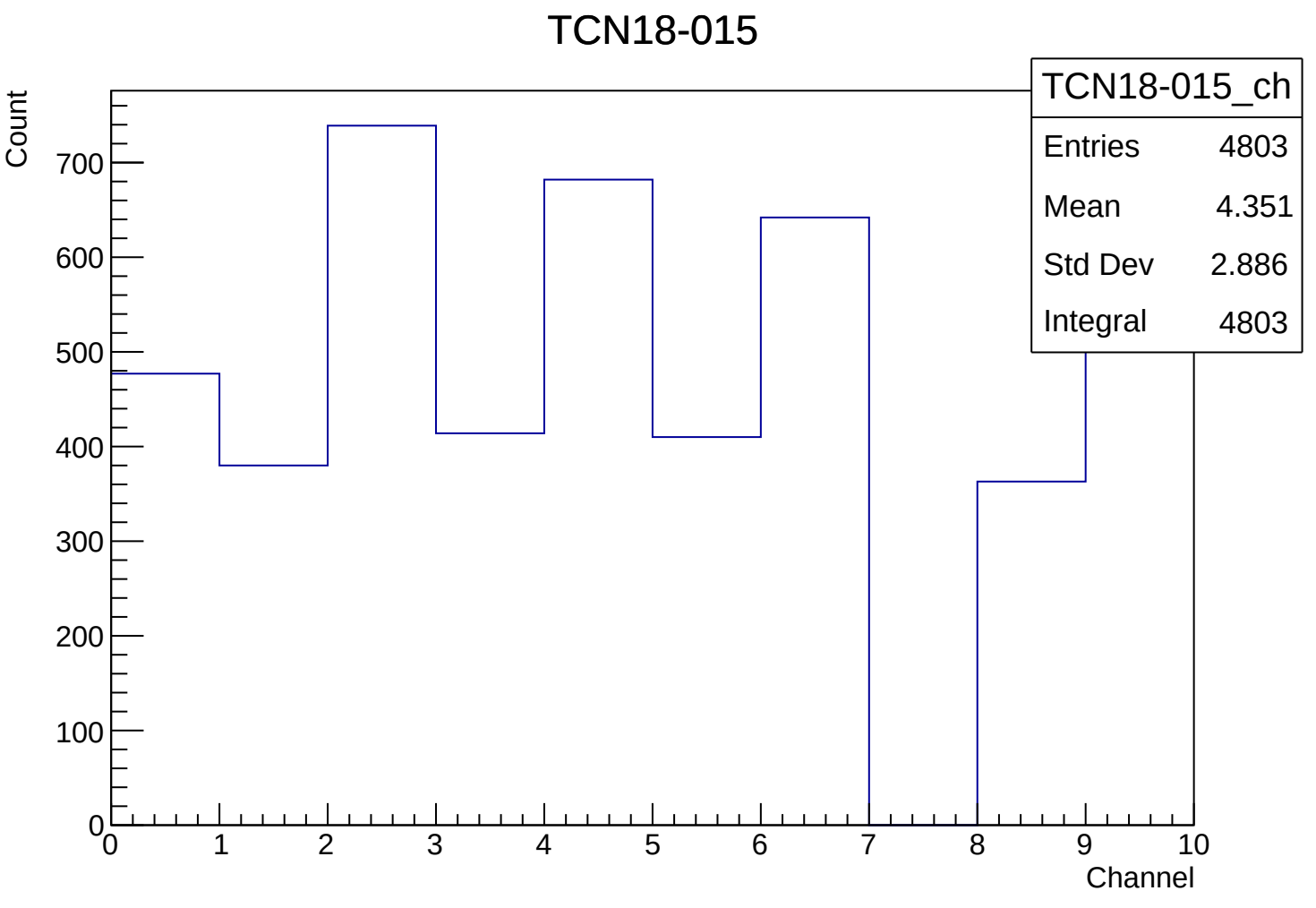

TCN18-015
TCN18-015_ch
Entries 19218
Mean 4.387
Std Dev 2.913
Integral 1.922e+04
Count
3000
2500
2000
1500
1000
500
0
0 1 2 3 4 5 6 7 8 9 10
Channel

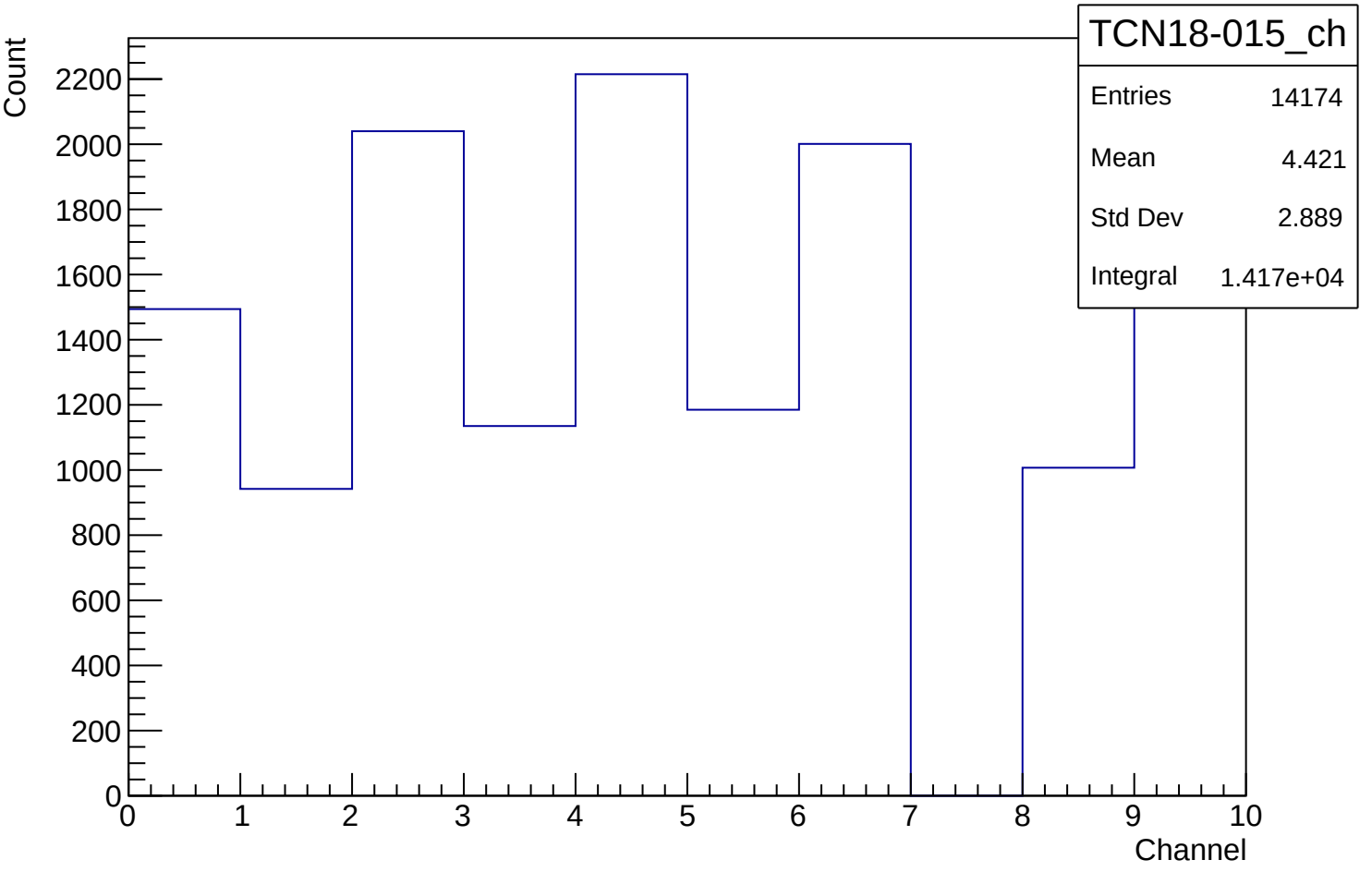

TCN18-015
TCN18-015_ch
Entries 30673
Mean 4.397
Std Dev 2.896
Integral 3.067e+04
Count
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel

