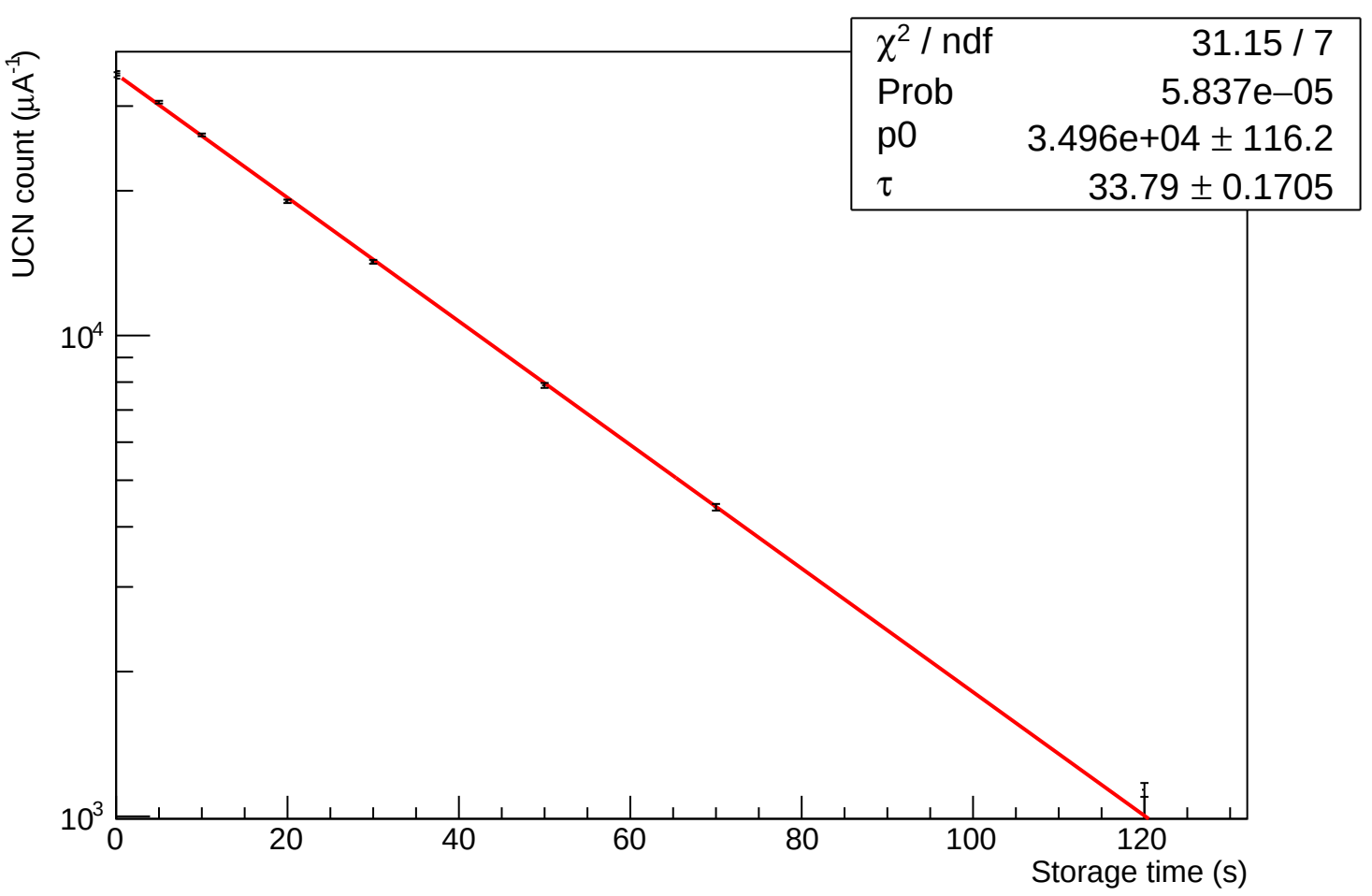
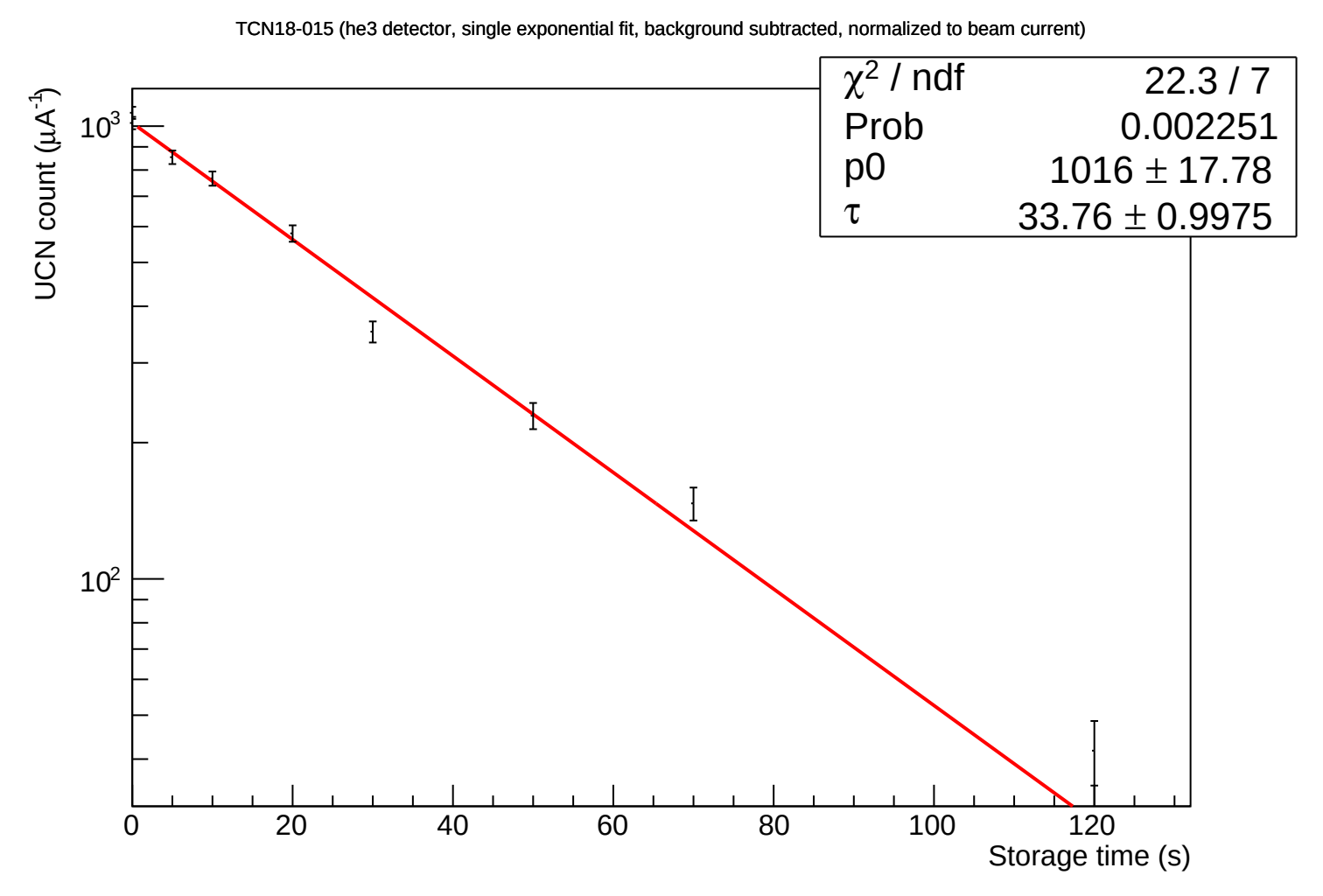
