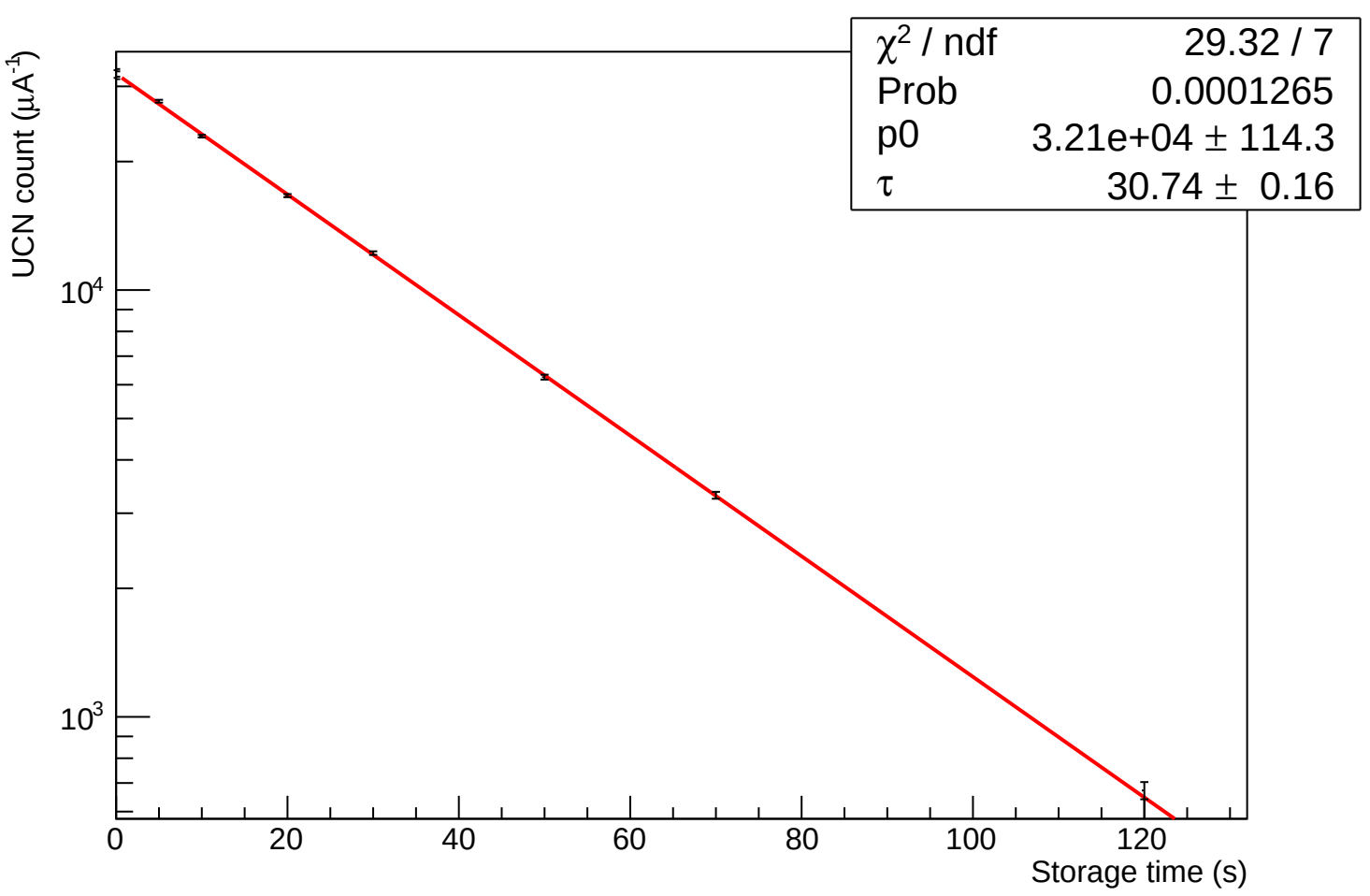
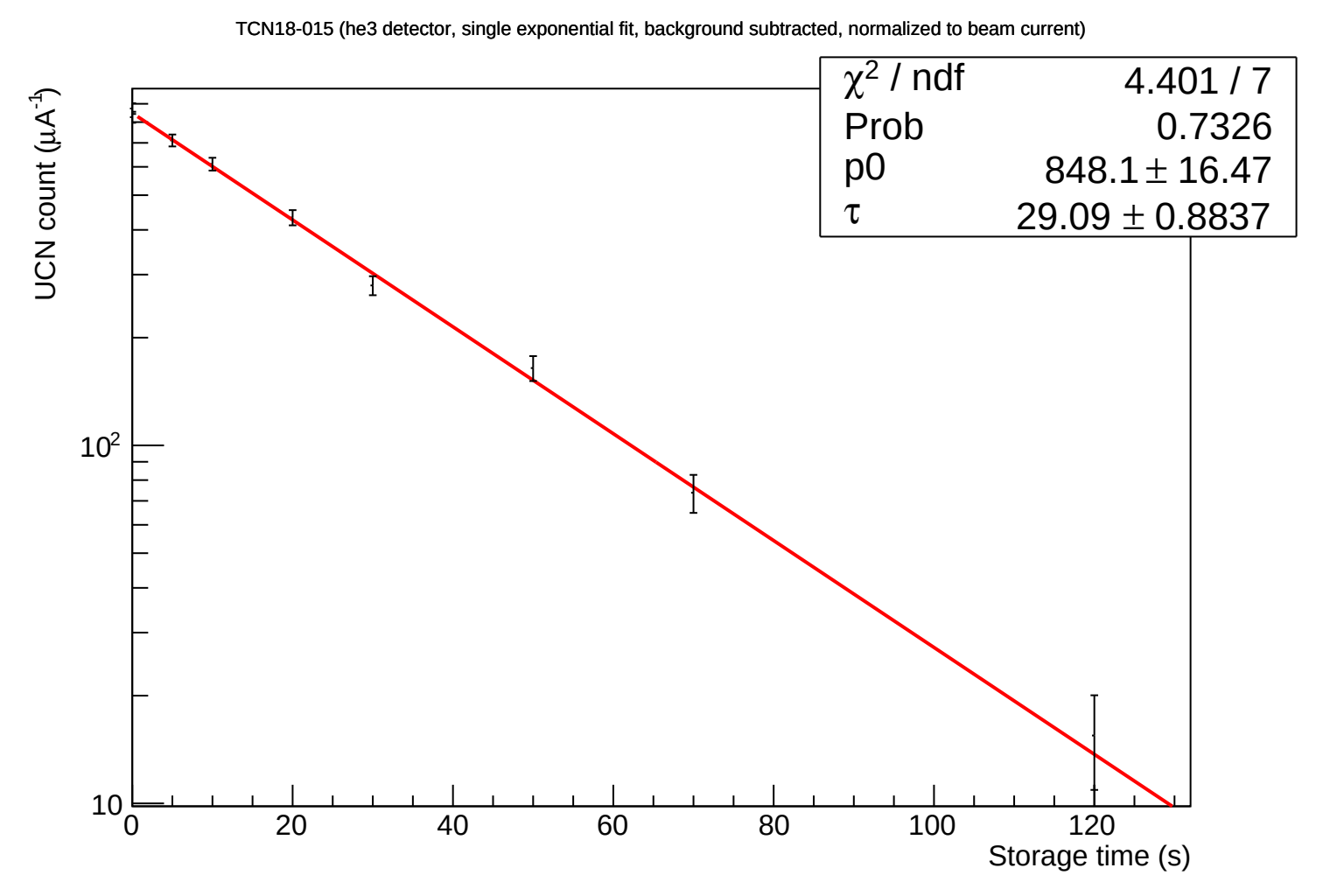