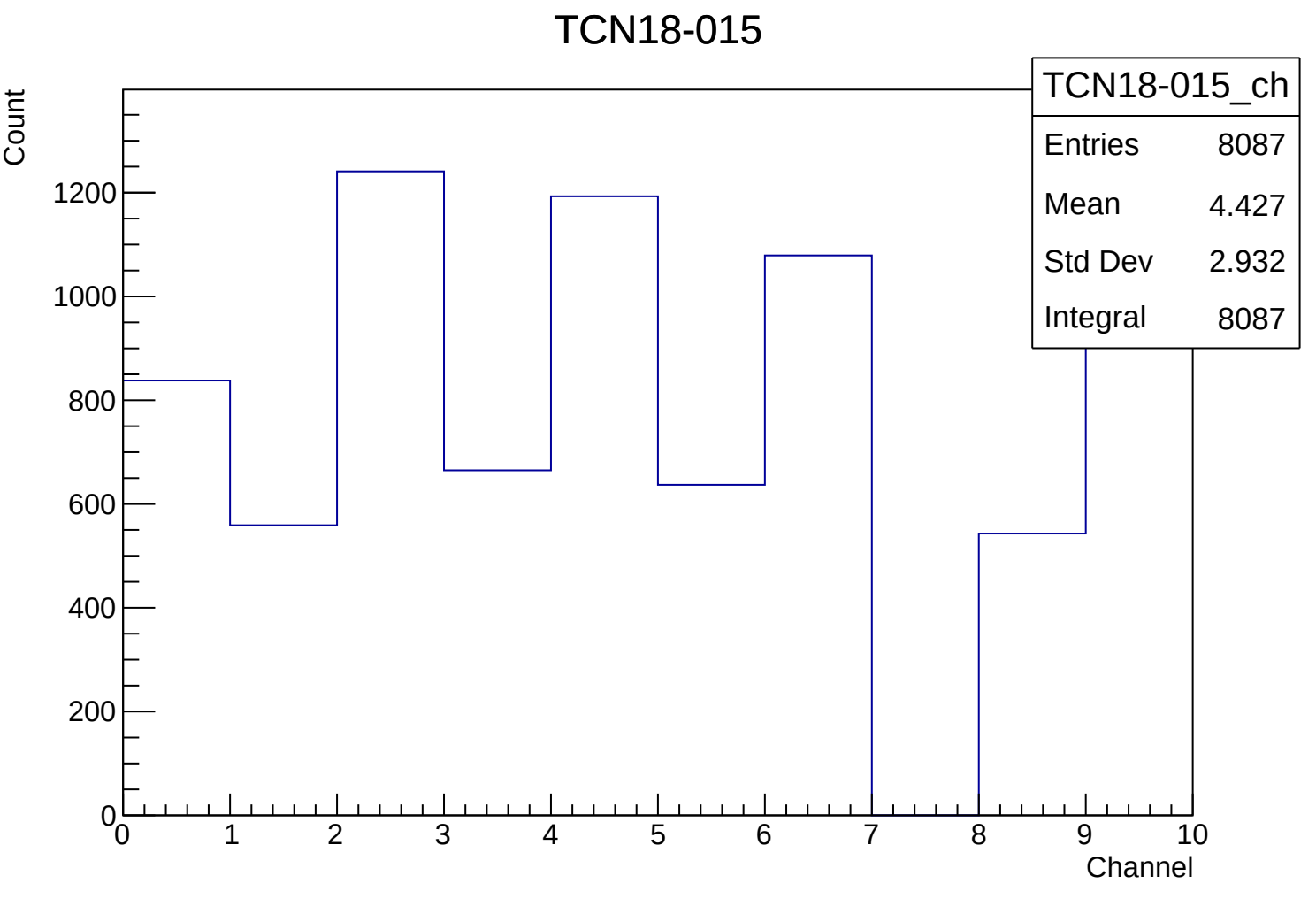

TCN18-015
TCN18-015_ch
Entries 35816
Mean 4.39
Std Dev 2.891
Integral 3.582e+04
Count
0
1000
2000
3000
4000
5000
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 1854
Mean 4.017
Std Dev 2.858
Integral 1854
Count
0
50
100
150
200
250
300
350
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 26425
Mean 4.392
Std Dev 2.908
Integral 2.642e+04
Count
Channel
0
500
1000
1500
2000
2500
3000
3500
4000
0
1
2
3
4
5
6
7
8
9
10


TCN18-015
TCN18-015_ch
Entries 4803
Mean 4.351
Std Dev 2.886
Integral 4803
Count
0
100
200
300
400
500
600
700
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 14174
Mean 4.421
Std Dev 2.889
Integral 1.417e+04
Count
Channel
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
0
1
2
3
4
5
6
7
8
9
10