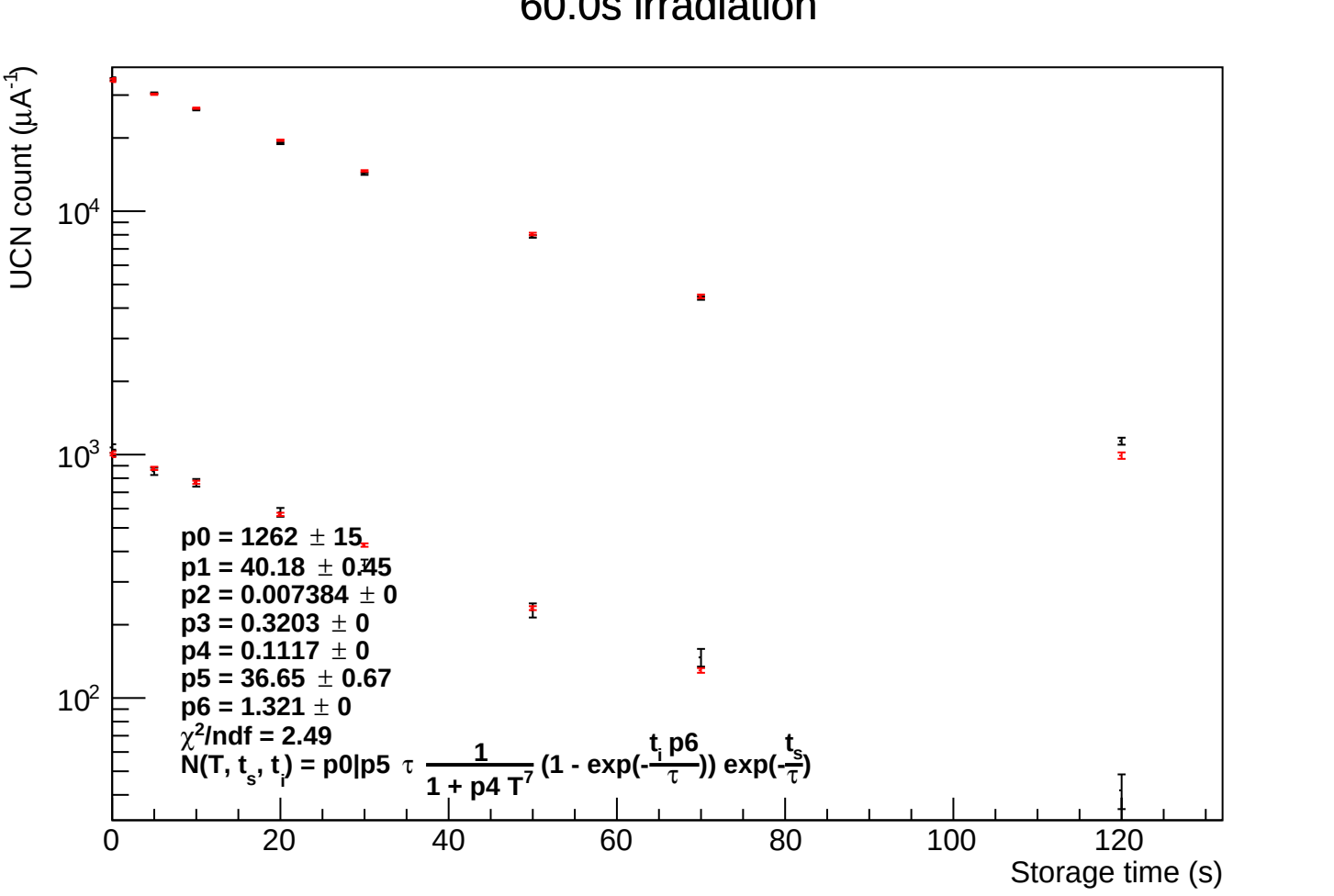
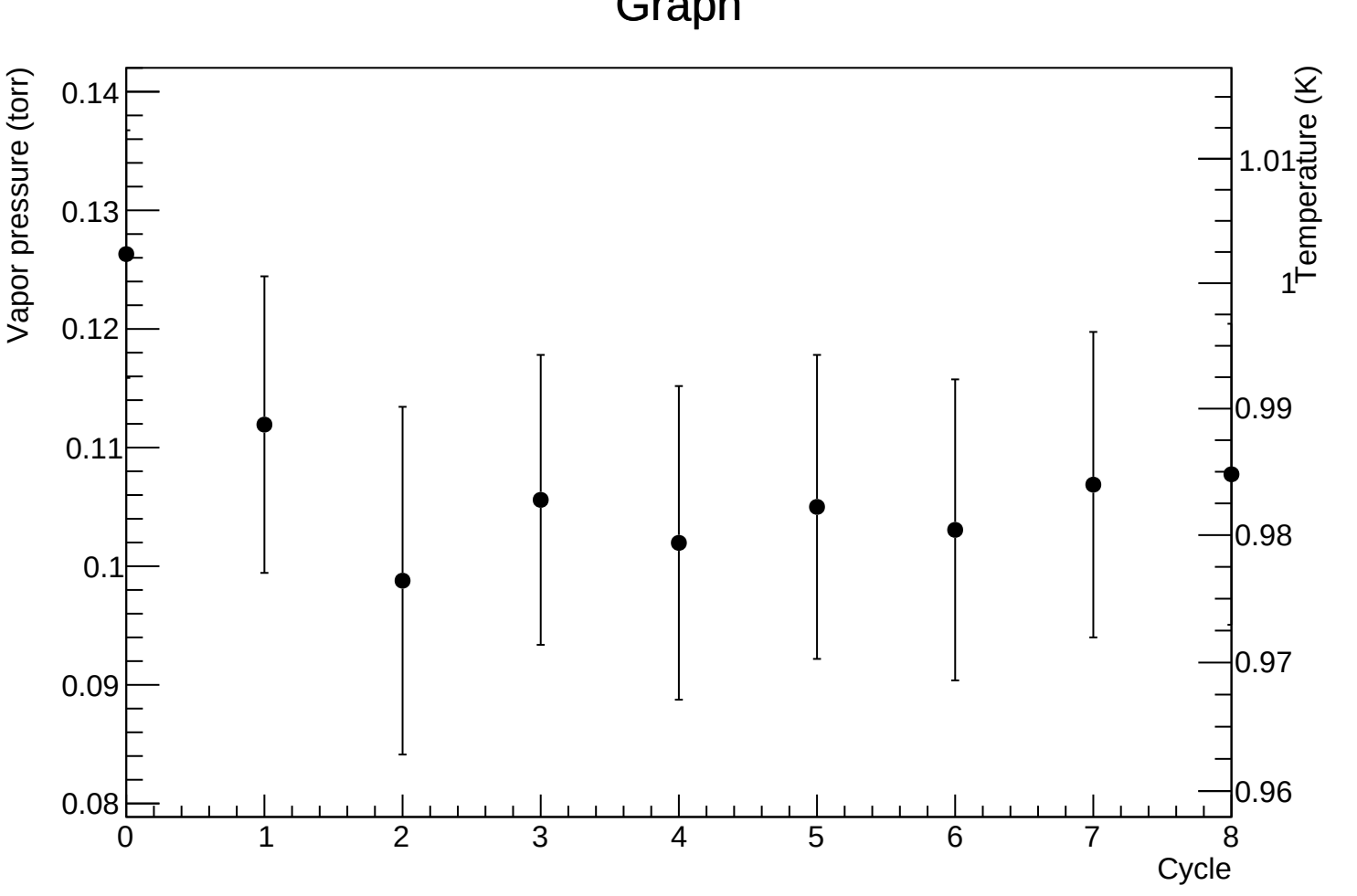
