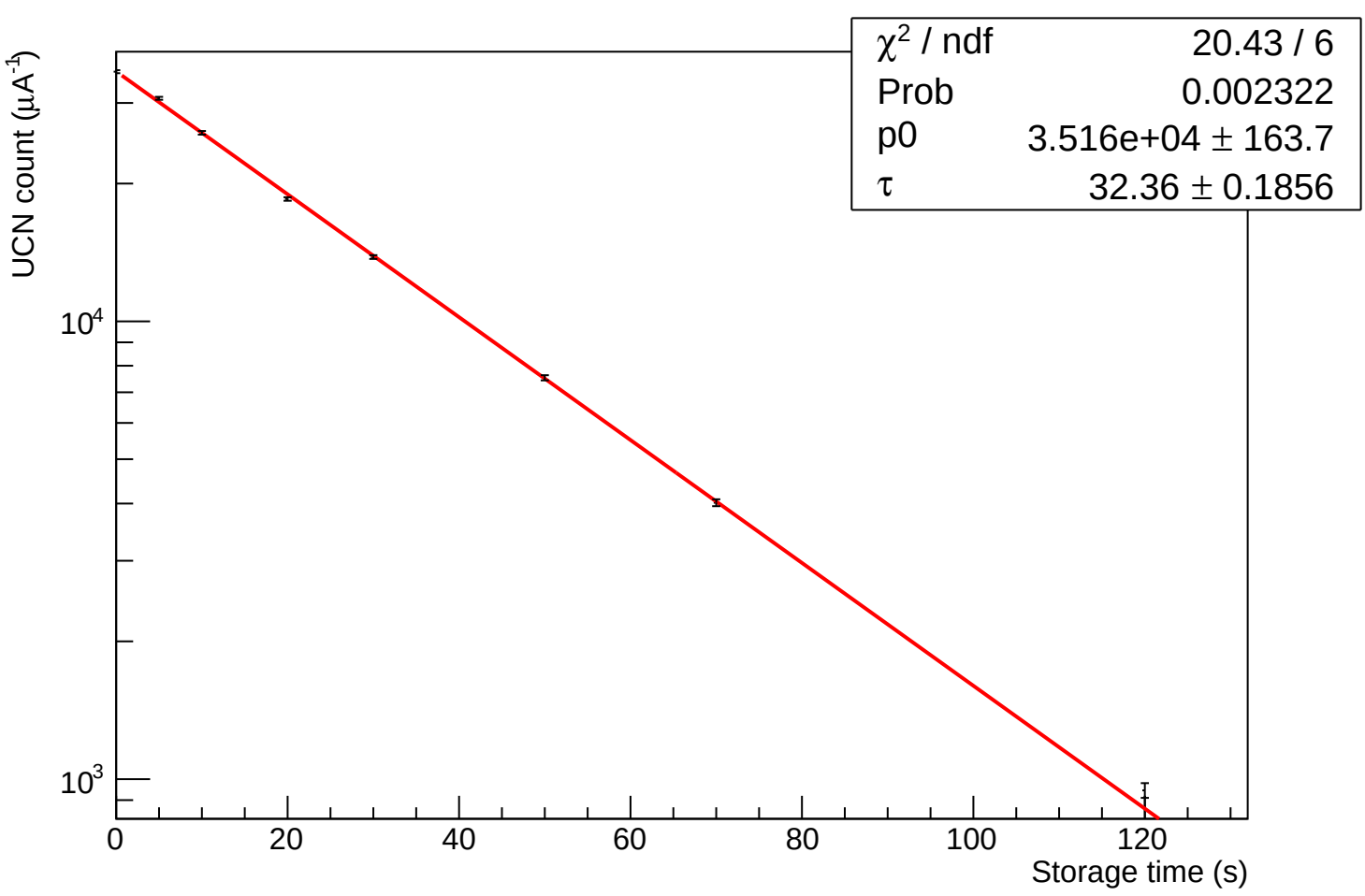
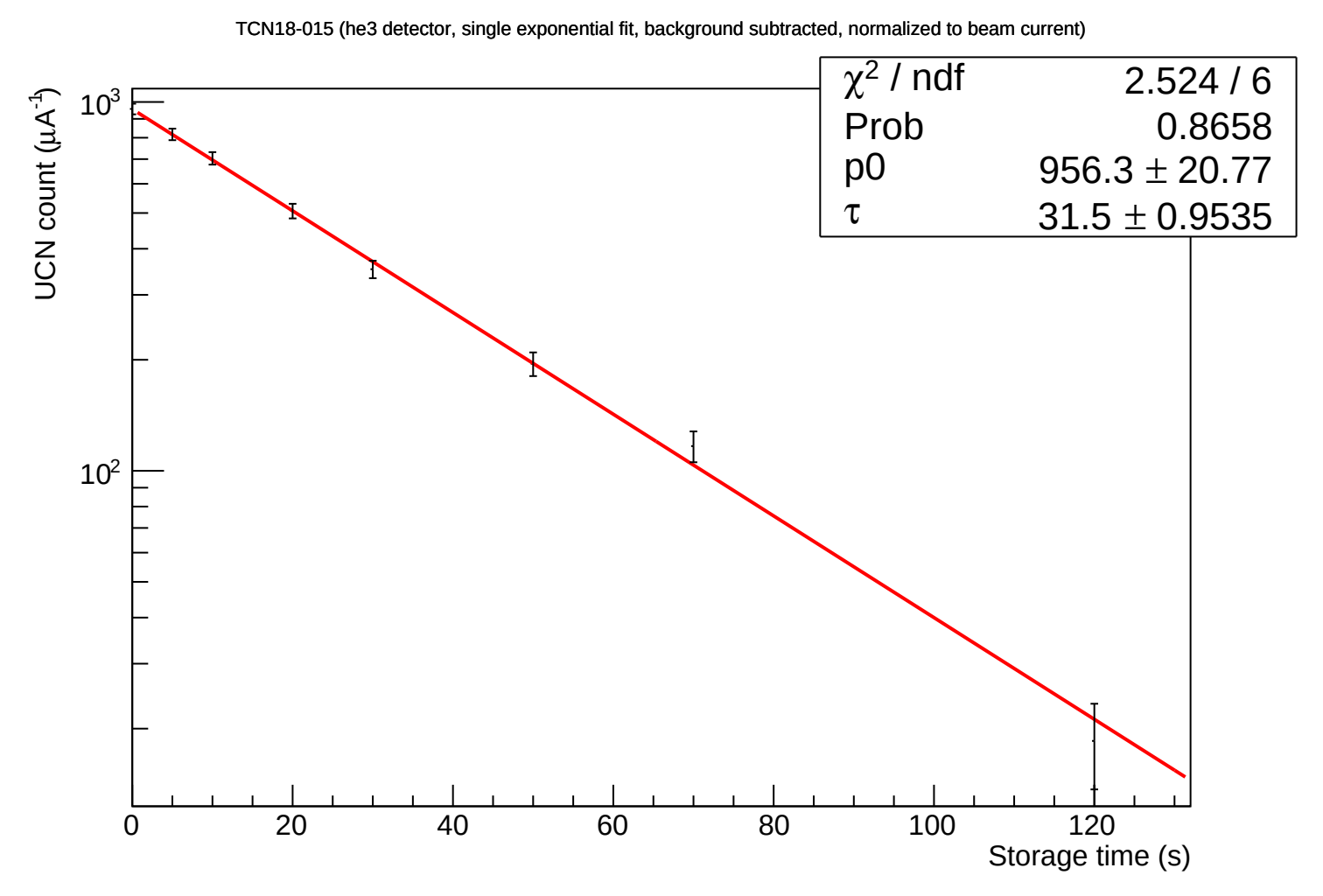