TCN18-015
TCN18-015_ch
Entries 8087
Mean 4.427
Std Dev 2.932
Integral 8087
Count
0
200
400
600
800
1000
1200
0
1
2
3
4
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6
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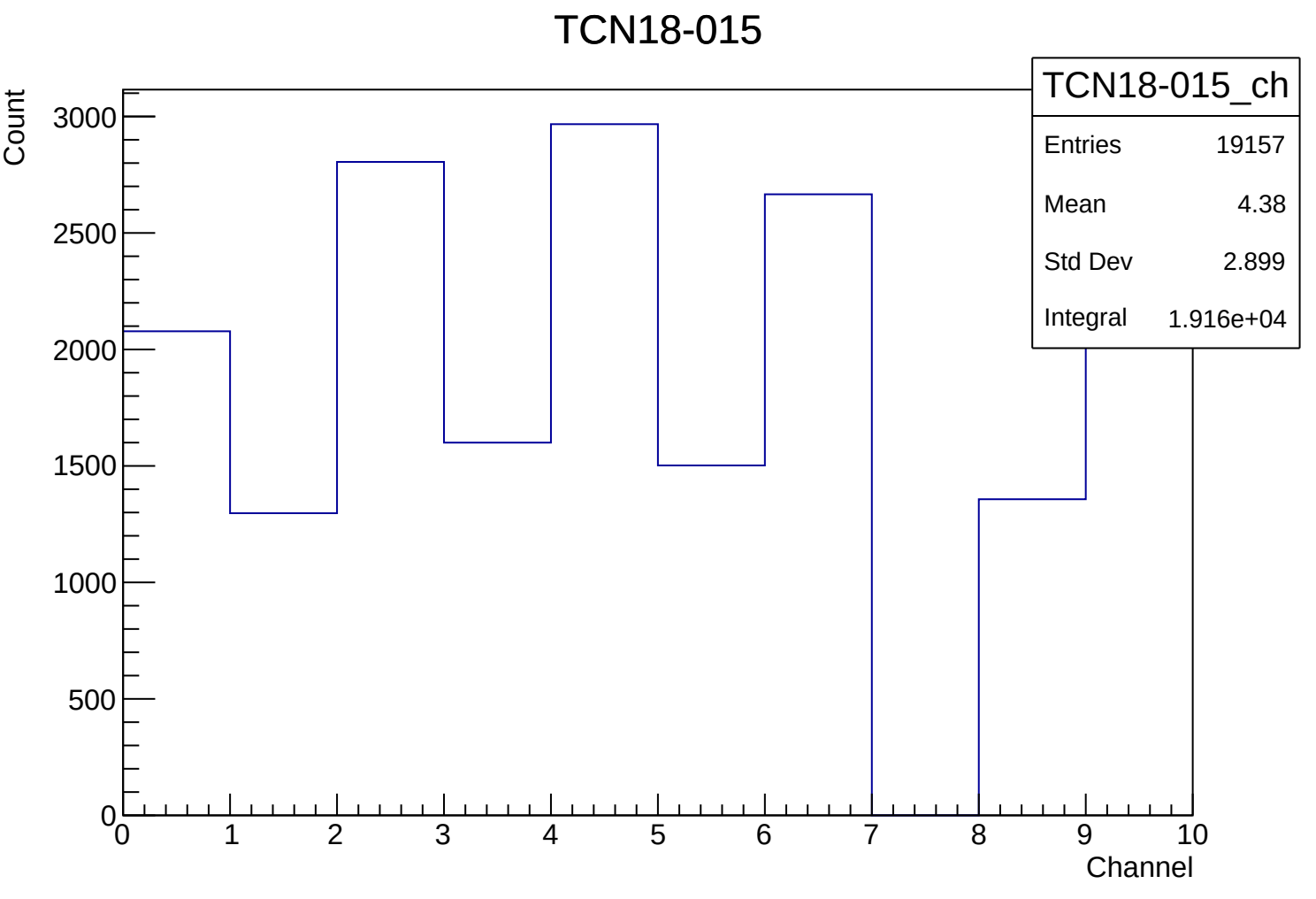
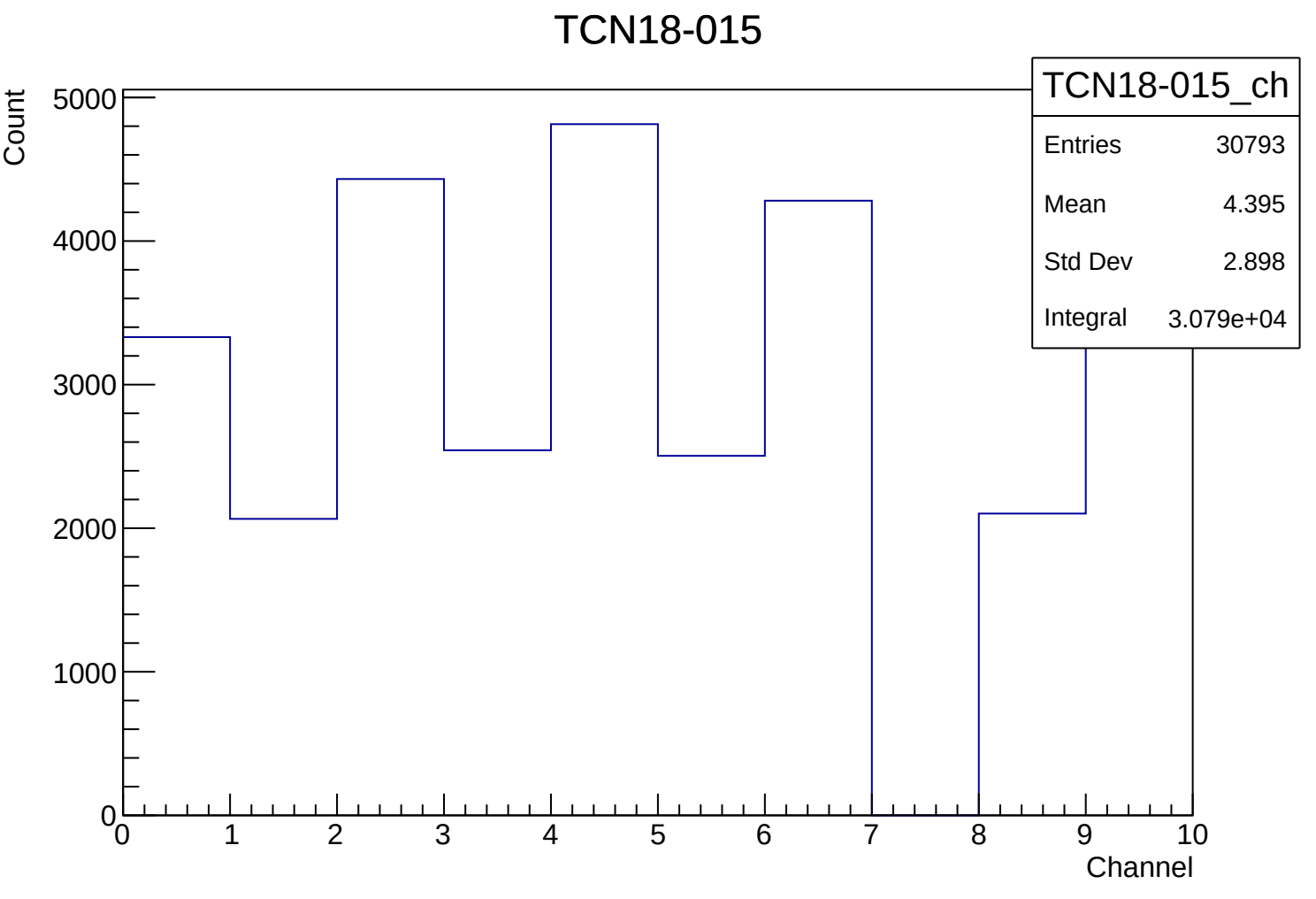
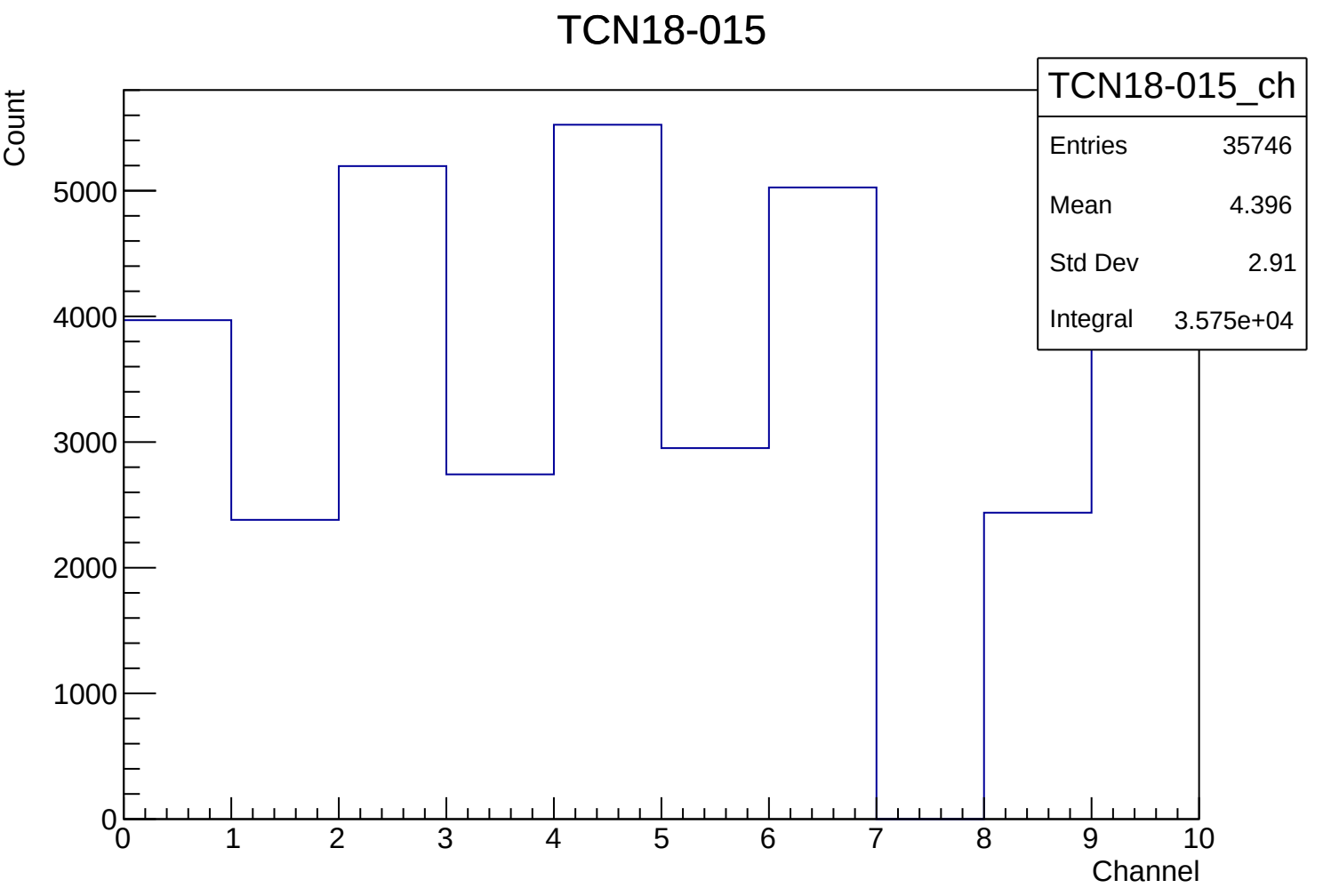
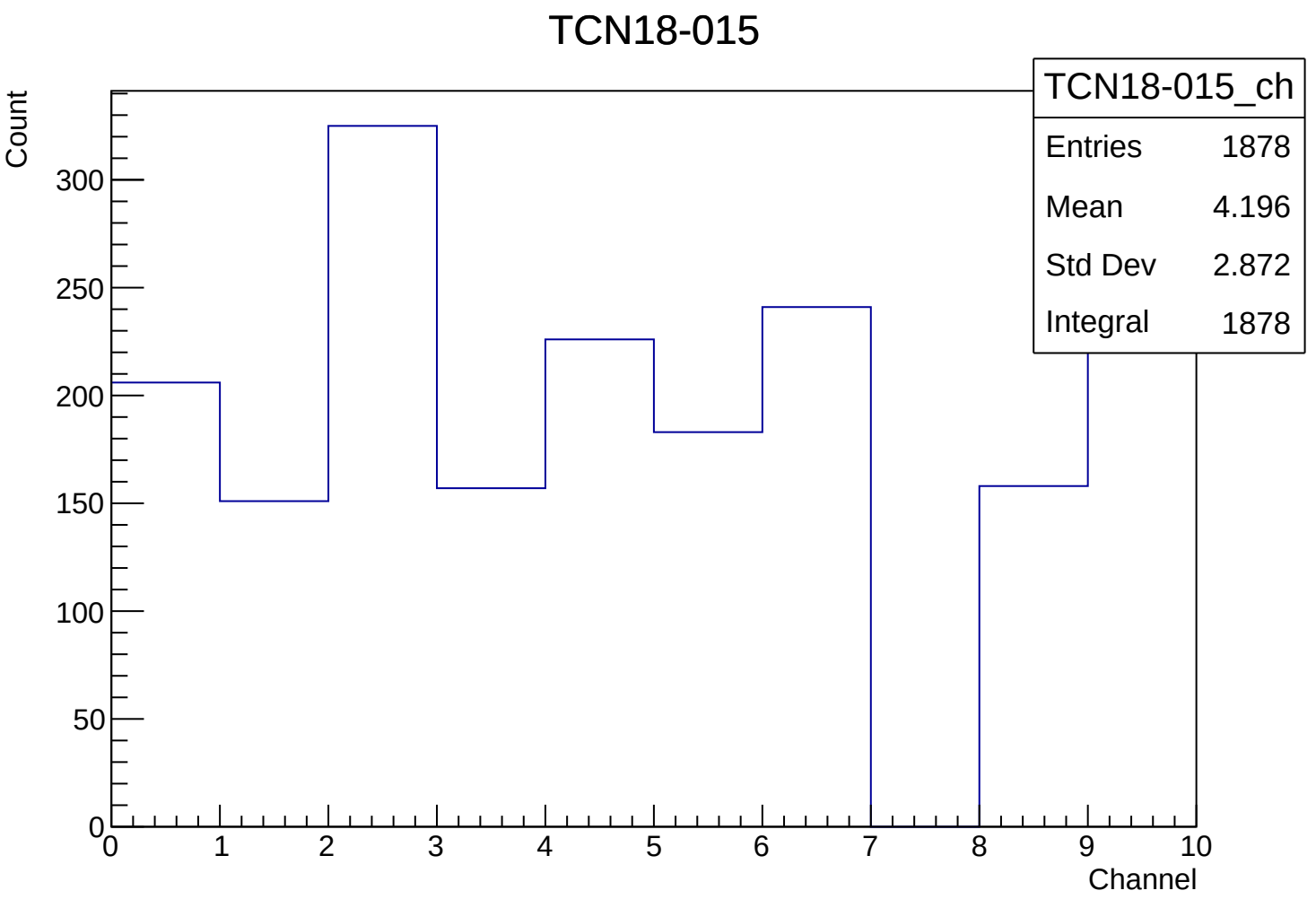
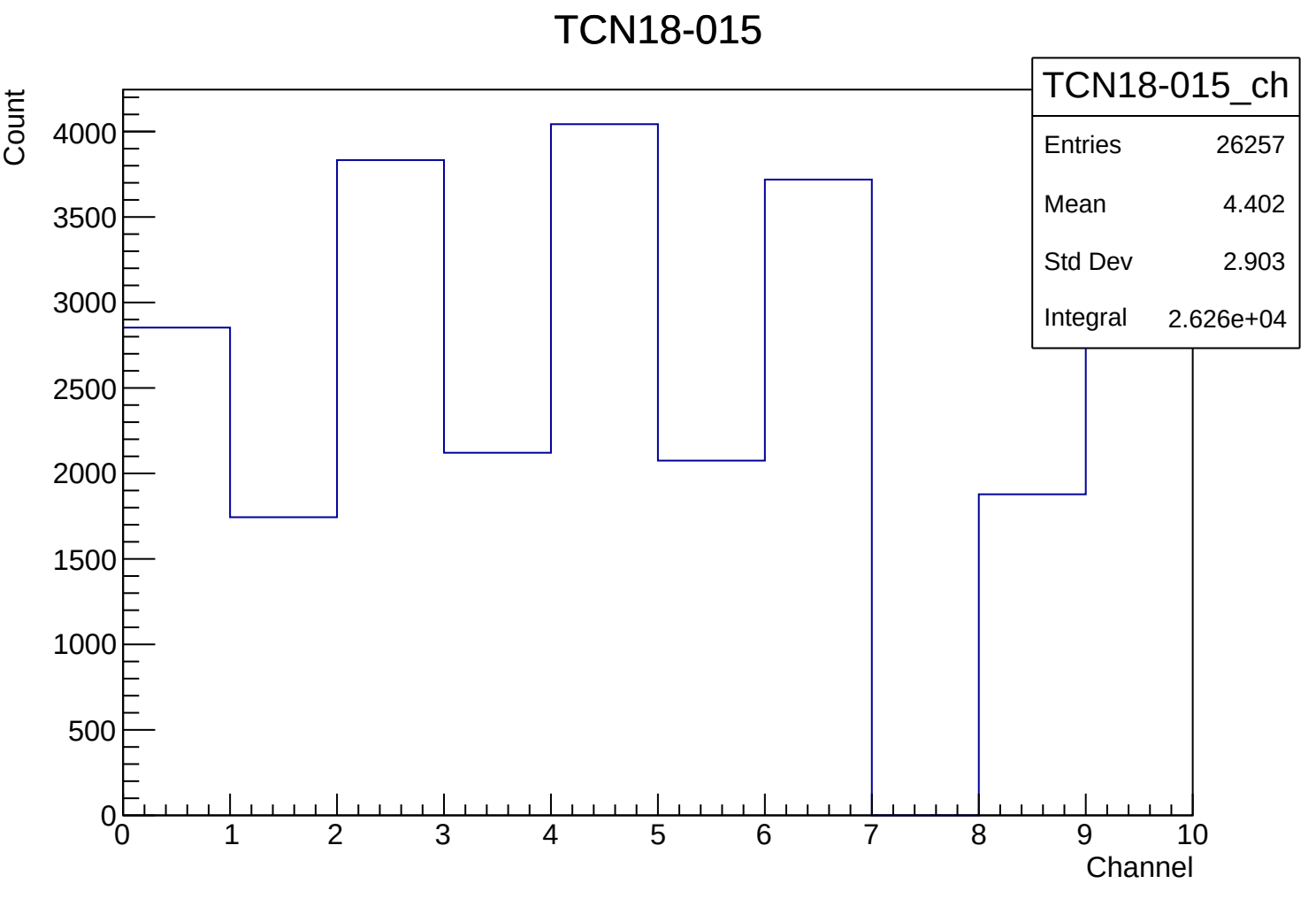
8
9
10
Channel