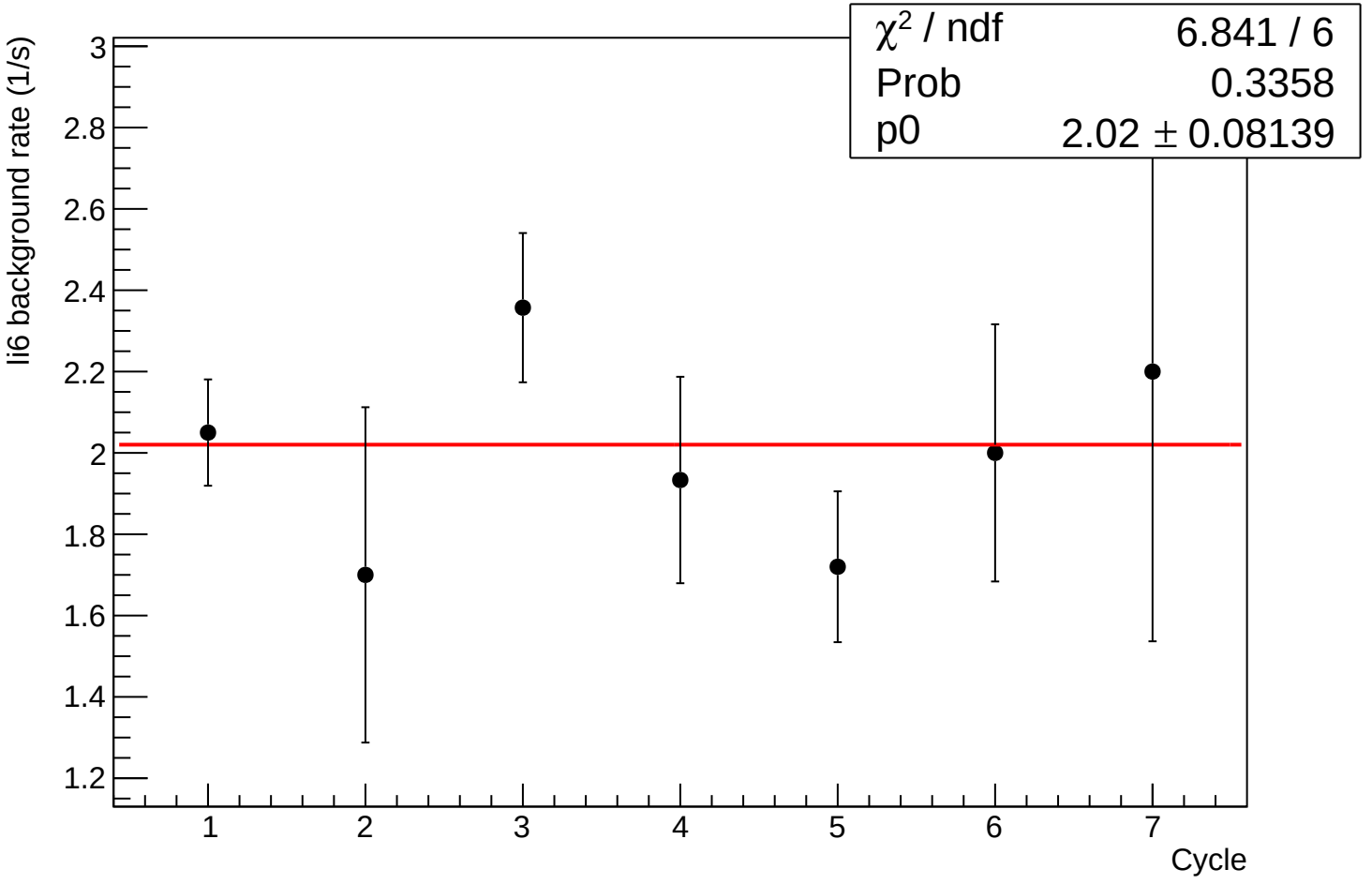
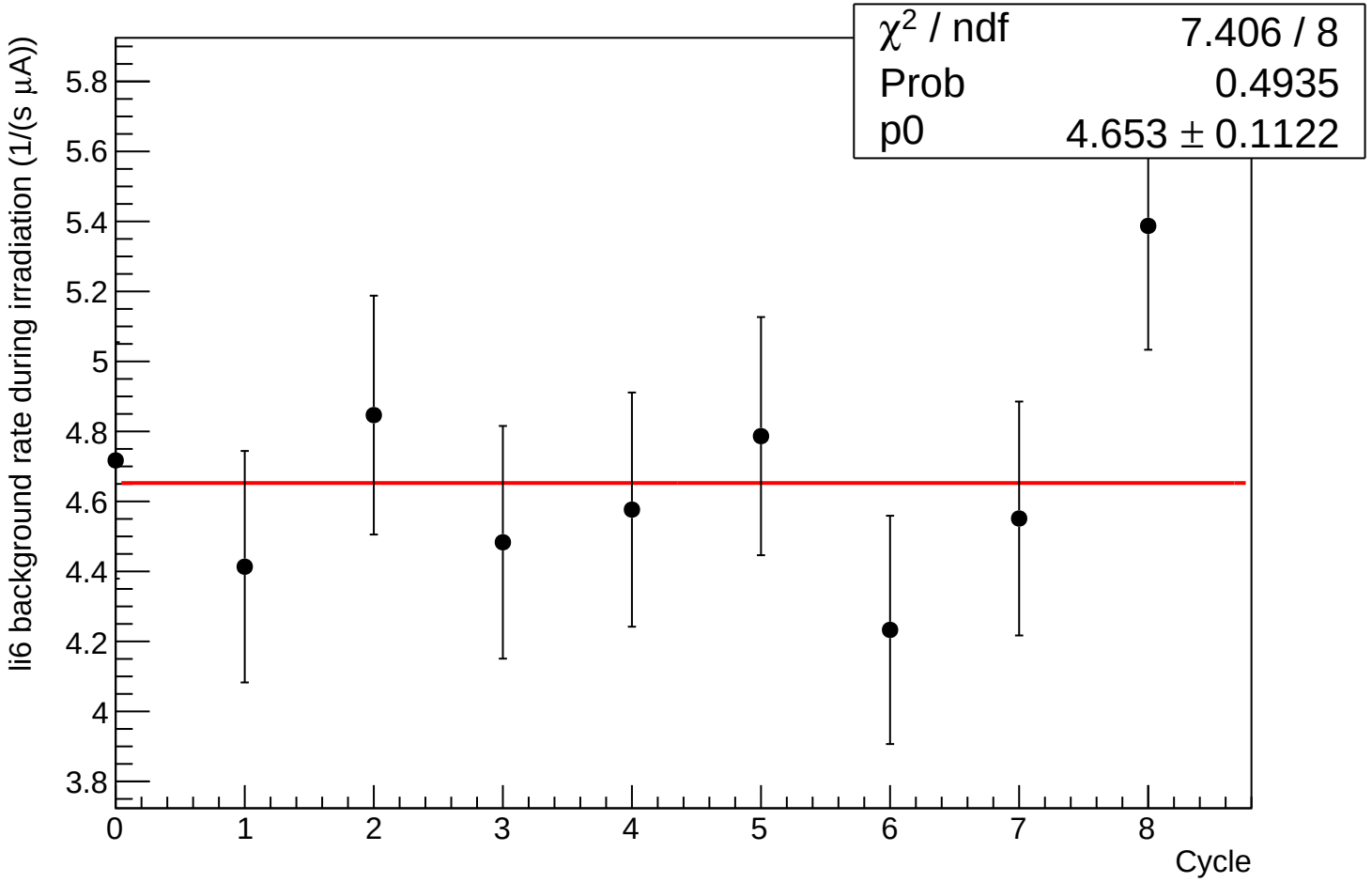