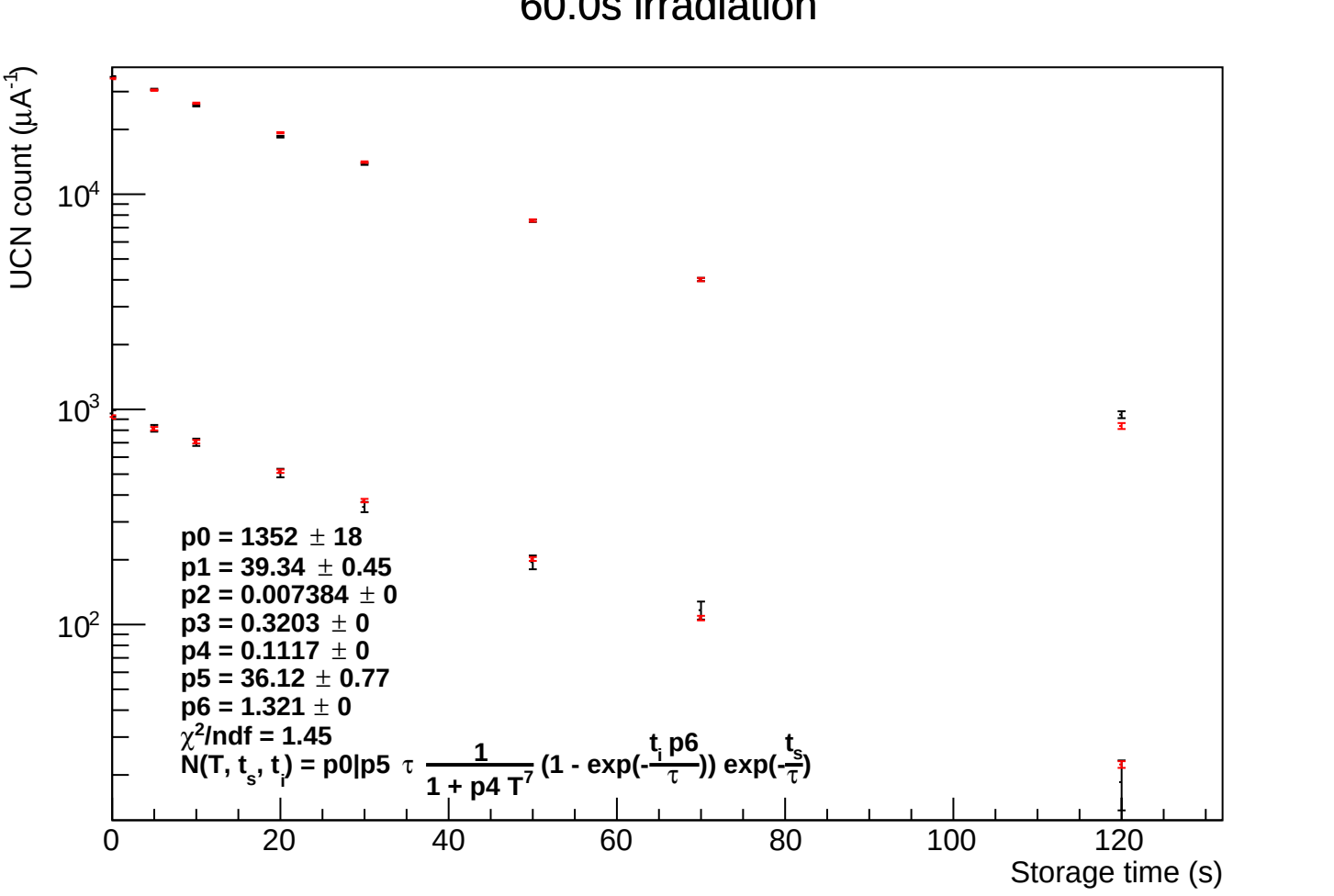
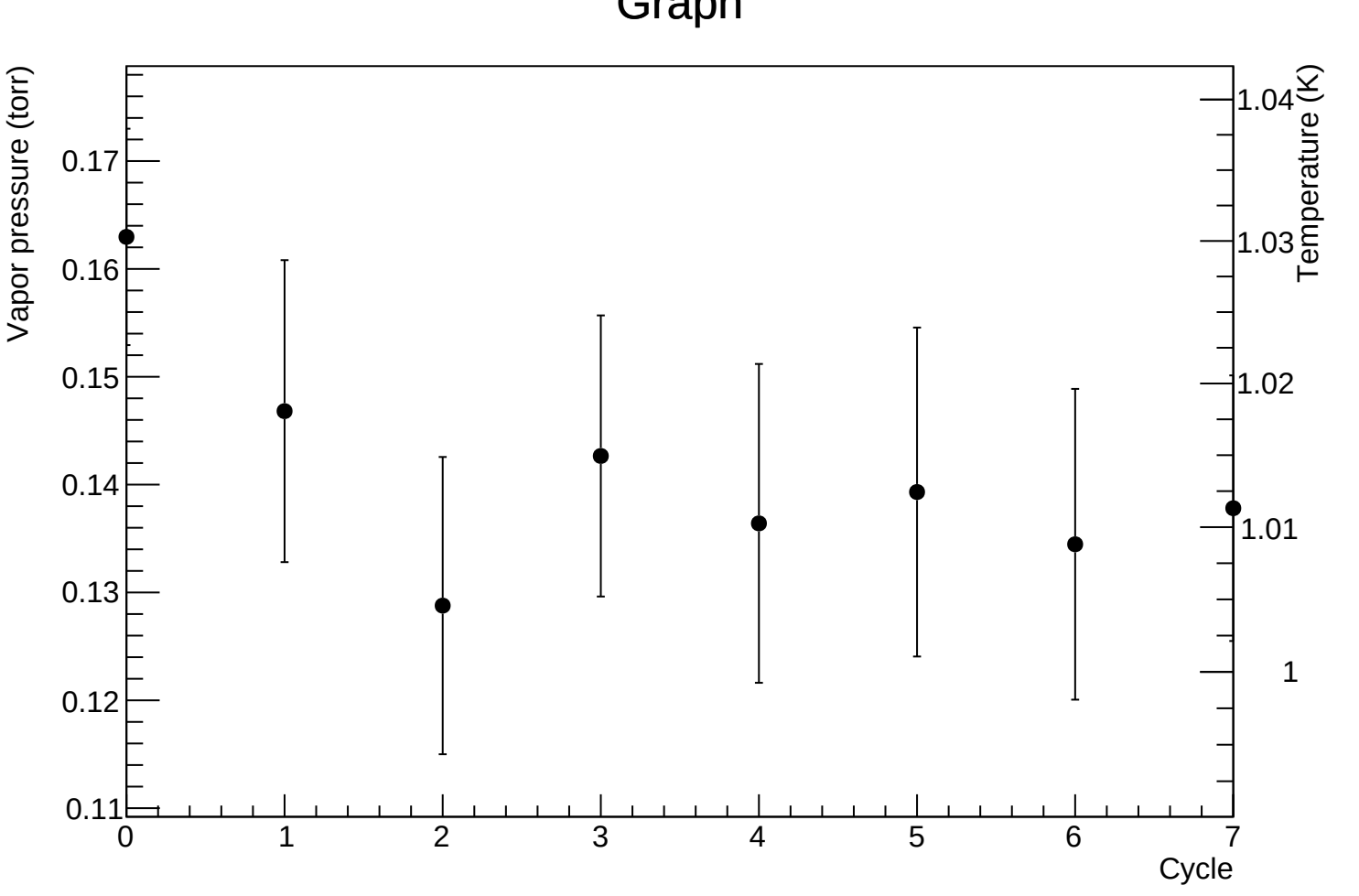