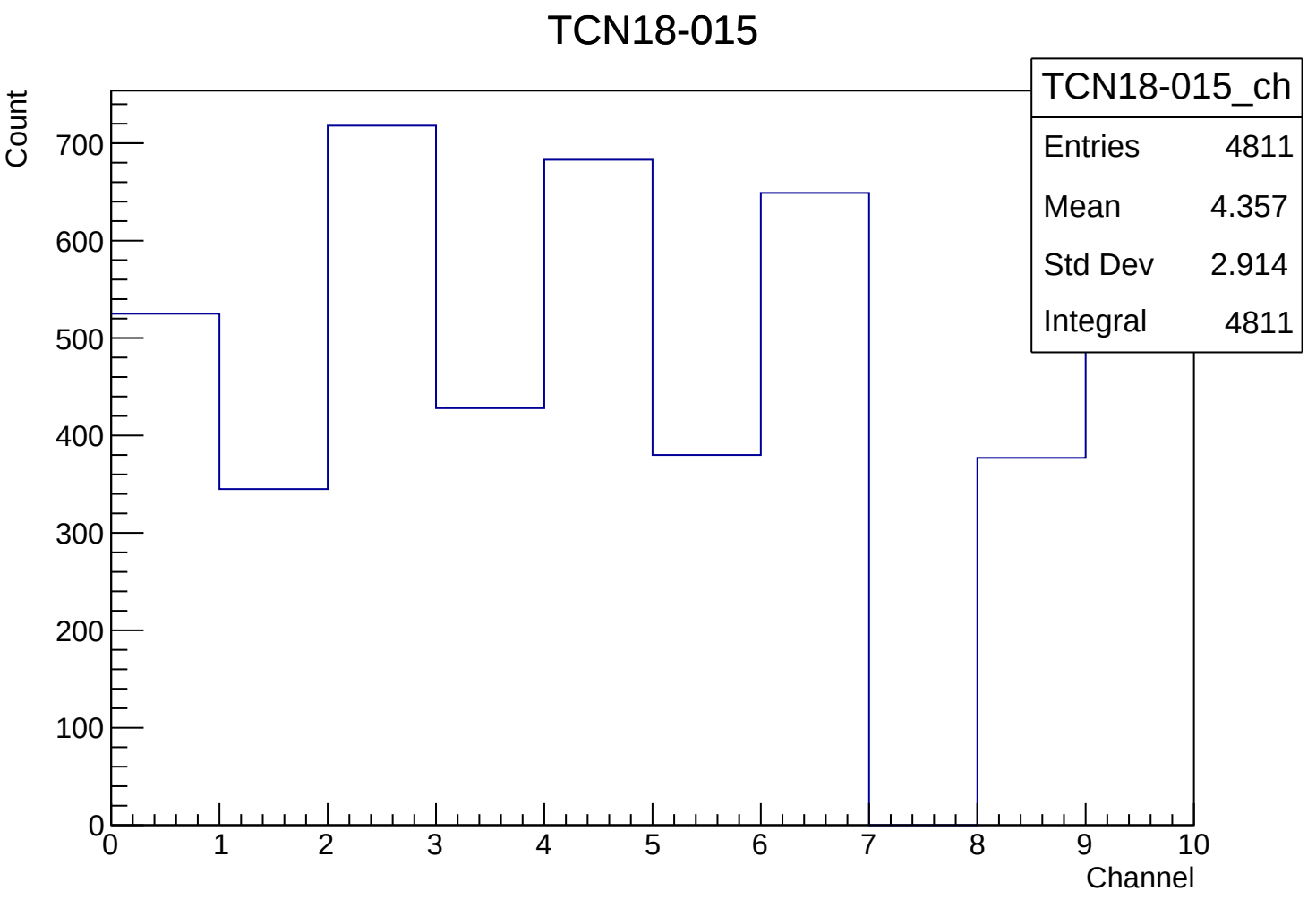

TCN18-015
TCN18-015_ch
Entries 19157
Mean 4.38
Std Dev 2.899
Integral 1.916e+04
Count
3000
2500
2000
1500
1000
500
0
0 1 2 3 4 5 6 7 8 9 10
Channel

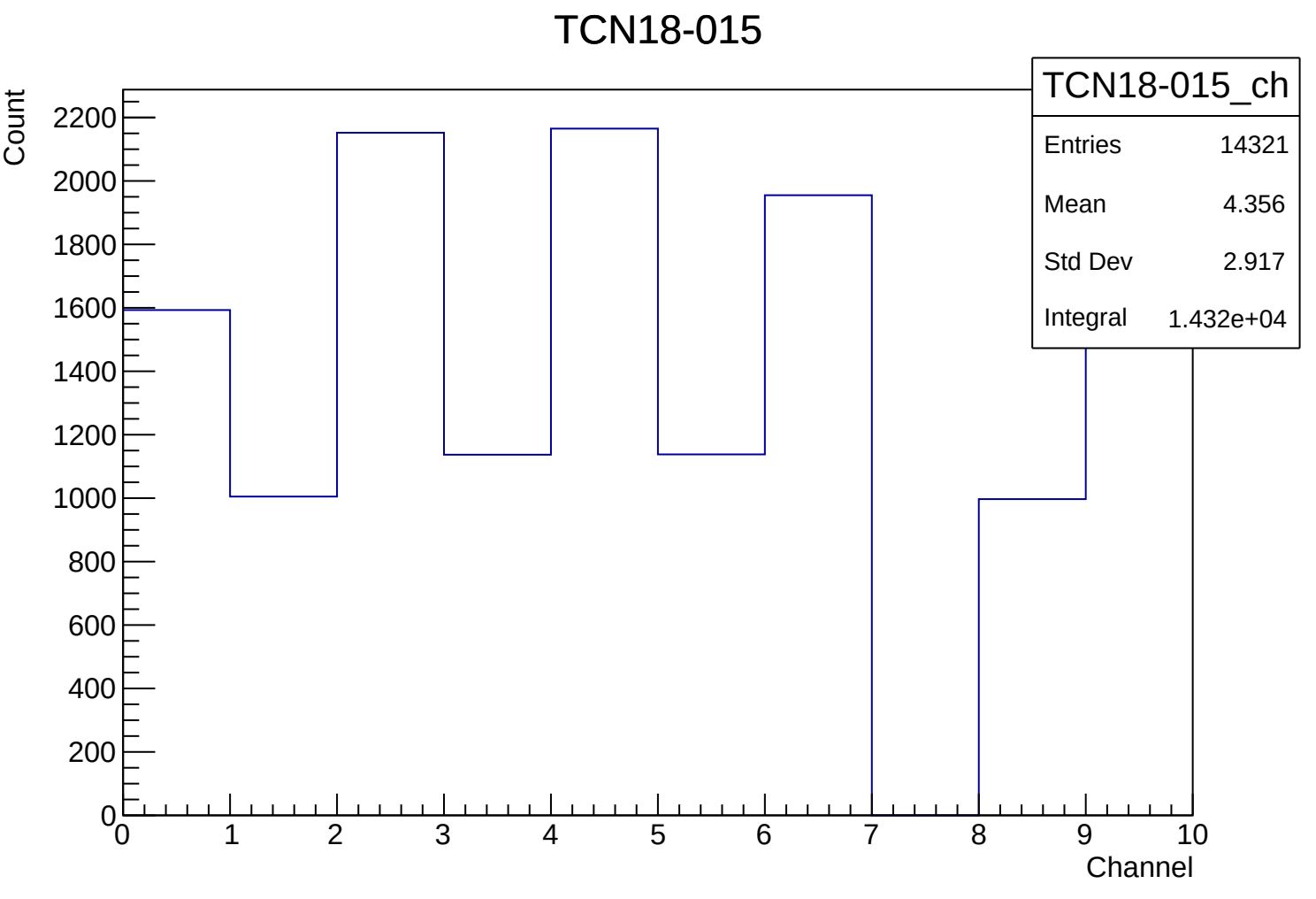

TCN18-015
TCN18-015_ch
Entries 30793
Mean 4.395
Std Dev 2.898
Integral 3.079e+04
Count
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel

