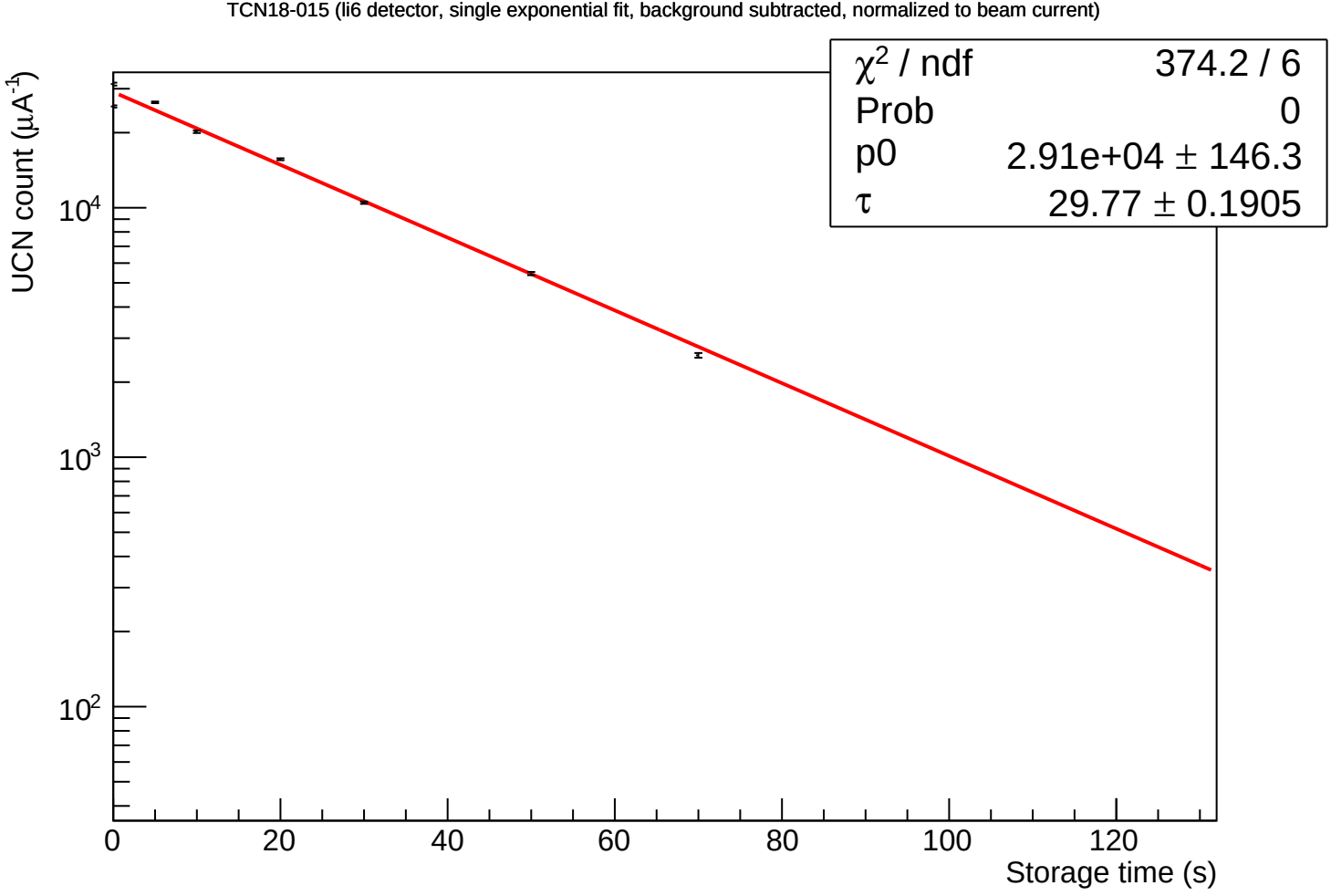
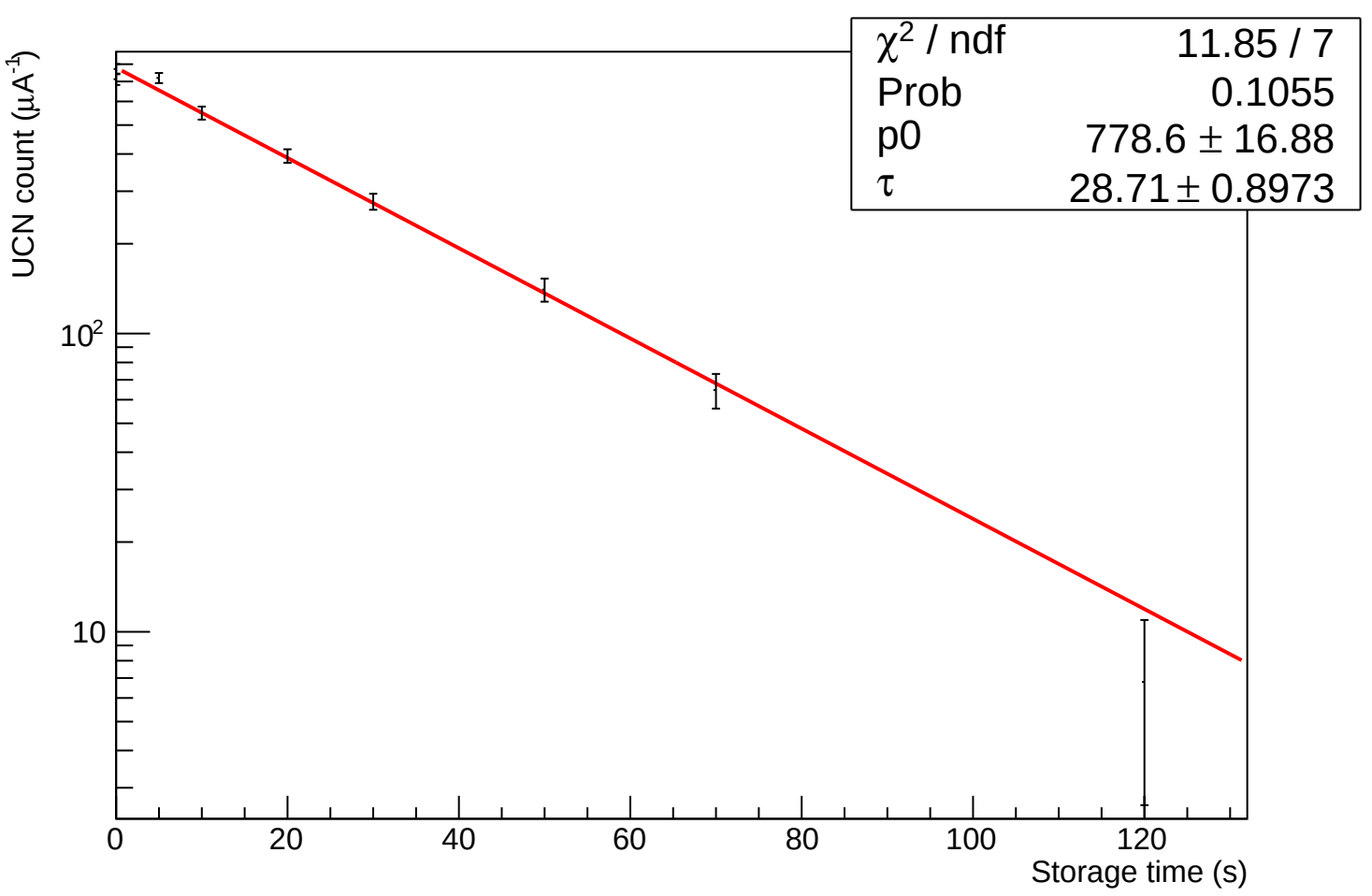