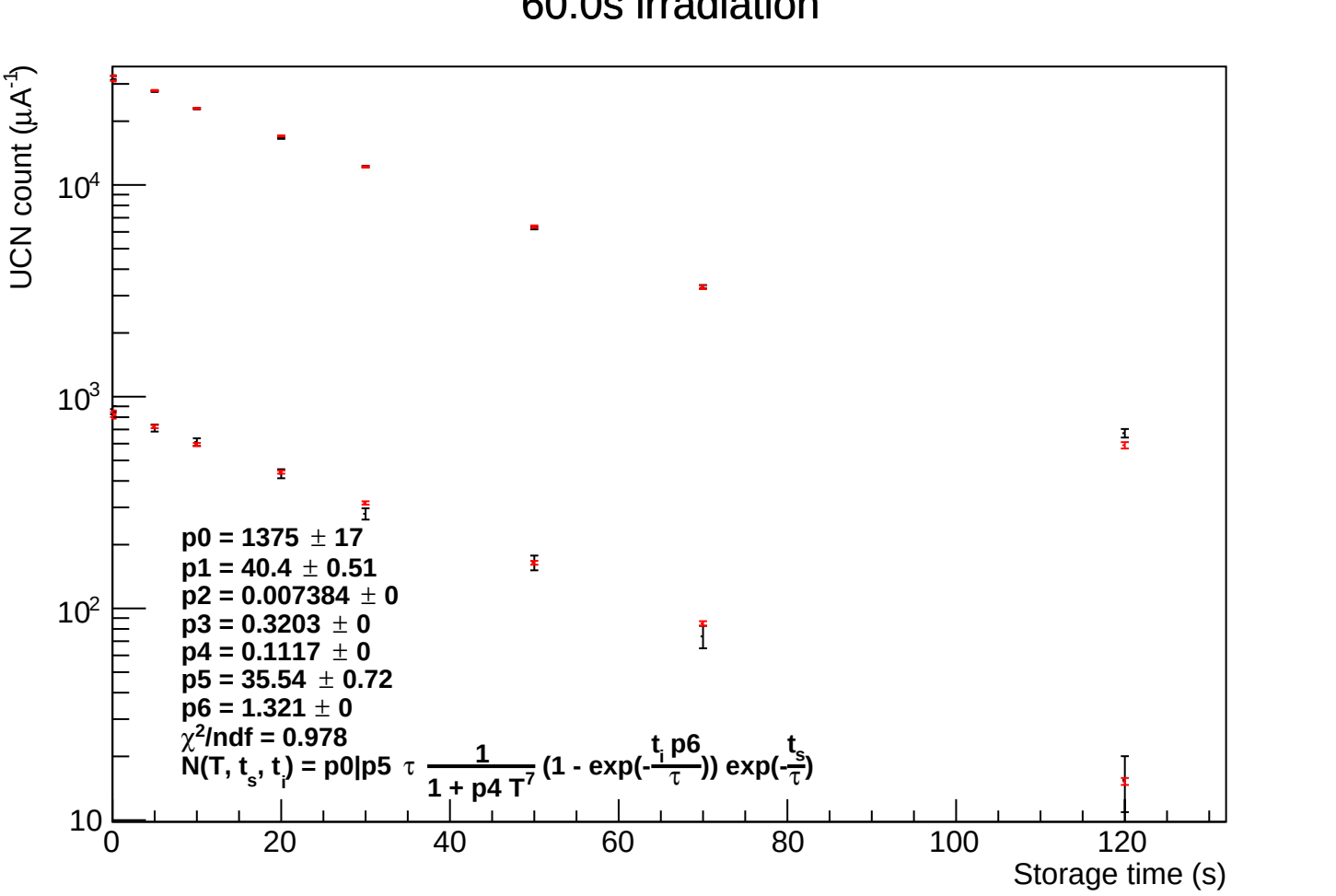
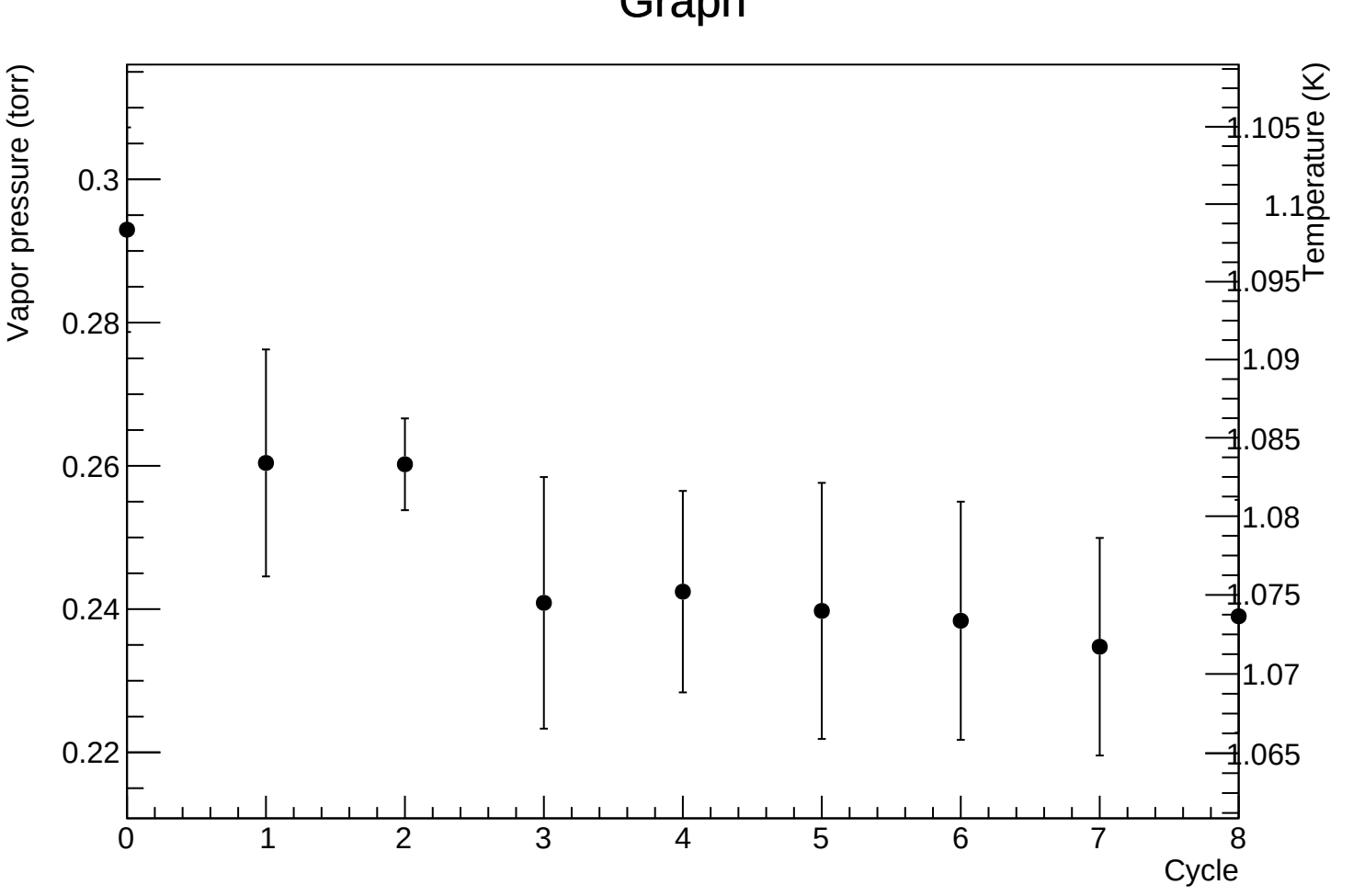