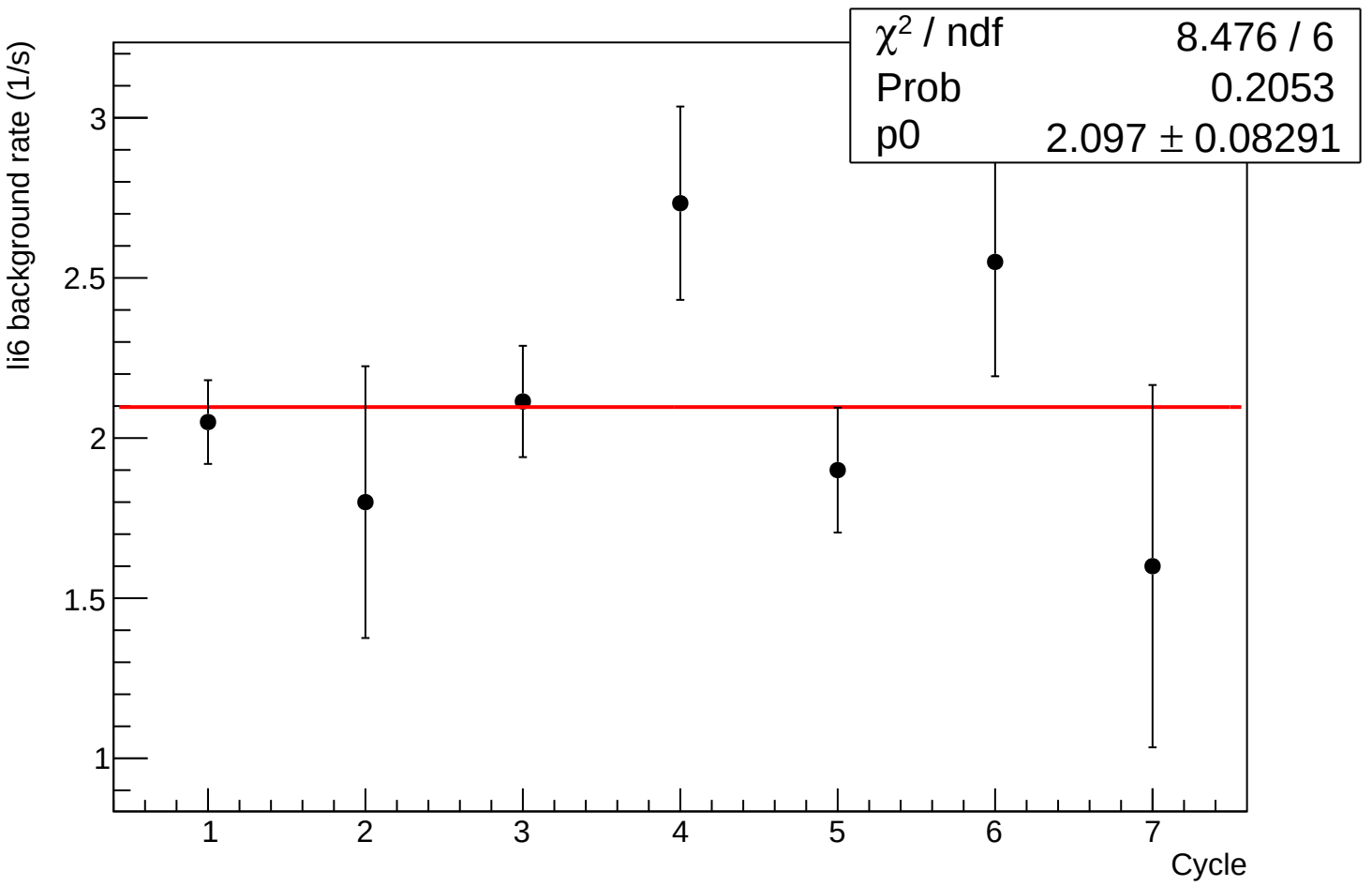
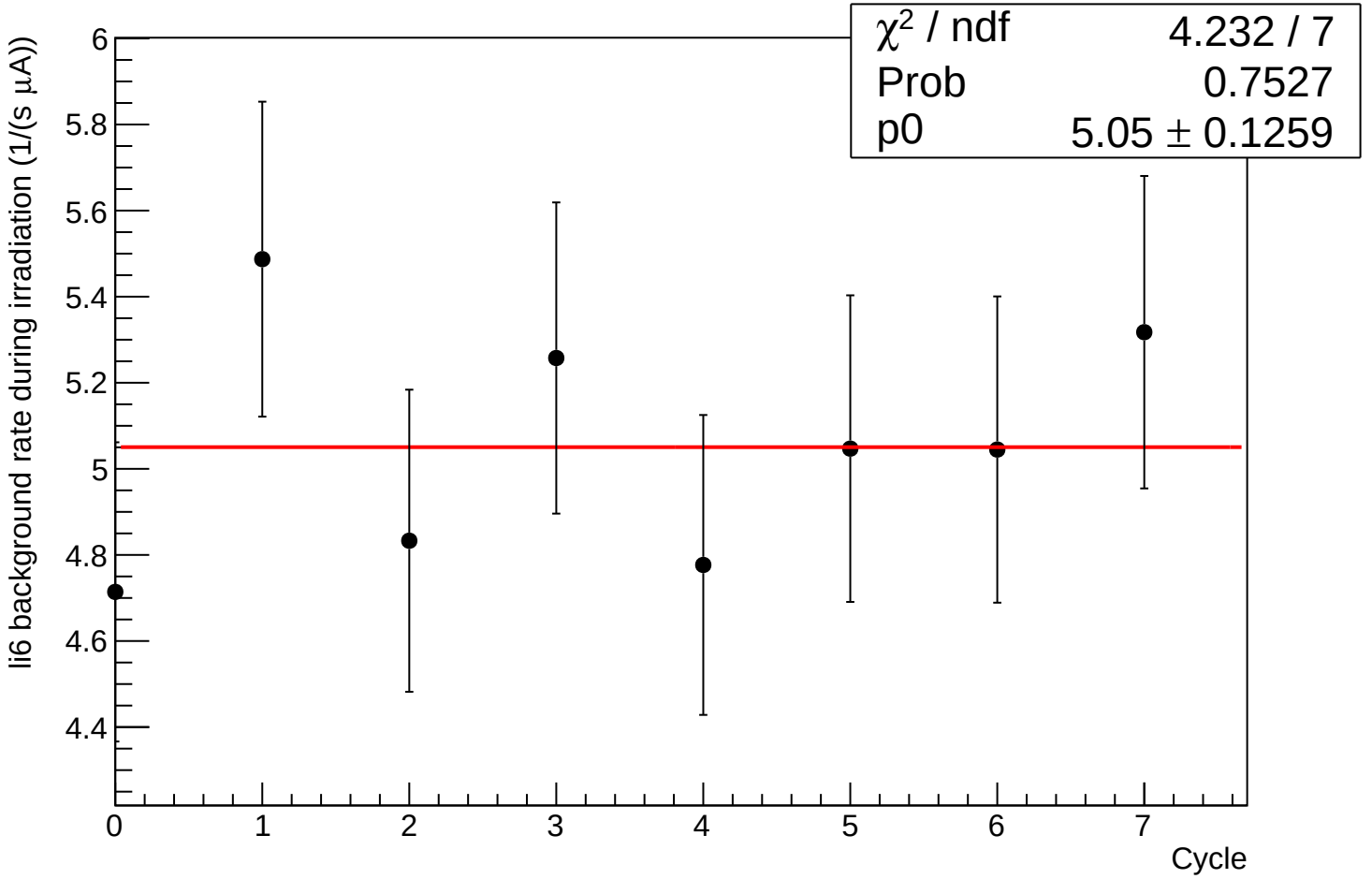