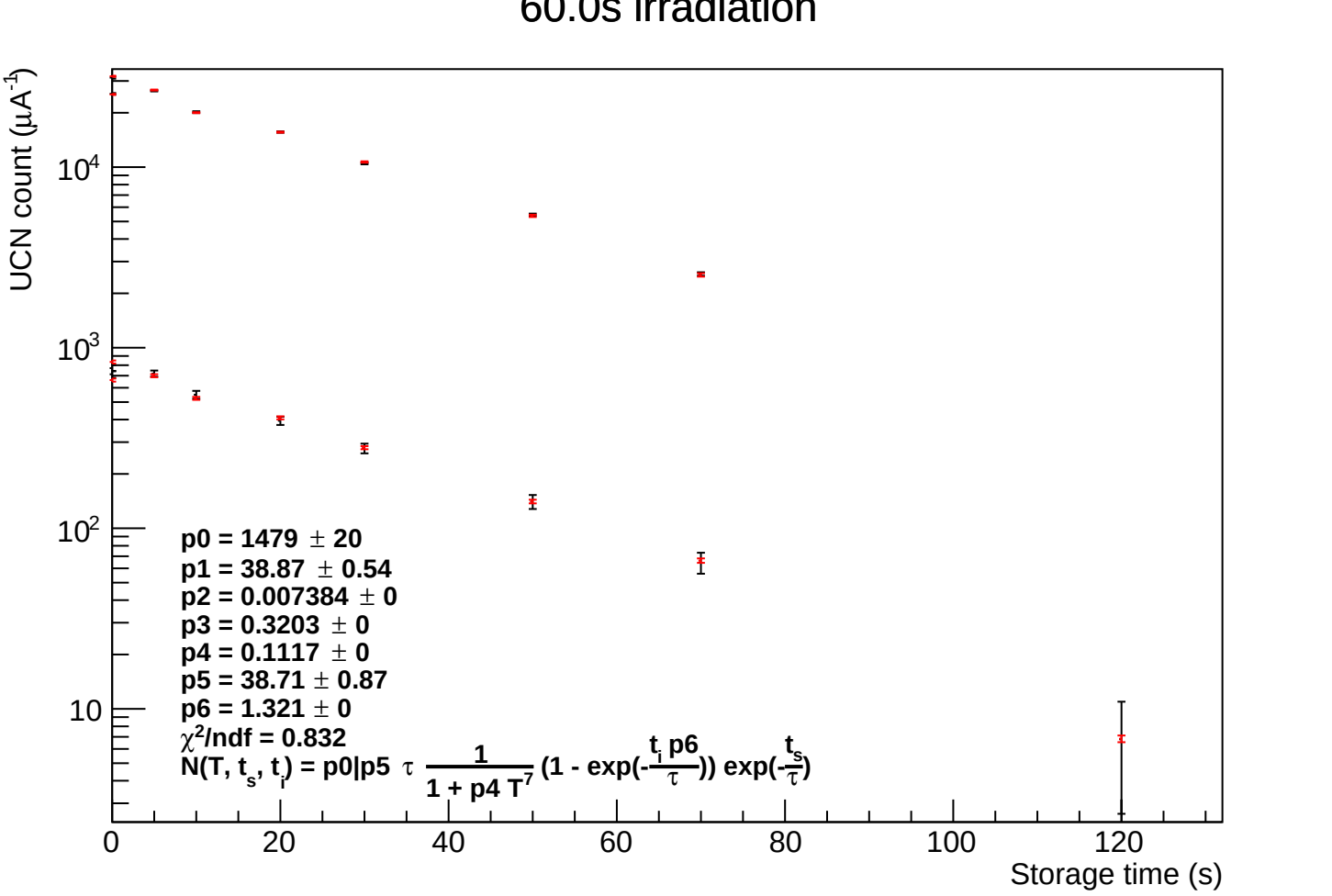
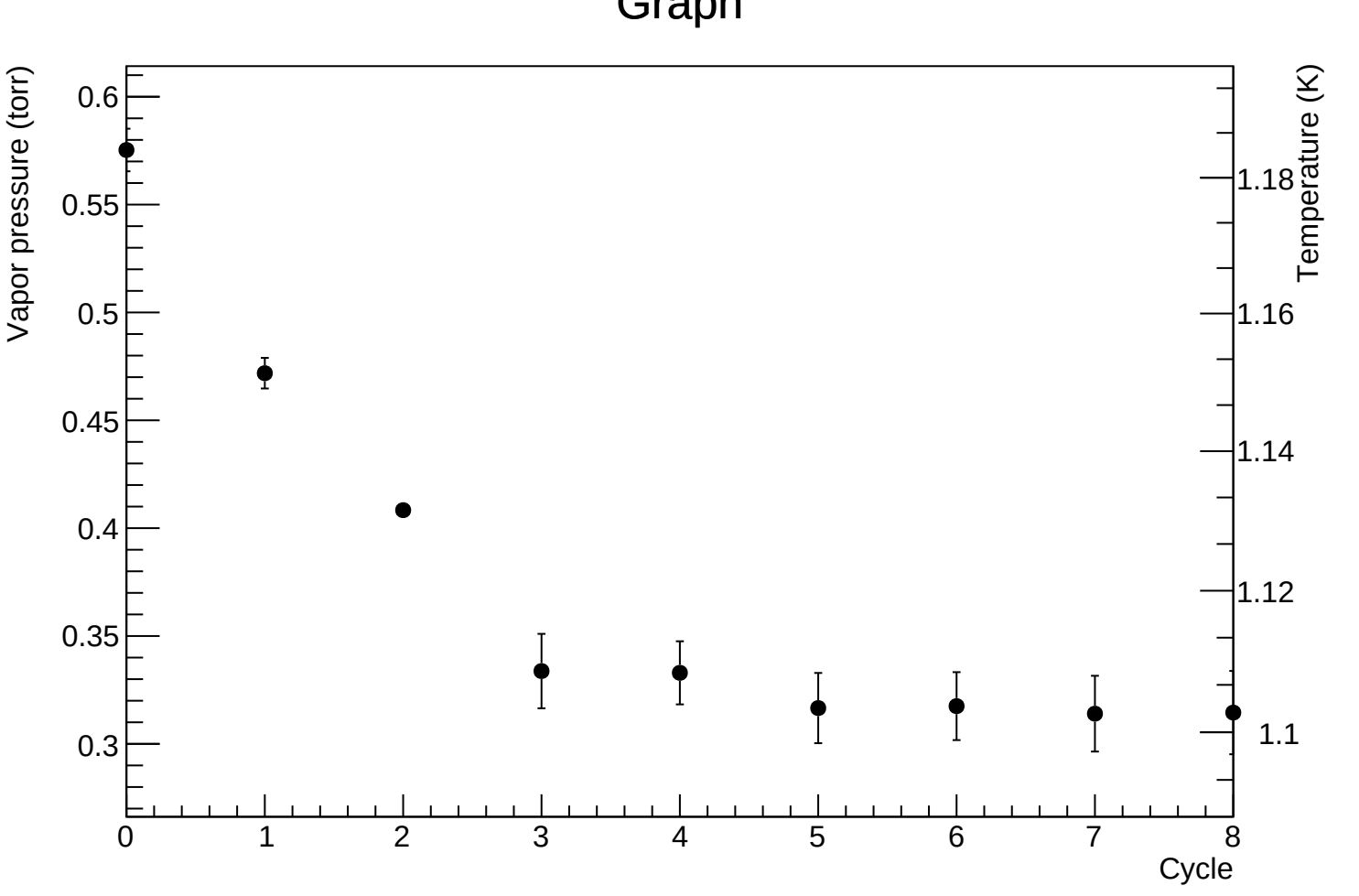