TCN18-015 (li6 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 31.15 / 7
Prob 5.837e–05
p0 3.496e+04 ± 116.2
τ 33.79 ± 0.1705
UCN count (μA⁻¹)
10⁴
10³
0
20
40
60
80
100
120
Storage time (s)

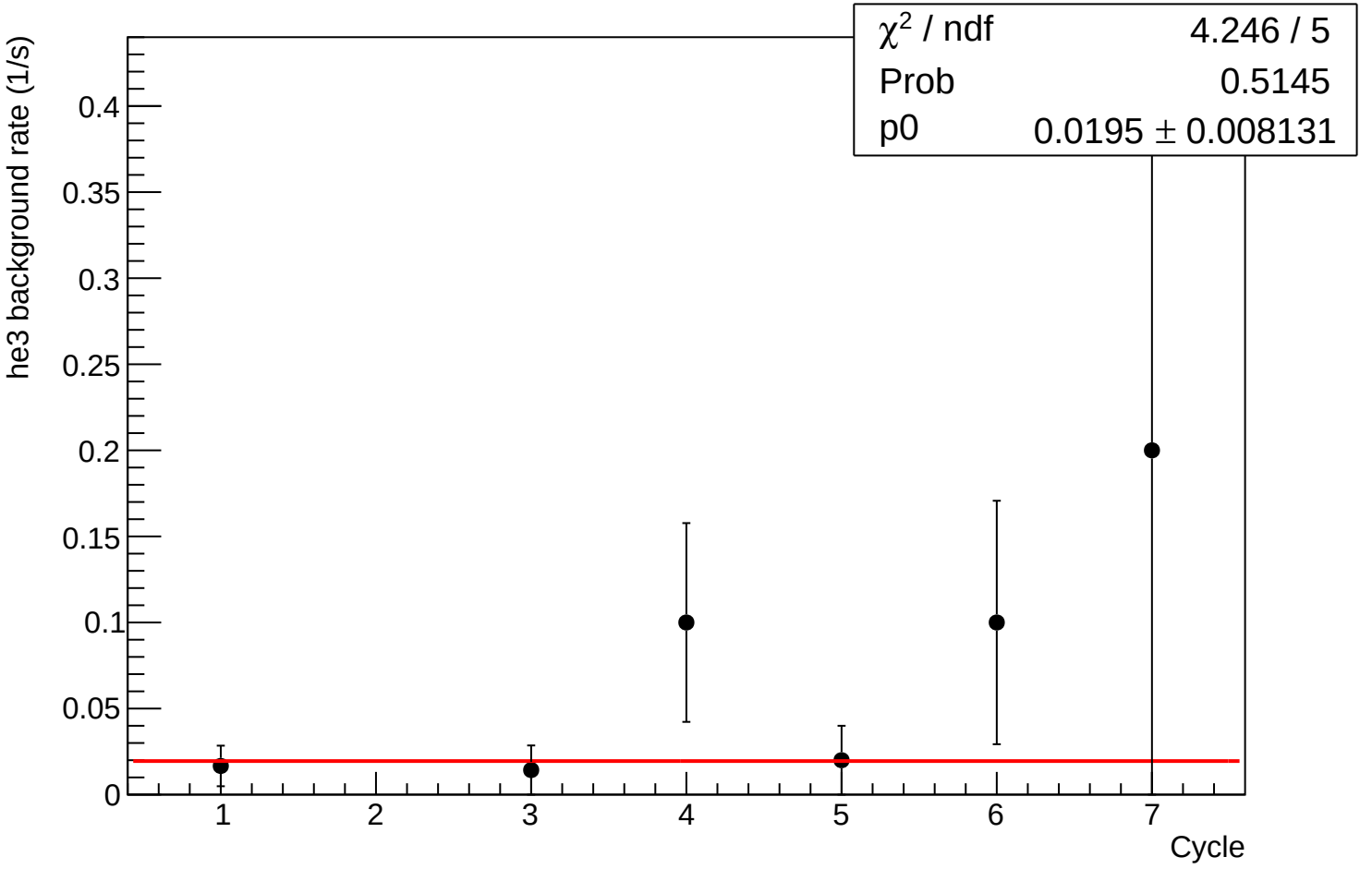

TCN18-015 (he3 detector, single exponential fit, background subtracted, normalized to beam current)
χ2 / ndf 22.3 / 7
Prob 0.002251
p0 1016 ± 17.78
τ 33.76 ± 0.9975
UCN count (μA-1)
10^3
10^2
0
20
40
60
80
100
120
Storage time (s)

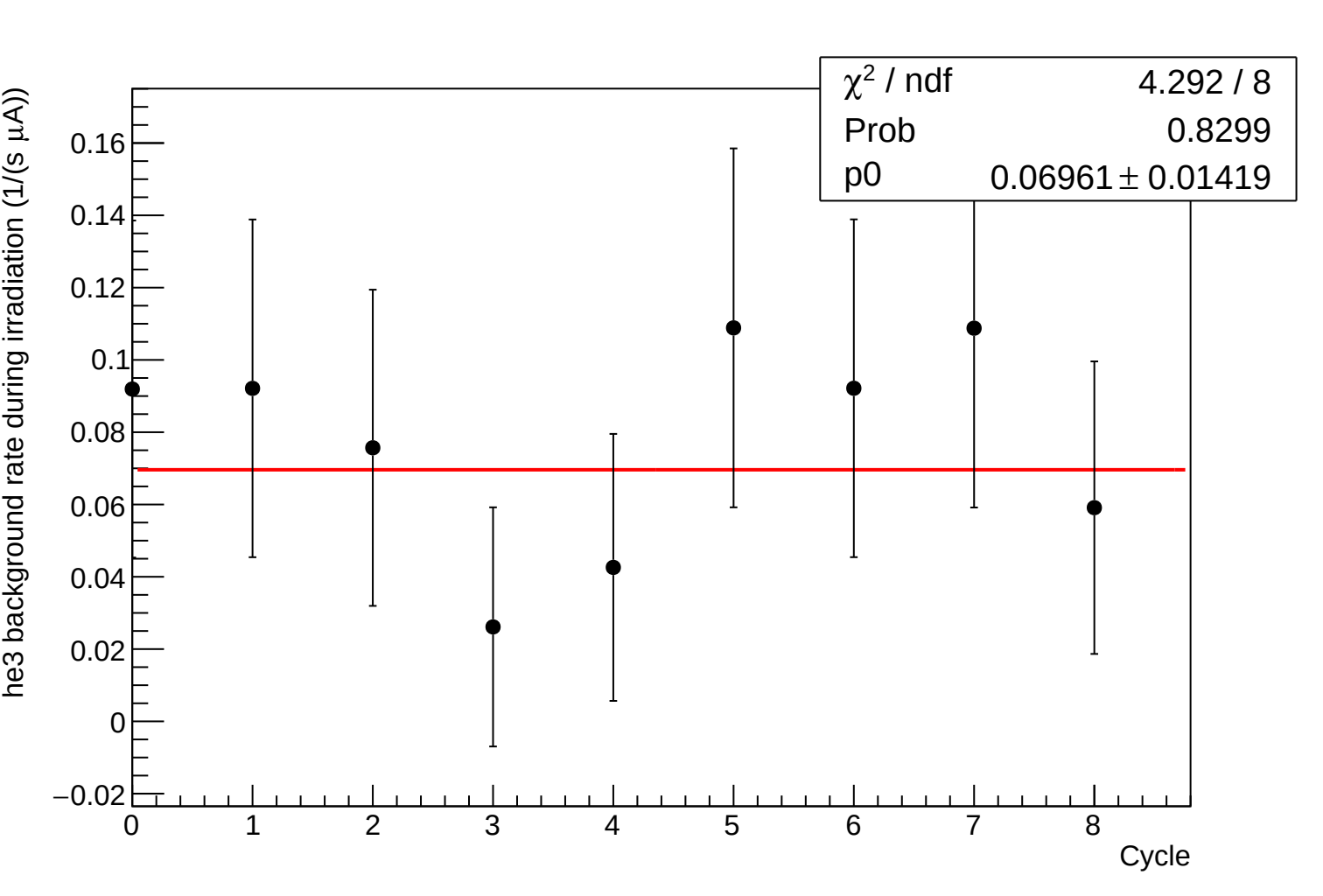

60.0s irradiation
UCN count (μA-1)
10^4
10^3
10^2
0
20
40
60
80
100
120
Storage time (s)
p0 = 1262 ± 15
p1 = 40.18 ± 0.45
p2 = 0.007384 ± 0
p3 = 0.3203 ± 0
p4 = 0.1117 ± 0
p5 = 36.65 ± 0.67
p6 = 1.321 ± 0
χ2/ndf = 2.49
N(T, ts, ti) = p0|p5 τ 1/(1 + p4 T7) (1 - exp(-ti p6/τ)) exp(-ts/τ)

