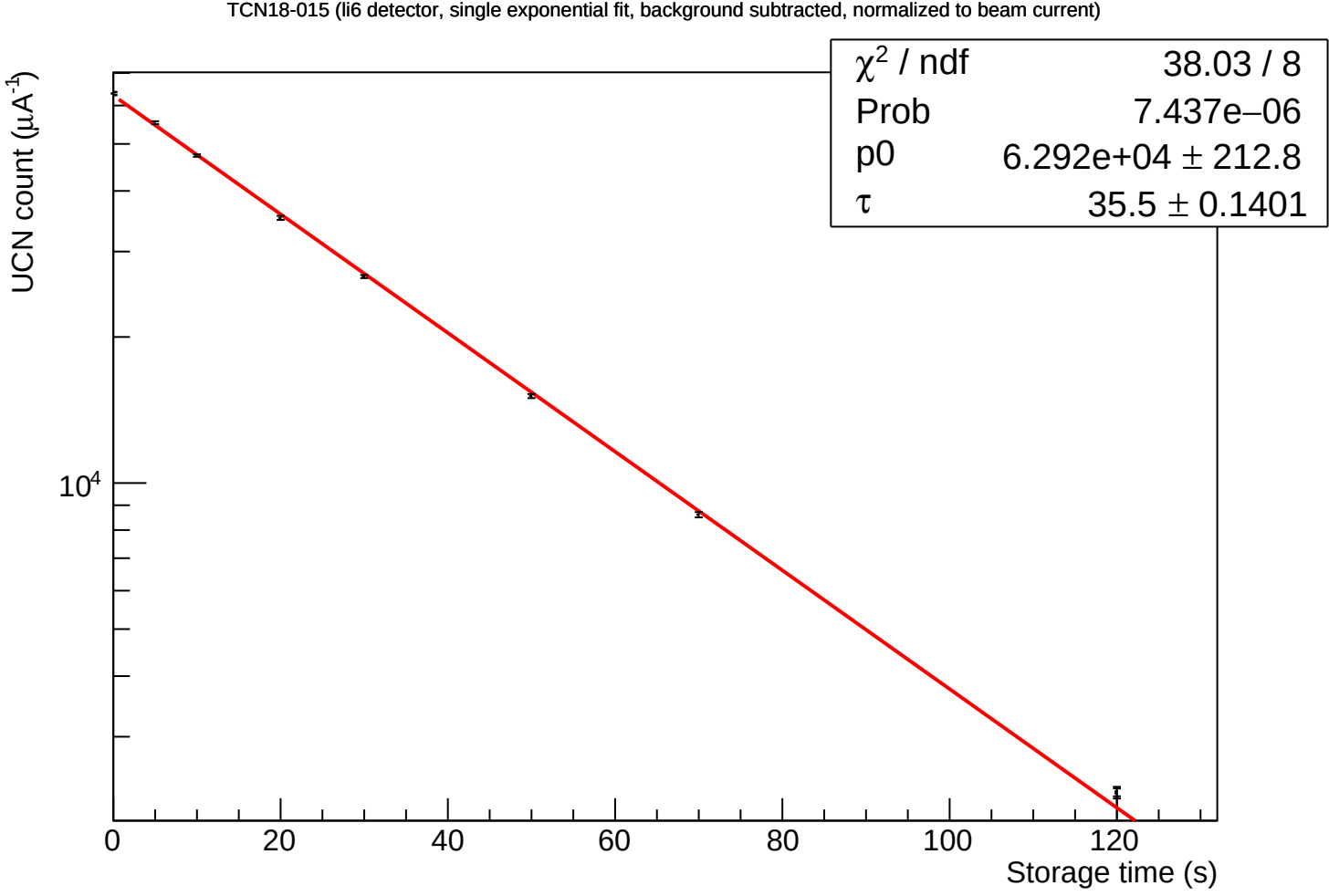
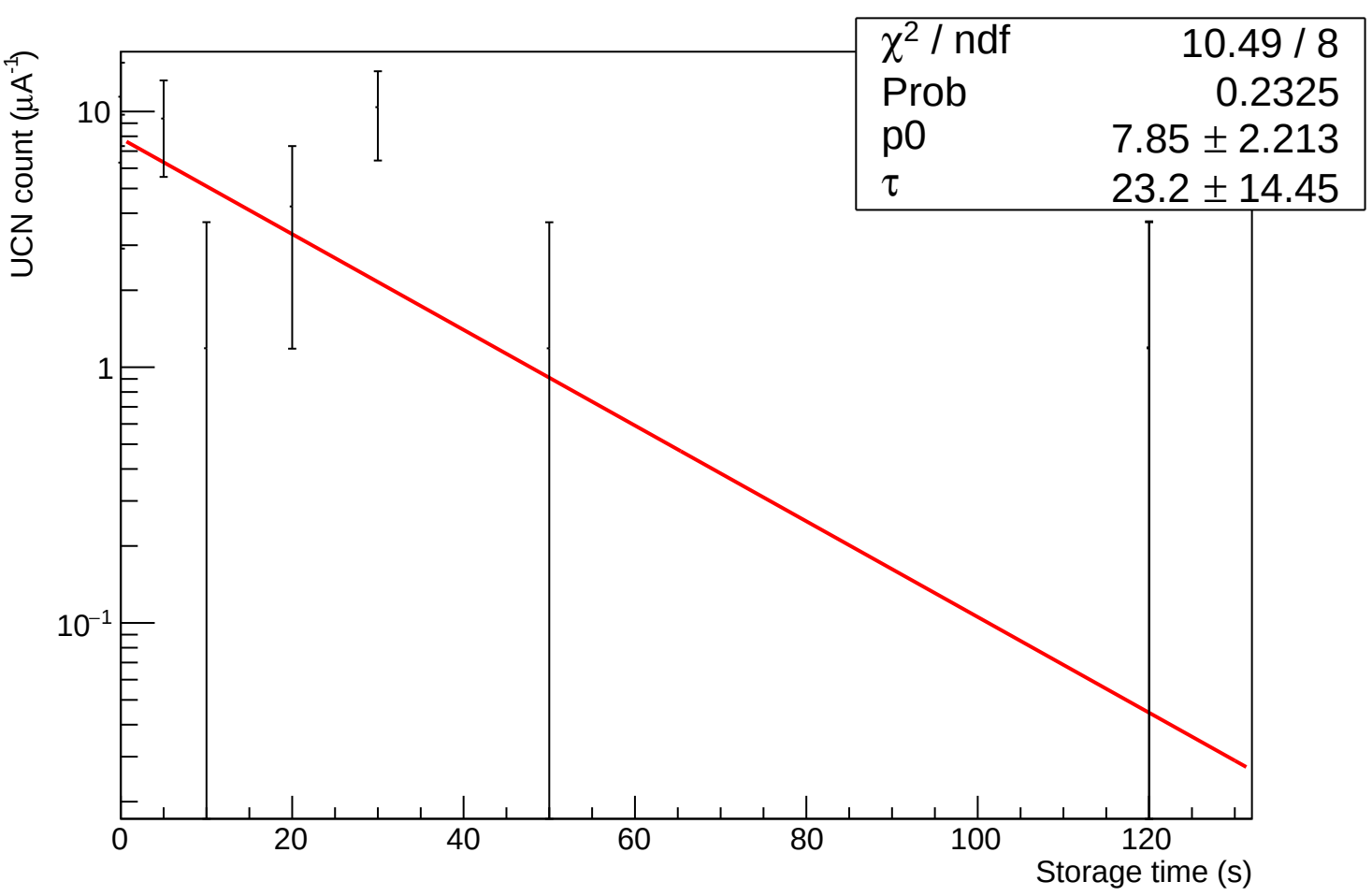
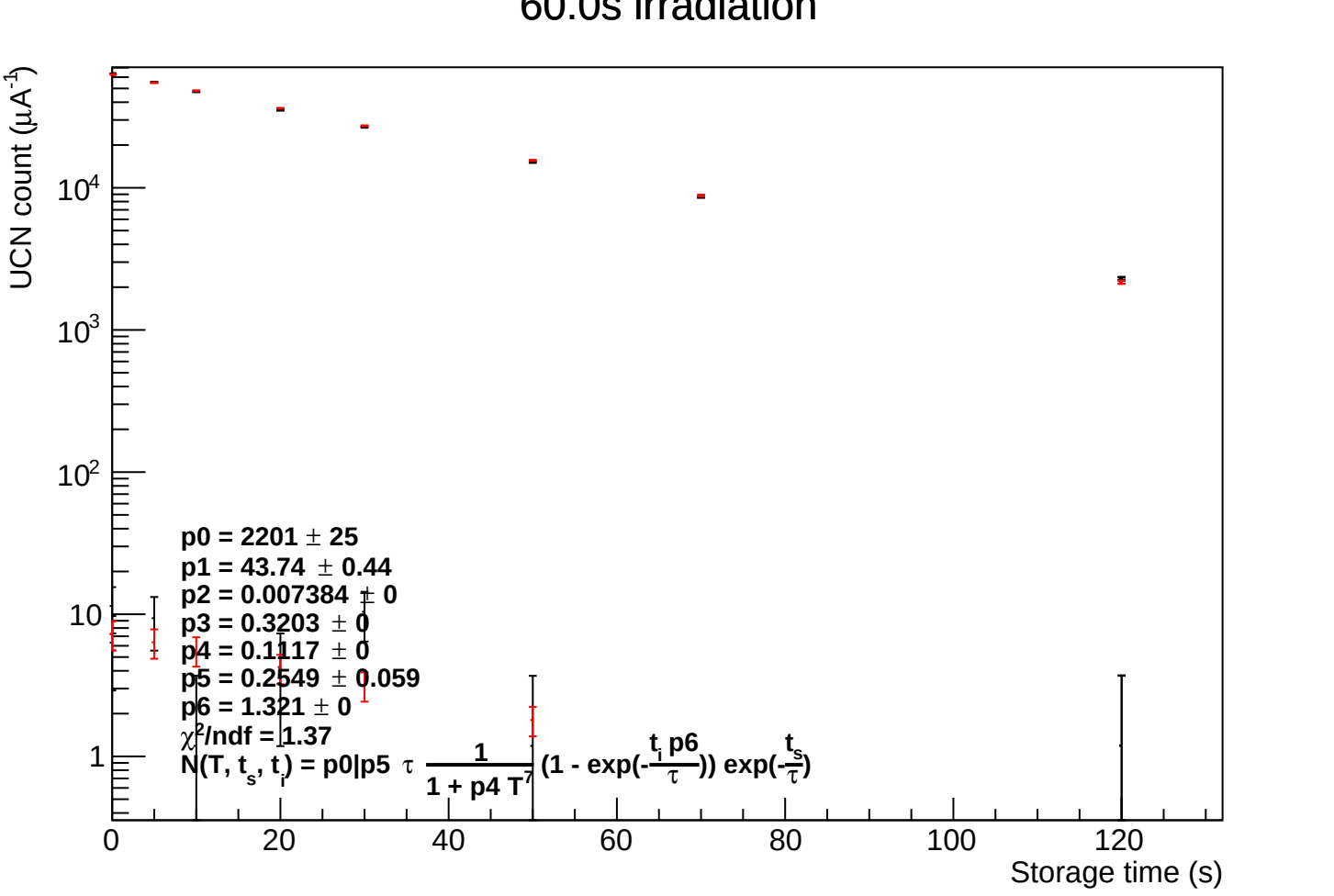