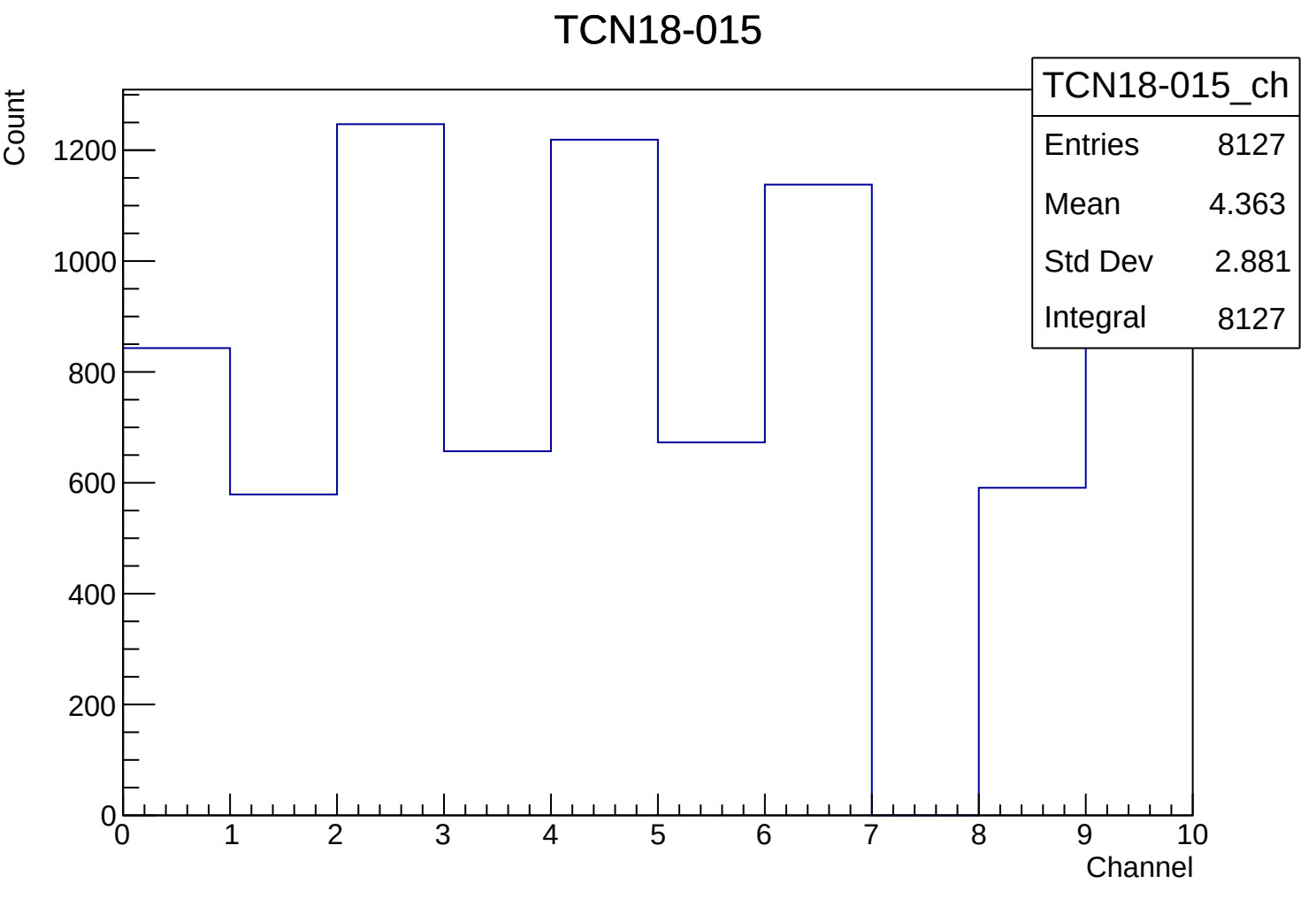

TCN18-015
TCN18-015_ch
Entries 35746
Mean 4.396
Std Dev 2.91
Integral 3.575e+04
Count
0
1000
2000
3000
4000
5000
0
1
2
3
4
5
6
7
8
9
10
Channel

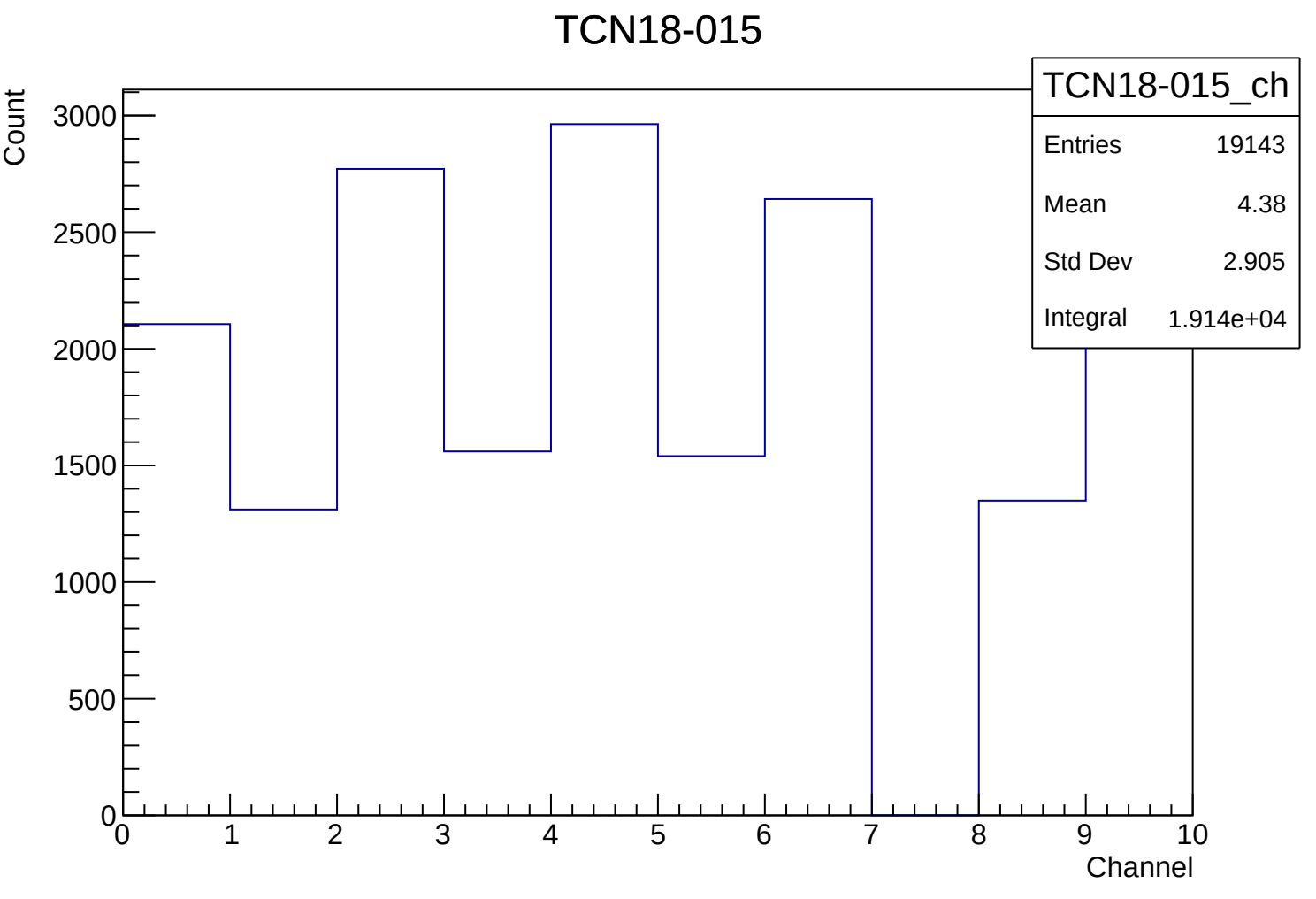

TCN18-015
TCN18-015_ch
Entries 1878
Mean 4.196
Std Dev 2.872
Integral 1878
Count
0
50
100
150
200
250
300
0
1
2
3
4
5
6
7
8
9
10
Channel