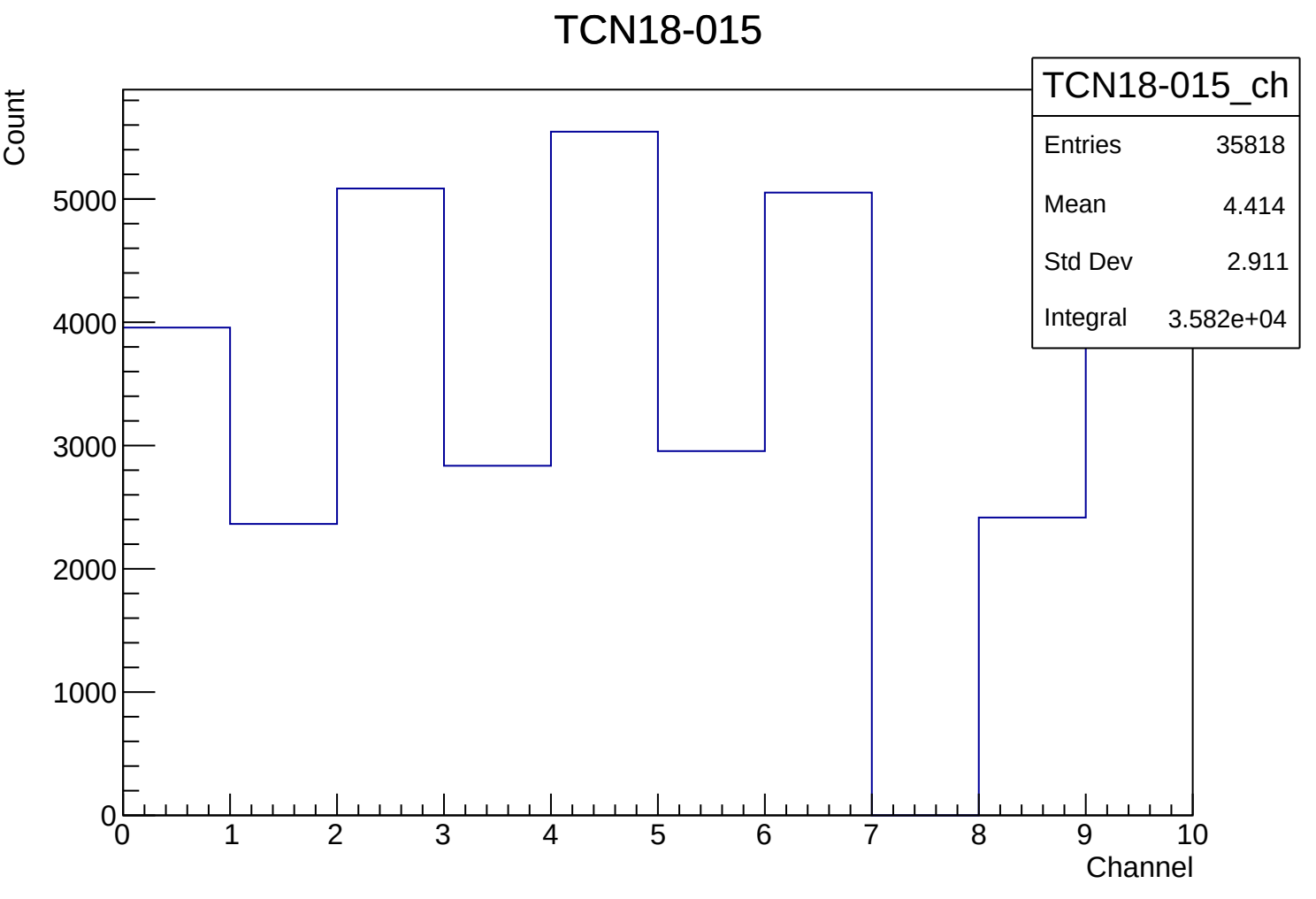

Graph
Vapor pressure (torr)
0.14
0.13
0.12
0.11
0.1
0.09
0.08
Temperature (K)
1.01
1
0.99
0.98
0.97
0.96
0
1
2
3
4
5
6
7
8
Cycle

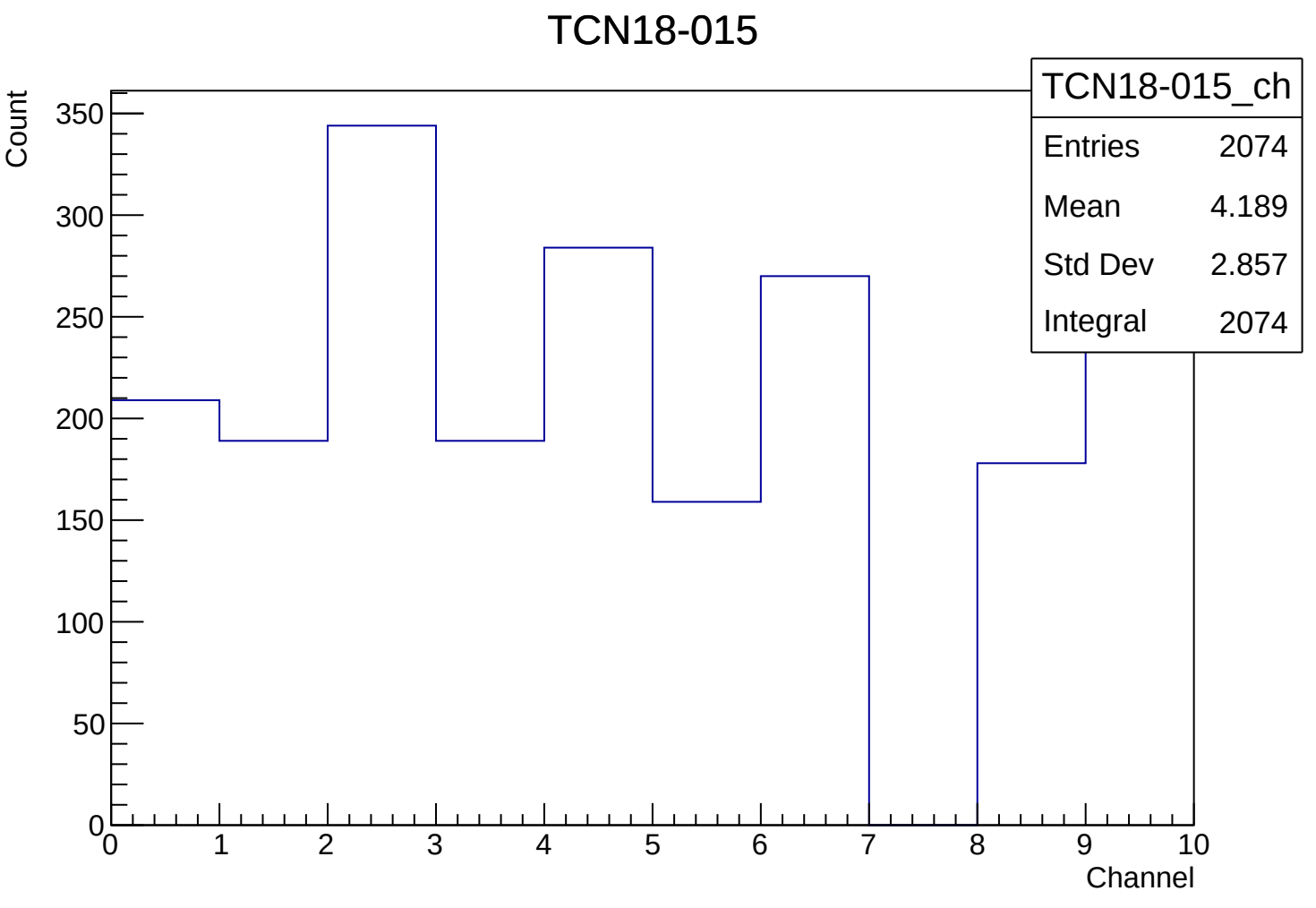

χ² / ndf 6.841 / 6
Prob 0.3358
p0 2.02 ± 0.08139
li6 background rate (1/s)
3
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
2
3
4
5
6
7
Cycle

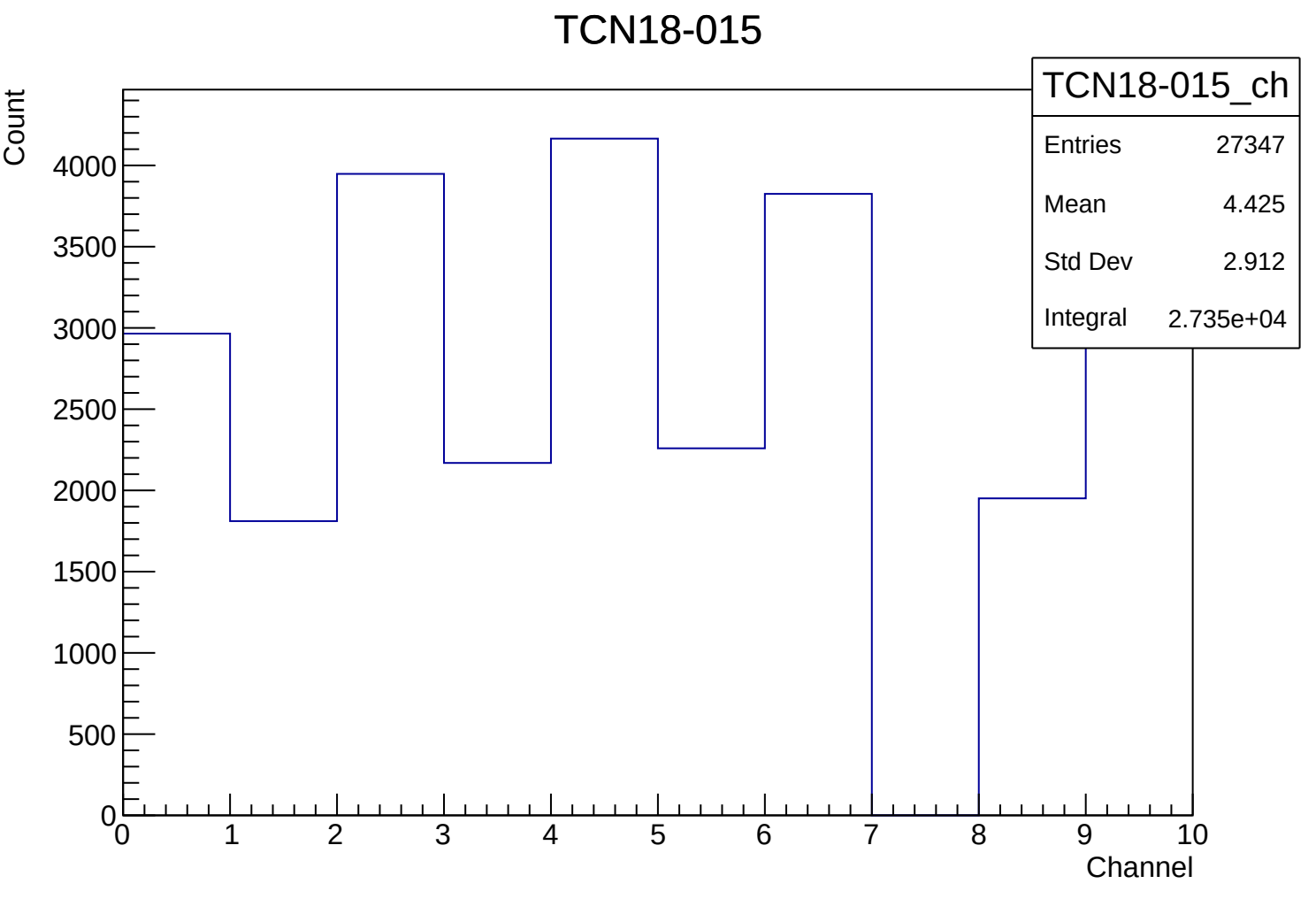

li6 background rate during irradiation (1/(s μA))
Cycle
χ² / ndf 7.406 / 8
Prob 0.4935
p0 4.653 ± 0.1122
5.8
5.6
5.4
5.2
5
4.8
4.6
4.4
4.2
4
3.8
0
1
2
3
4
5
6
7
8