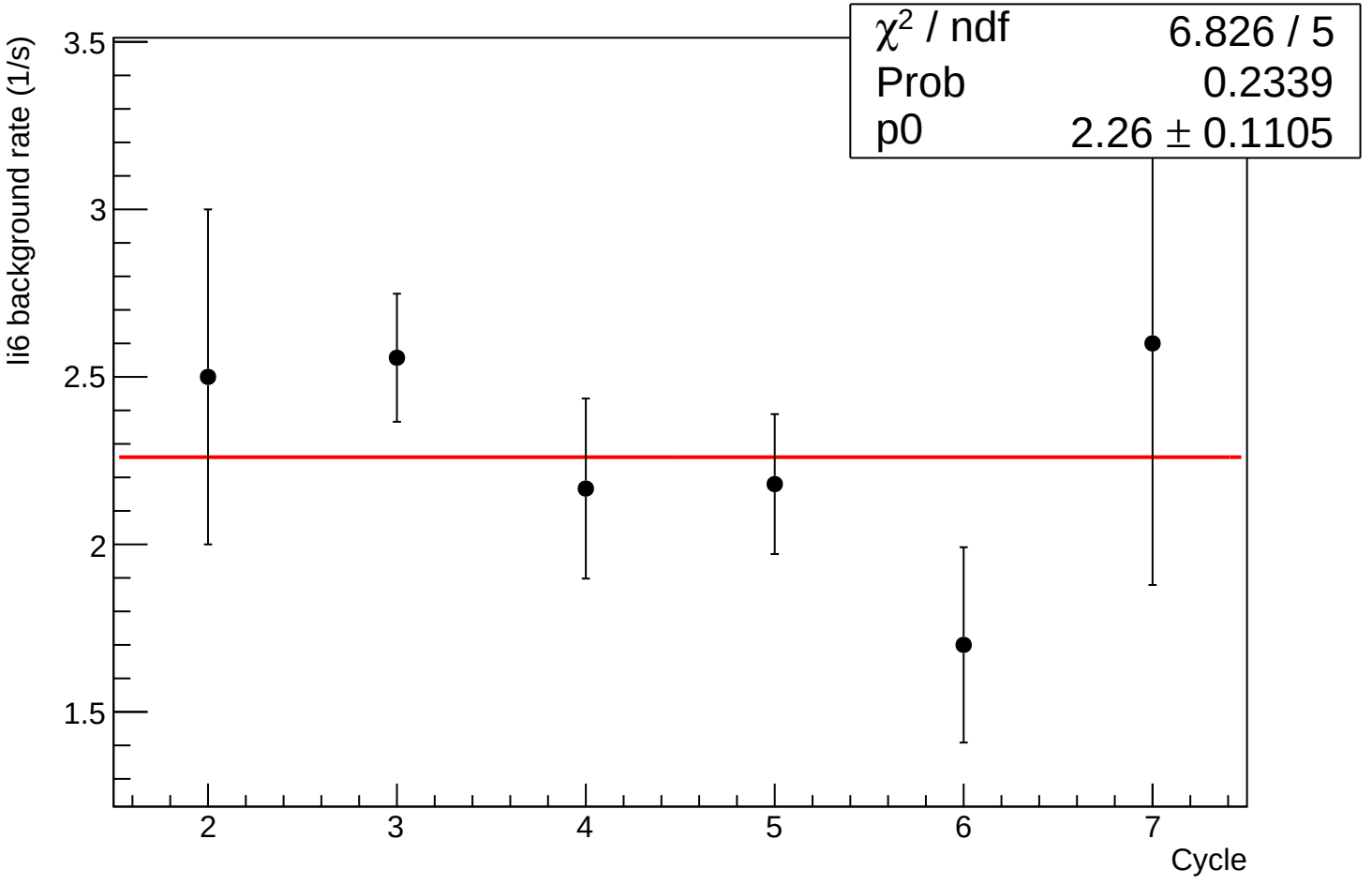
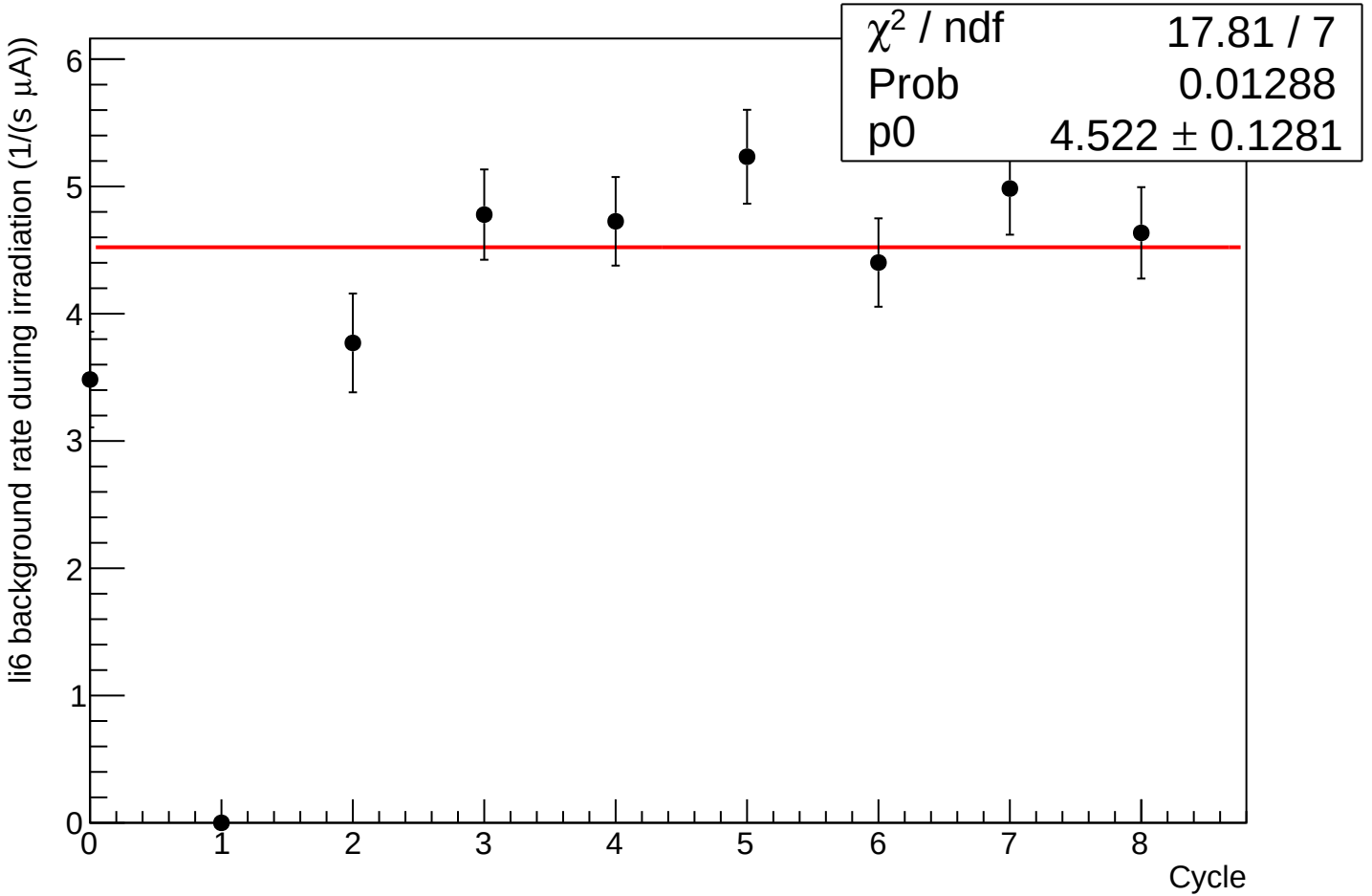