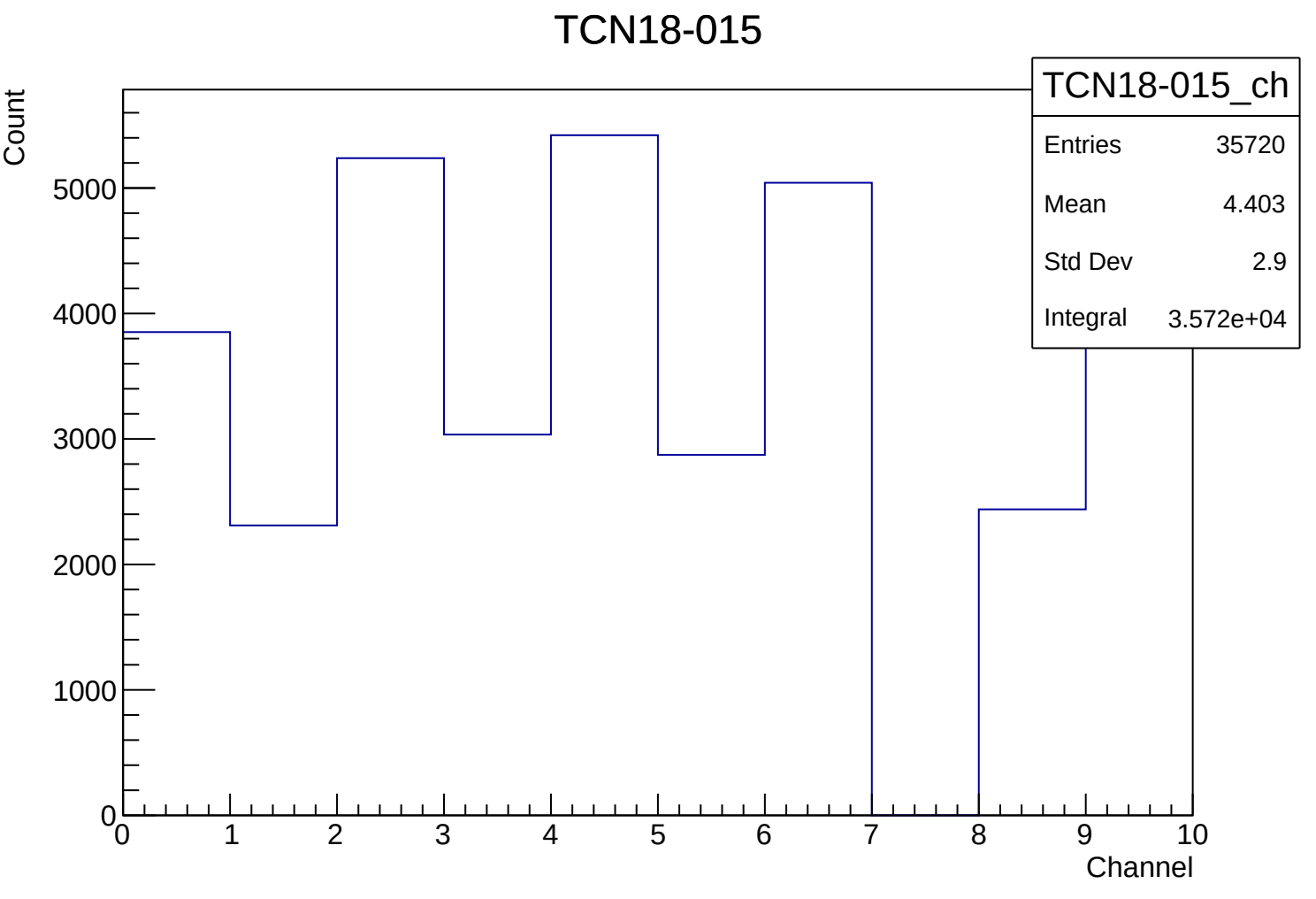

TCN18-015
TCN18-015_ch
Entries 26257
Mean 4.402
Std Dev 2.903
Integral 2.626e+04
Count
0
500
1000
1500
2000
2500
3000
3500
4000
0
1
2
3
4
5
6
7
8
9
10
Channel

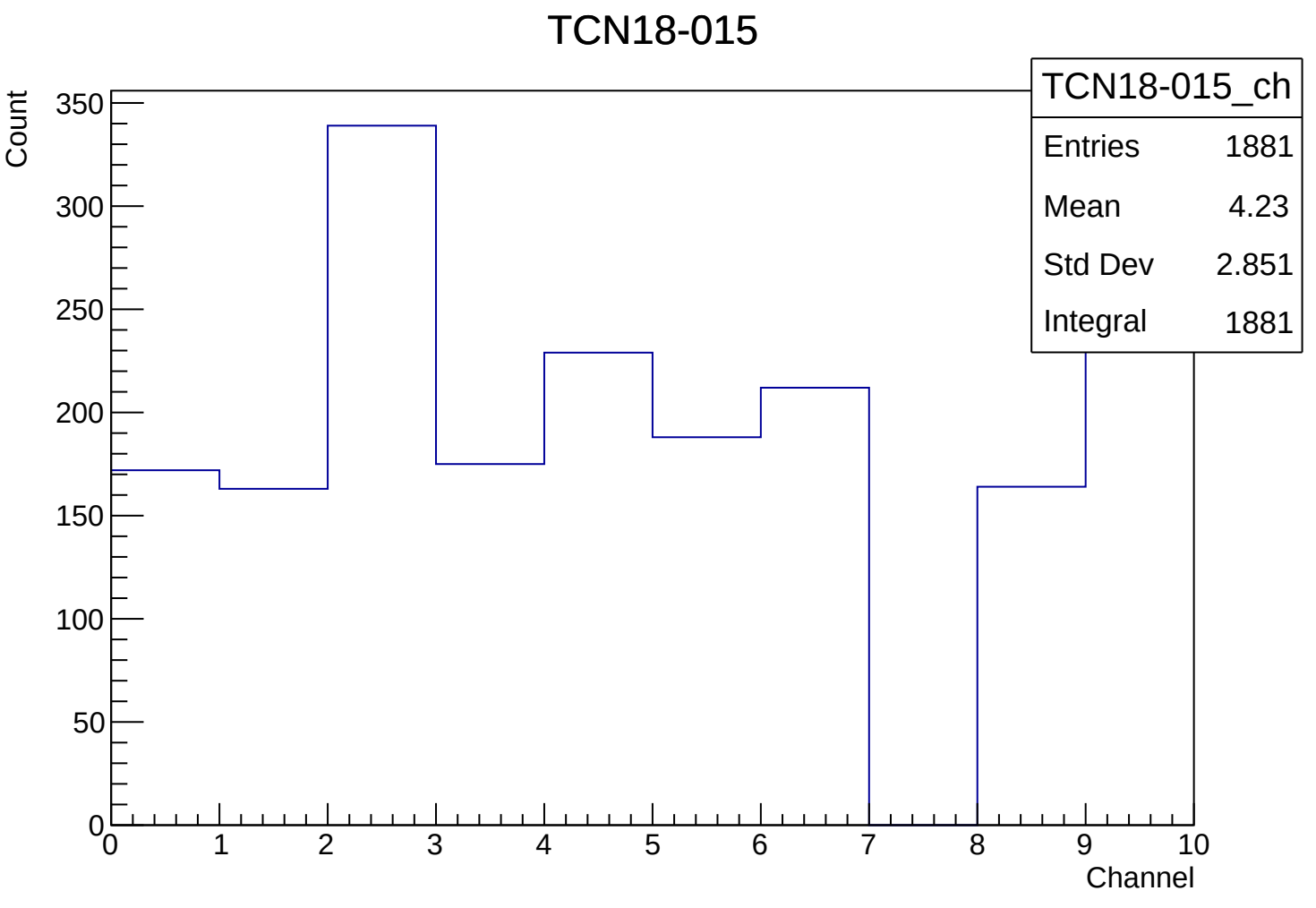

TCN18-015
TCN18-015_ch
Entries 4811
Mean 4.357
Std Dev 2.914
Integral 4811
Count
0
100
200
300
400
500
600
700
0
1
2
3
4
5
6
7
8
9
10
Channel