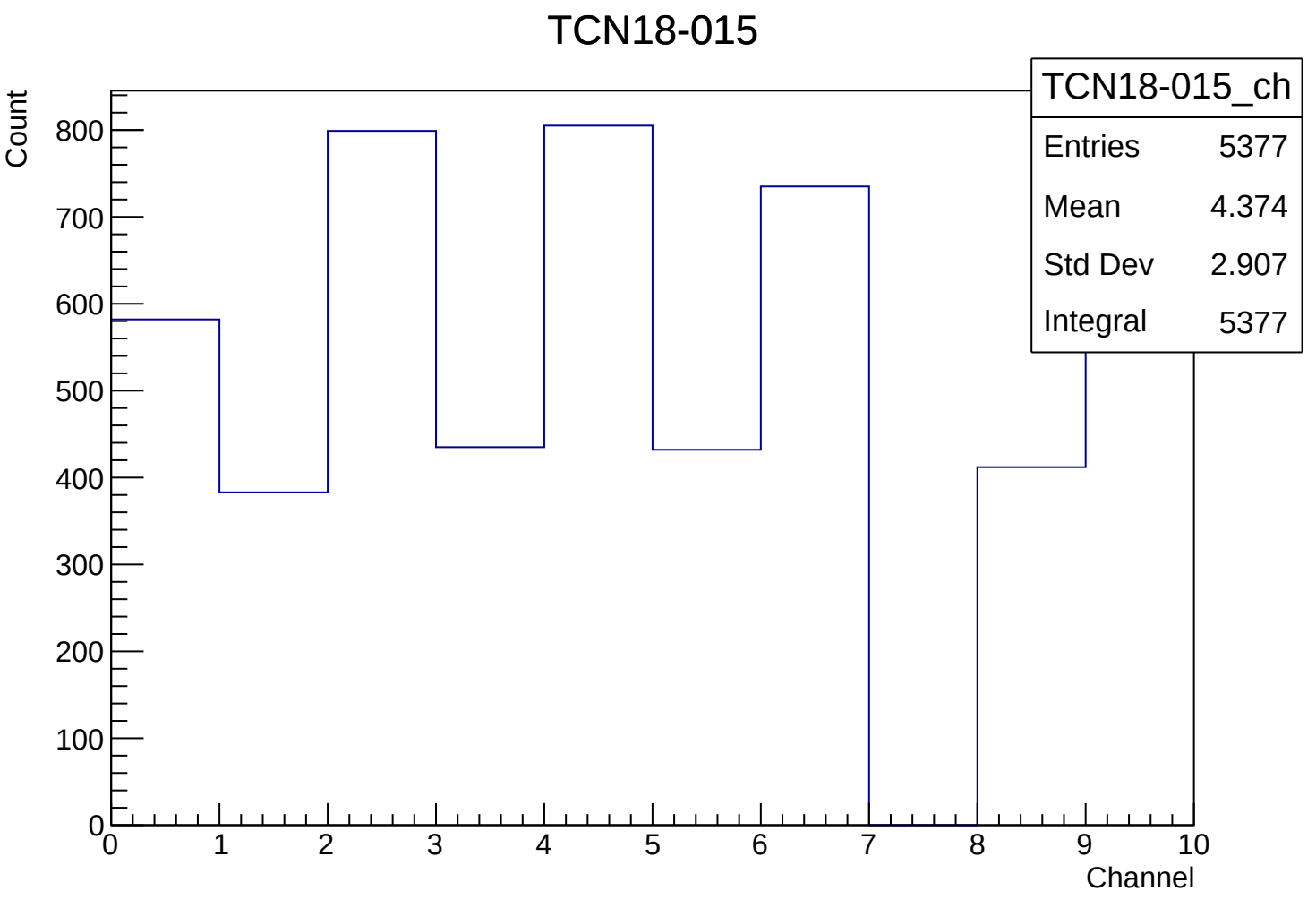

χ² / ndf 4.246 / 5
Prob 0.5145
p0 0.0195 ± 0.008131
he3 background rate (1/s)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
1
2
3
4
5
6
7
Cycle

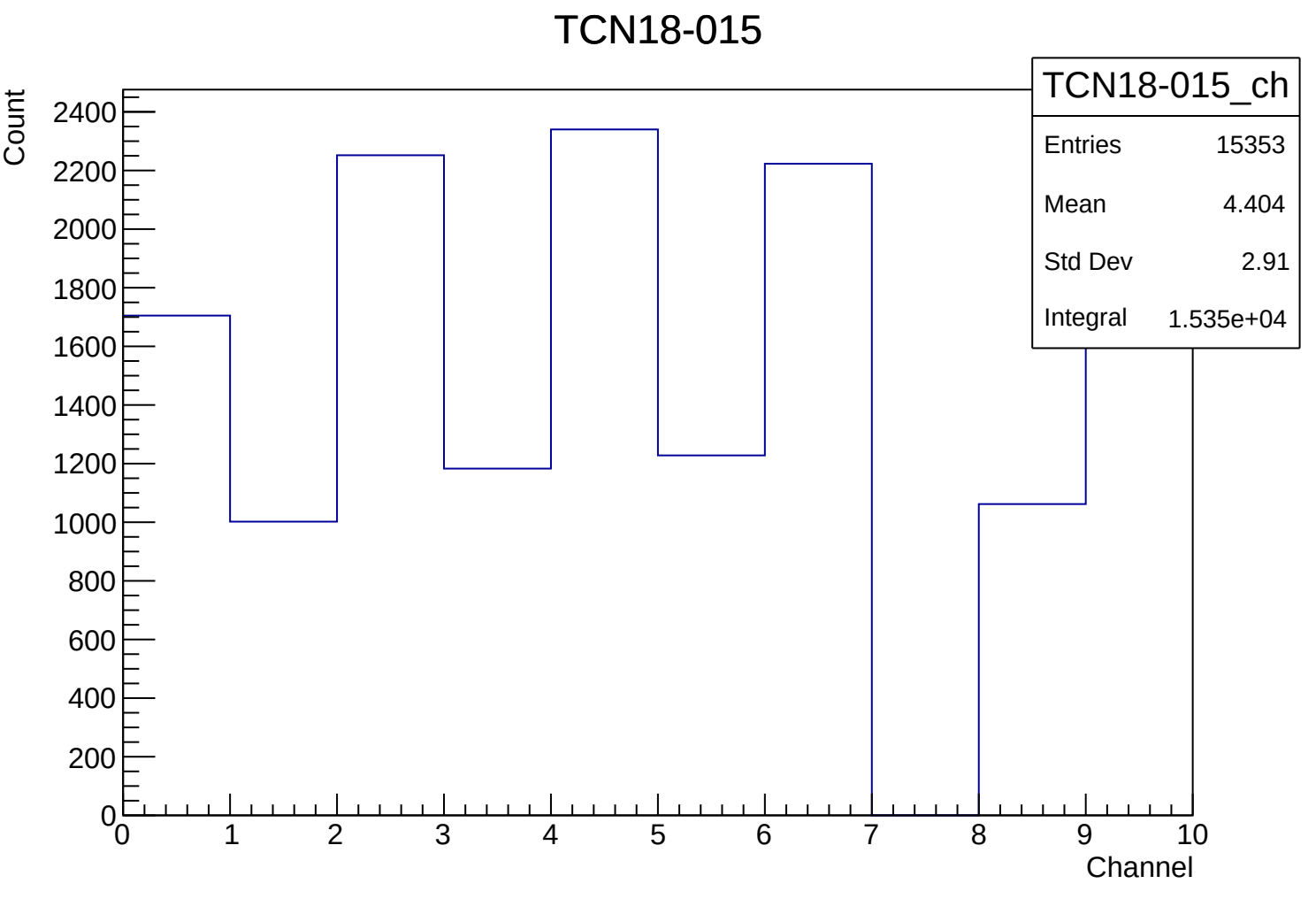

χ² / ndf 4.292 / 8
Prob 0.8299
p0 0.06961 ± 0.01419
he3 background rate during irradiation (1/(s μA))
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
−0.02
0
1
2
3
4
5
6
7
8
Cycle