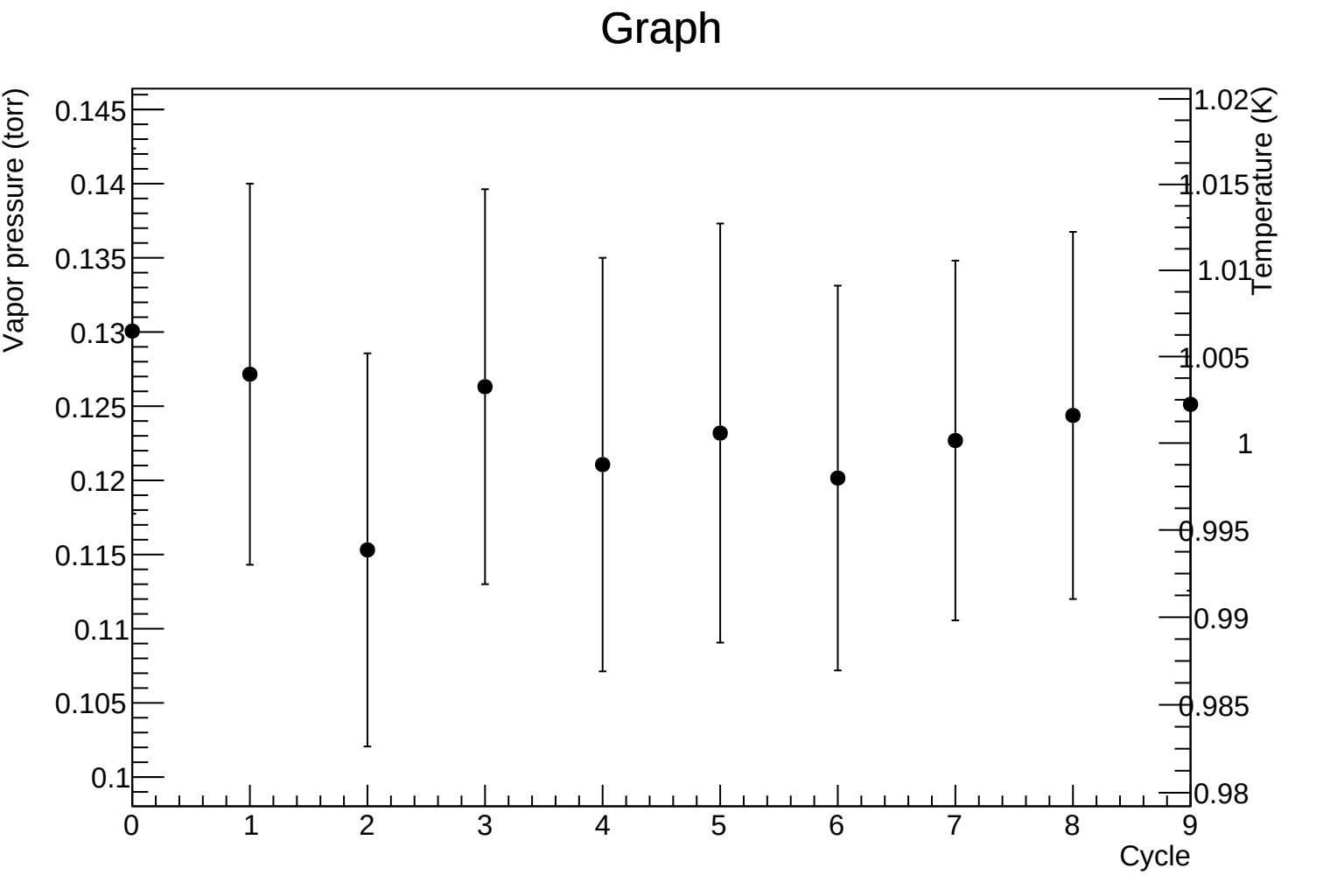
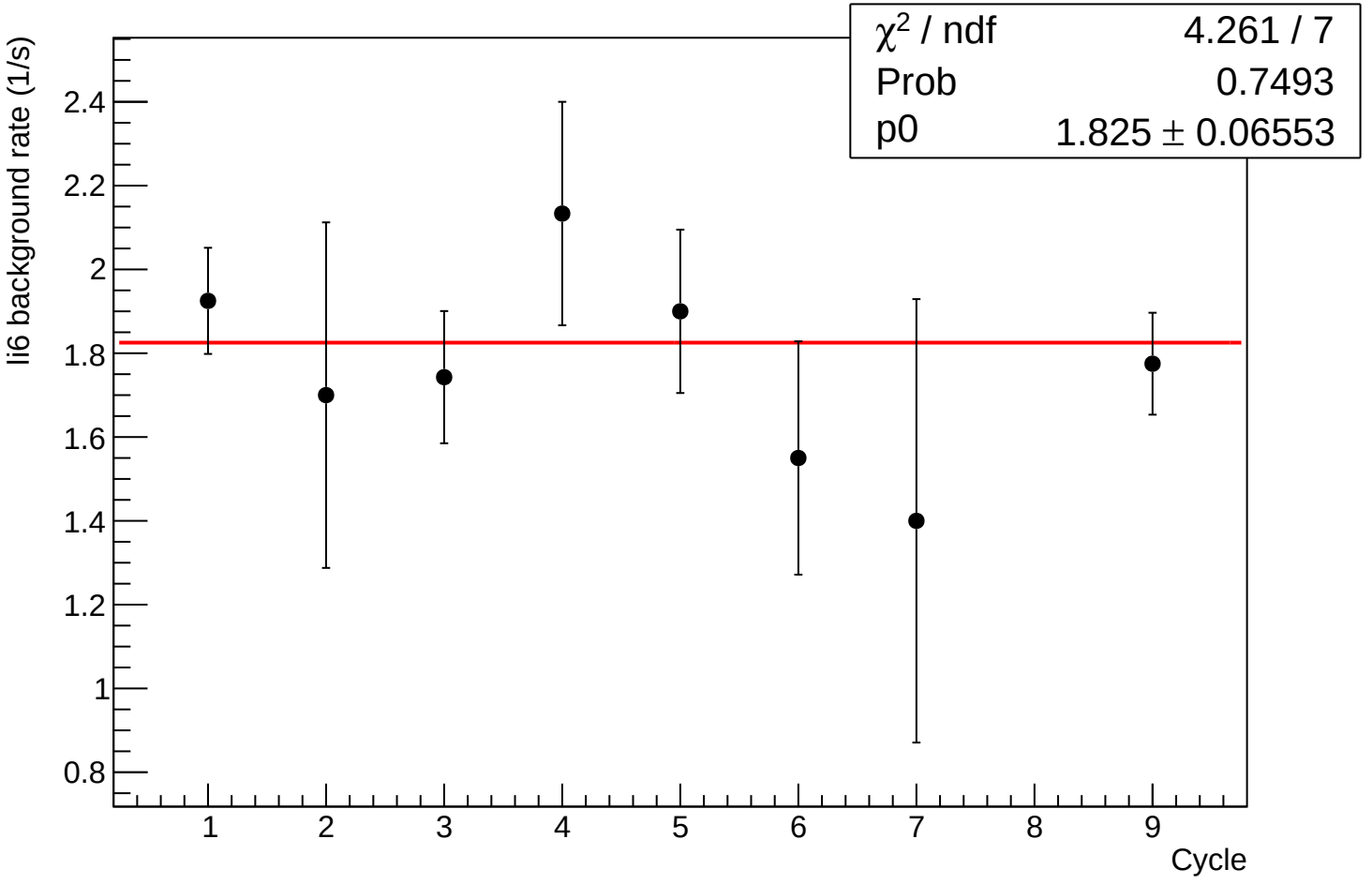
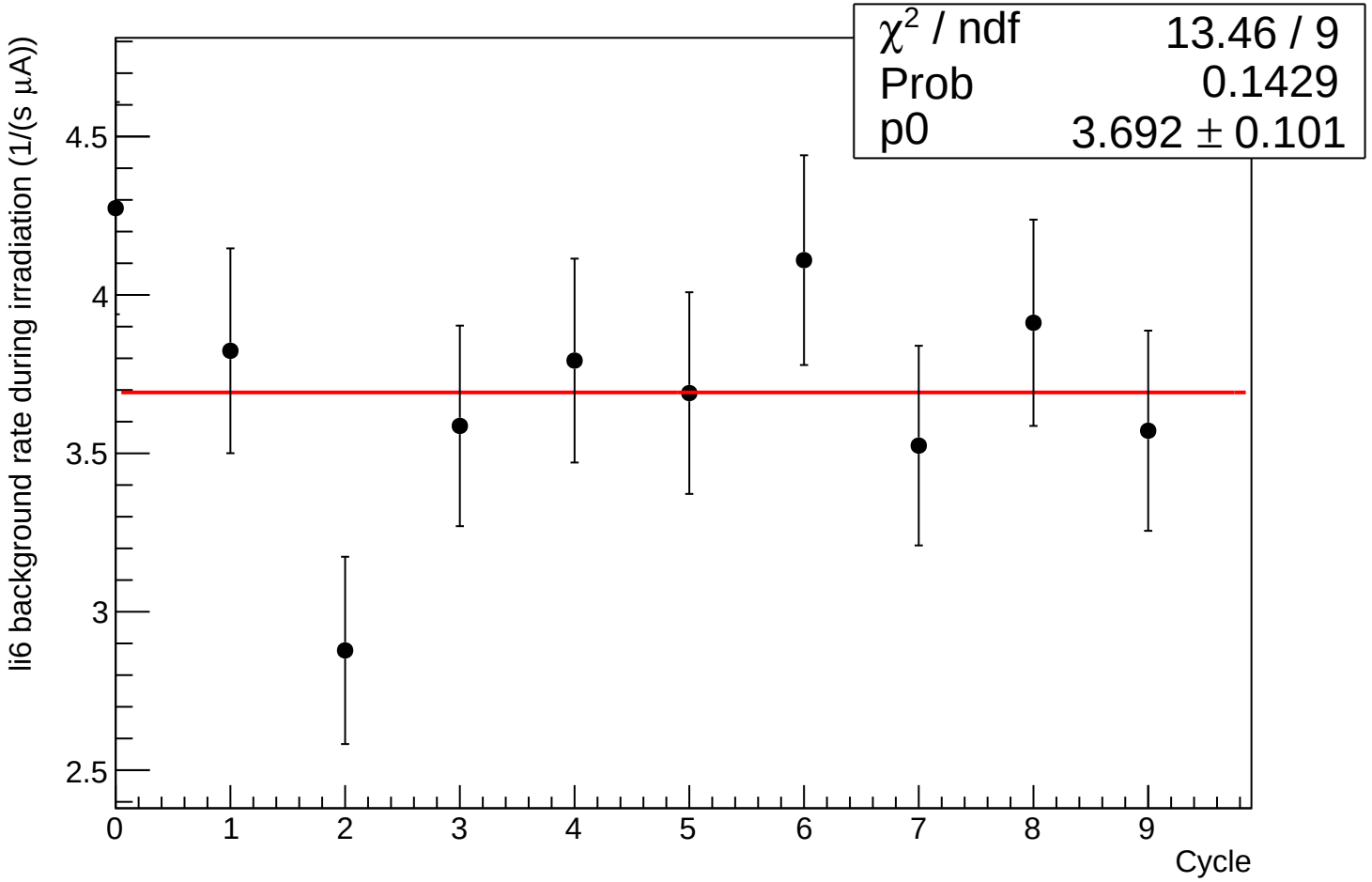