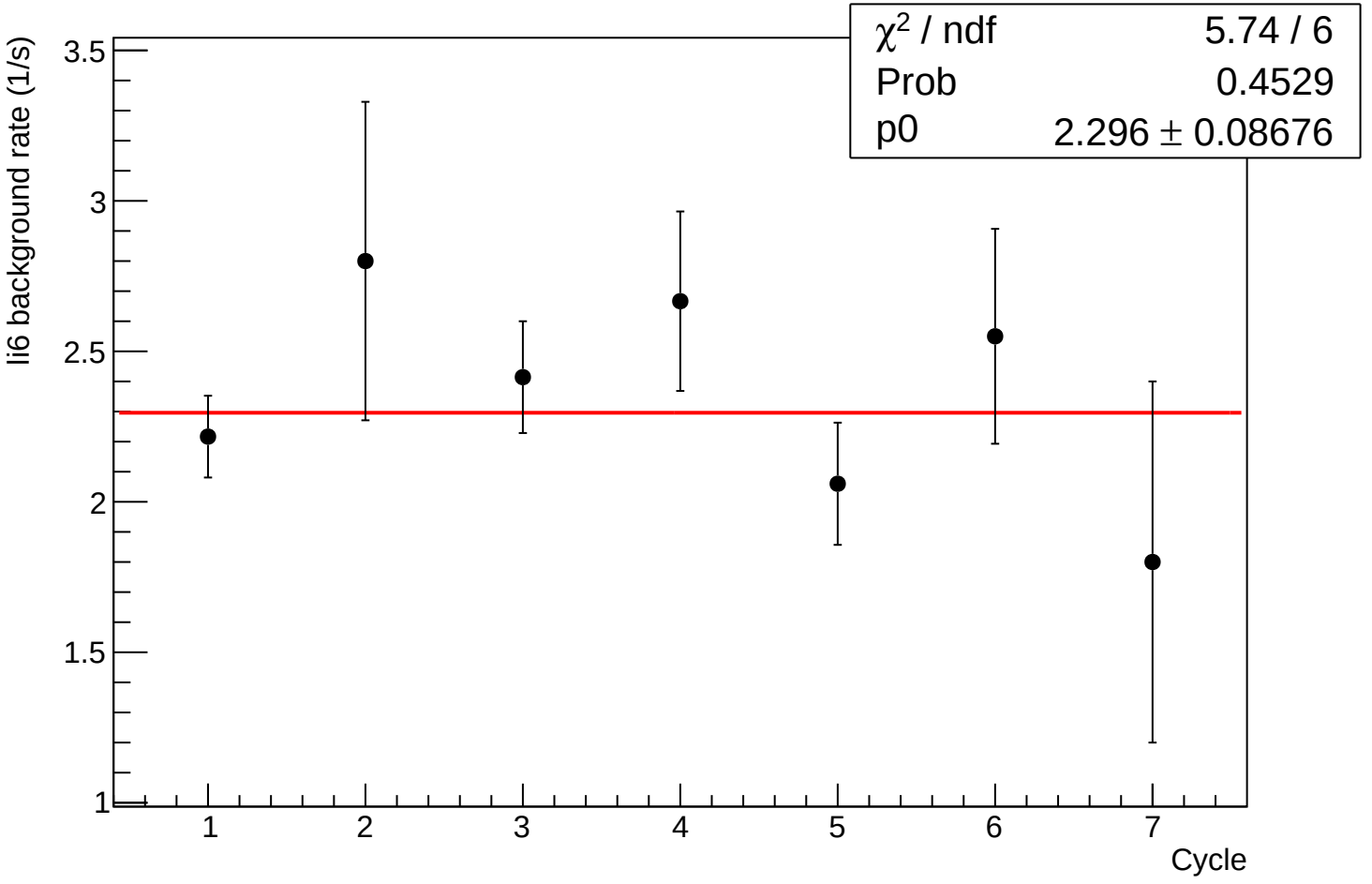
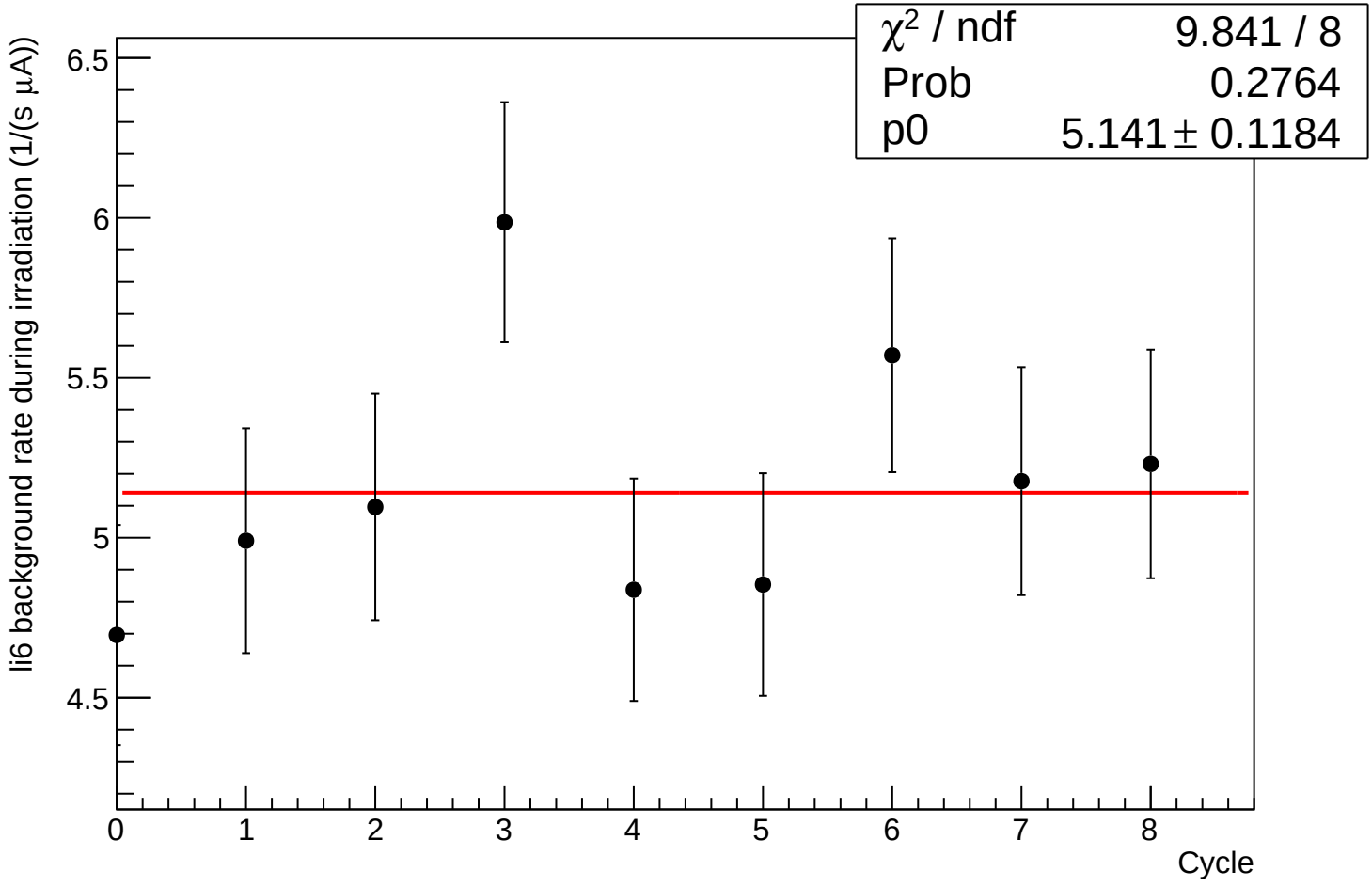