TCN18-015 (li6 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 374.2 / 6
Prob 0
p0 2.91e+04 ± 146.3
τ 29.77 ± 0.1905
UCN count (μA⁻¹)
10⁴
10³
10²
0
20
40
60
80
100
120
Storage time (s)

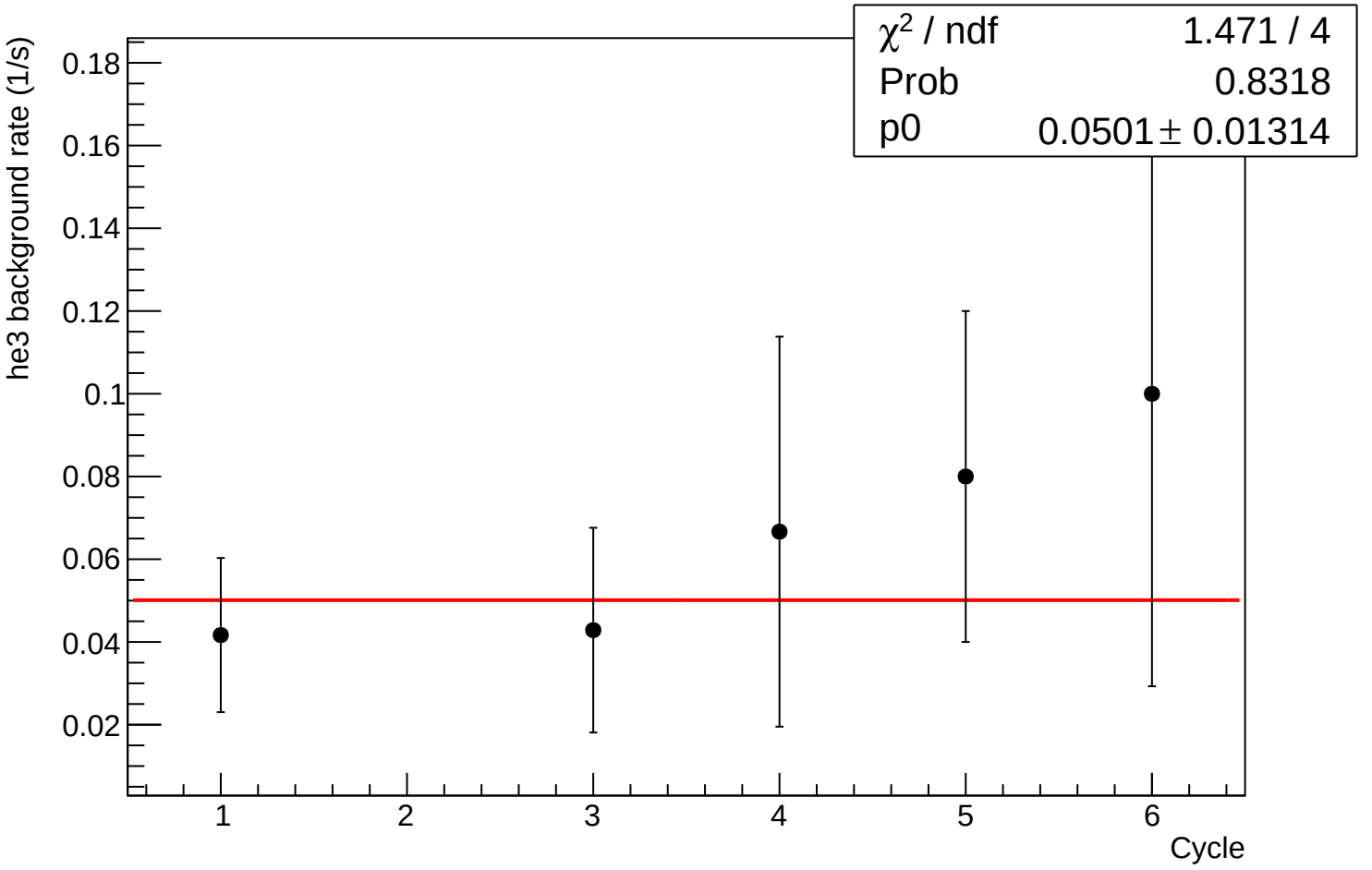

TCN18-015 (he3 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 11.85 / 7
Prob 0.1055
p0 778.6 ± 16.88
τ 28.71 ± 0.8973
UCN count (μA⁻¹)
10²
10
0
20
40
60
80
100
120
Storage time (s)

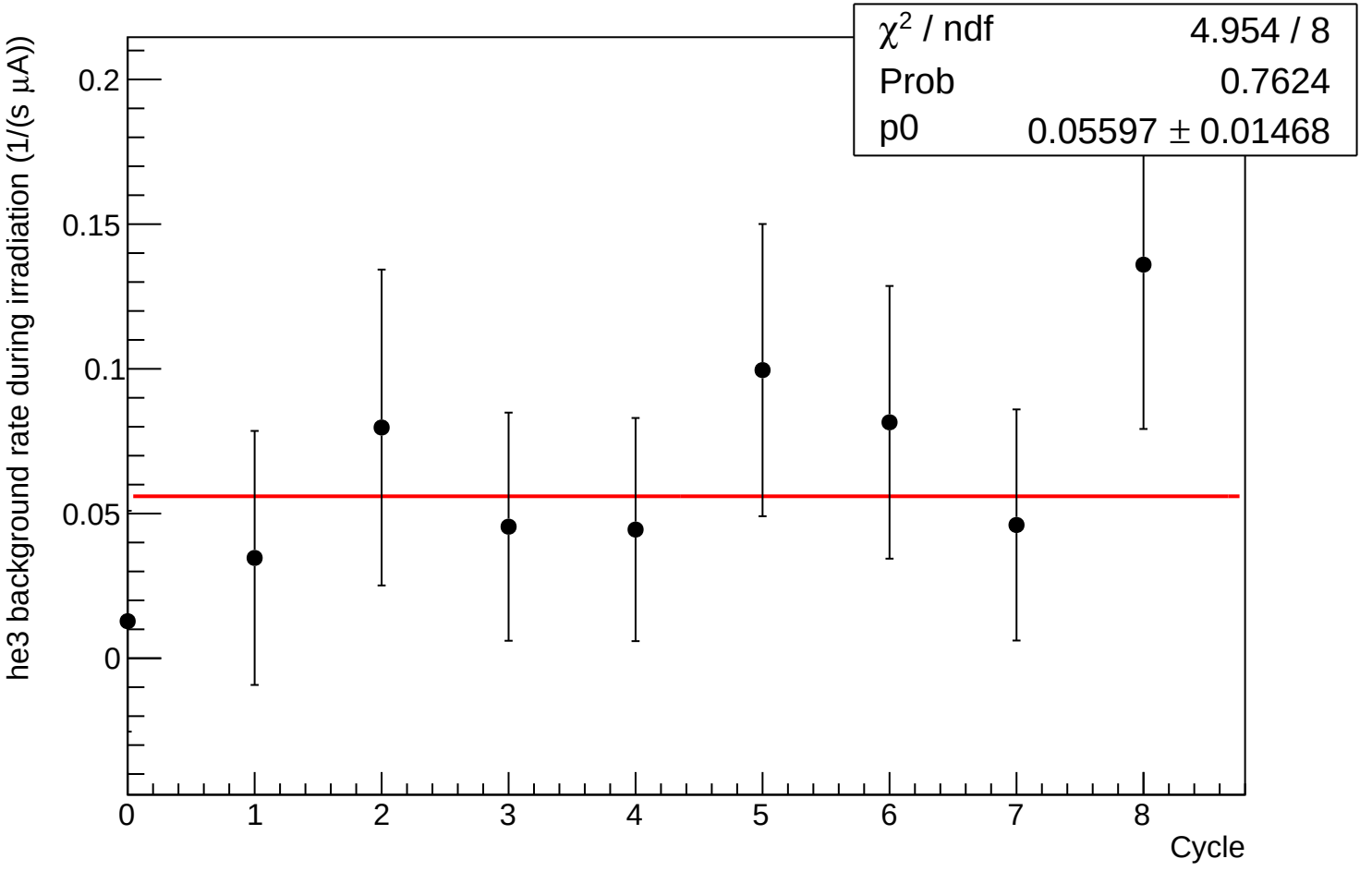

60.0s irradiation
UCN count (μA-1)
10^4
10^3
10^2
10
0
20
40
60
80
100
120
Storage time (s)
p0 = 1479 ± 20
p1 = 38.87 ± 0.54
p2 = 0.007384 ± 0
p3 = 0.3203 ± 0
p4 = 0.1117 ± 0
p5 = 38.71 ± 0.87
p6 = 1.321 ± 0
χ2/ndf = 0.832
N(T, ts, ti) = p0|p5 τ 1/(1 + p4 T7) (1 - exp(-ti p6/τ)) exp(-ts/τ)