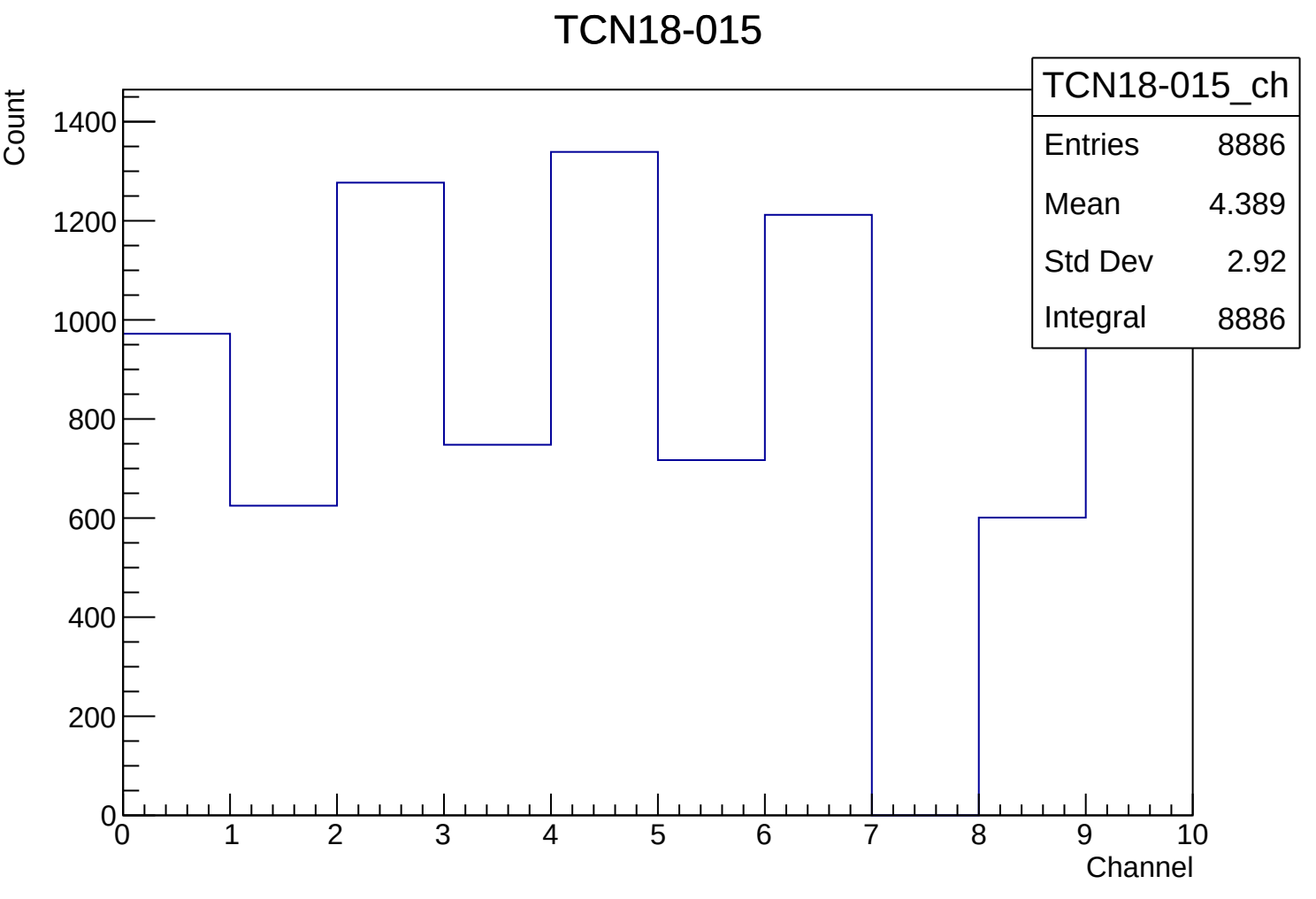

TCN18-015
TCN18-015_ch
Entries 35818
Mean 4.414
Std Dev 2.911
Integral 3.582e+04
Count
0
1000
2000
3000
4000
5000
0
1
2
3
4
5
6
7
8
9
10
Channel

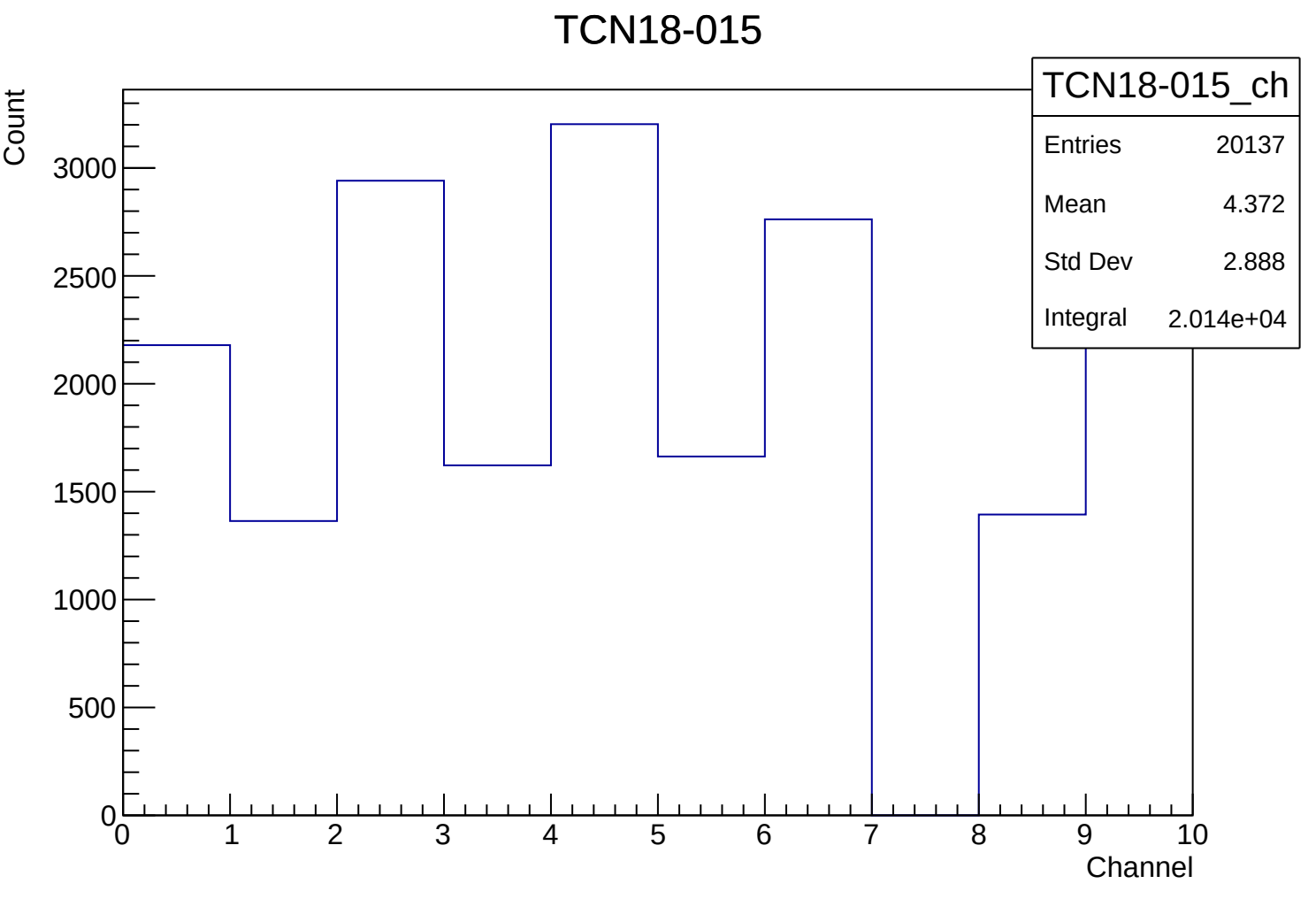

TCN18-015
TCN18-015_ch
Entries 2074
Mean 4.189
Std Dev 2.857
Integral 2074
Count
Channel
0
50
100
150
200
250
300
350
0
1
2
3
4
5
6
7
8
9
10