TCN18-015 (li6 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 38.03 / 8
Prob 7.437e–06
p0 6.292e+04 ± 212.8
τ 35.5 ± 0.1401
UCN count (μA⁻¹)
10⁴
0
20
40
60
80
100
120
Storage time (s)

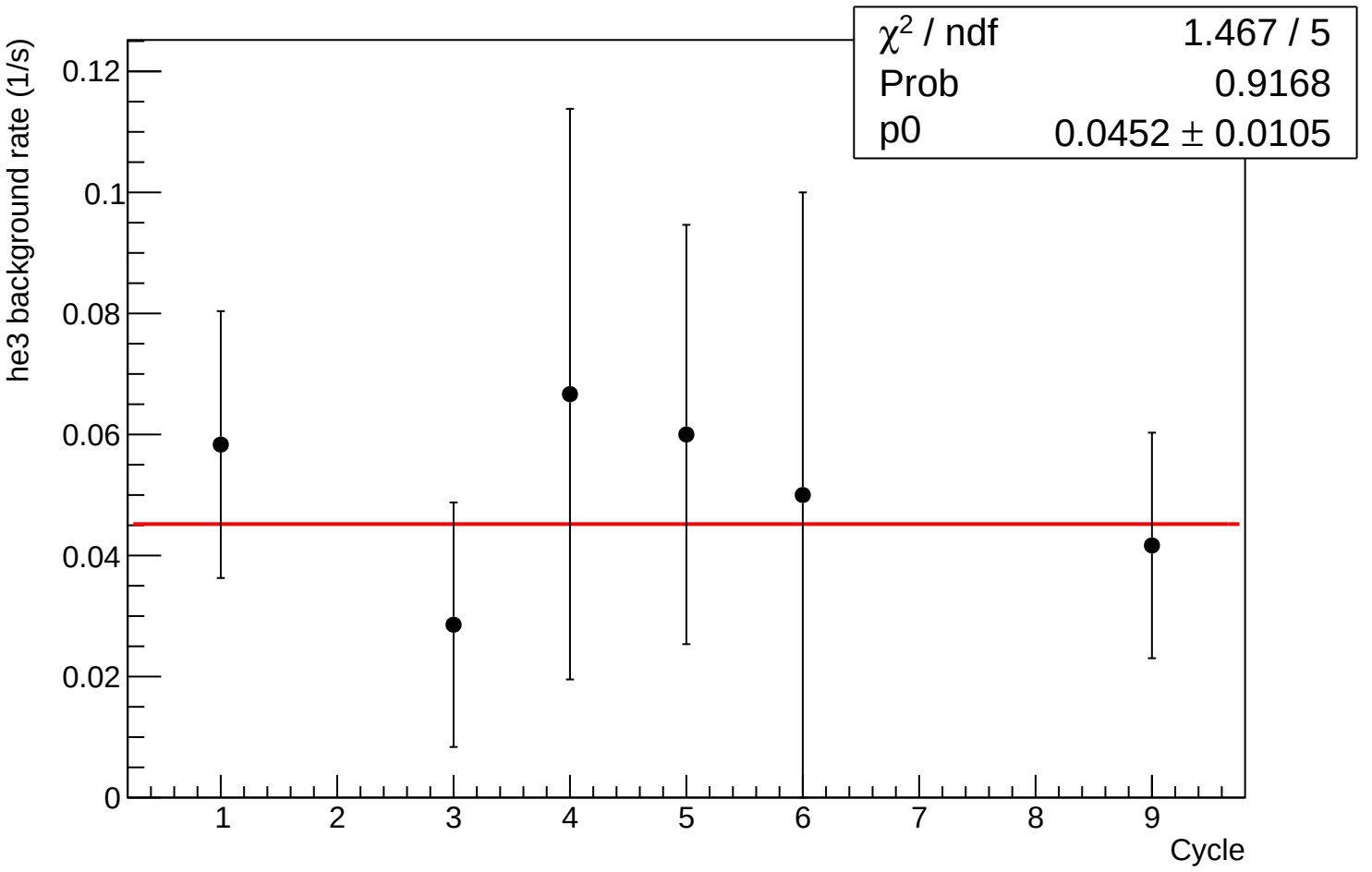

TCN18-015 (he3 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 10.49 / 8
Prob 0.2325
p0 7.85 ± 2.213
τ 23.2 ± 14.45
UCN count (μA⁻¹)
10
1
10⁻¹
0
20
40
60
80
100
120
Storage time (s)