TCN18-015 (li6 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 20.43 / 6
Prob 0.002322
p0 3.516e+04 ± 163.7
τ 32.36 ± 0.1856
UCN count (μA⁻¹)
10⁴
10³
0
20
40
60
80
100
120
Storage time (s)

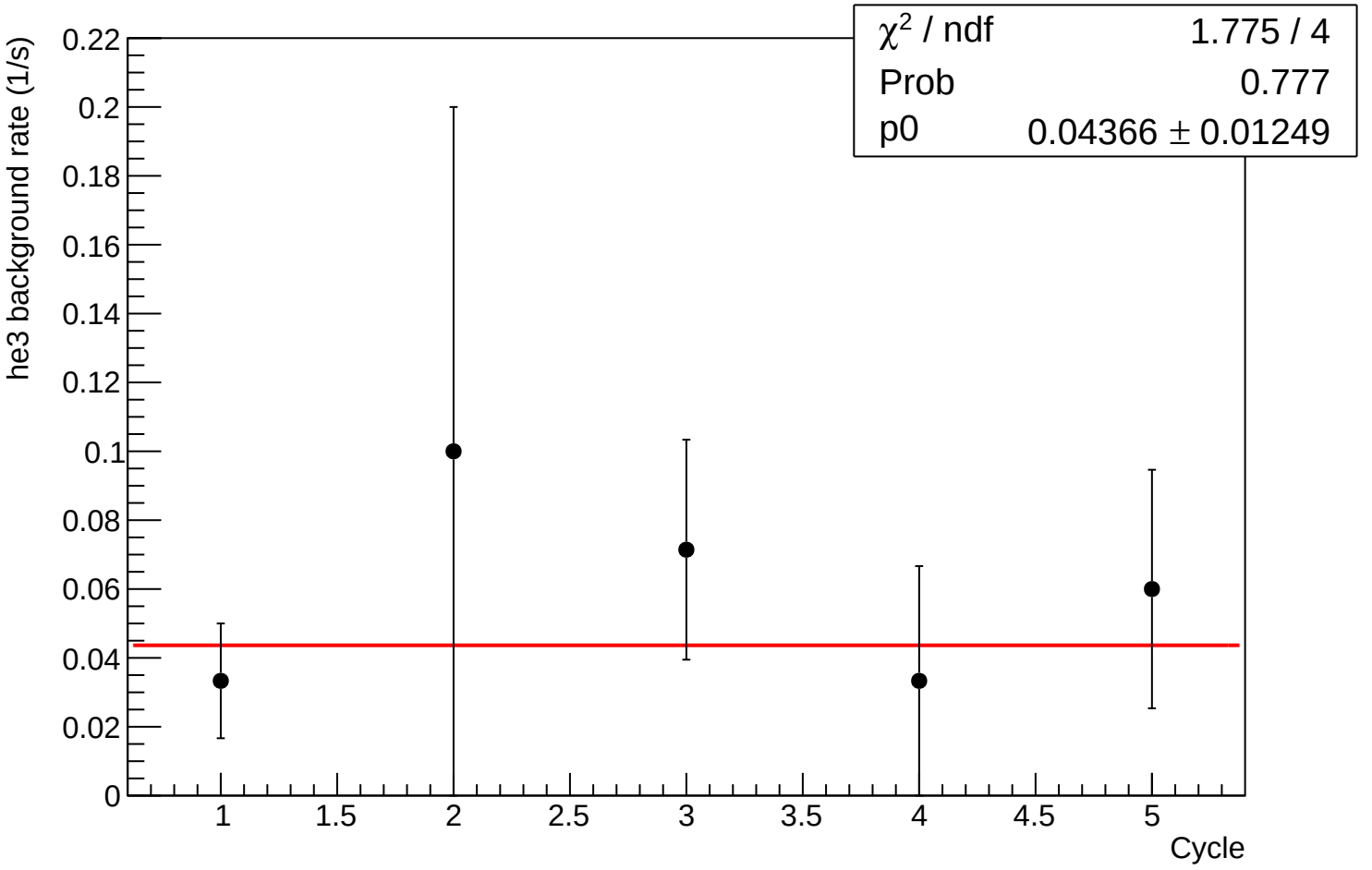

TCN18-015 (he3 detector, single exponential fit, background subtracted, normalized to beam current)
χ2 / ndf 2.524 / 6
Prob 0.8658
p0 956.3 ± 20.77
τ 31.5 ± 0.9535
UCN count (μA-1)
10^3
10^2
0
20
40
60
80
100
120
Storage time (s)

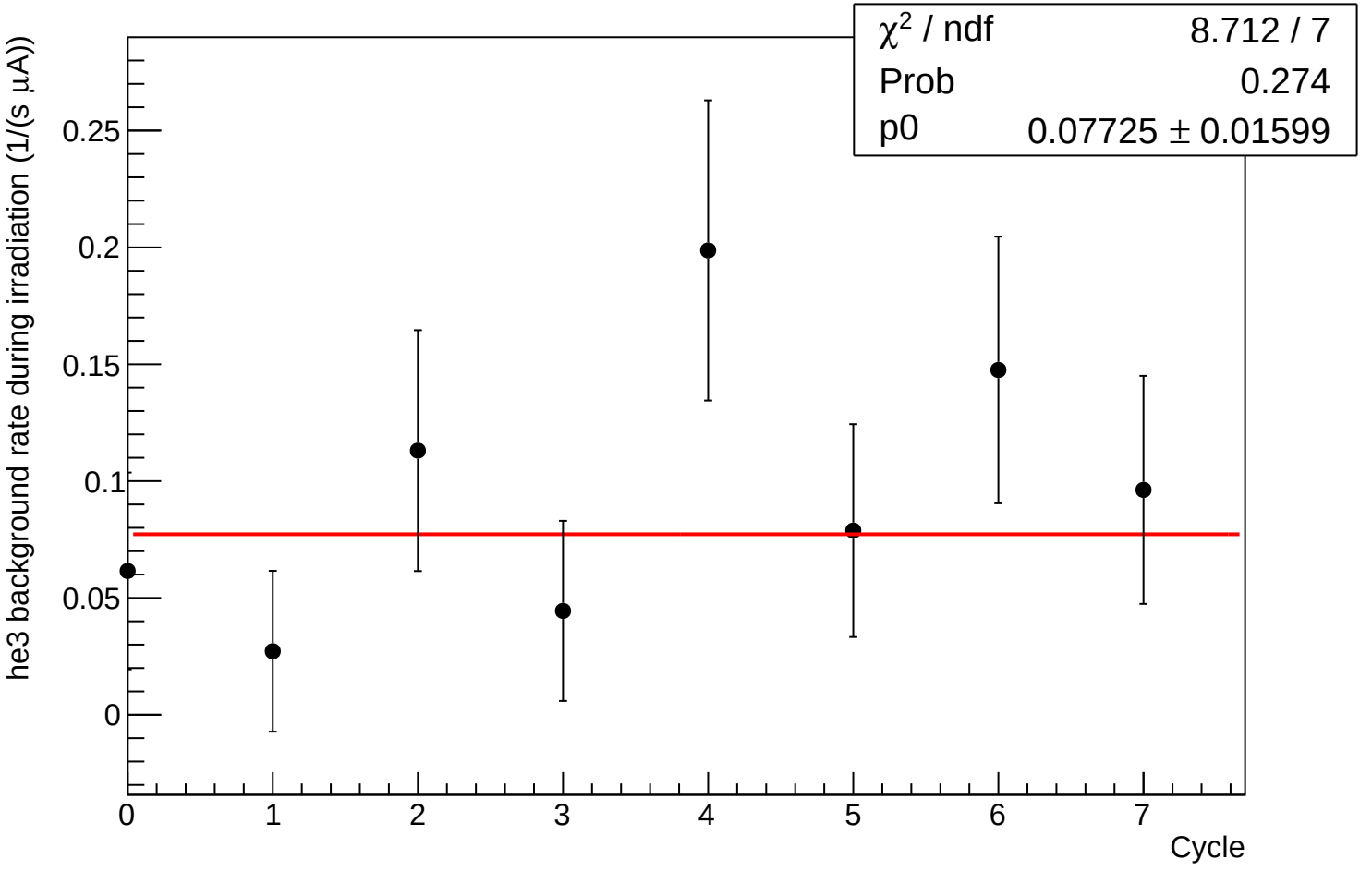

60.0s irradiation
UCN count (μA-1)
10^4
10^3
10^2
0
20
40
60
80
100
120
Storage time (s)
p0 = 1352 ± 18
p1 = 39.34 ± 0.45
p2 = 0.007384 ± 0
p3 = 0.3203 ± 0
p4 = 0.1117 ± 0
p5 = 36.12 ± 0.77
p6 = 1.321 ± 0
χ2/ndf = 1.45
N(T, ts, ti) = p0|p5 τ 1/(1 + p4 T7) (1 - exp(-ti p6/τ)) exp(-ts/τ)