TCN18-015 (li6 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 29.32 / 7
Prob 0.0001265
p0 3.21e+04 ± 114.3
τ 30.74 ± 0.16
UCN count (μA⁻¹)
10⁴
10³
0
20
40
60
80
100
120
Storage time (s)

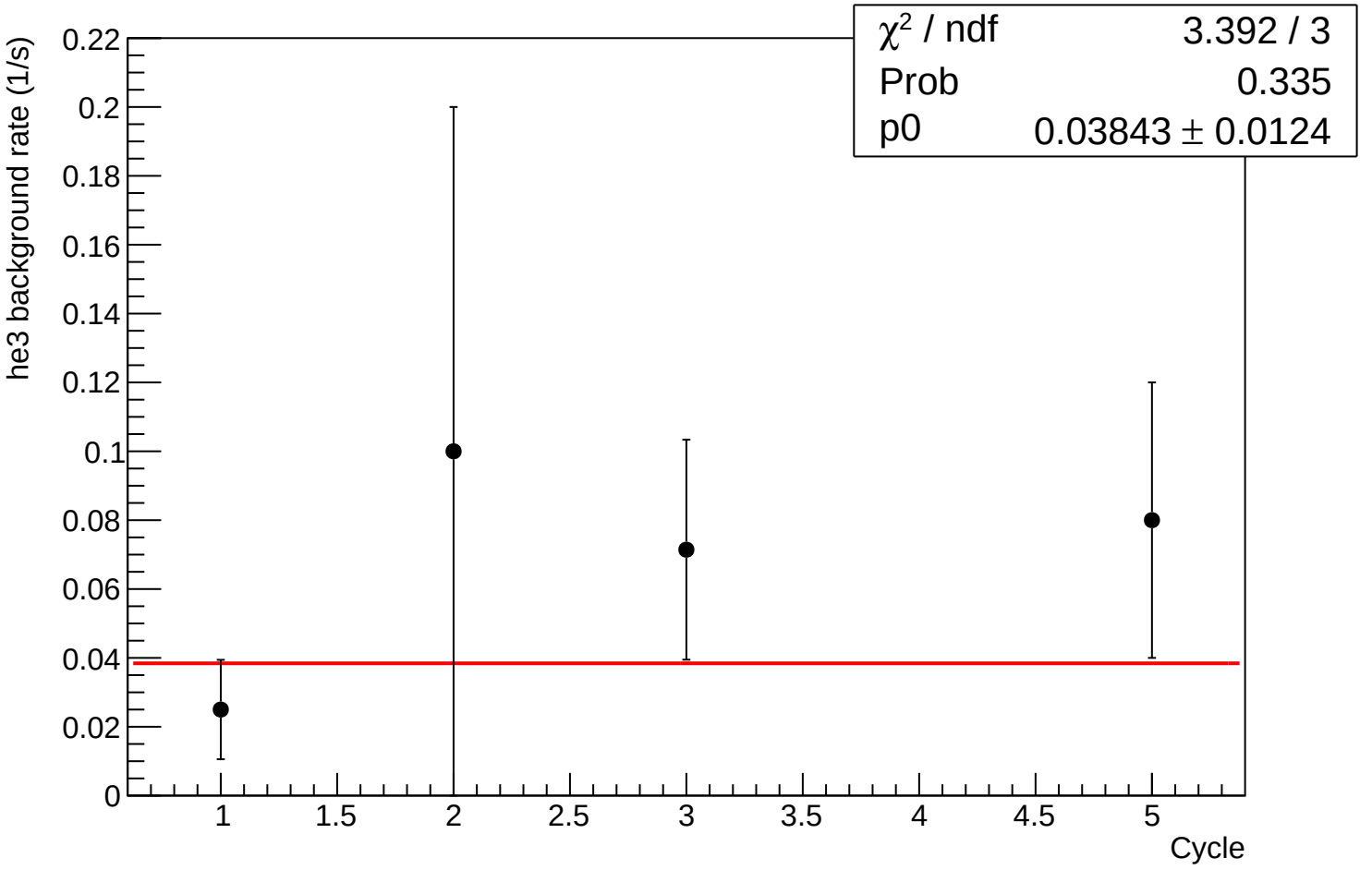

TCN18-015 (he3 detector, single exponential fit, background subtracted, normalized to beam current)
χ2 / ndf 4.401 / 7
Prob 0.7326
p0 848.1 ± 16.47
τ 29.09 ± 0.8837
UCN count (μA-1)
10
10^2
0
20
40
60
80
100
120
Storage time (s)

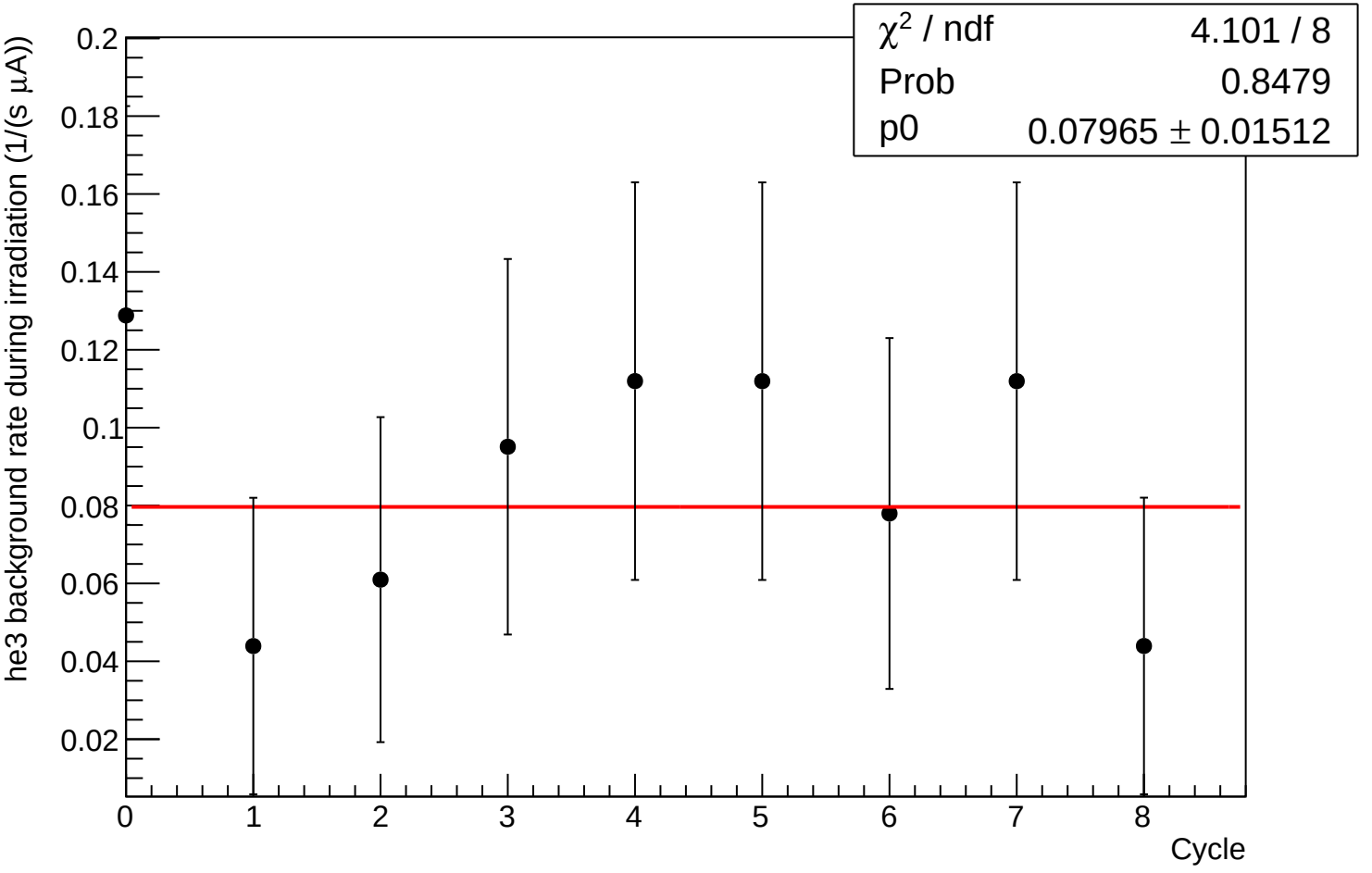

60.0s irradiation
UCN count (μA-1)
10^4
10^3
10^2
10
0
20
40
60
80
100
120
Storage time (s)
p0 = 1375 ± 17
p1 = 40.4 ± 0.51
p2 = 0.007384 ± 0
p3 = 0.3203 ± 0
p4 = 0.1117 ± 0
p5 = 35.54 ± 0.72
p6 = 1.321 ± 0
χ2/ndf = 0.978
N(T, ts, ti) = p0|p5 τ 1/(1 + p4 T7) (1 - exp(-ti p6/τ)) exp(-ts/τ)