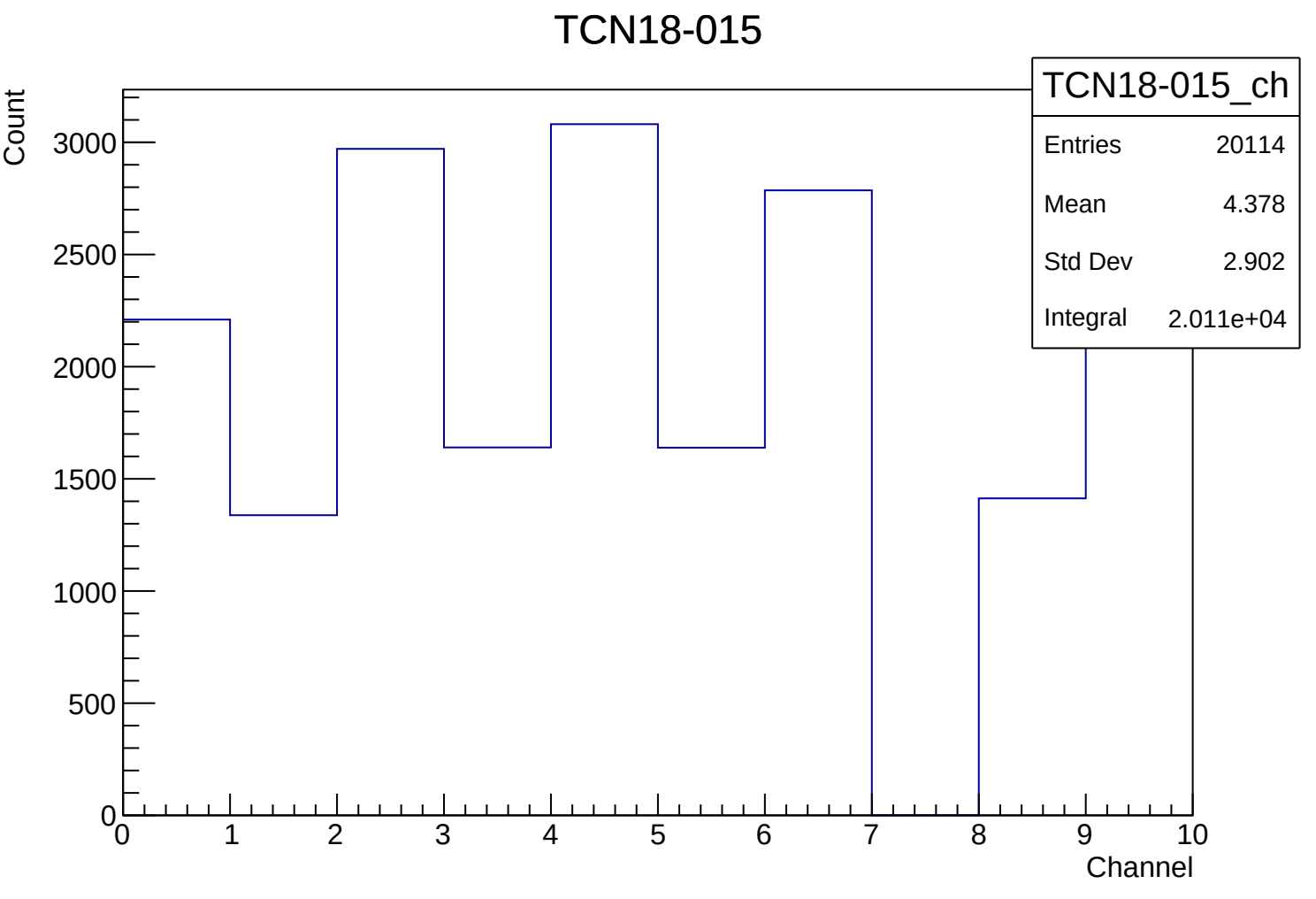

Graph
Vapor pressure (torr)
0.6
0.55
0.5
0.45
0.4
0.35
0.3
Temperature (K)
1.18
1.16
1.14
1.12
1.1
0
1
2
3
4
5
6
7
8
Cycle

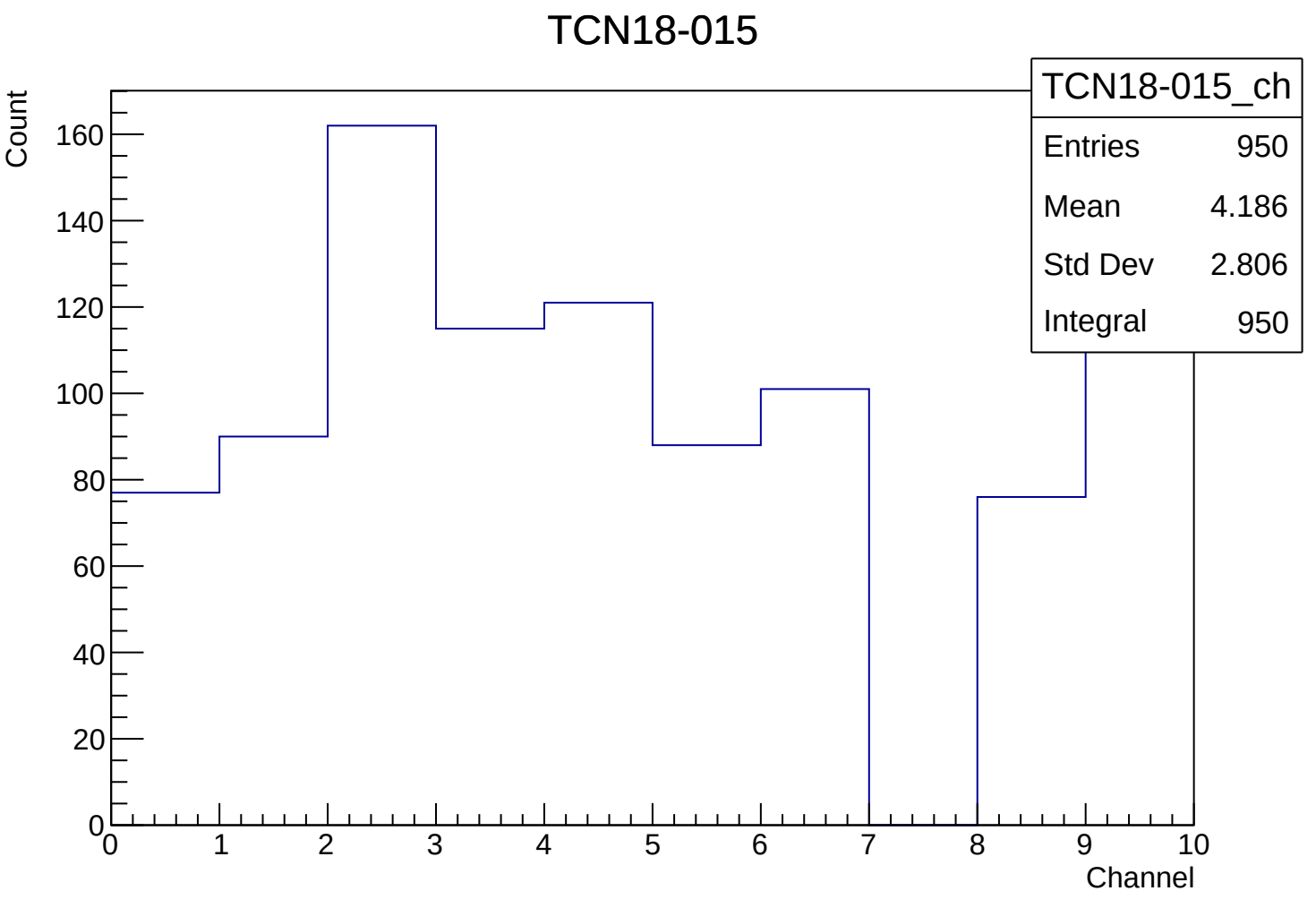

li6 background rate (1/s)
3.5
3
2.5
2
1.5
2
3
4
5
6
7
Cycle
χ² / ndf 6.826 / 5
Prob 0.2339
p0 2.26 ± 0.1105

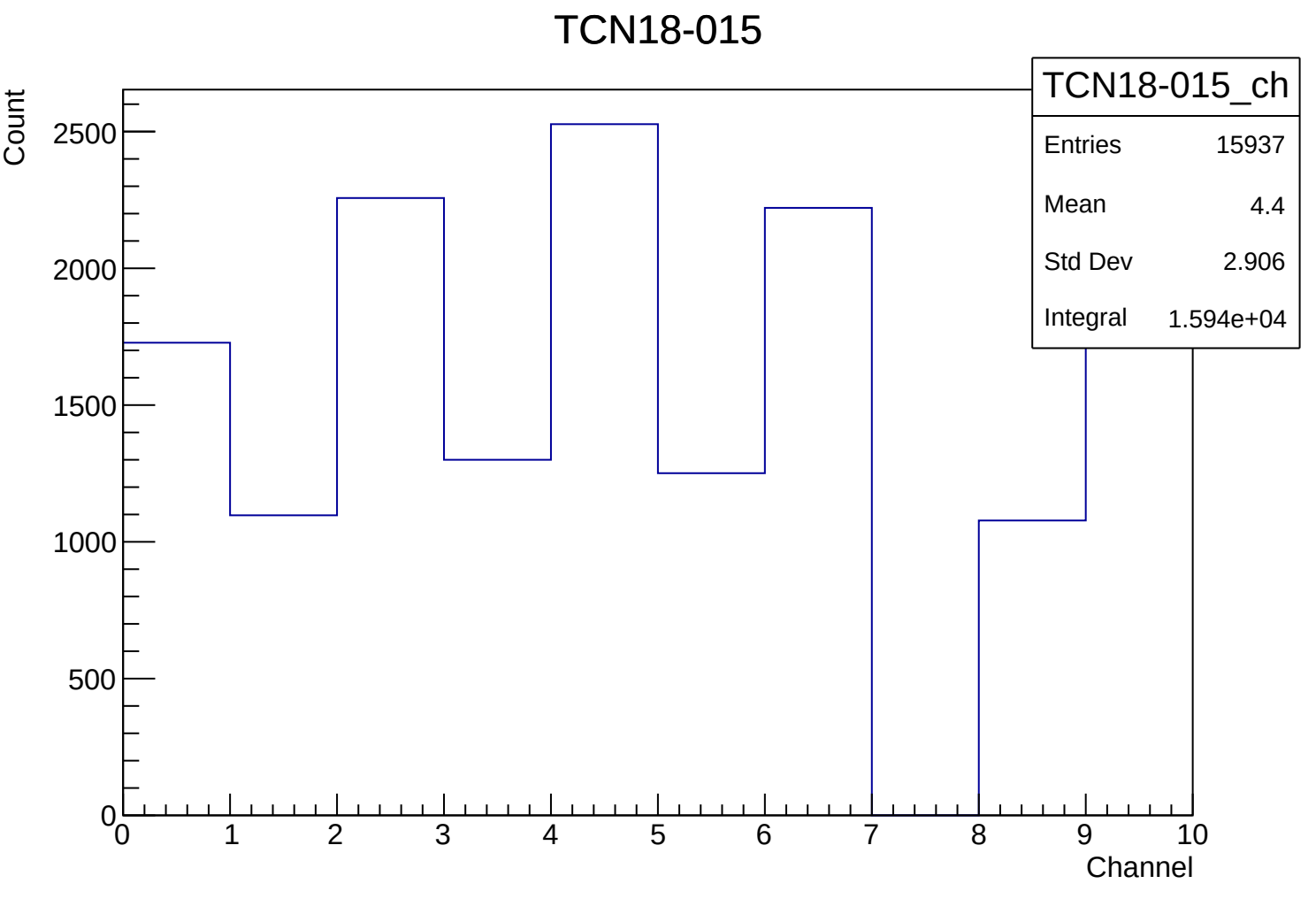

χ^2 / ndf 17.81 / 7
Prob 0.01288
p0 4.522 ± 0.1281
li6 background rate during irradiation (1/(s μA))
Cycle
0
1
2
3
4
5
6
7
8