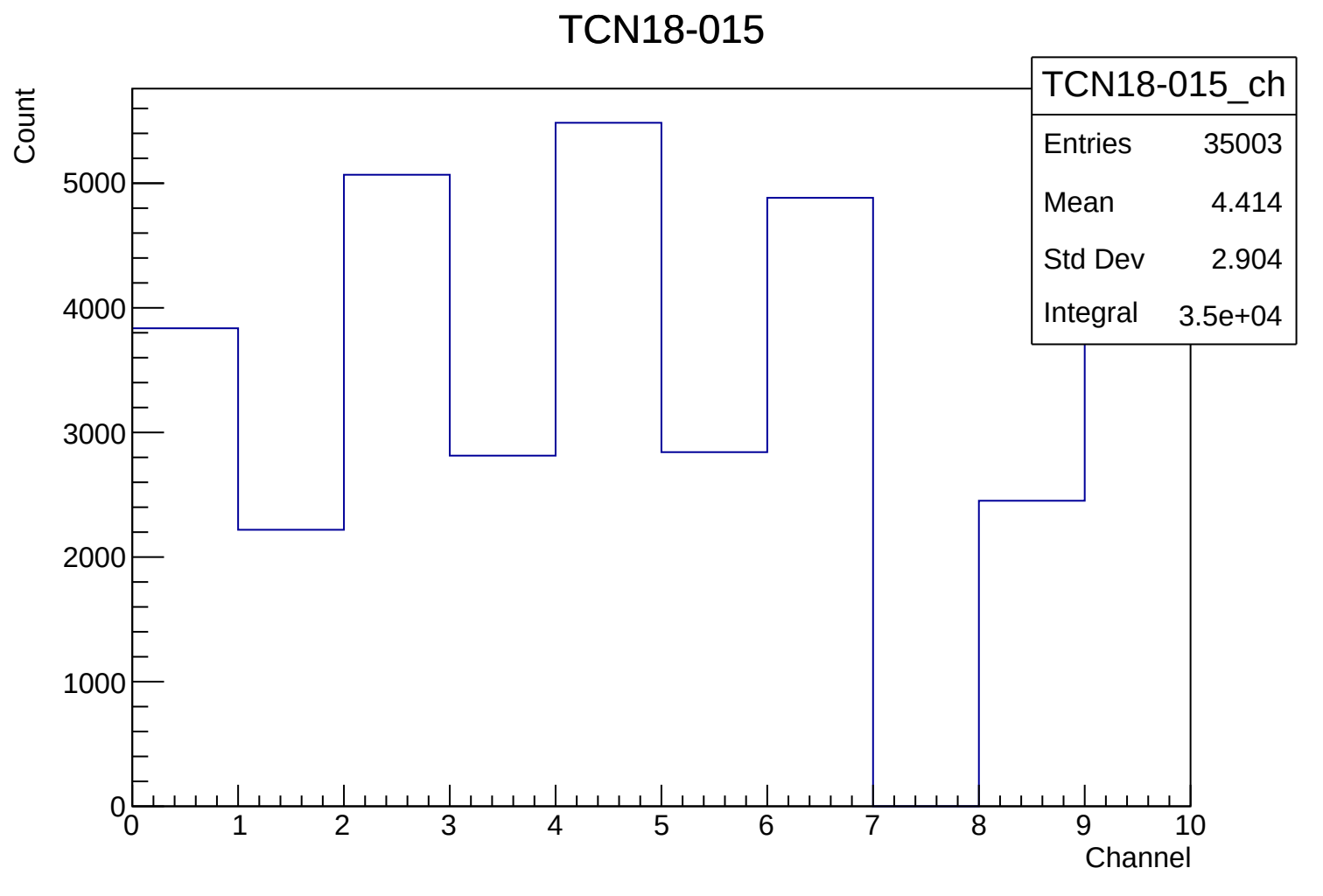

Graph
Vapor pressure (torr)
0.17
0.16
0.15
0.14
0.13
0.12
0.11
Temperature (K)
1.04
1.03
1.02
1.01
1
0
1
2
3
4
5
6
7
Cycle

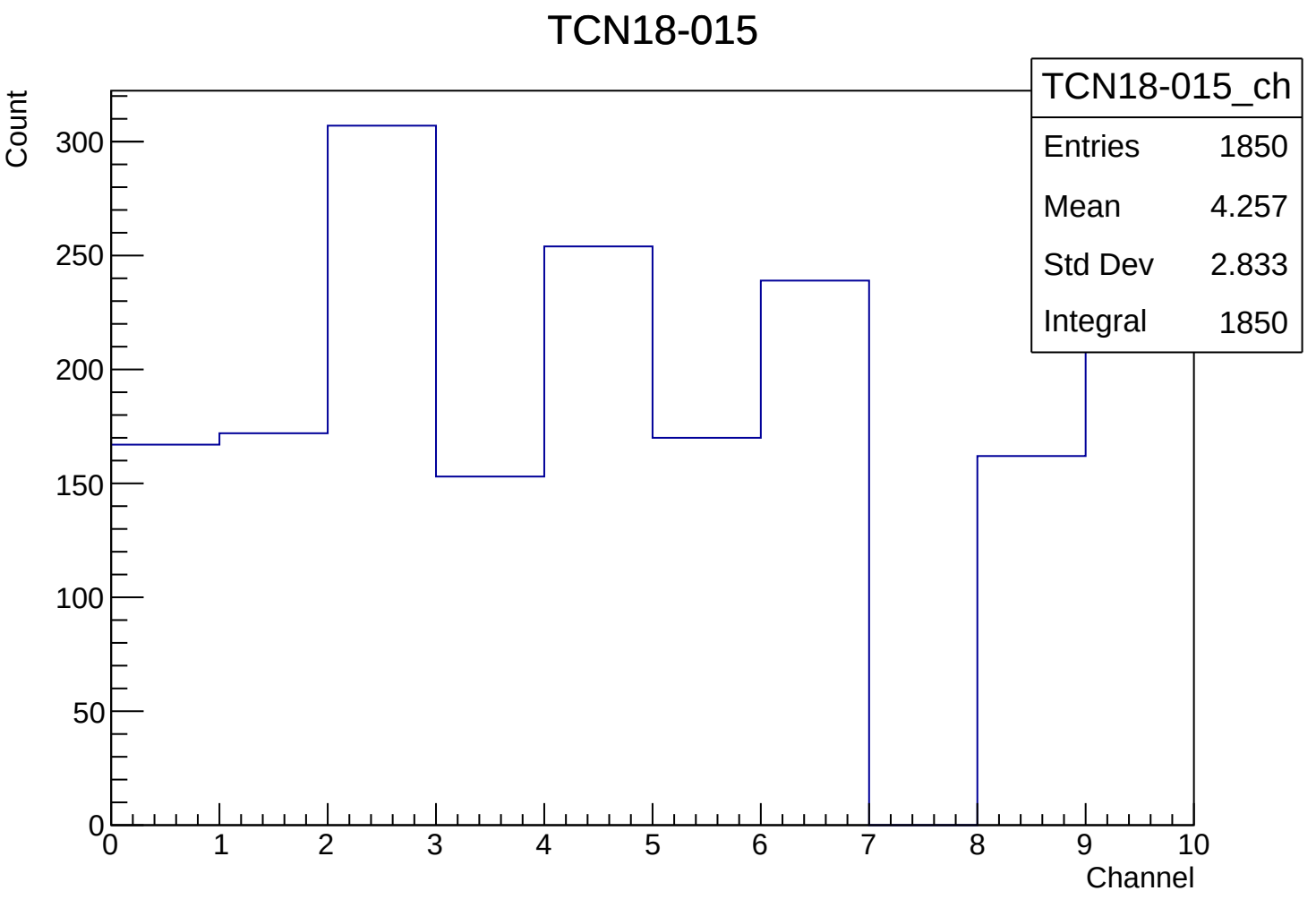

li6 background rate (1/s)
3
2.5
2
1.5
1
1
2
3
4
5
6
7
Cycle
χ² / ndf 8.476 / 6
Prob 0.2053
p0 2.097 ± 0.08291