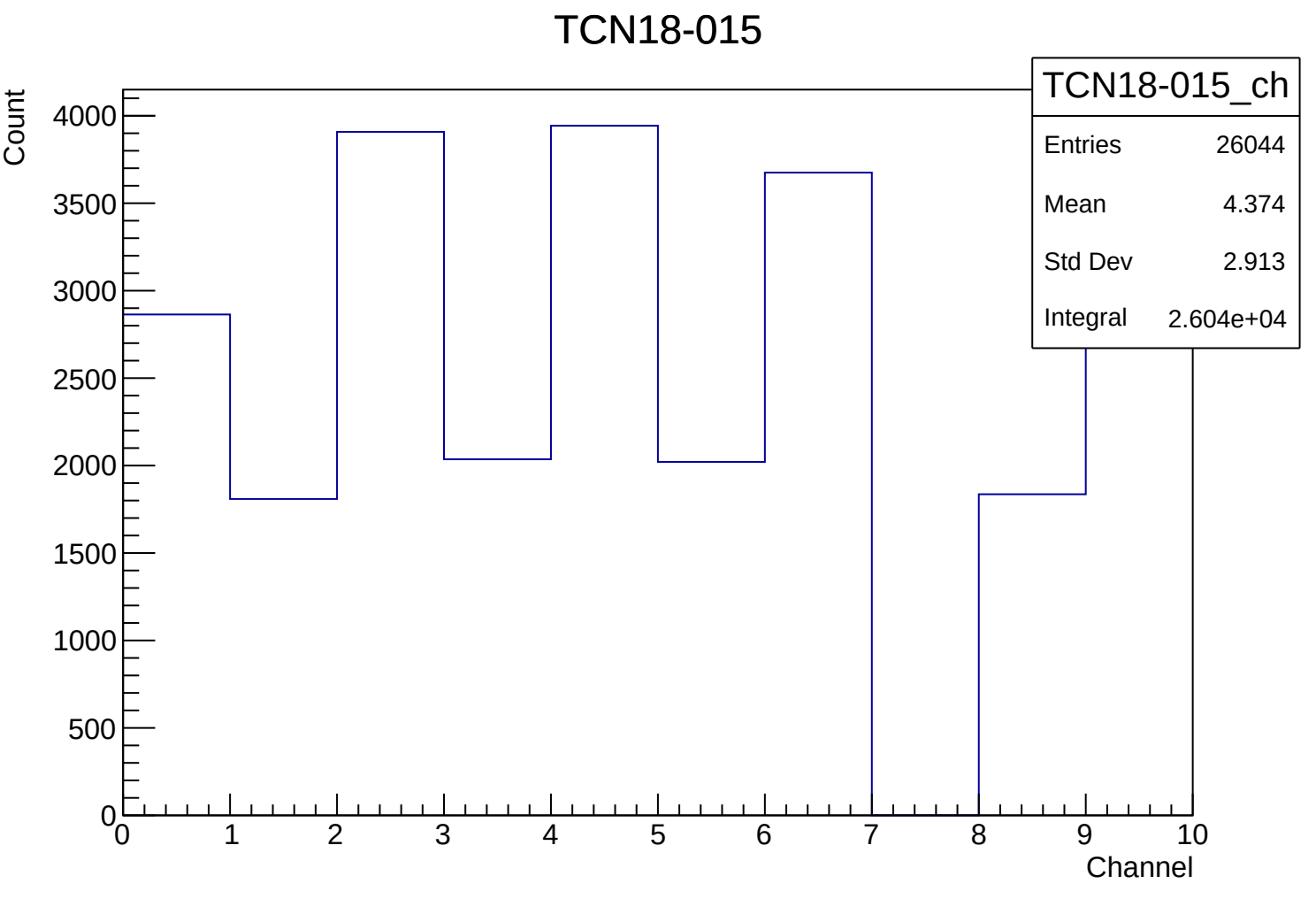

TCN18-015
TCN18-015_ch
Entries 14321
Mean 4.356
Std Dev 2.917
Integral 1.432e+04
Count
Channel
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
0
1
2
3
4
5
6
7
8
9
10


TCN18-015
TCN18-015_ch
Entries 8127
Mean 4.363
Std Dev 2.881
Integral 8127
Count
0
200
400
600
800
1000
1200
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 19143
Mean 4.38
Std Dev 2.905
Integral 1.914e+04
Count
3000
2500
2000
1500
1000
500
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-015
TCN18-015_ch
Entries 35720
Mean 4.403
Std Dev 2.9
Integral 3.572e+04
Count
0
1000
2000
3000
4000
5000
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 1881
Mean 4.23
Std Dev 2.851
Integral 1881
Count
Channel
0
50
100
150
200
250
300
350
0
1
2
3
4
5
6
7
8
9
10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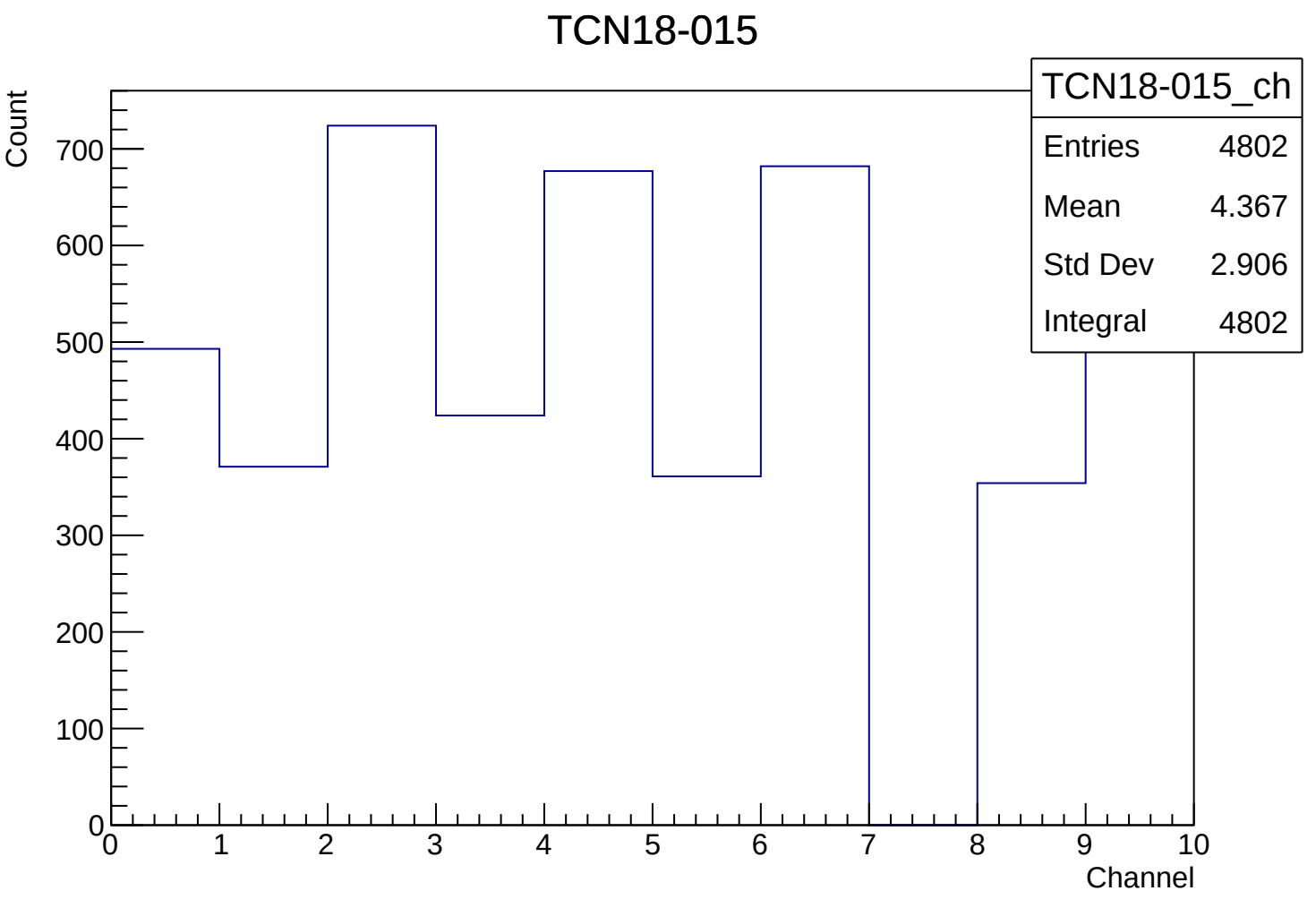
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6
7
8
9
10
Channel