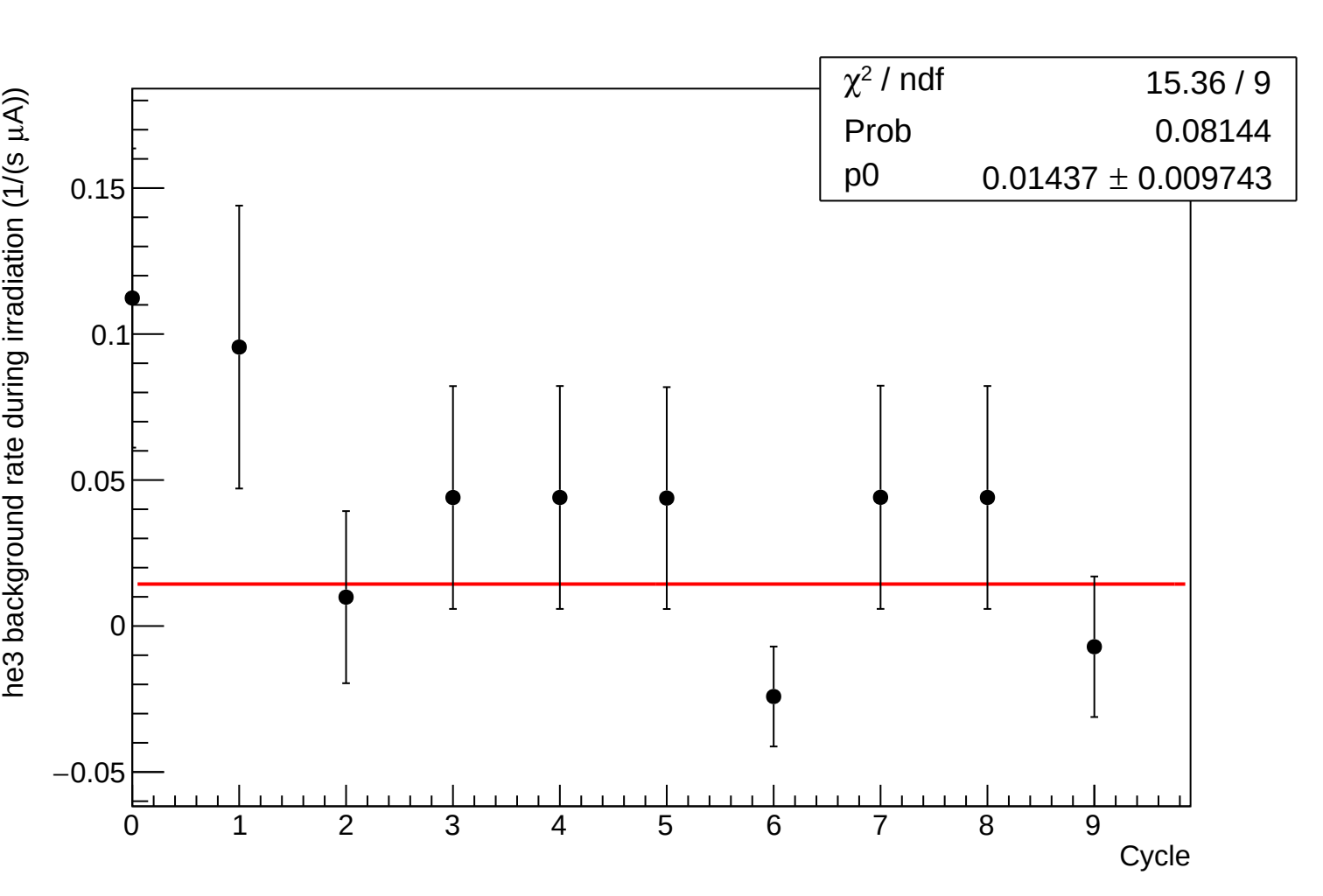

60.0s irradiation
UCN count (μA-1)
Storage time (s)
p0 = 2201 ± 25
p1 = 43.74 ± 0.44
p2 = 0.007384 ± 0
p3 = 0.3203 ± 0
p4 = 0.1117 ± 0
p5 = 0.2549 ± 0.059
p6 = 1.321 ± 0
χ2/ndf = 1.37
N(T, ts, ti) = p0|p5 τ 1/(1 + p4 T7) (1 - exp(-ti p6/τ)) exp(-ts/τ)

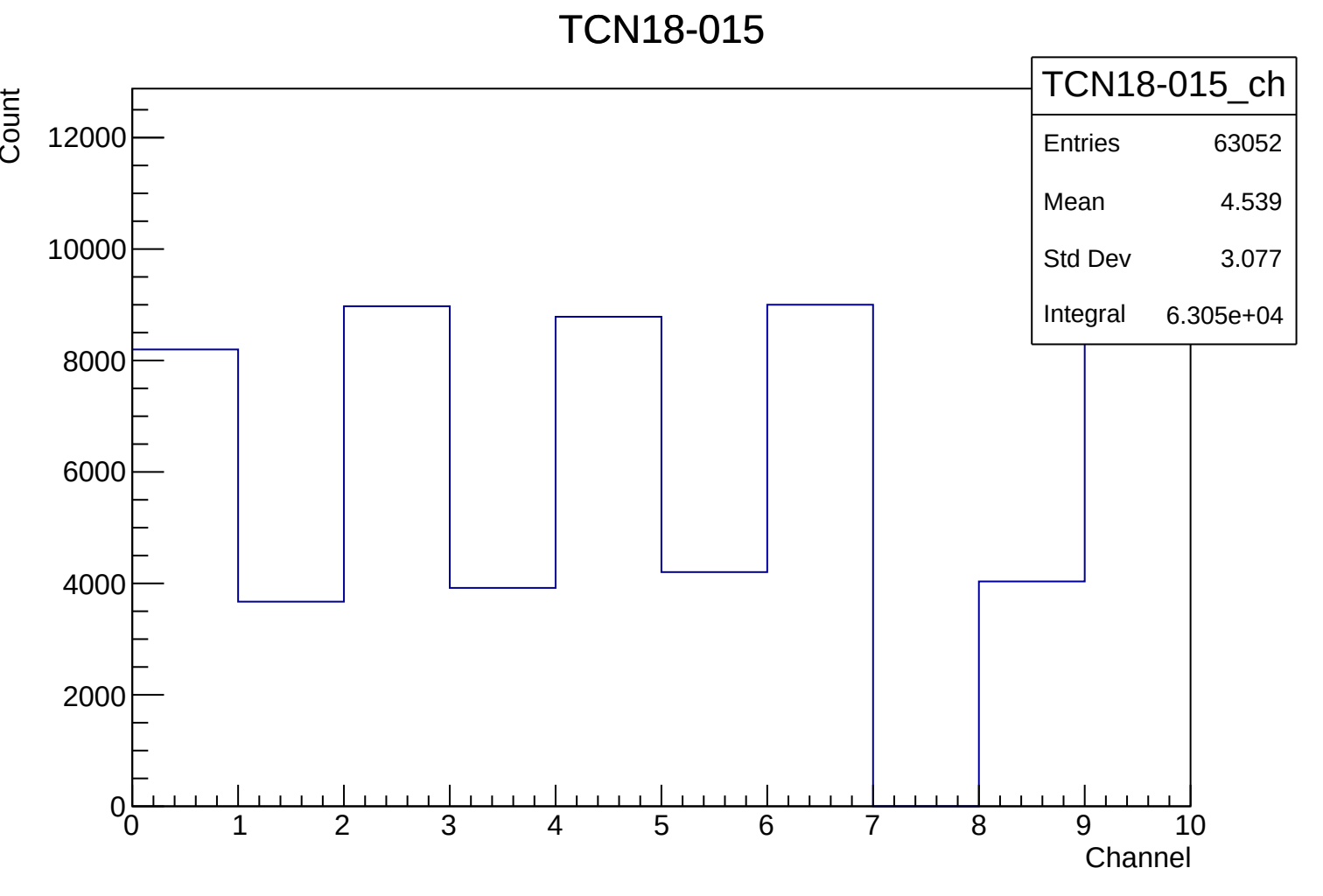

Graph
Vapor pressure (torr)
0.145
0.14
0.135
0.13
0.125
0.12
0.115
0.11
0.105
0.1
Temperature (K)
1.02
1.015
1.01
1.005
1
0.995
0.99
0.985
0.98
0
1
2
3
4
5
6
7
8
9
Cycle