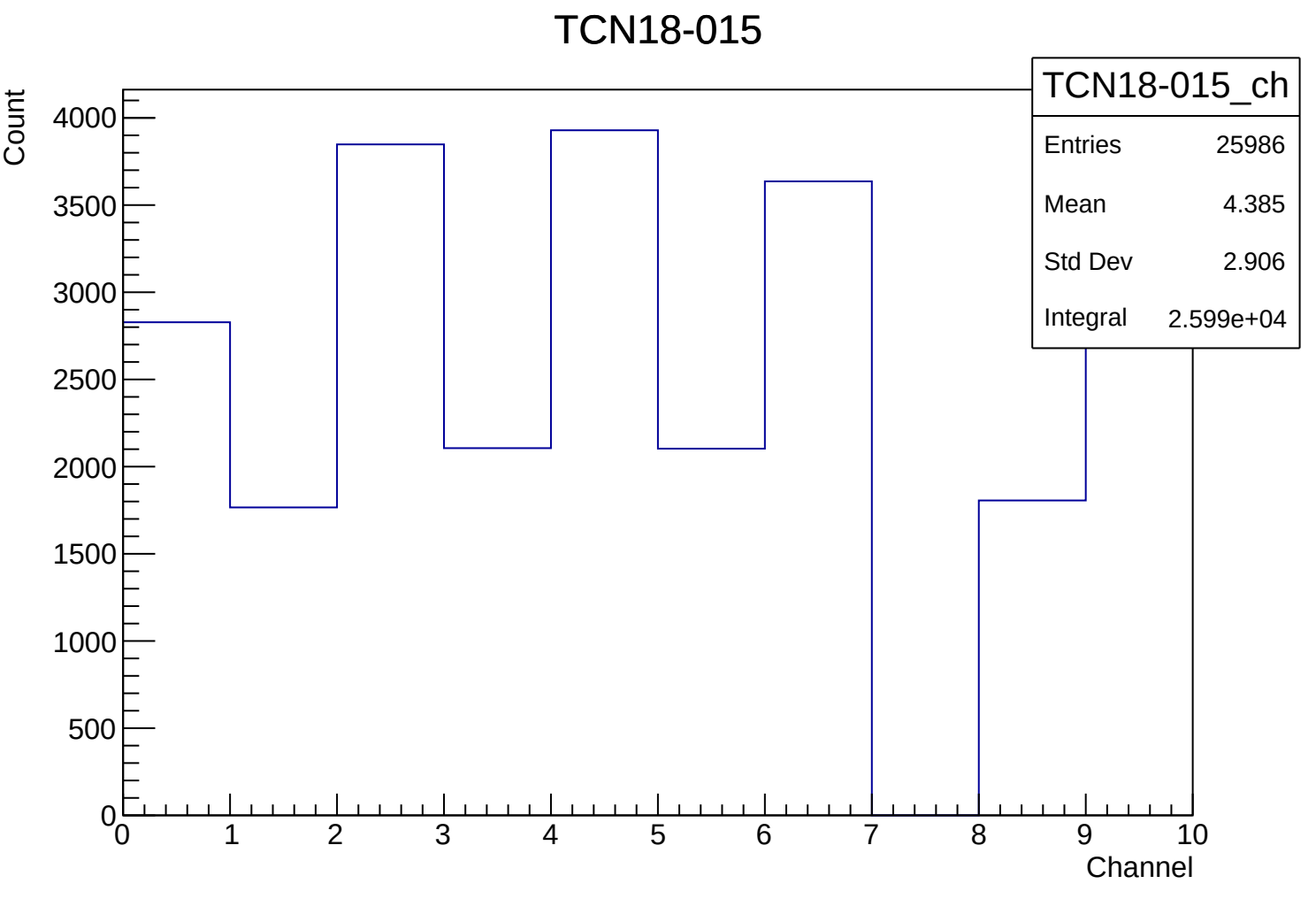

χ² / ndf 4.232 / 7
Prob 0.7527
p0 5.05 ± 0.1259
li6 background rate during irradiation (1/(s μA))
6
5.8
5.6
5.4
5.2
5
4.8
4.6
4.4
0
1
2
3
4
5
6
7
Cycle

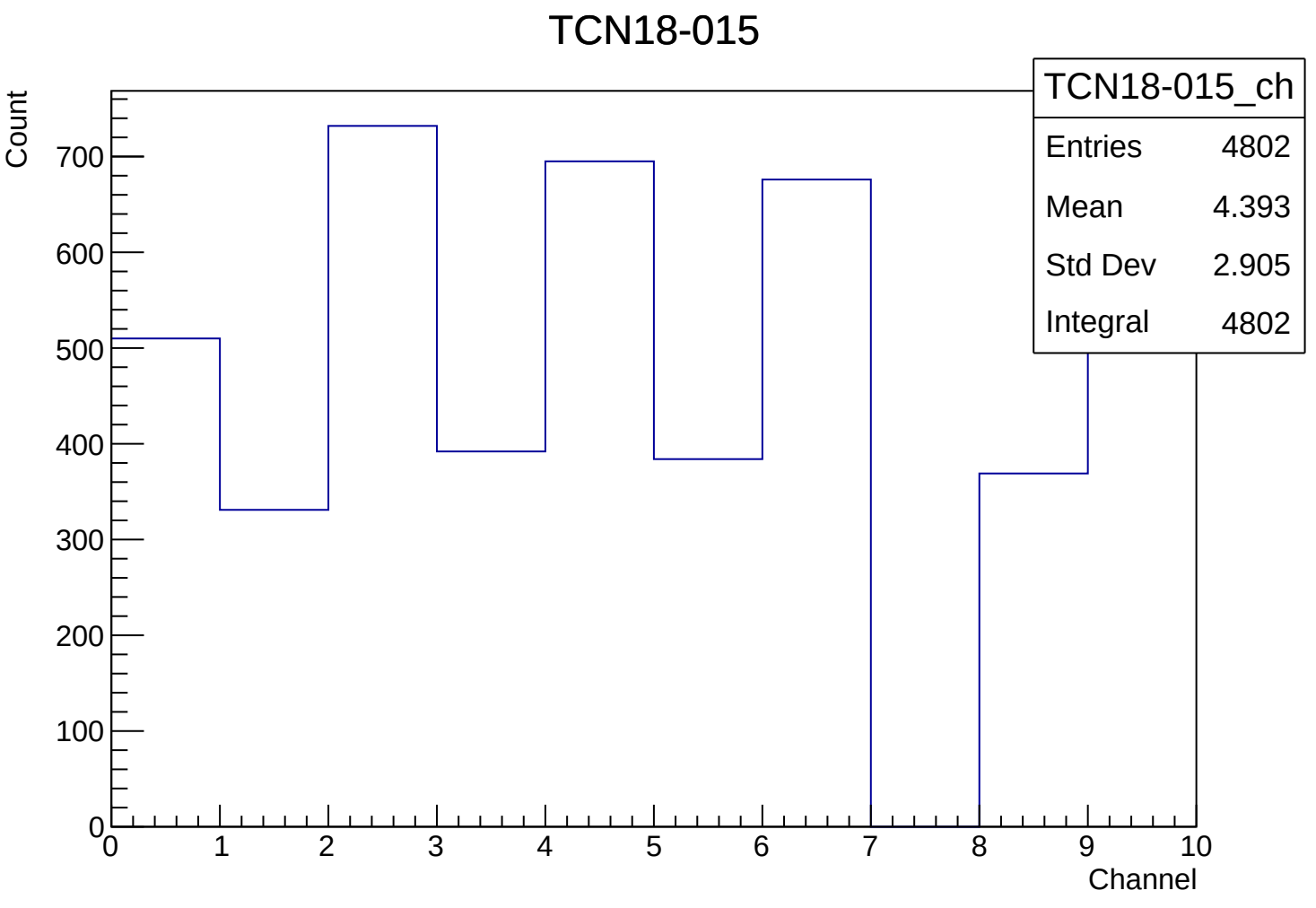

χ² / ndf 1.775 / 4
Prob 0.777
p0 0.04366 ± 0.01249
he3 background rate (1/s)
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
1
1.5
2
2.5
3
3.5
4
4.5
5
Cycle