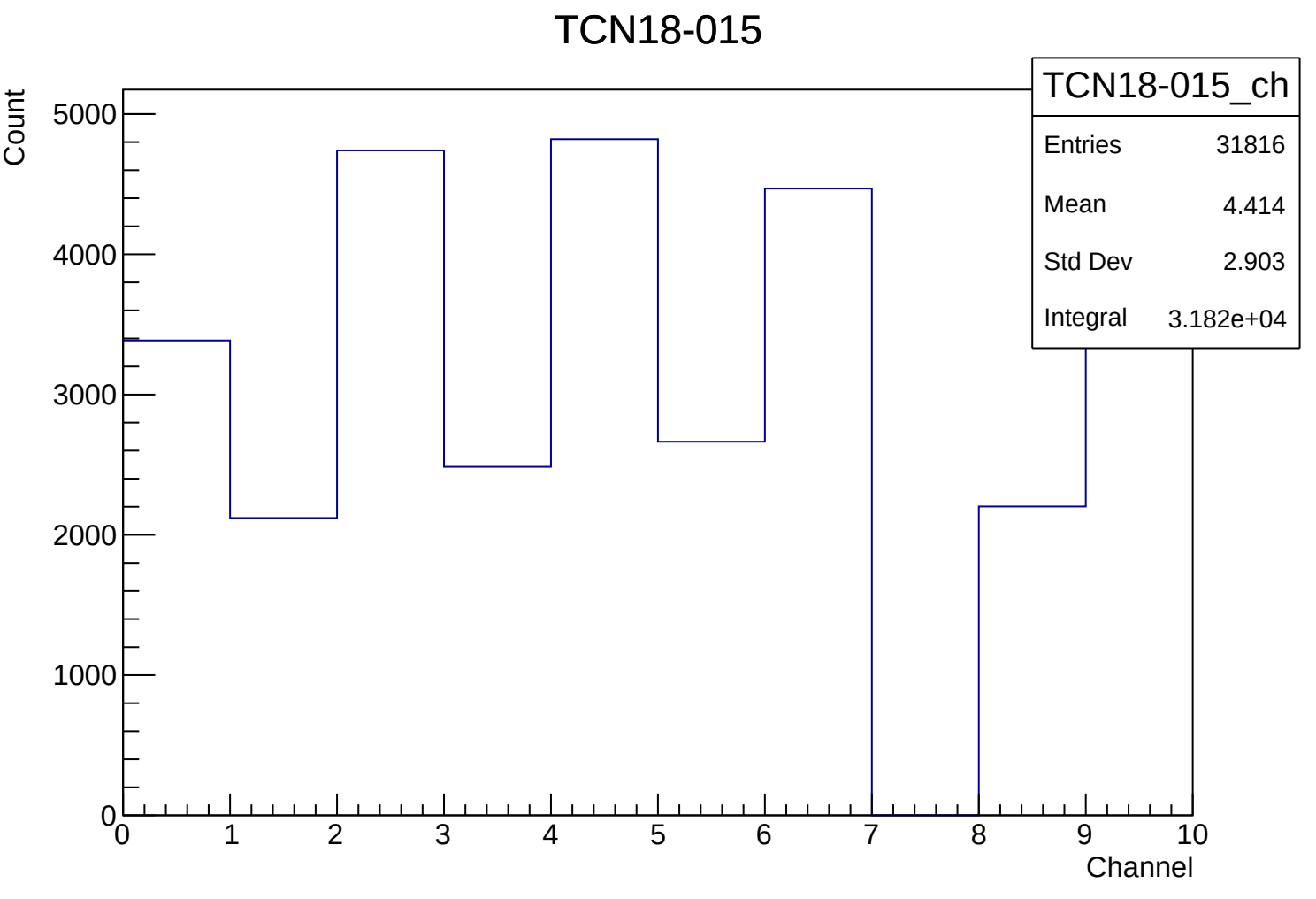

TCN18-015
TCN18-015_ch
Entries 27347
Mean 4.425
Std Dev 2.912
Integral 2.735e+04
Count
0
500
1000
1500
2000
2500
3000
3500
4000
0
1
2
3
4
5
6
7
8
9
10
Channel

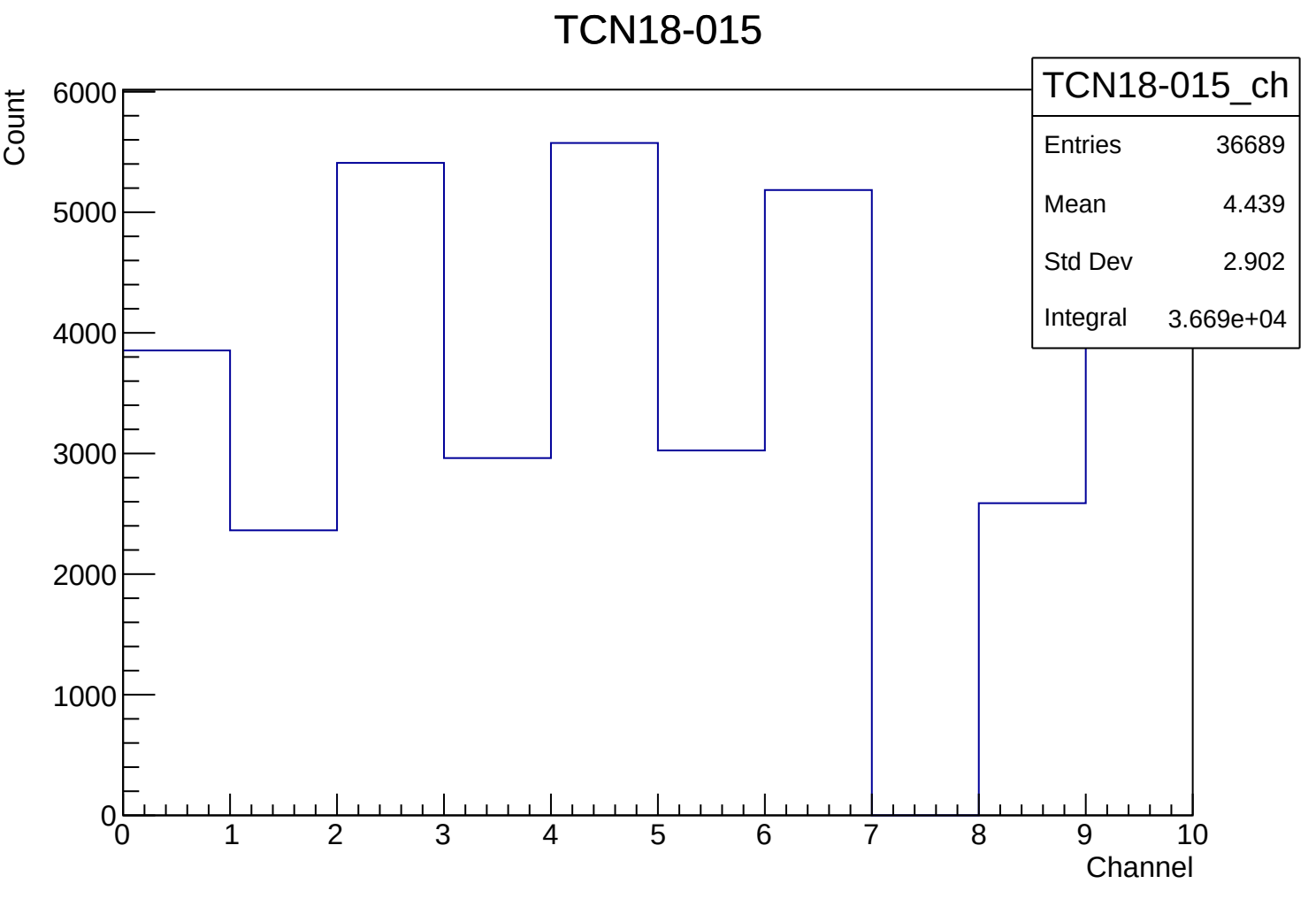

TCN18-015
TCN18-015_ch
Entries 5377
Mean 4.374
Std Dev 2.907
Integral 5377
Count
0
100
200
300
400
500
600
700
800
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 15353
Mean 4.404
Std Dev 2.91
Integral 1.535e+04
Count
Channel
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
0
1
2
3
4
5
6
7
8
9
10


TCN18-015
TCN18-015_ch
Entries 8886
Mean 4.389
Std Dev 2.92
Integral 8886
Count
1400
1200
1000
800
600
400
200
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-015
TCN18-015_ch
Entries 20137
Mean 4.372
Std Dev 2.888
Integral 2.014e+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 31816
Mean 4.414
Std Dev 2.903
Integral 3.182e+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 36689
Mean 4.439
Std Dev 2.902
Integral 3.669e+04
Count
Channel
0
1000
2000
3000
4000
5000
6000
0
1
2
3
4
5
6
7
8
9
10