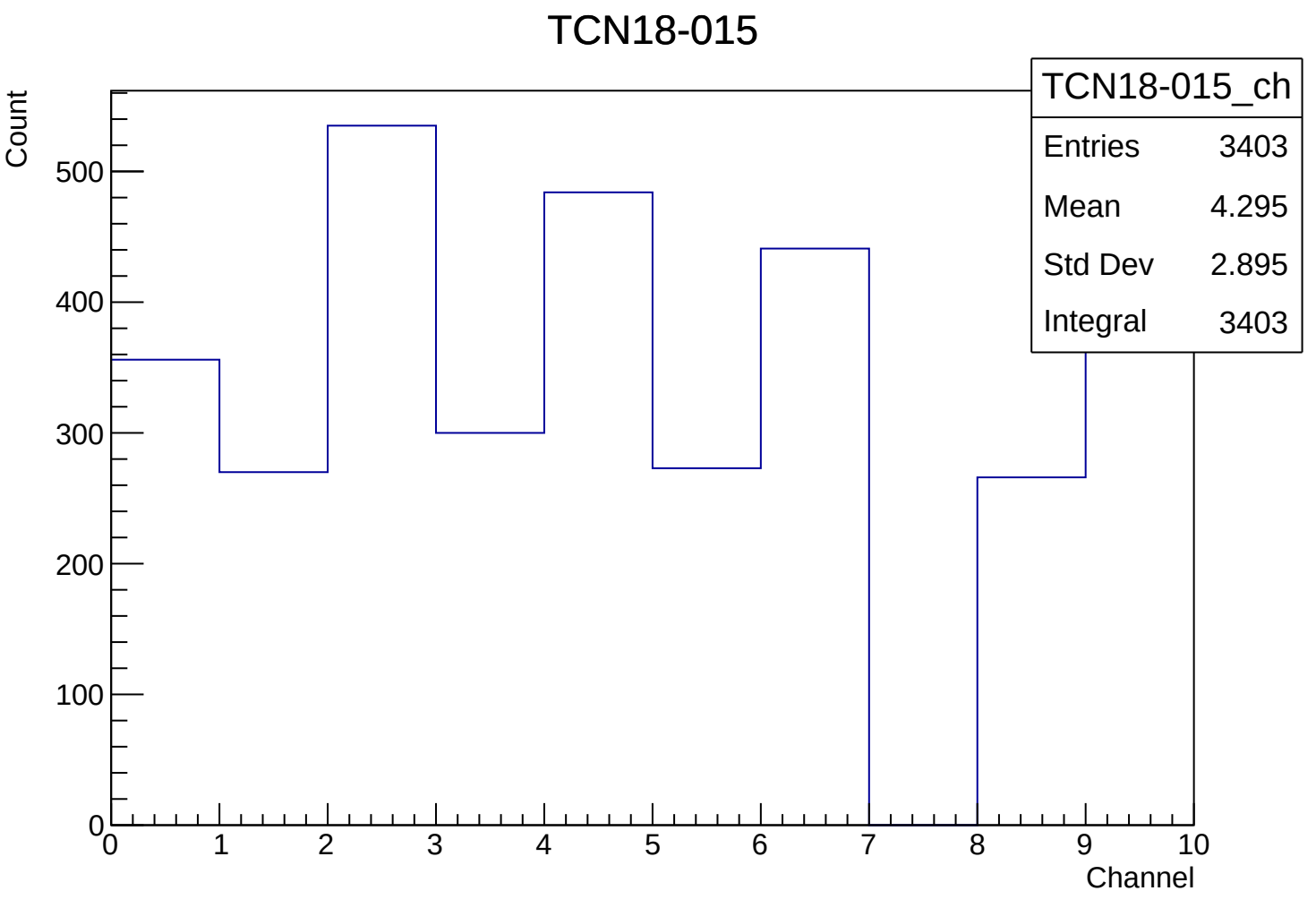

χ² / ndf 1.471 / 4
Prob 0.8318
p0 0.0501 ± 0.01314
he3 background rate (1/s)
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
1
2
3
4
5
6
Cycle

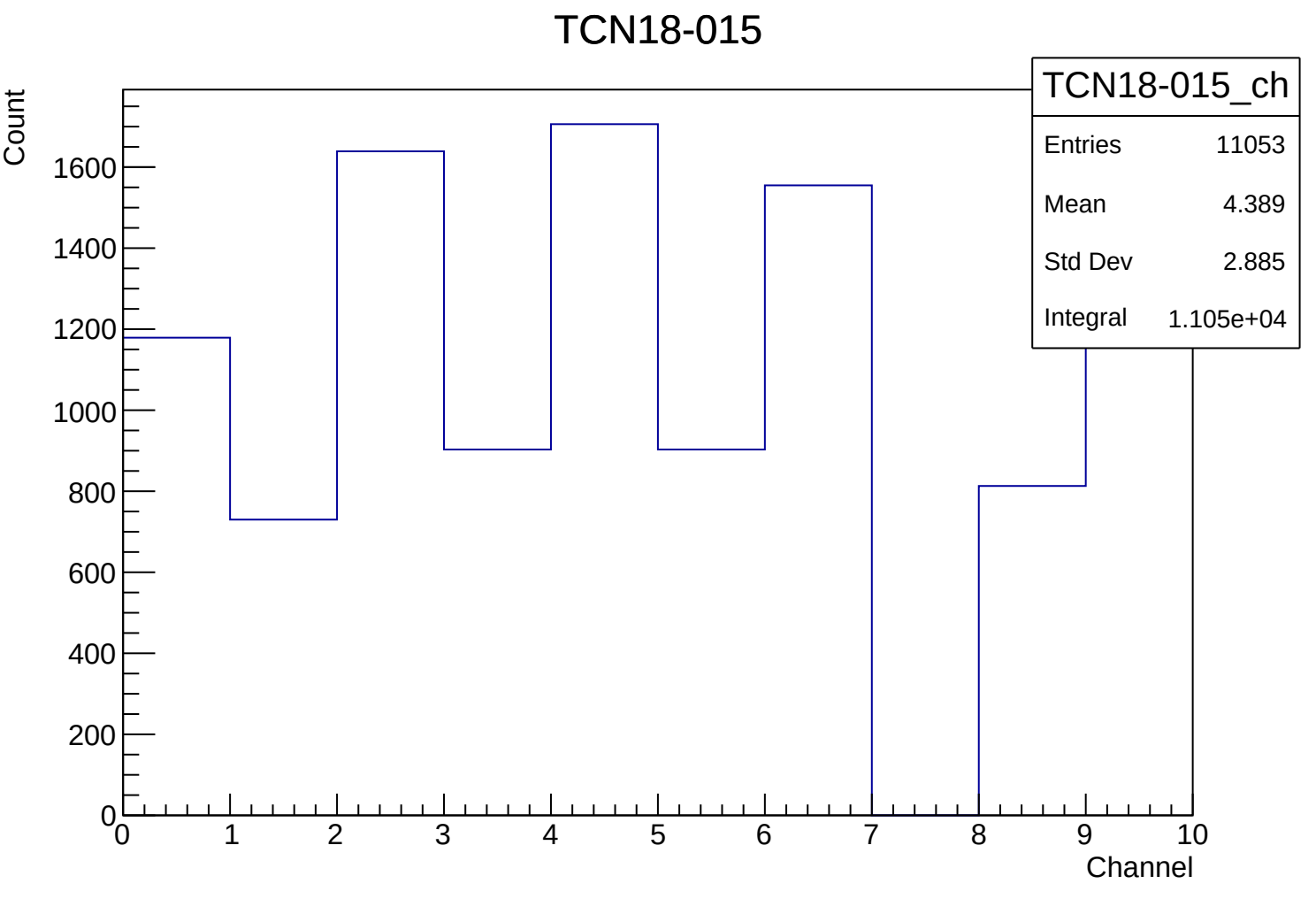

χ² / ndf 4.954 / 8
Prob 0.7624
p0 0.05597 ± 0.01468
he3 background rate during irradiation (1/(s μA))
0.2
0.15
0.1
0.05
0
0
1
2
3
4
5
6
7
8
Cycle