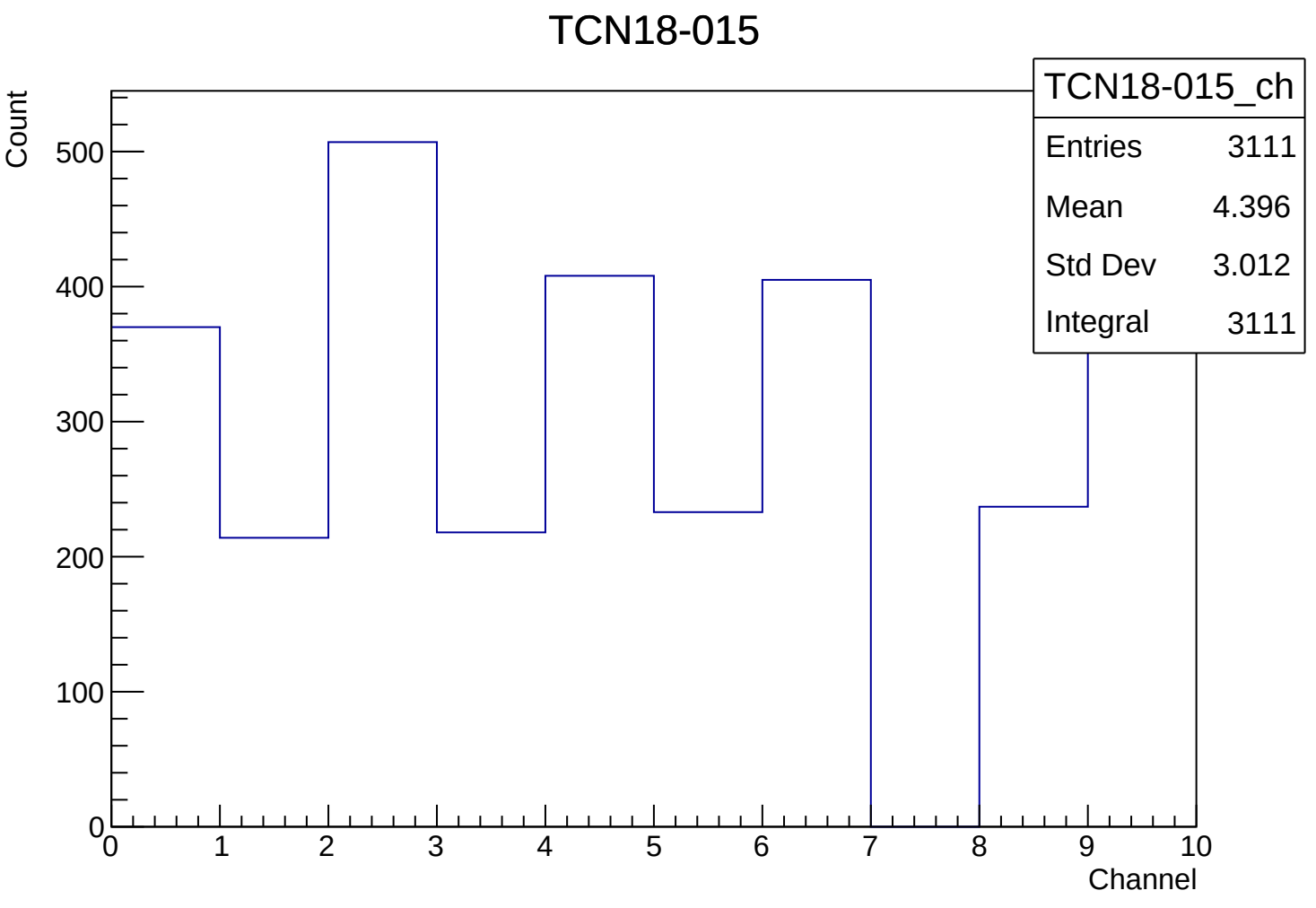

χ^2 / ndf 4.261 / 7
Prob 0.7493
p0 1.825 ± 0.06553
li6 background rate (1/s)
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
1
2
3
4
5
6
7
8
9
Cycle

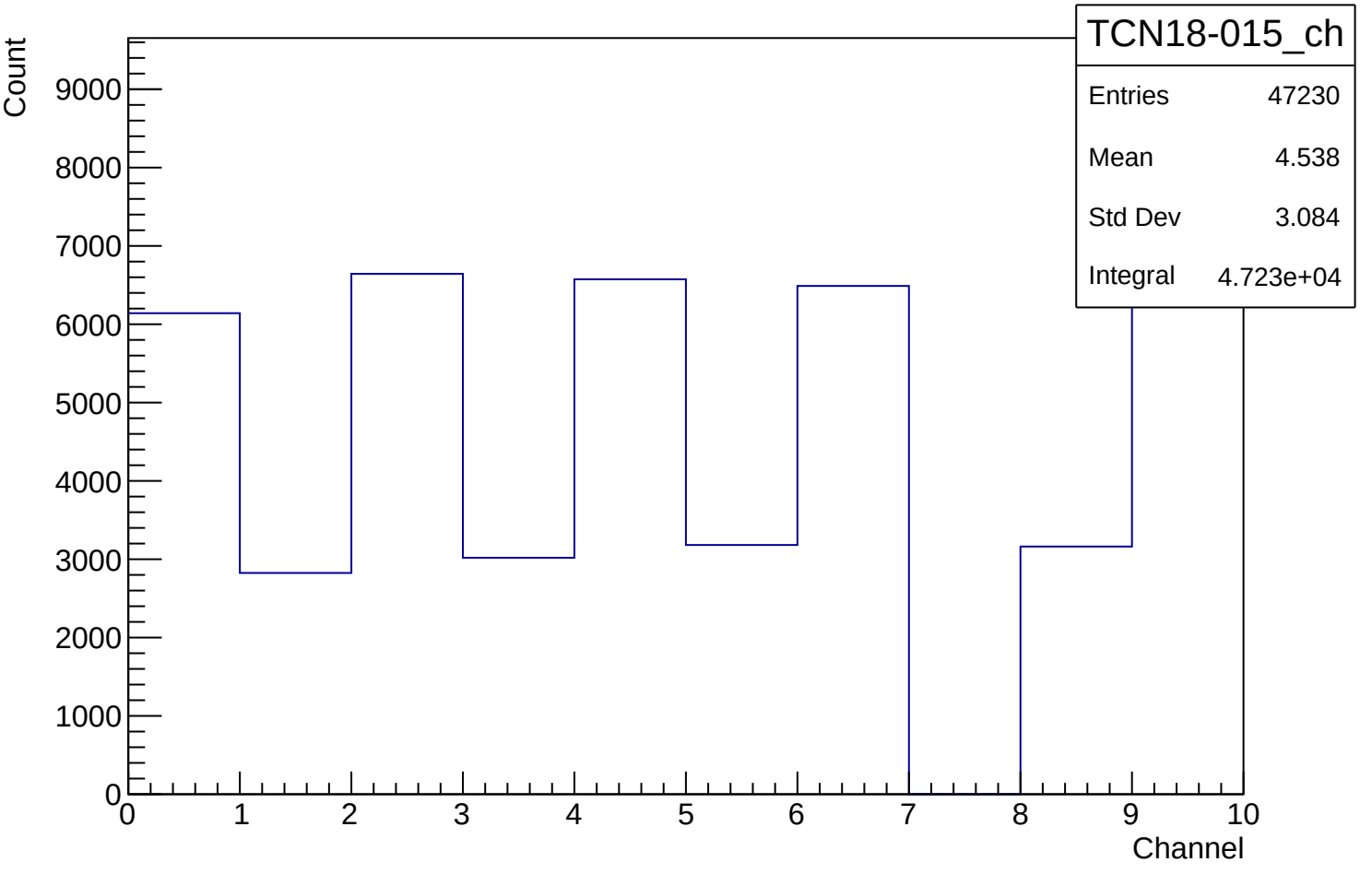

χ^2 / ndf 13.46 / 9
Prob 0.1429
p0 3.692 ± 0.101
li6 background rate during irradiation (1/(s μA))
Cycle
2.5
3
3.5
4
4.5
0
1
2
3
4
5
6
7
8
9