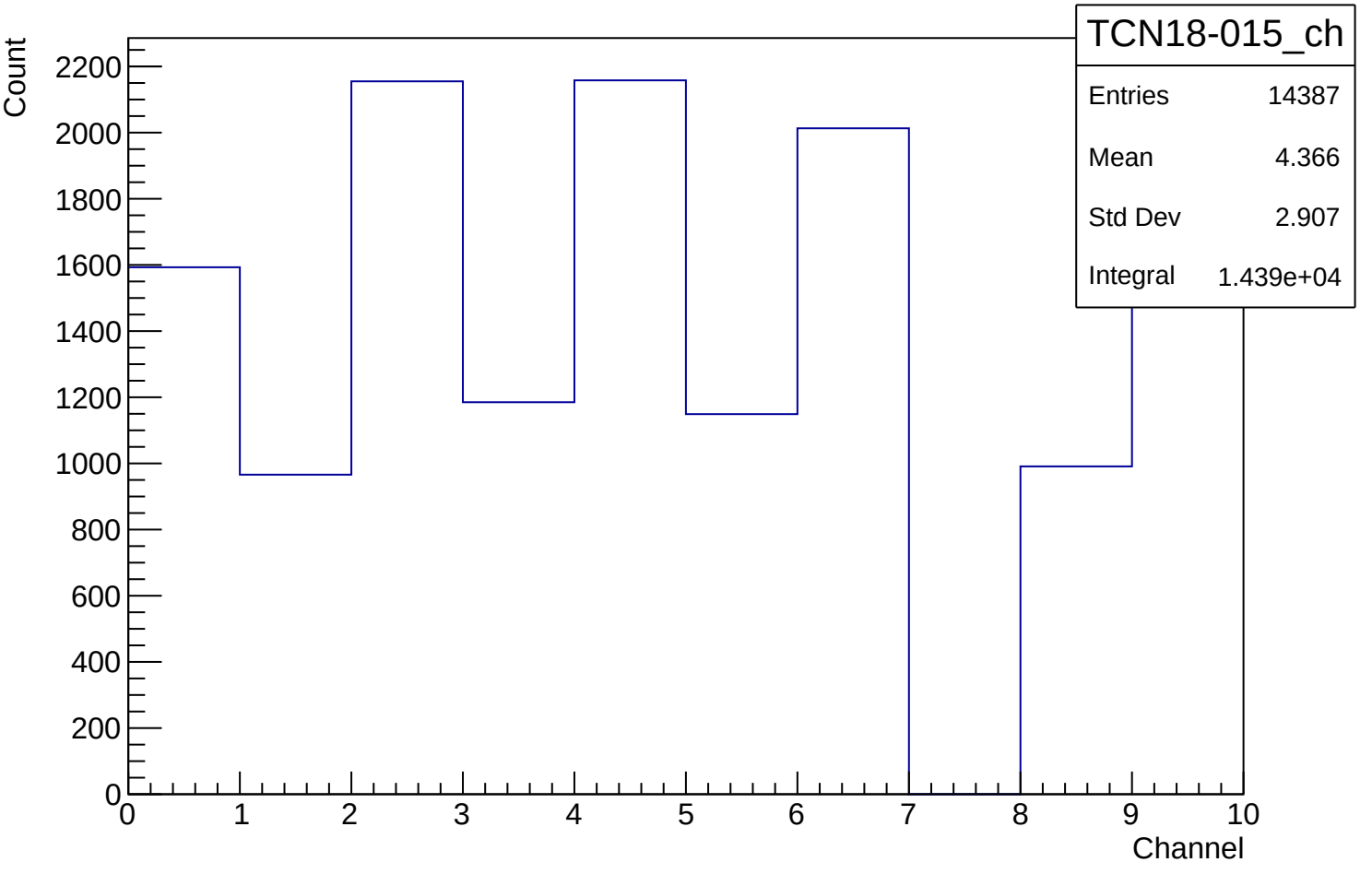

χ² / ndf 8.712 / 7
Prob 0.274
p0 0.07725 ± 0.01599
he3 background rate during irradiation (1/(s μA))
0.25
0.2
0.15
0.1
0.05
0
0
1
2
3
4
5
6
7
Cycle

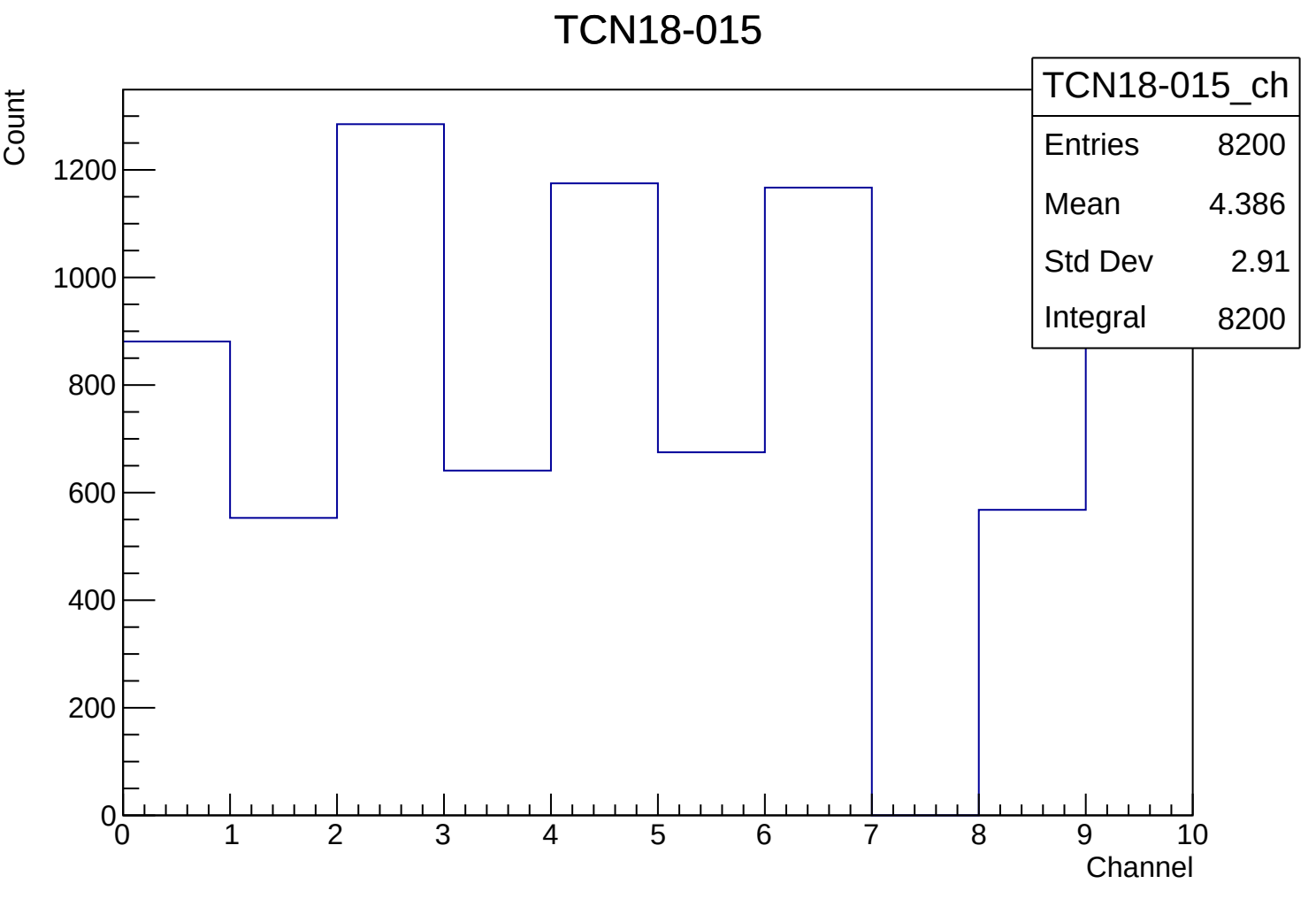

TCN18-015
TCN18-015_ch
Entries 35003
Mean 4.414
Std Dev 2.904
Integral 3.5e+04
Count
0
1000
2000
3000
4000
5000
0
1
2
3
4
5
6
7
8
9
10
Channel