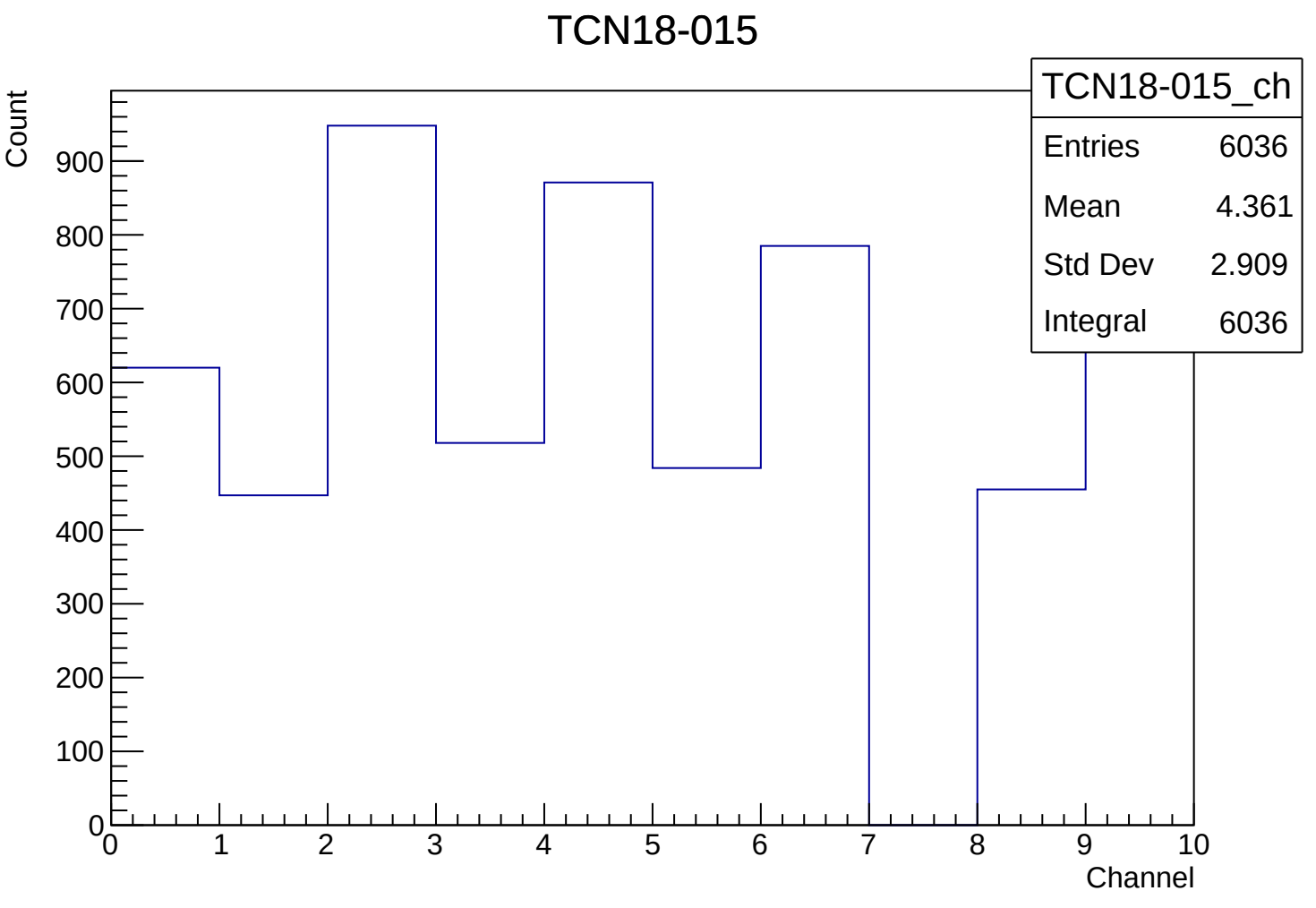

TCN18-015
TCN18-015_ch
Entries 20114
Mean 4.378
Std Dev 2.902
Integral 2.011e+04
Count
3000
2500
2000
1500
1000
500
0
0 1 2 3 4 5 6 7 8 9 10
Channel

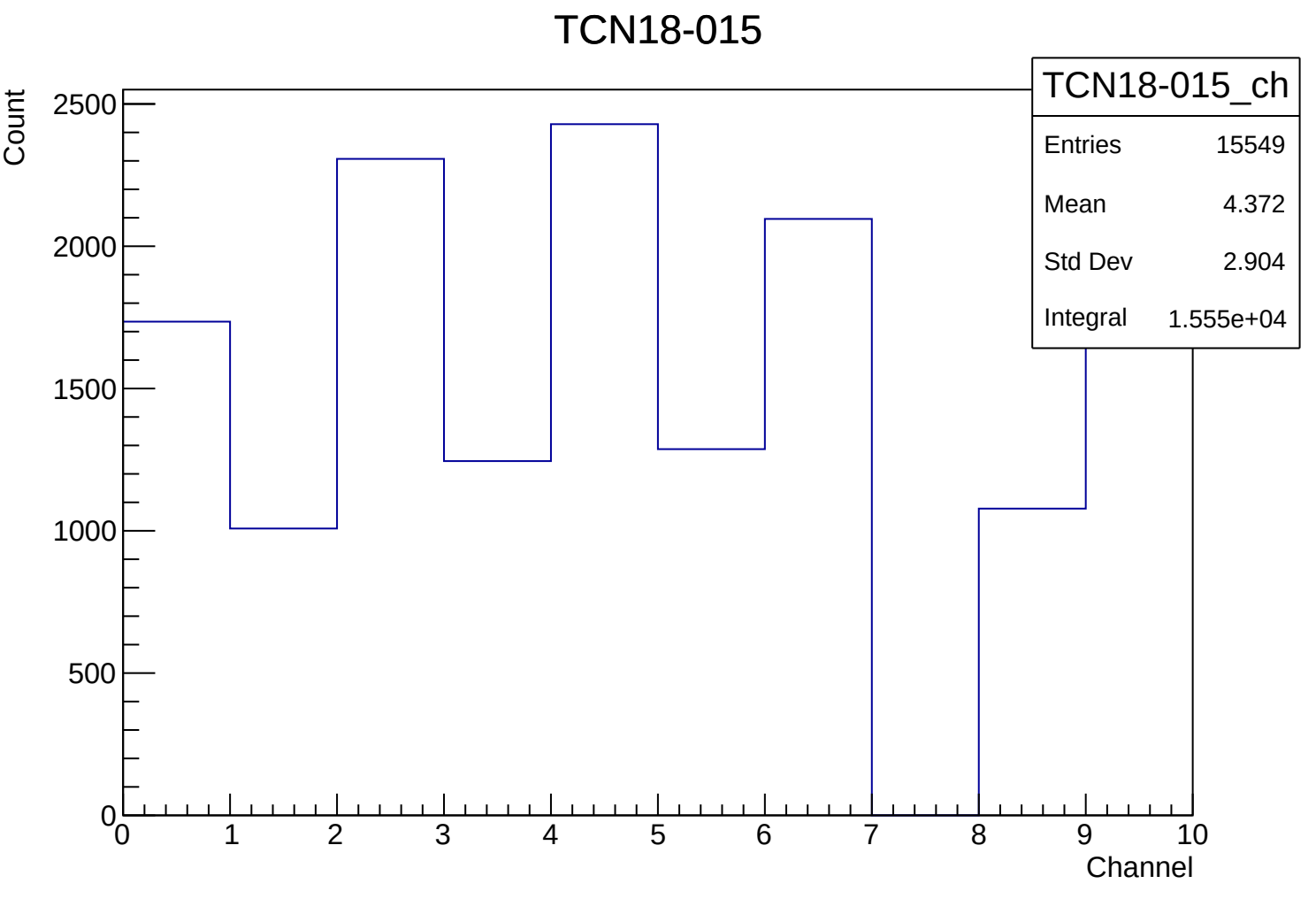

TCN18-015
TCN18-015_ch
Entries 950
Mean 4.186
Std Dev 2.806
Integral 950
Count
Channel
0
20
40
60
80
100
120
140
160
0
1
2
3
4
5
6
7
8
9
10