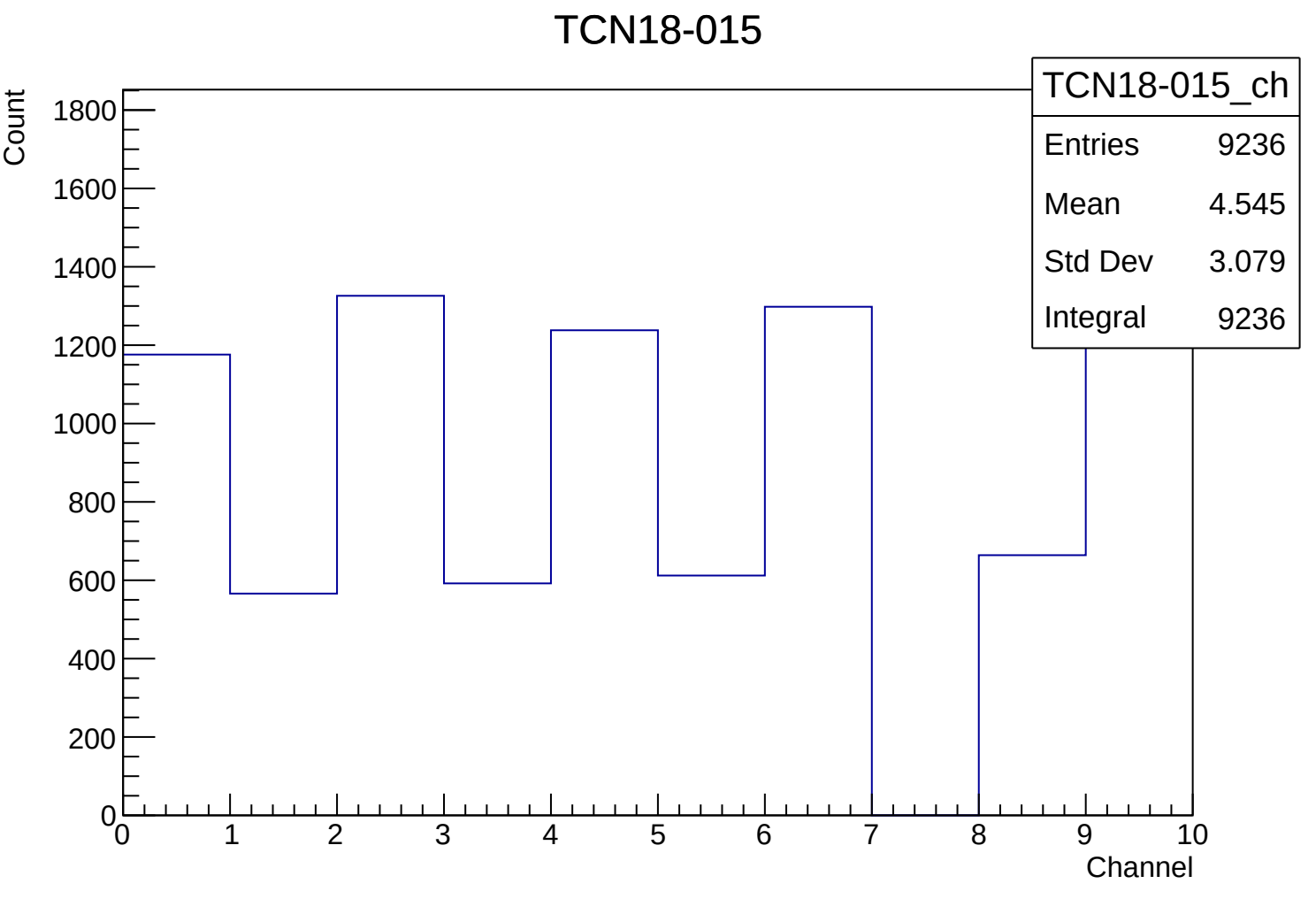

χ² / ndf 1.467 / 5
Prob 0.9168
p0 0.0452 ± 0.0105
he3 background rate (1/s)
0.12
0.1
0.08
0.06
0.04
0.02
0
1
2
3
4
5
6
7
8
9
Cycle

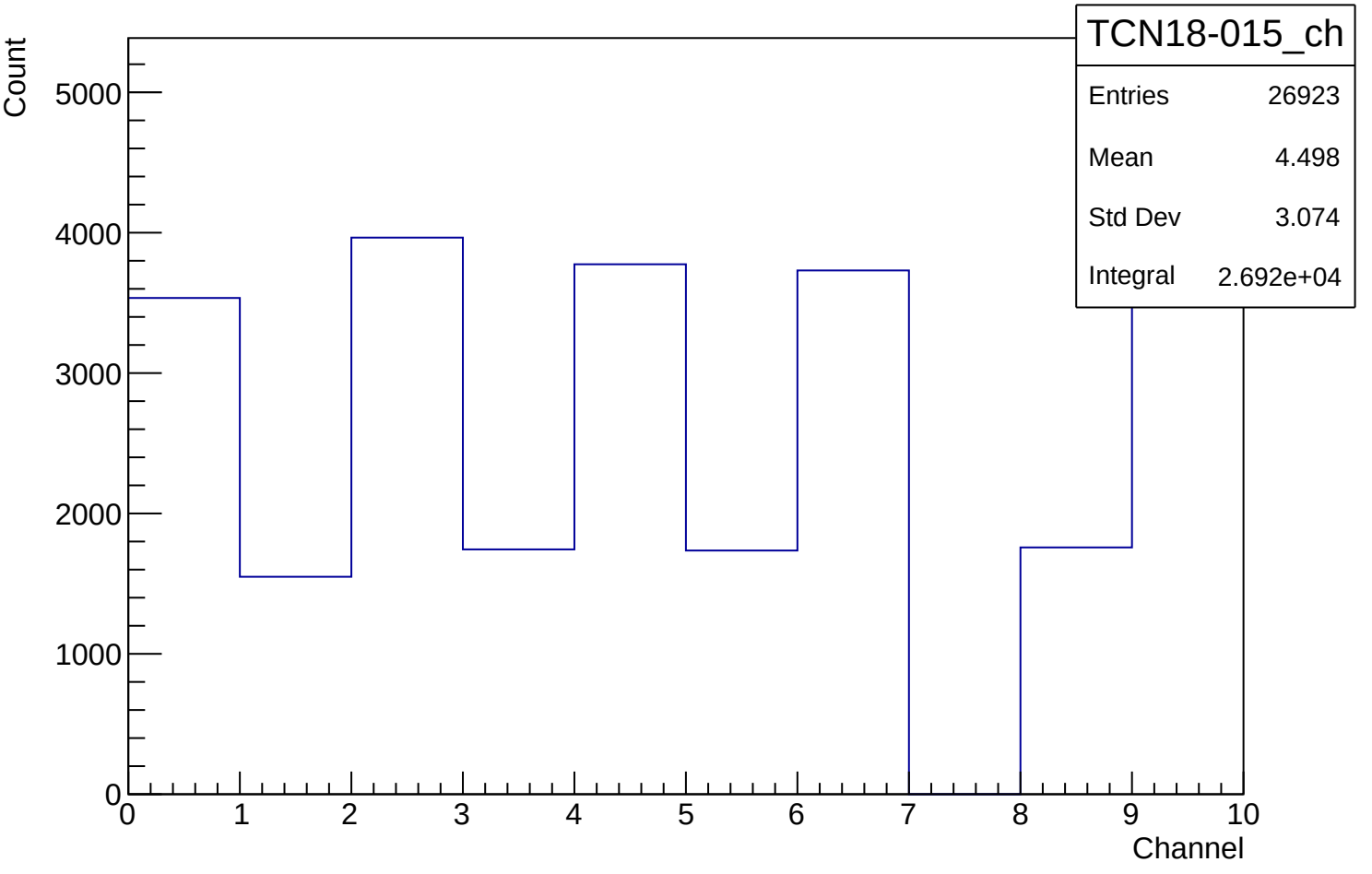

χ² / ndf 15.36 / 9
Prob 0.08144
p0 0.01437 ± 0.009743
he3 background rate during irradiation (1/(s μA))
0.15
0.1
0.05
0
−0.05
0
1
2
3
4
5
6
7
8
9
Cycle