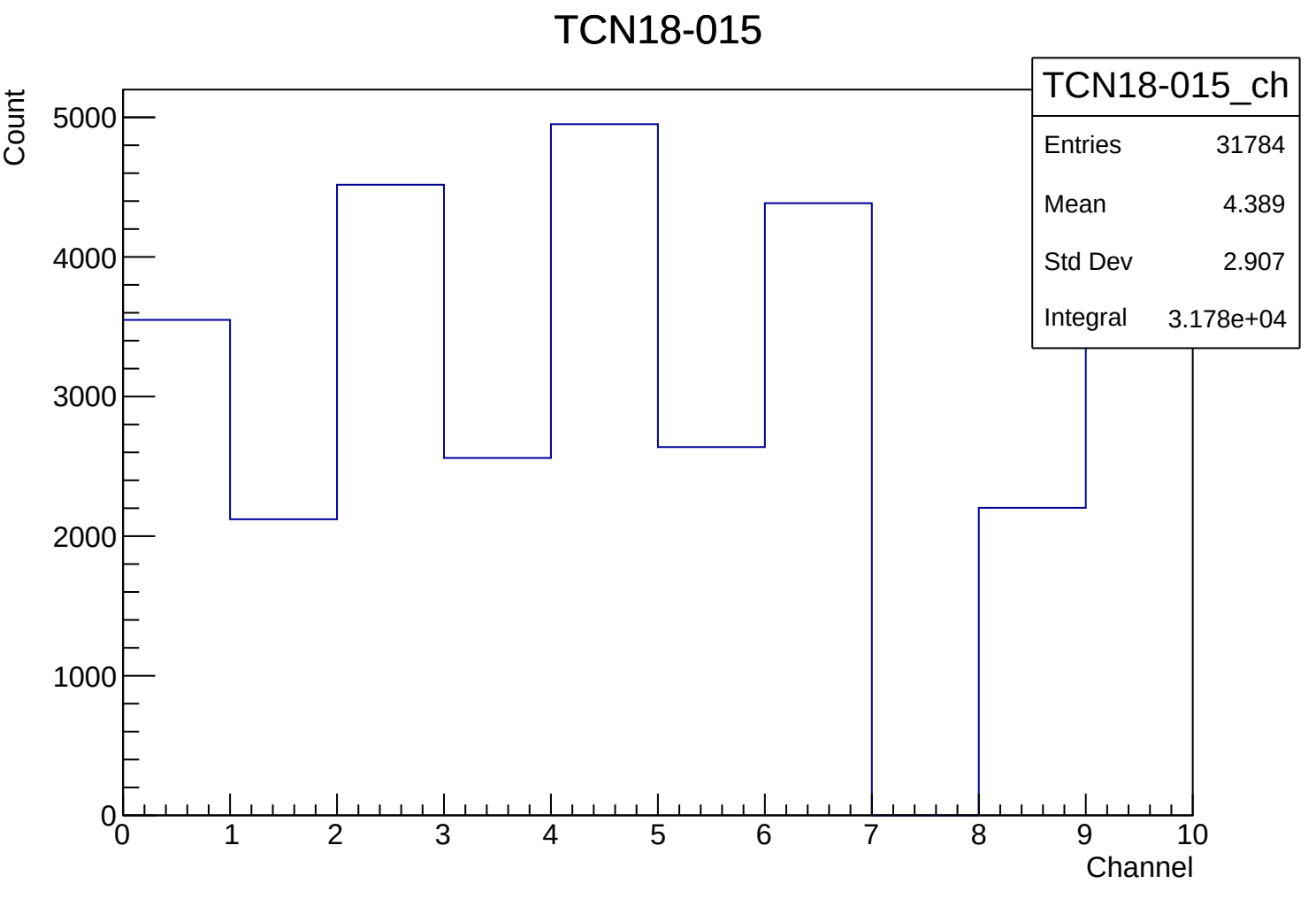

Graph
Vapor pressure (torr)
0.3
0.28
0.26
0.24
0.22
Temperature (K)
1.105
1.1
1.095
1.09
1.085
1.08
1.075
1.07
1.065
0
1
2
3
4
5
6
7
8
Cycle

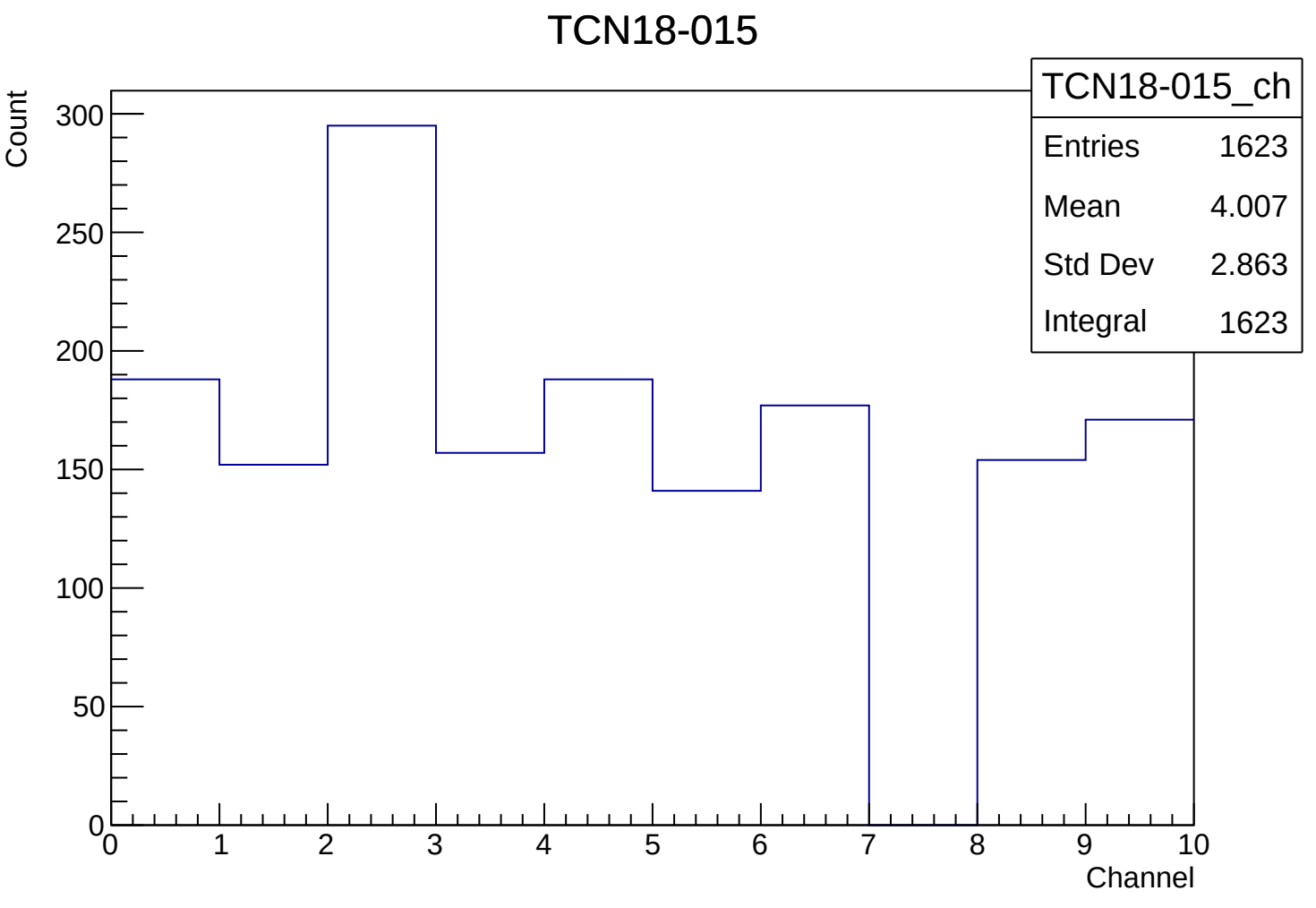

li6 background rate (1/s)
3.5
3
2.5
2
1.5
1
1
2
3
4
5
6
7
Cycle
χ² / ndf 5.74 / 6
Prob 0.4529
p0 2.296 ± 0.08676

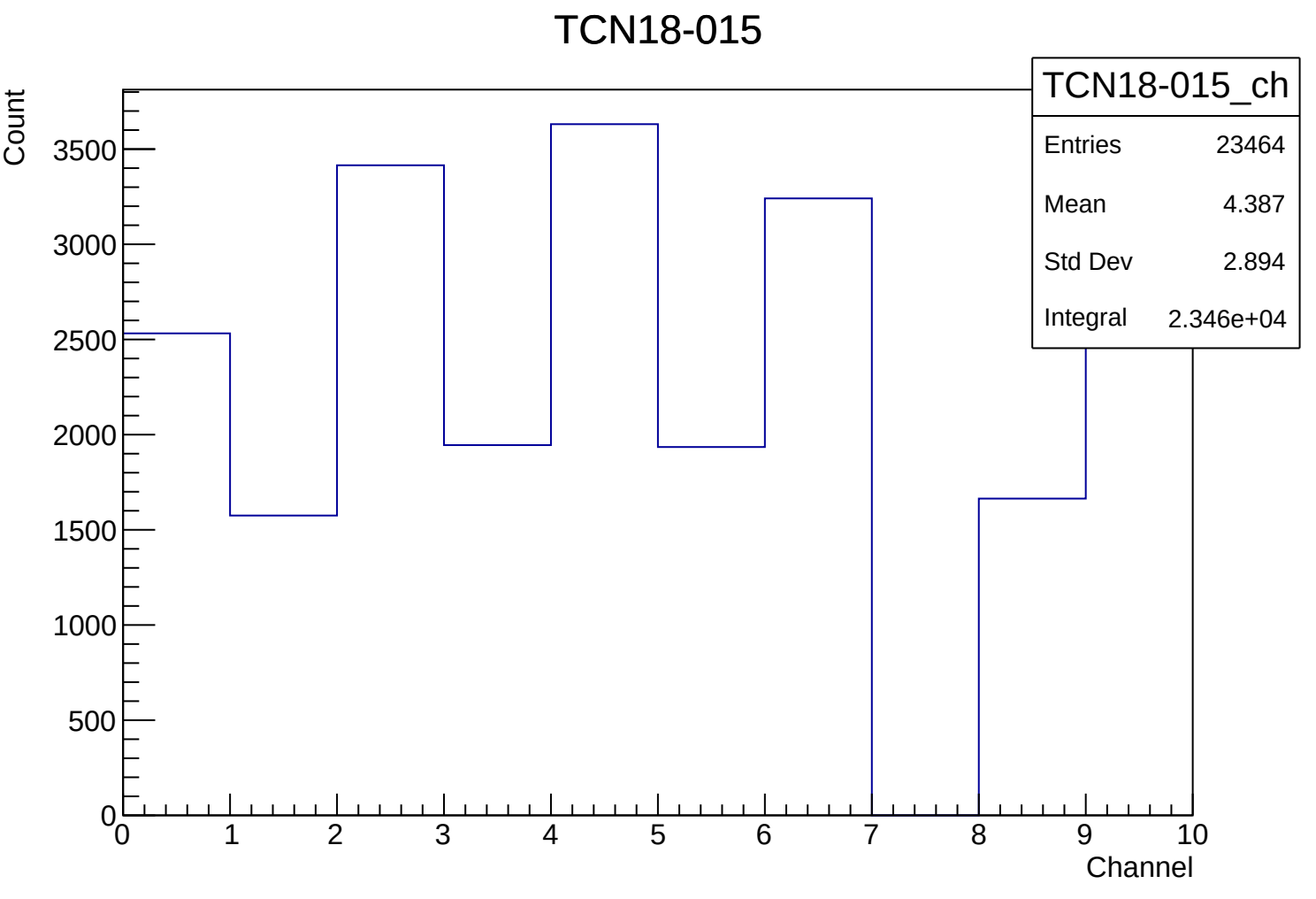

χ^2 / ndf 9.841 / 8
Prob 0.2764
p0 5.141 ± 0.1184
li6 background rate during irradiation (1/(s μA))
6.5
6
5.5
5
4.5
0
1
2
3
4
5
6
7
8
Cycle