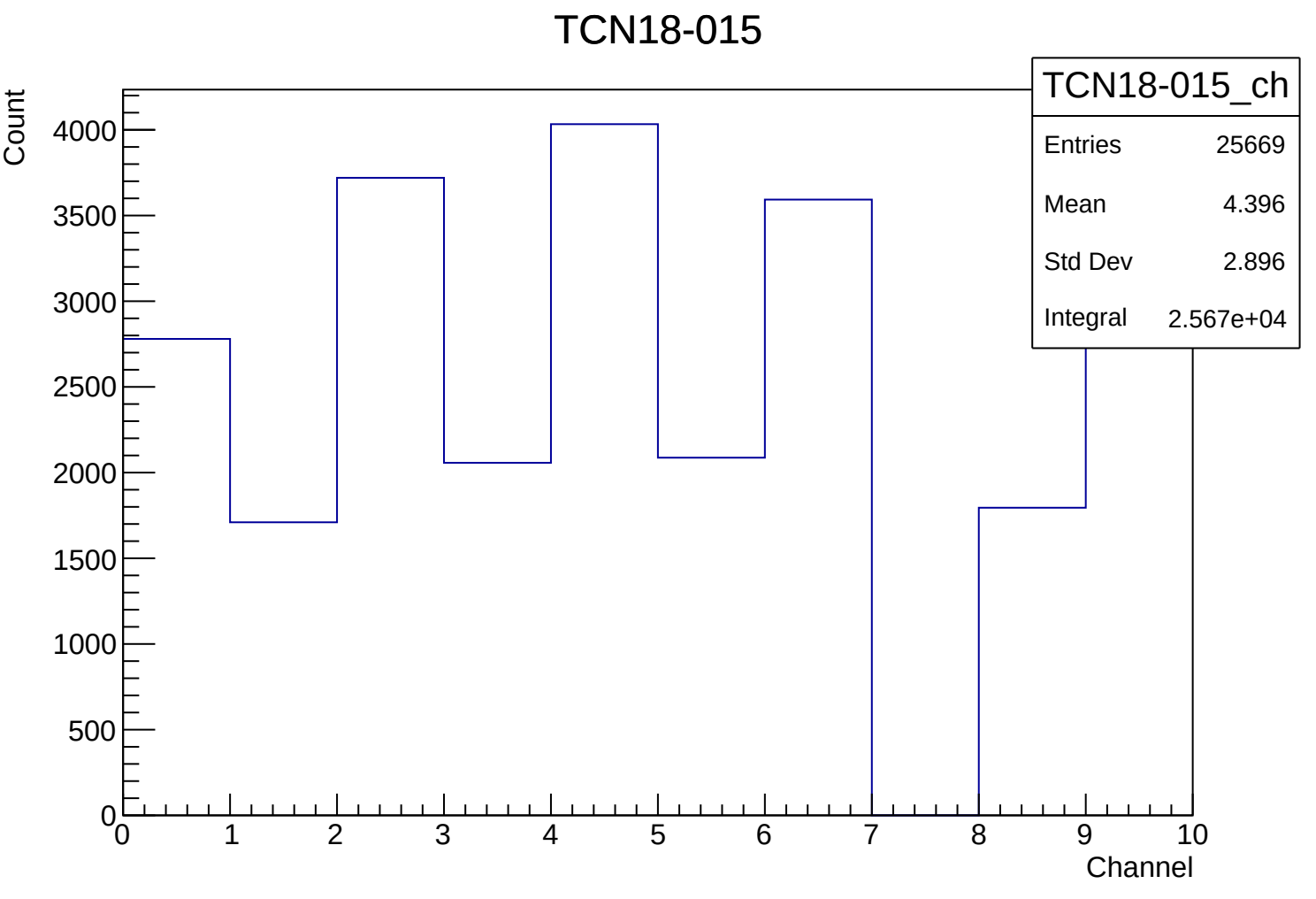

TCN18-015
TCN18-015_ch
Entries 15937
Mean 4.4
Std Dev 2.906
Integral 1.594e+04
Count
2500
2000
1500
1000
500
0
0 1 2 3 4 5 6 7 8 9 10
Channel

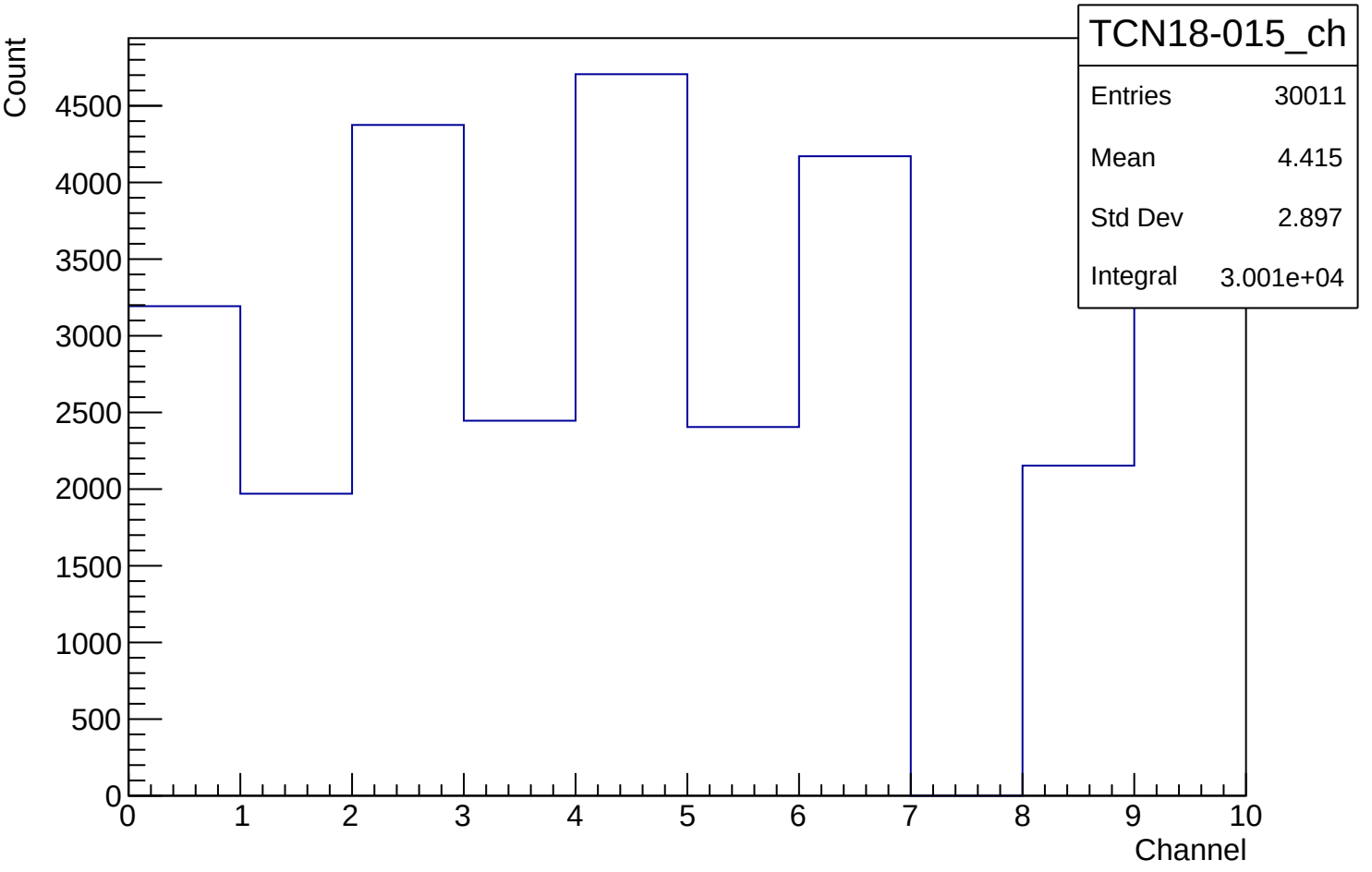

TCN18-015
TCN18-015_ch
Entries 3403
Mean 4.295
Std Dev 2.895
Integral 3403
Count
0
100
200
300
400
500
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 11053
Mean 4.389
Std Dev 2.885
Integral 1.105e+04
Count
0
200
400
600
800
1000
1200
1400
1600
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 6036
Mean 4.361
Std Dev 2.909
Integral 6036
Count
0
100
200
300
400
500
600
700
800
900
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-015
TCN18-015_ch
Entries 15549
Mean 4.372
Std Dev 2.904
Integral 1.555e+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 25669
Mean 4.396
Std Dev 2.896
Integral 2.567e+04
Count
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 30011
Mean 4.415
Std Dev 2.897
Integral 3.001e+04
Count
0
500
1000
1500
2000
2500
3000
3500
4000
4500
0
1
2
3
4
5
6
7
8
9
10
Channel