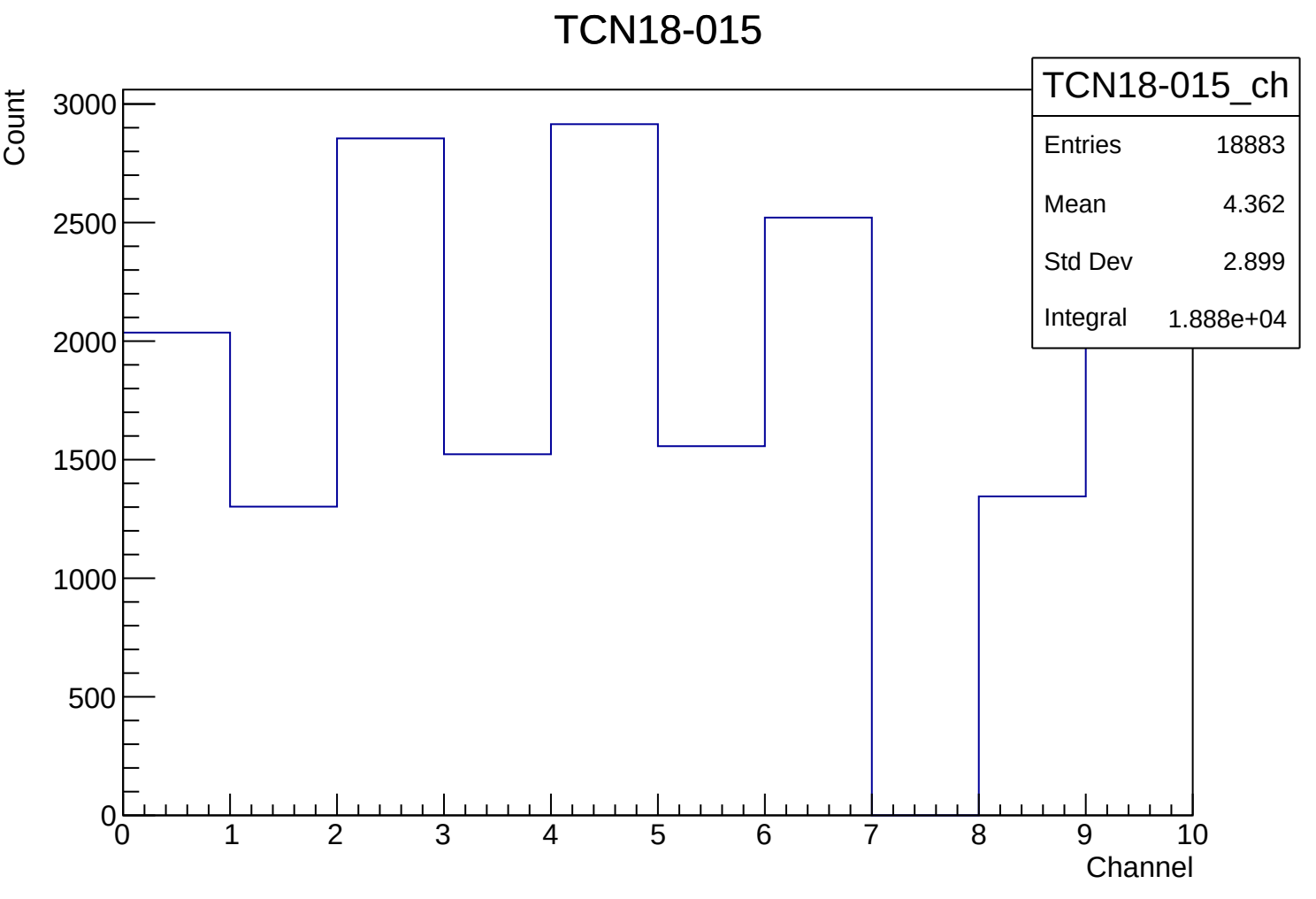

TCN18-015
TCN18-015_ch
Entries 1850
Mean 4.257
Std Dev 2.833
Integral 1850
Count
Channel
0
50
100
150
200
250
300
0
1
2
3
4
5
6
7
8
9
10

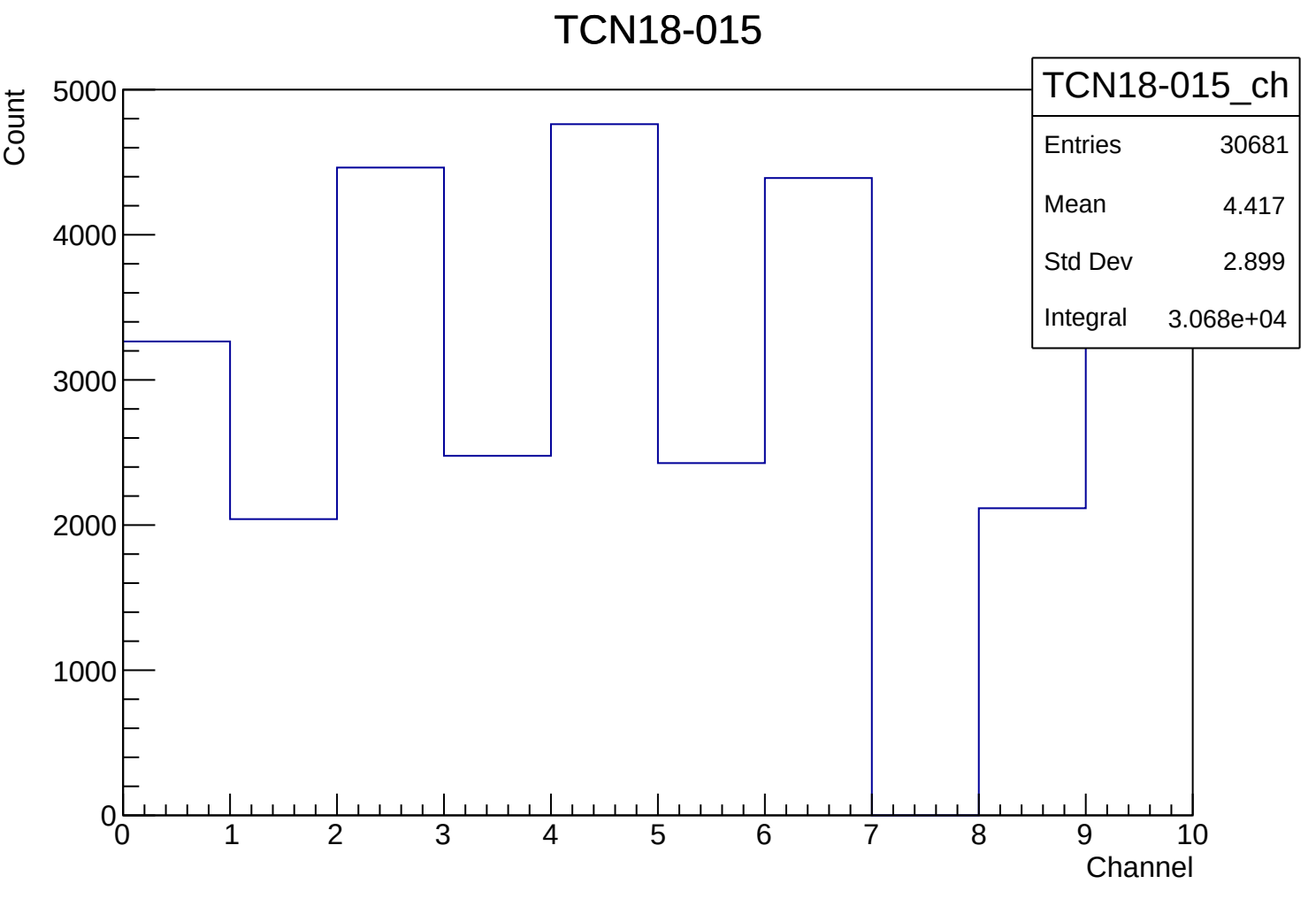

TCN18-015
TCN18-015_ch
Entries 25986
Mean 4.385
Std Dev 2.906
Integral 2.599e+04
Count
Channel
0
500
1000
1500
2000
2500
3000
3500
4000
0
1
2
3
4
5
6
7
8
9
10


TCN18-015
TCN18-015_ch
Entries 4802
Mean 4.393
Std Dev 2.905
Integral 4802
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 14387
Mean 4.366
Std Dev 2.907
Integral 1.439e+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 8200
Mean 4.386
Std Dev 2.91
Integral 8200
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 18883
Mean 4.362
Std Dev 2.899
Integral 1.888e+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 30681
Mean 4.417
Std Dev 2.899
Integral 3.068e+04
Count
Channel
0
1000
2000
3000
4000
5000
0
1
2
3
4
5
6
7
8
9
10