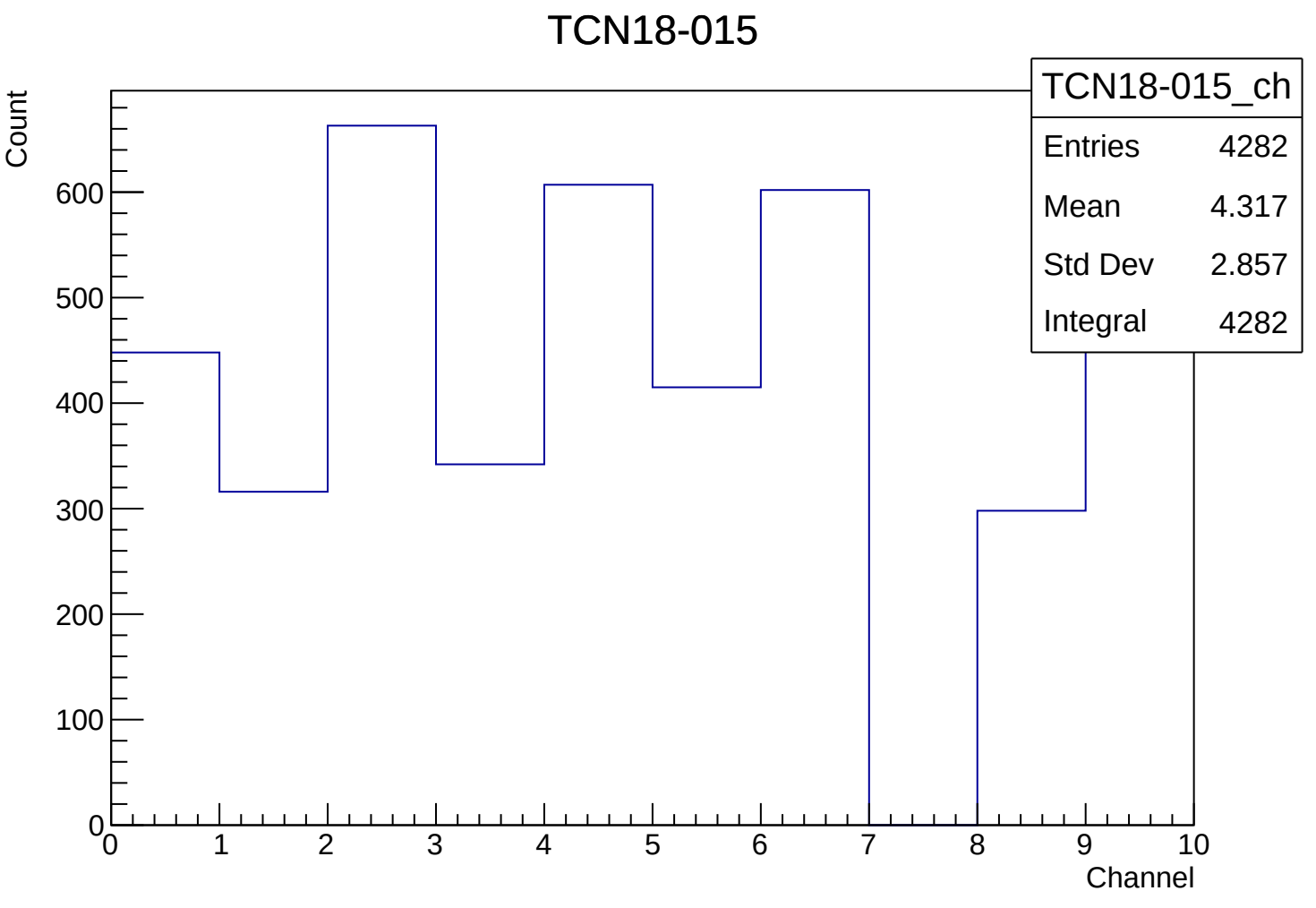

χ^2 / ndf 3.392 / 3
Prob 0.335
p0 0.03843 ± 0.0124
he3 background rate (1/s)
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
1
1.5
2
2.5
3
3.5
4
4.5
5
Cycle

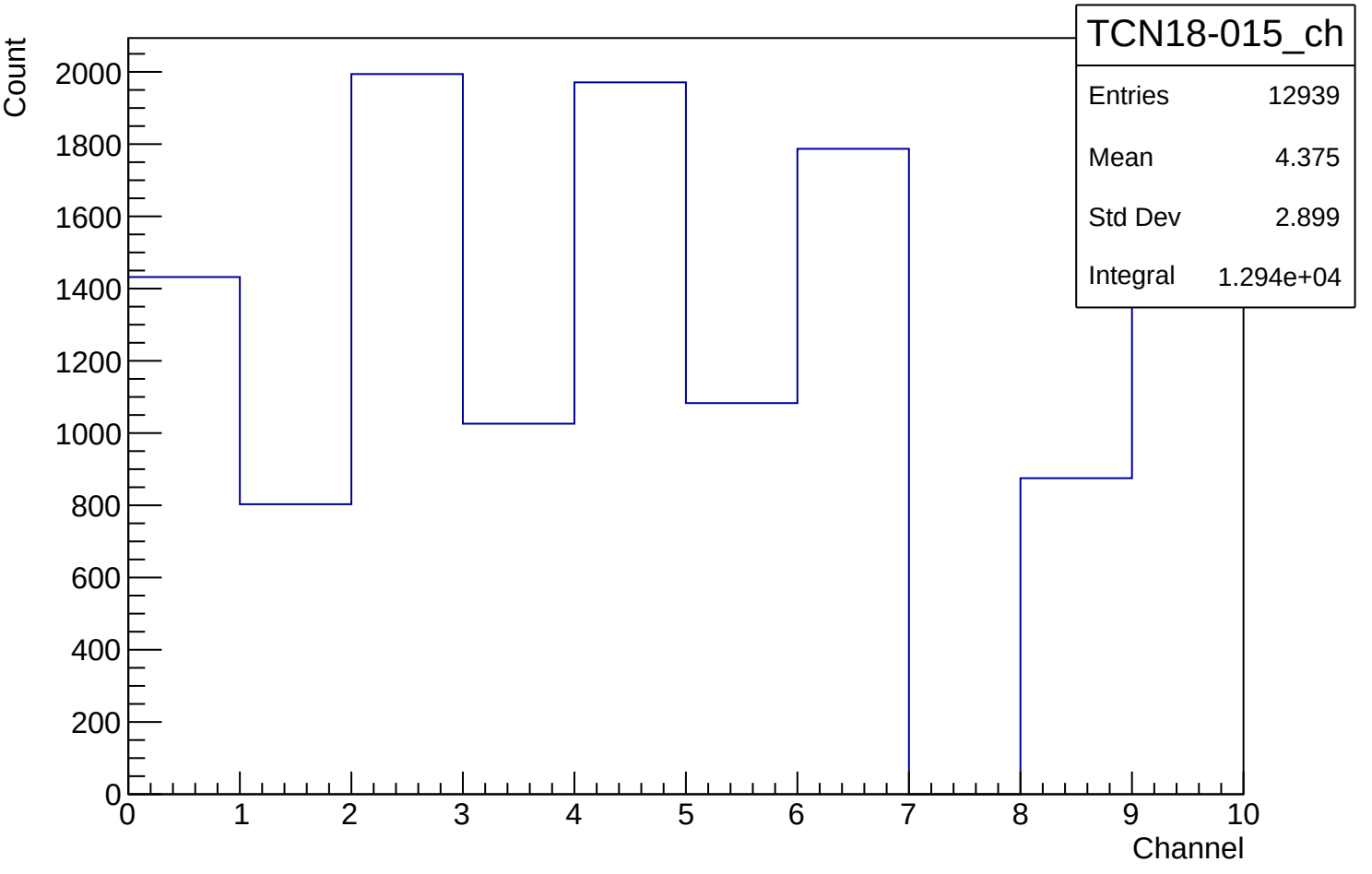

χ² / ndf 4.101 / 8
Prob 0.8479
p0 0.07965 ± 0.01512
he3 background rate during irradiation (1/(s μA))
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
1
2
3
4
5
6
7
8
Cycle