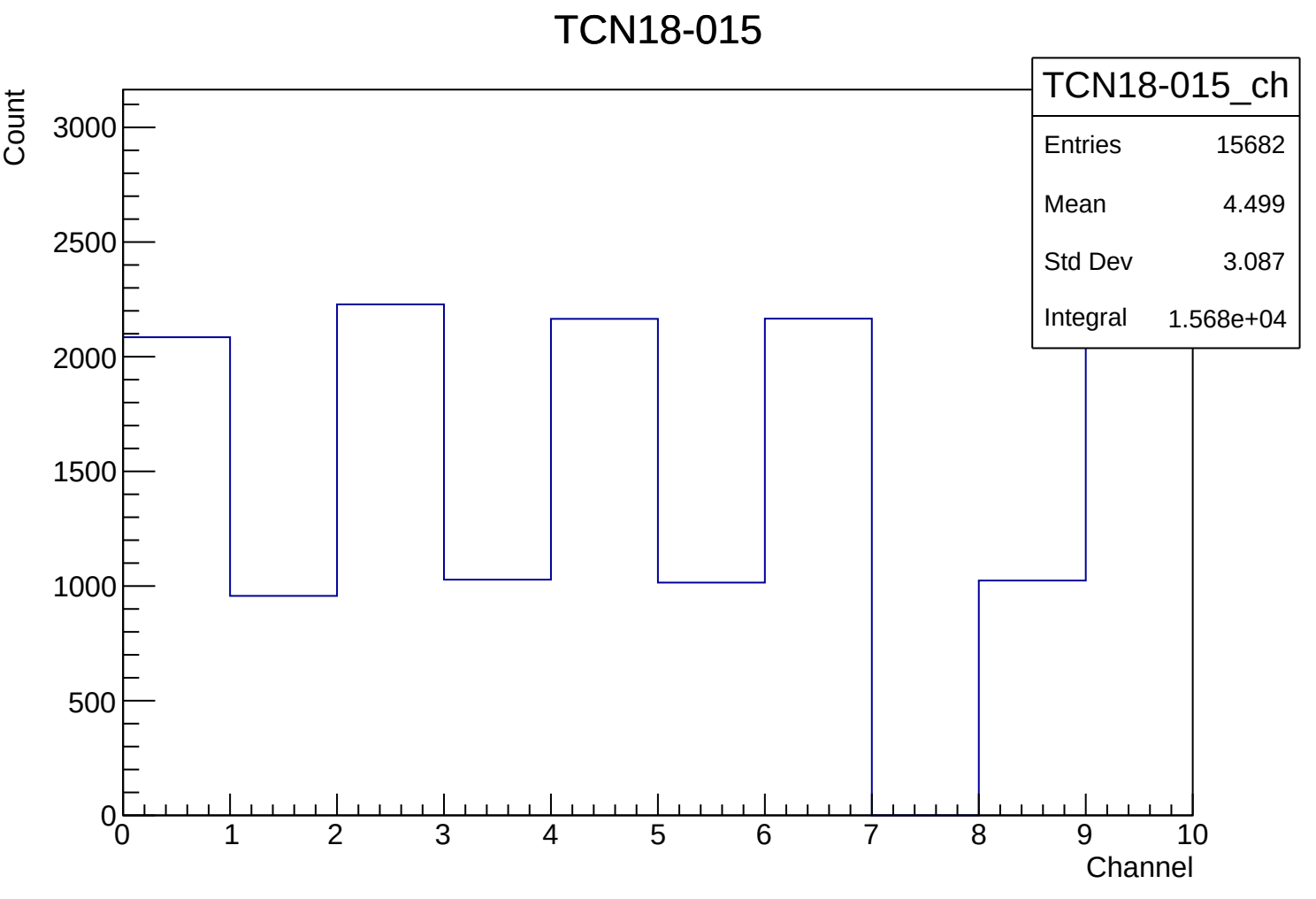

TCN18-015
TCN18-015_ch
Entries 63052
Mean 4.539
Std Dev 3.077
Integral 6.305e+04
Count
12000
10000
8000
6000
4000
2000
0
0 1 2 3 4 5 6 7 8 9 10
Channel

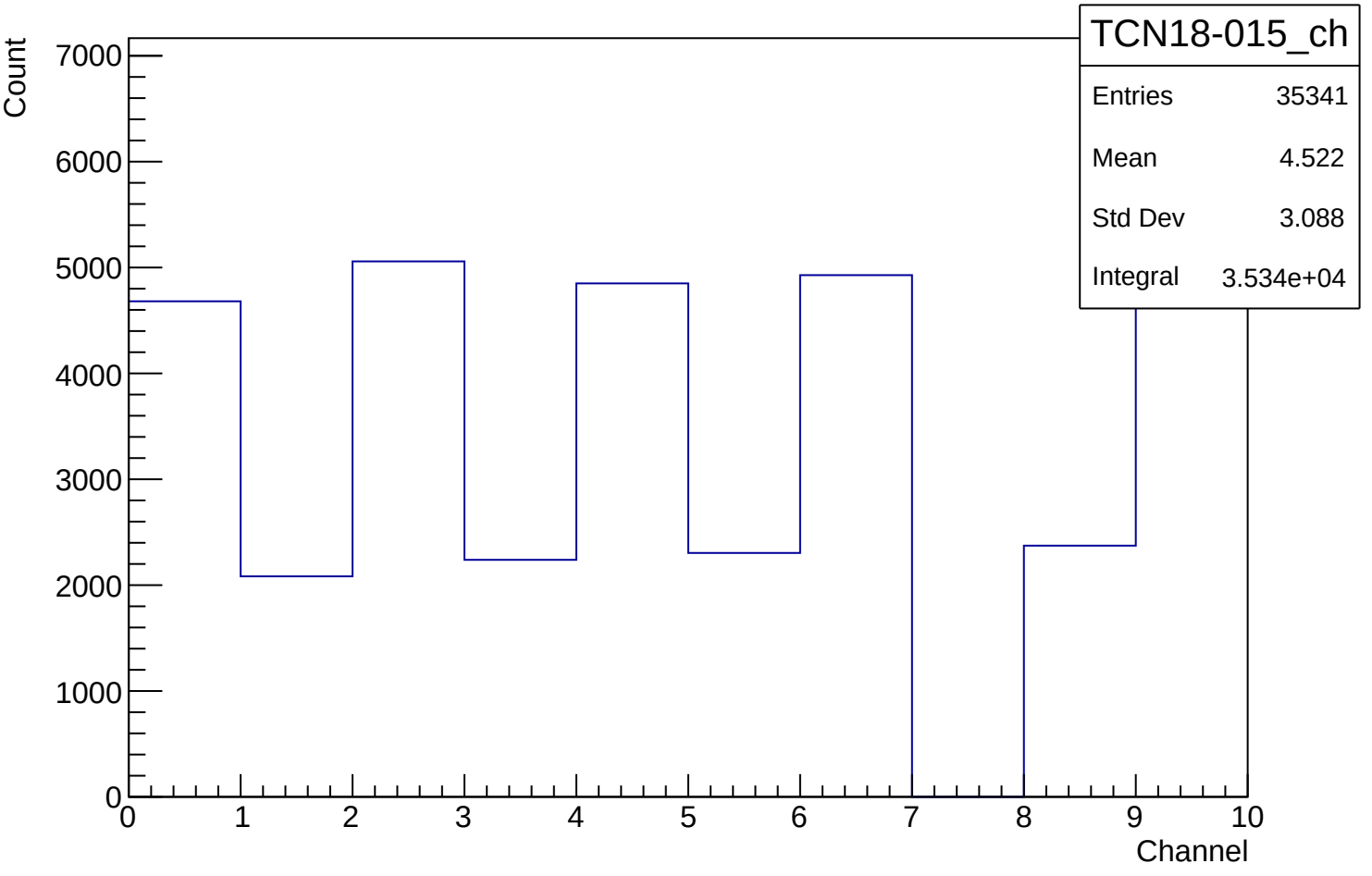

TCN18-015
TCN18-015_ch
Entries 3111
Mean 4.396
Std Dev 3.012
Integral 3111
Count
0
100
200
300
400
500
0 1 2 3 4 5 6 7 8 9 10
Channel

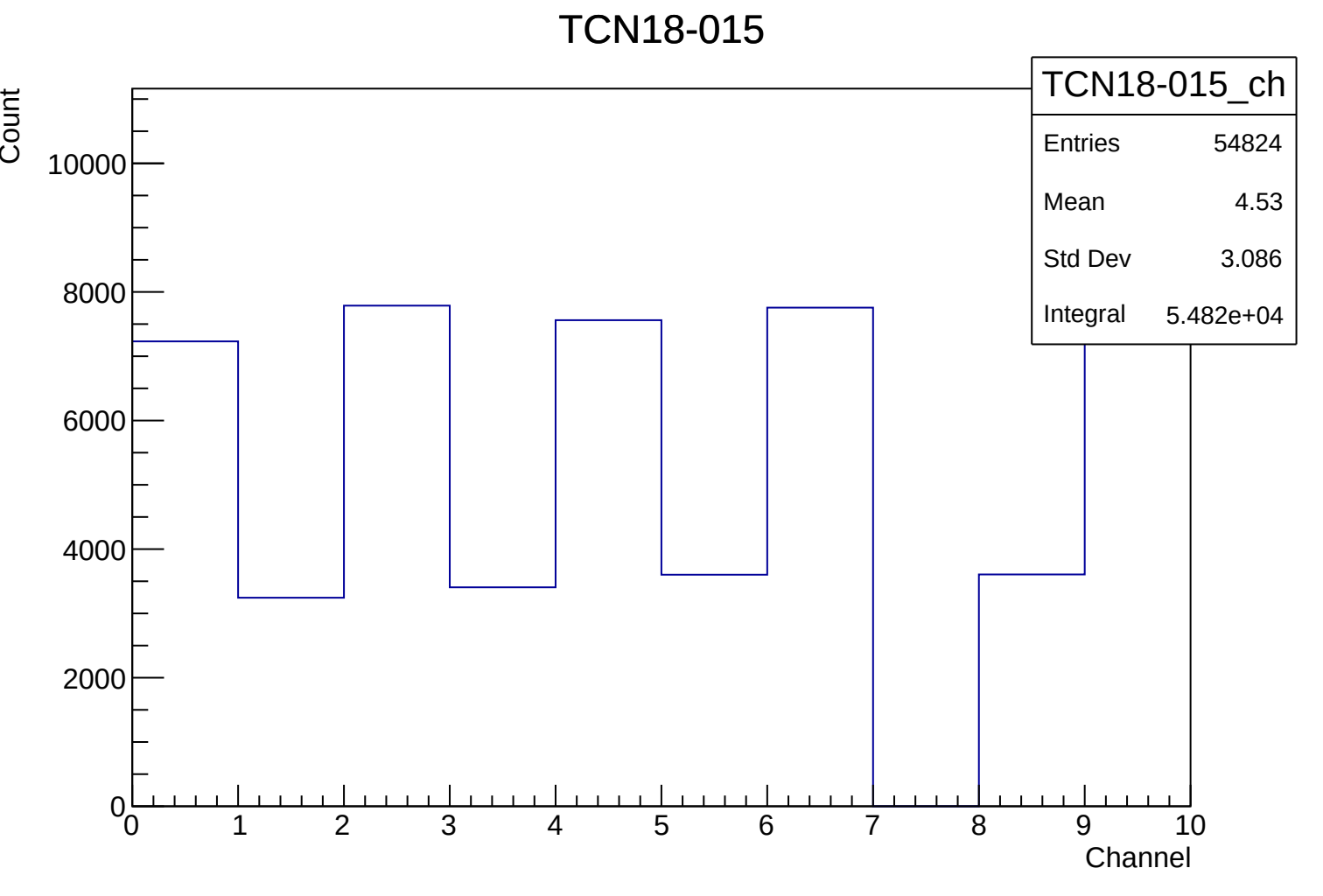

TCN18-015
TCN18-015_ch
Entries 47230
Mean 4.538
Std Dev 3.084
Integral 4.723e+04
Count
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel

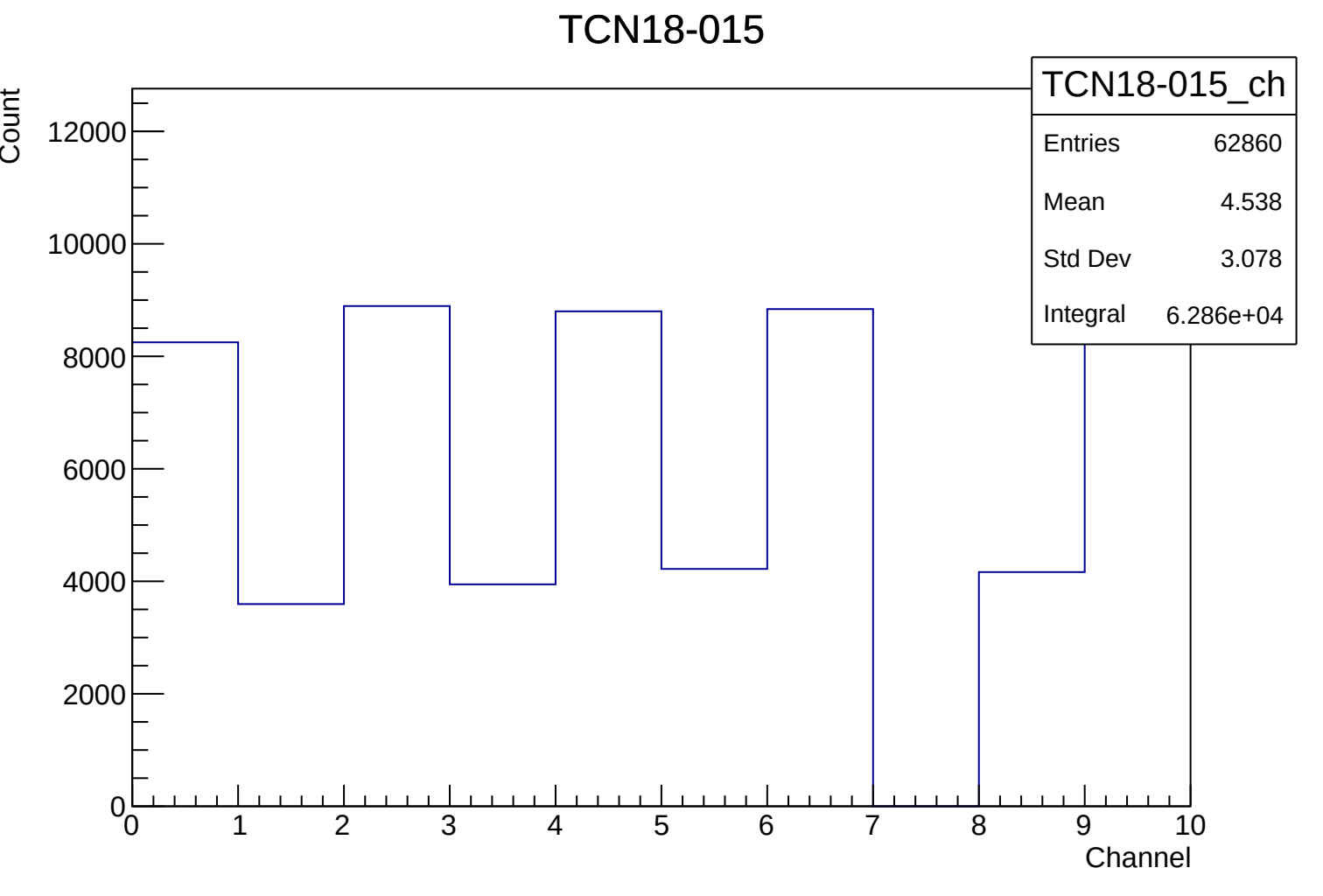

TCN18-015
TCN18-015_ch
Entries 9236
Mean 4.545
Std Dev 3.079
Integral 9236
Count
Channel
0
200
400
600
800
1000
1200
1400
1600
1800
0
1
2
3
4
5
6
7
8
9
10

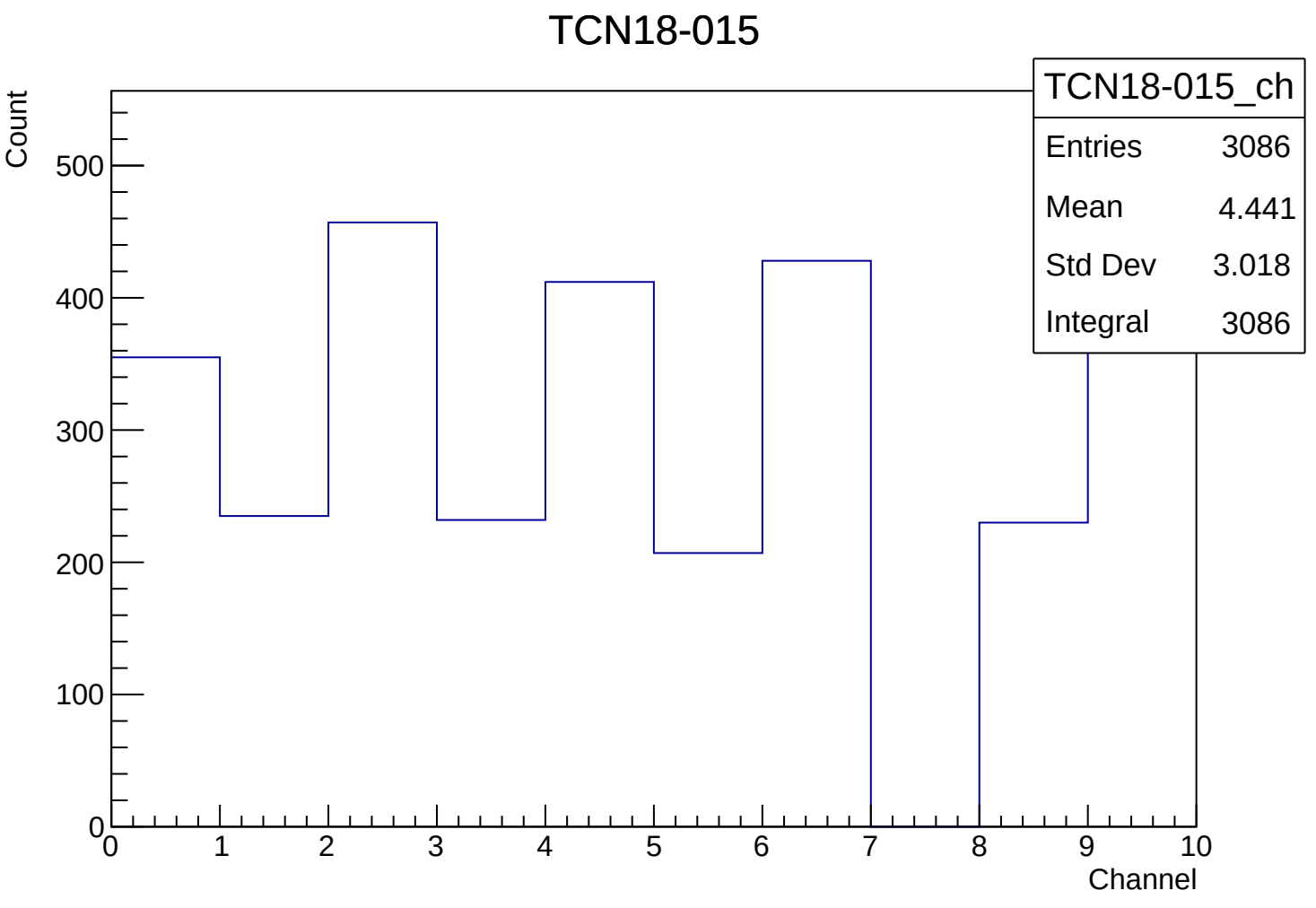

TCN18-015
TCN18-015_ch
Entries 26923
Mean 4.498
Std Dev 3.074
Integral 2.692e+04
Count
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-015
TCN18-015_ch
Entries 15682
Mean 4.499
Std Dev 3.087
Integral 1.568e+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 35341
Mean 4.522
Std Dev 3.088
Integral 3.534e+04
Count
7000
6000
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-015
TCN18-015_ch
Entries 54824
Mean 4.53
Std Dev 3.086
Integral 5.482e+04
Count
10000
8000
6000
4000
2000
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-015
TCN18-015_ch
Entries 62860
Mean 4.538
Std Dev 3.078
Integral 6.286e+04
Count
12000
10000
8000
6000
4000
2000
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-015
TCN18-015_ch
Entries 3086
Mean 4.441
Std Dev 3.018
Integral 3086
Count
0
100
200
300
400
500
0
1
2
3
4
5
6
7
8
9
10
Channel