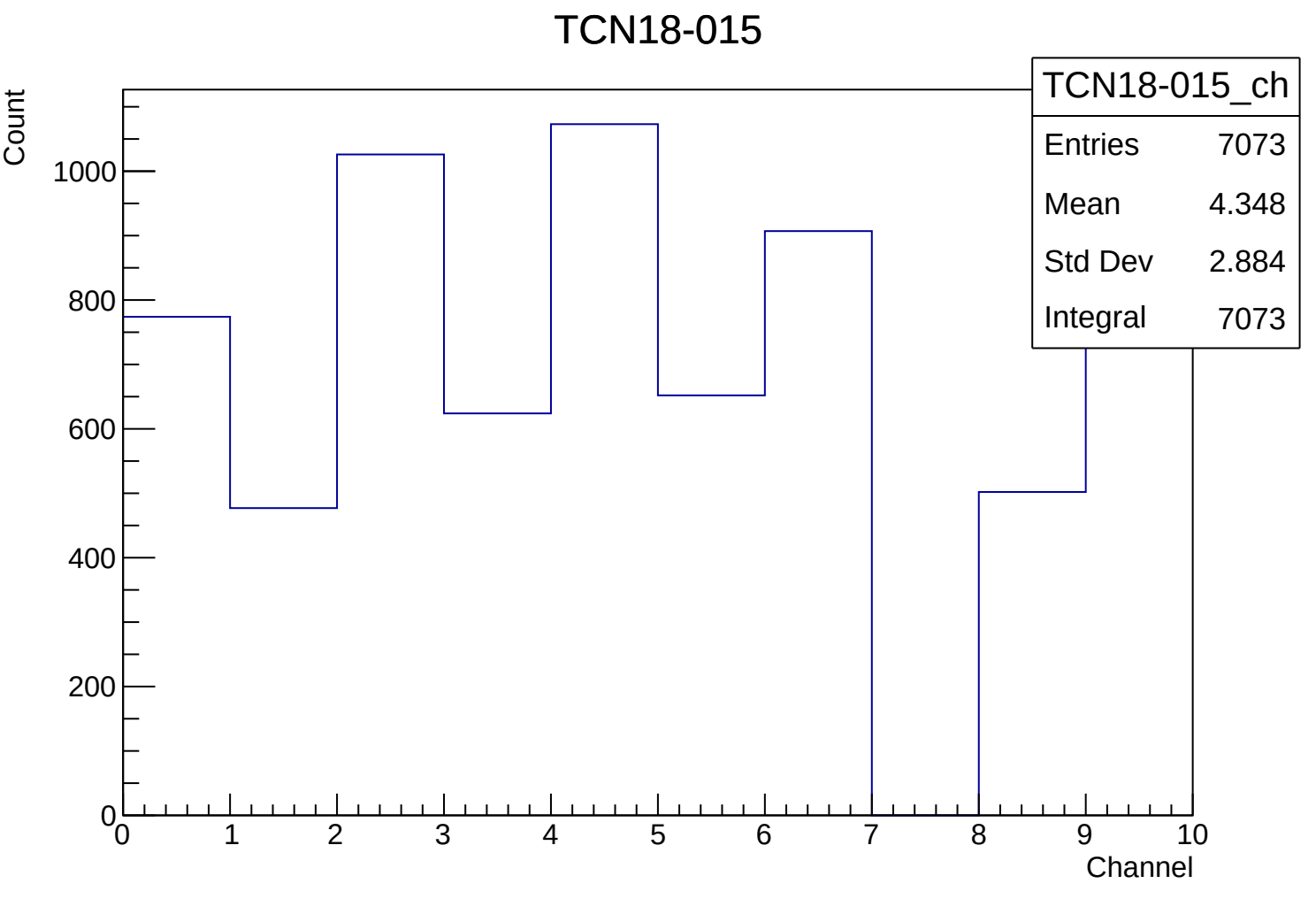

TCN18-015
TCN18-015_ch
Entries 31784
Mean 4.389
Std Dev 2.907
Integral 3.178e+04
Count
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel

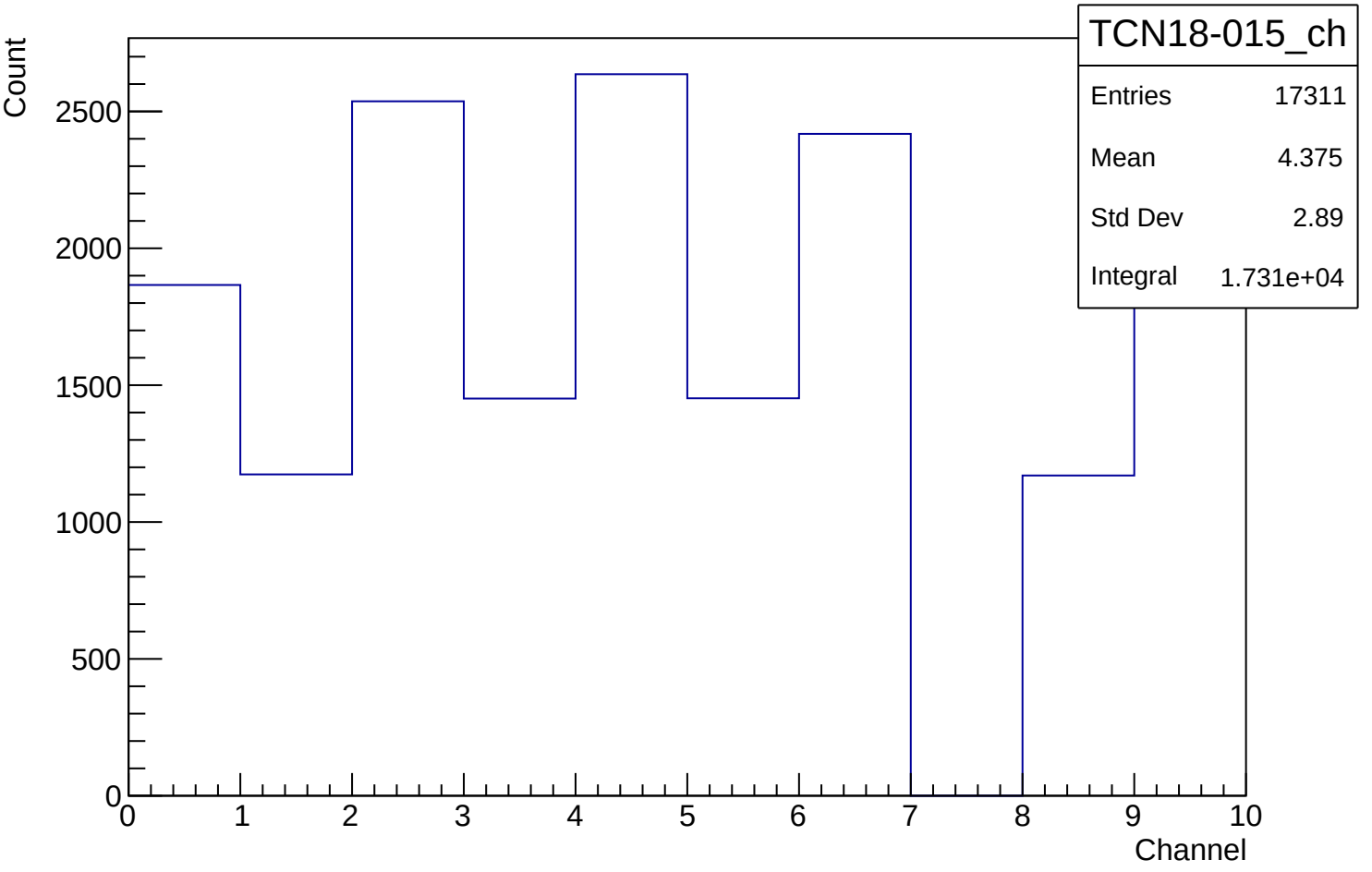

TCN18-015
TCN18-015_ch
Entries 1623
Mean 4.007
Std Dev 2.863
Integral 1623
Count
300
250
200
150
100
50
0
0 1 2 3 4 5 6 7 8 9 10
Channel

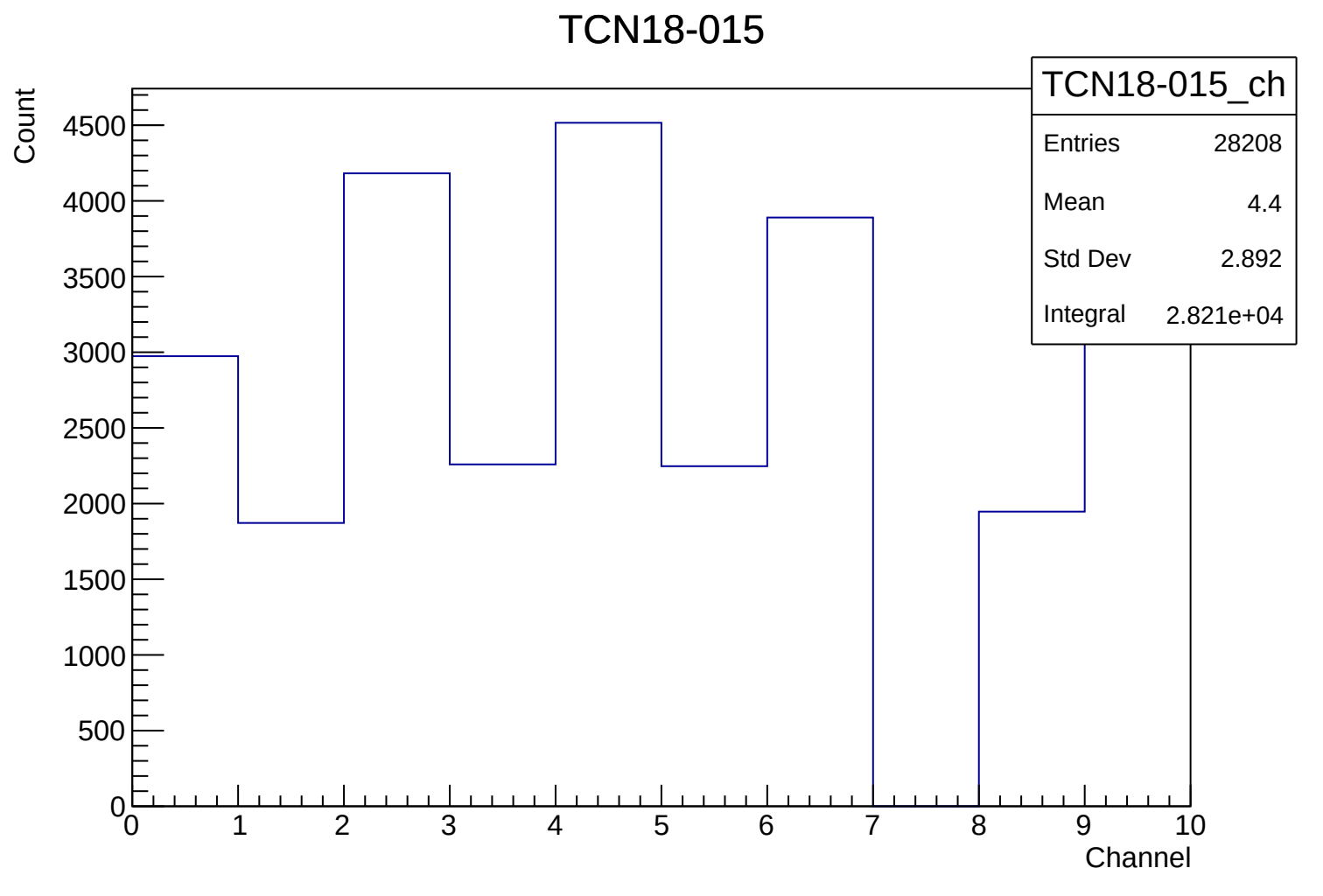

TCN18-015
TCN18-015_ch
Entries 23464
Mean 4.387
Std Dev 2.894
Integral 2.346e+04
Count
Channel
0
500
1000
1500
2000
2500
3000
3500
0
1
2
3
4
5
6
7
8
9
10

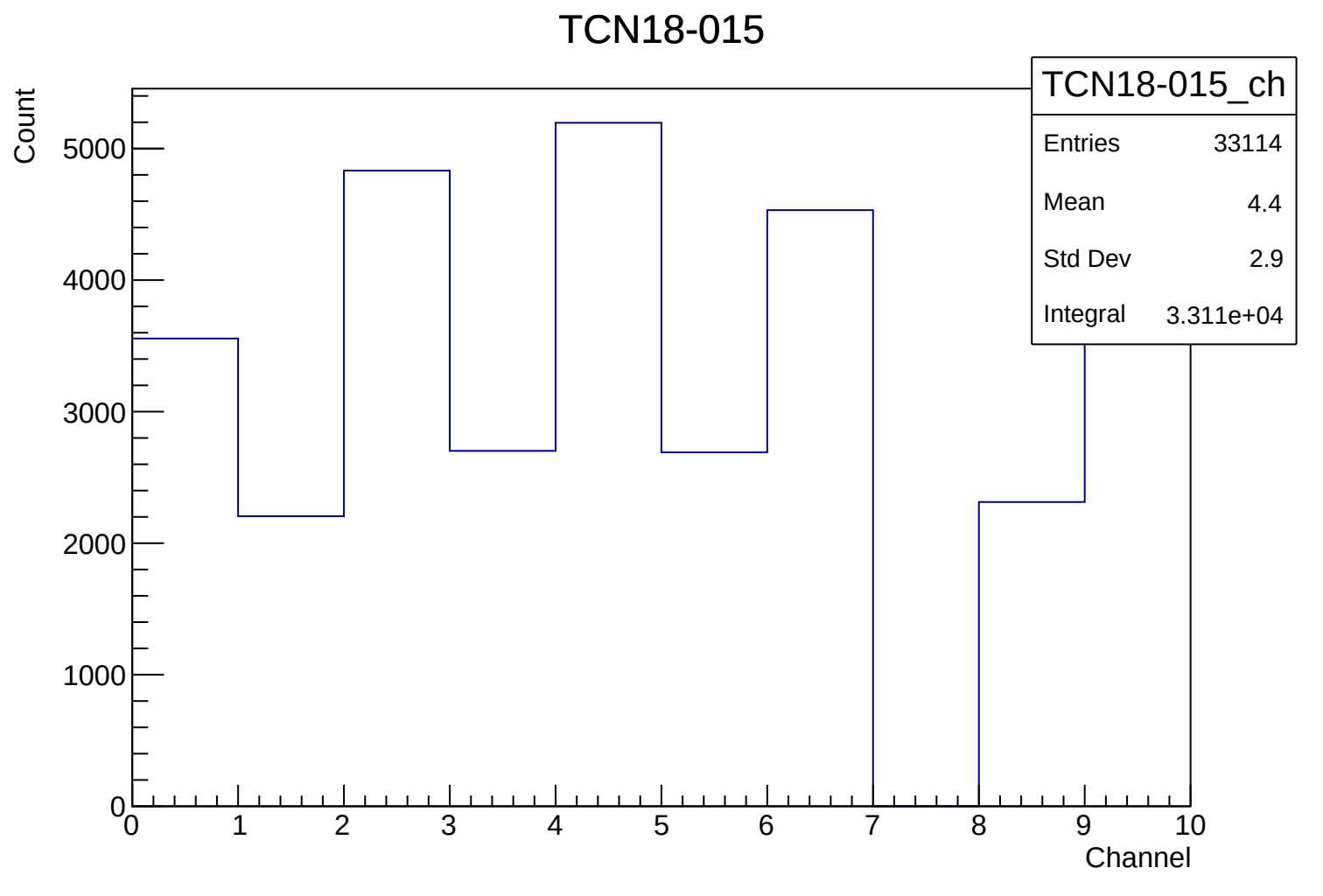

TCN18-015
TCN18-015_ch
Entries 4282
Mean 4.317
Std Dev 2.857
Integral 4282
Count
0
100
200
300
400
500
600
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 12939
Mean 4.375
Std Dev 2.899
Integral 1.294e+04
Count
Channel
0
200
400
600
800
1000
1200
1400
1600
1800
2000
0
1
2
3
4
5
6
7
8
9
10


TCN18-015
TCN18-015_ch
Entries 7073
Mean 4.348
Std Dev 2.884
Integral 7073
Count
0
200
400
600
800
1000
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 17311
Mean 4.375
Std Dev 2.89
Integral 1.731e+04
Count
2500
2000
1500
1000
500
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-015
TCN18-015_ch
Entries 28208
Mean 4.4
Std Dev 2.892
Integral 2.821e+04
Count
4500
4000
3500
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 33114
Mean 4.4
Std Dev 2.9
Integral 3.311e+04
Count
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel