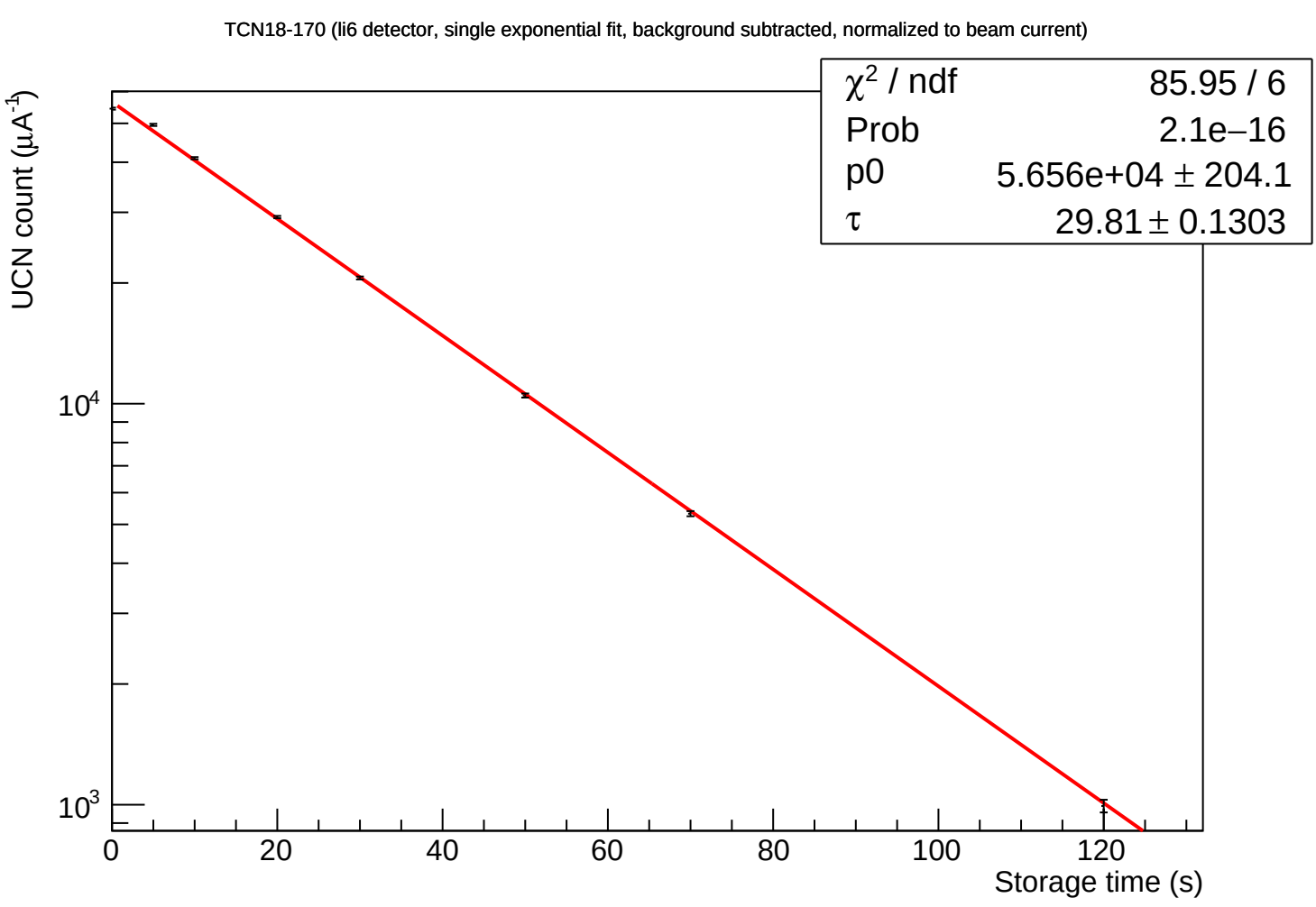
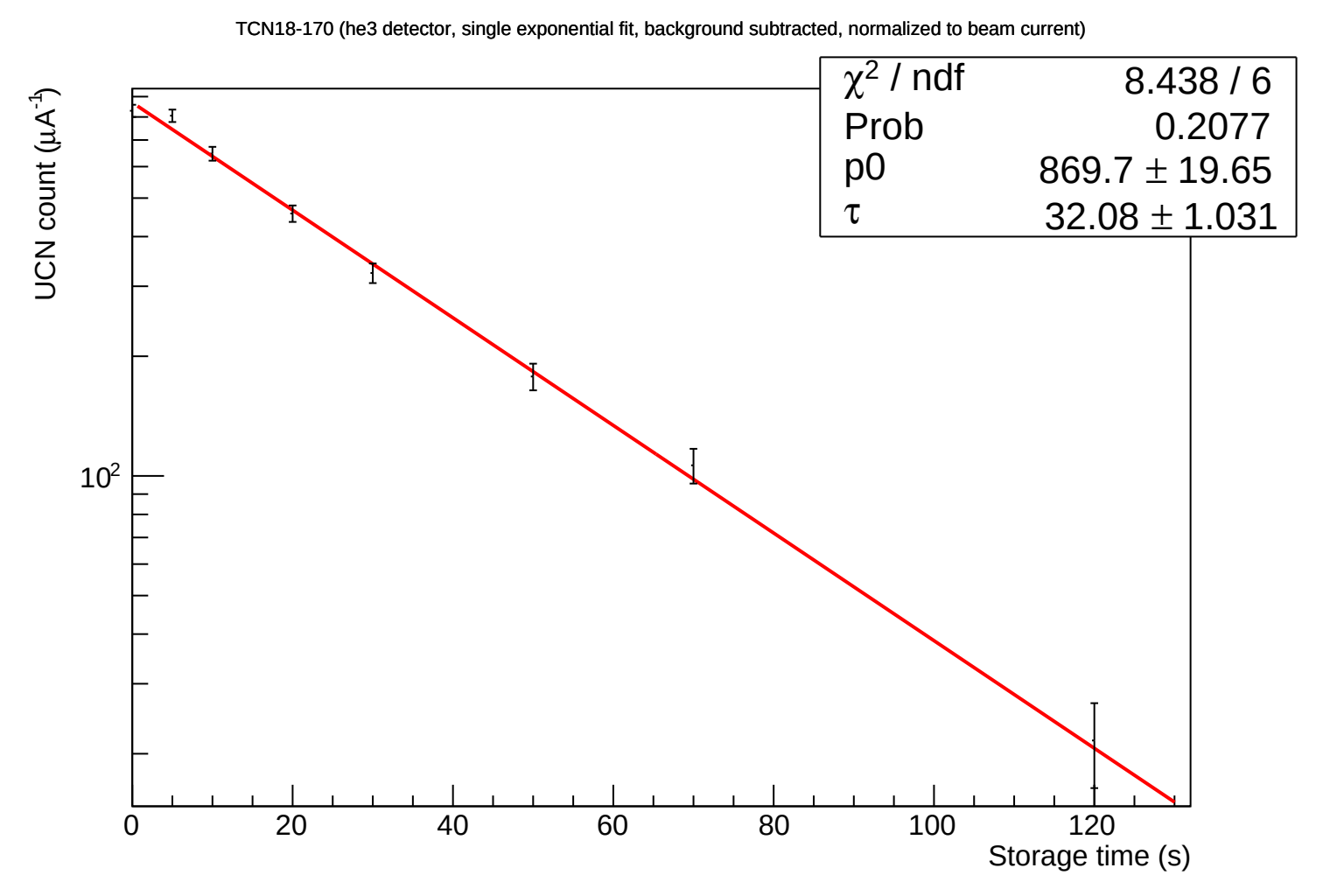
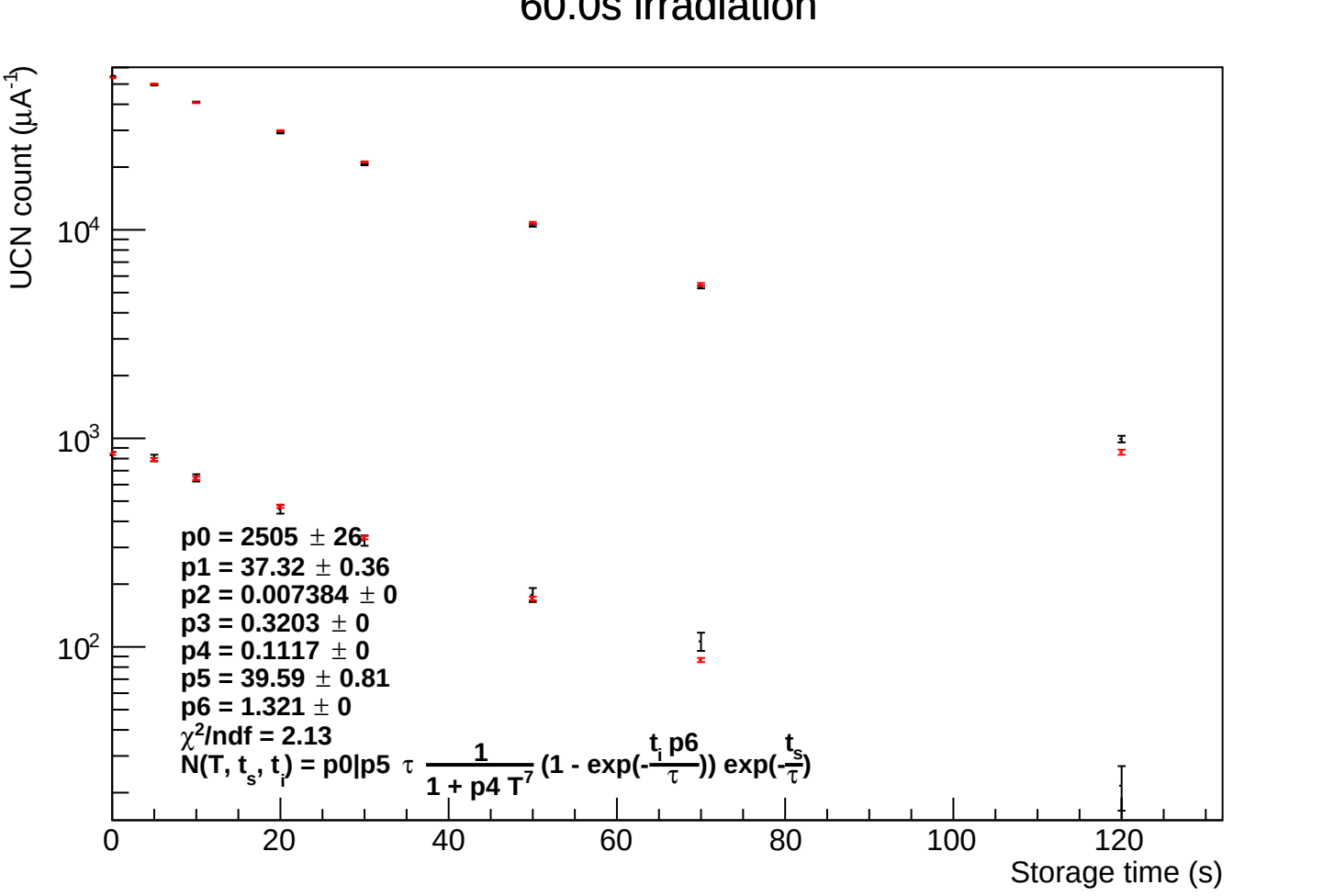
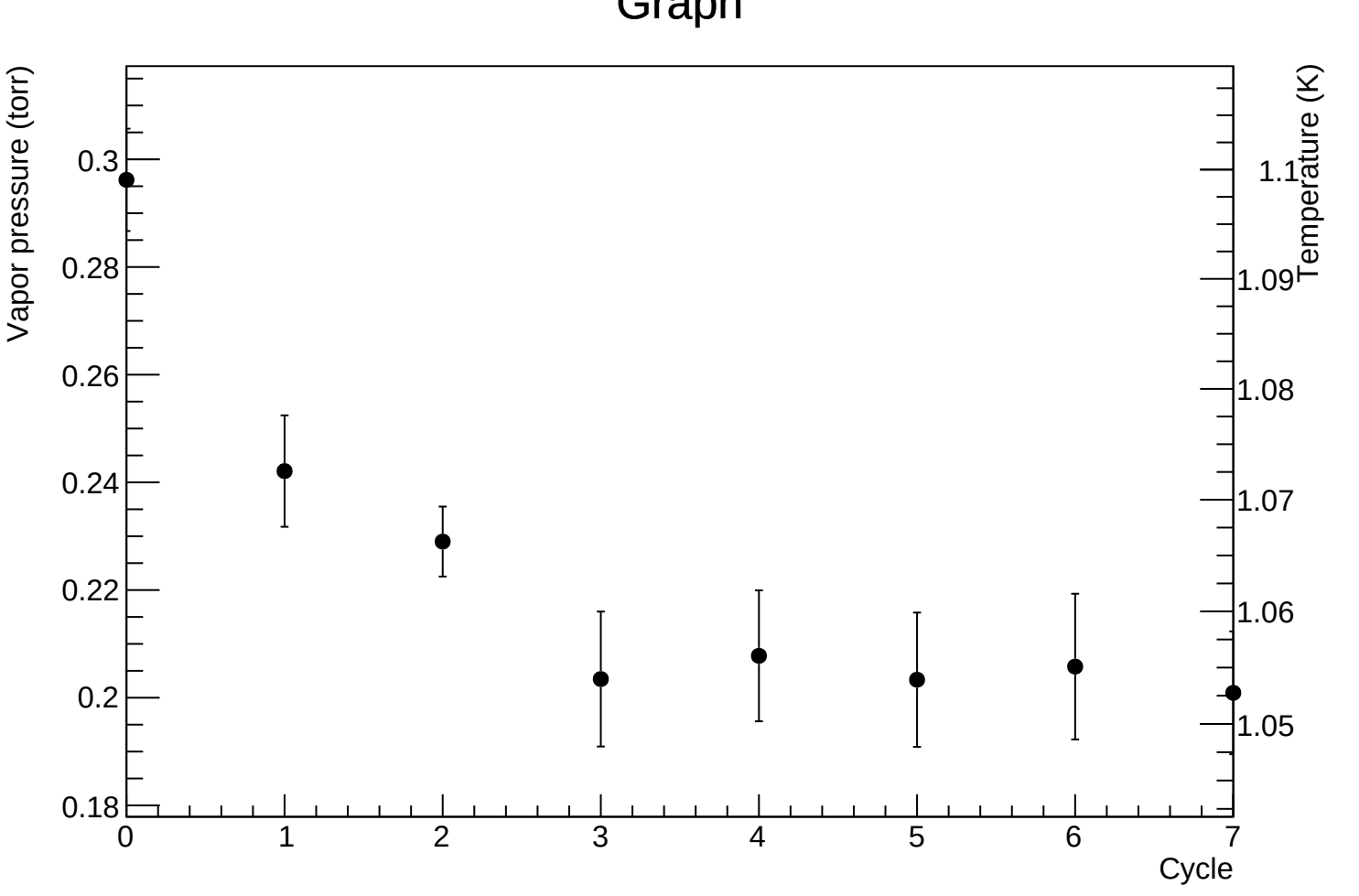
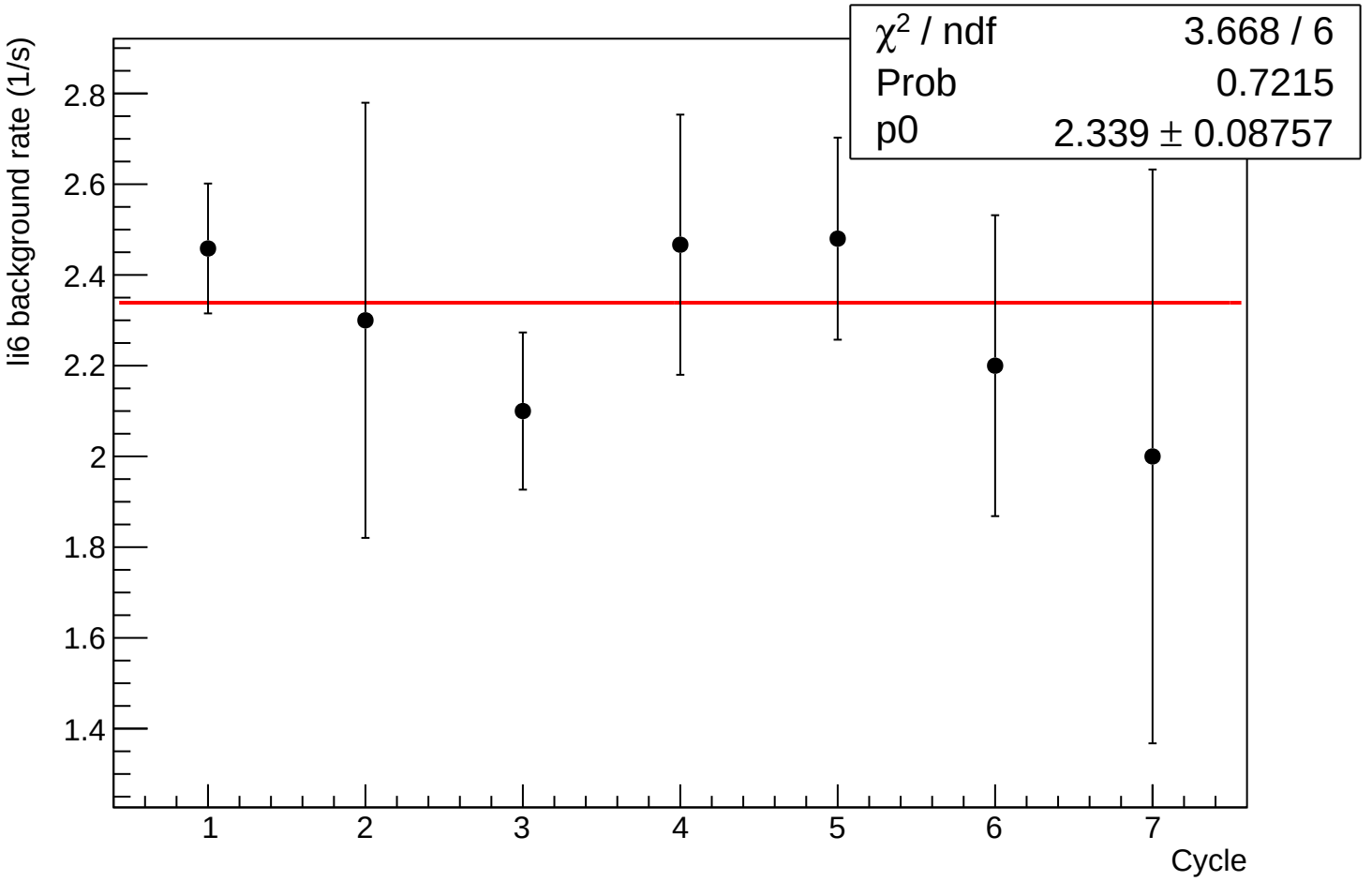
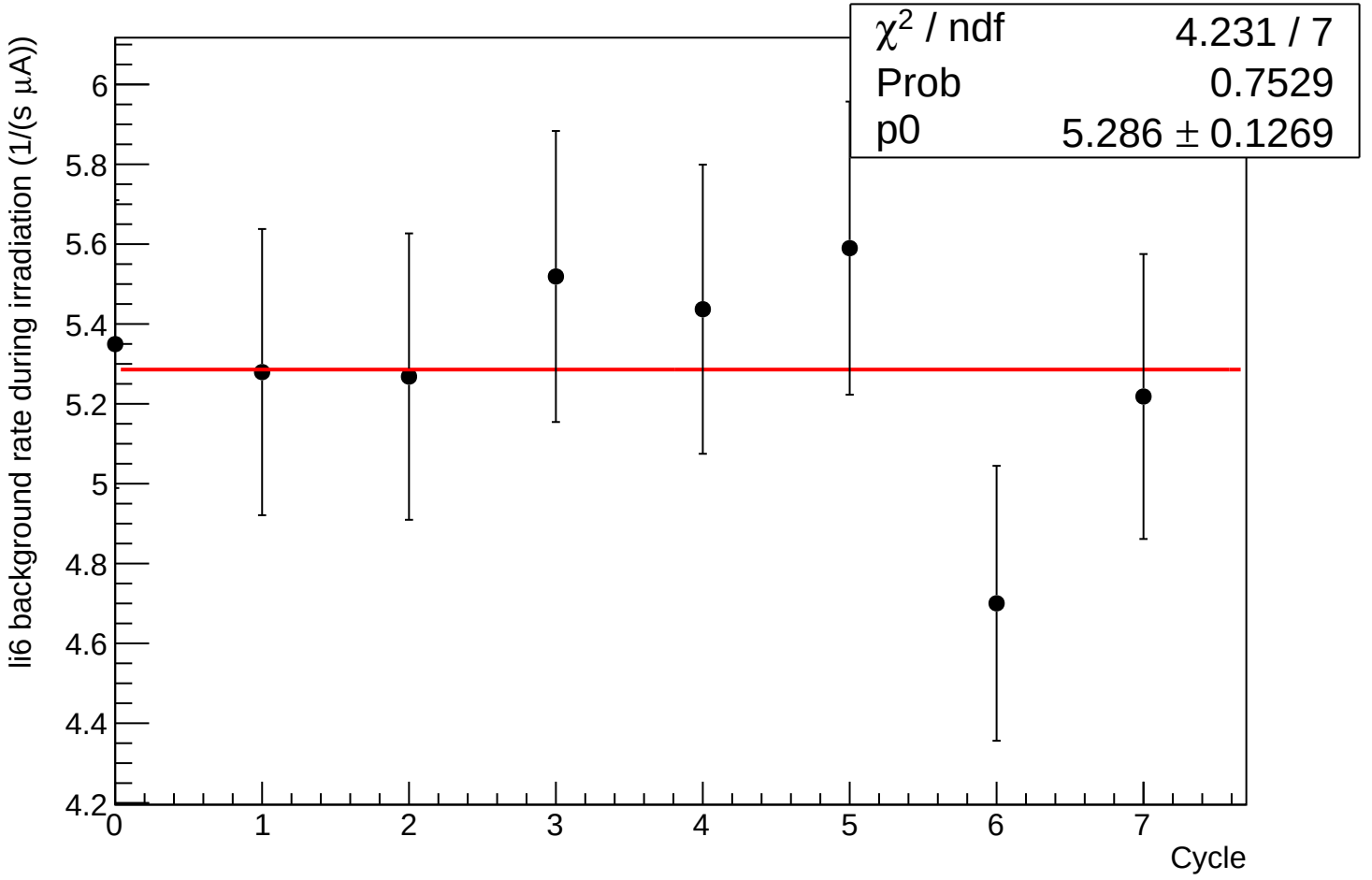

TCN18-170 (li6 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 85.95 / 6
Prob 2.1e−16
p0 5.656e+04 ± 204.1
τ 29.81 ± 0.1303
UCN count (μA⁻¹)
10⁴
10³
0
20
40
60
80
100
120
Storage time (s)

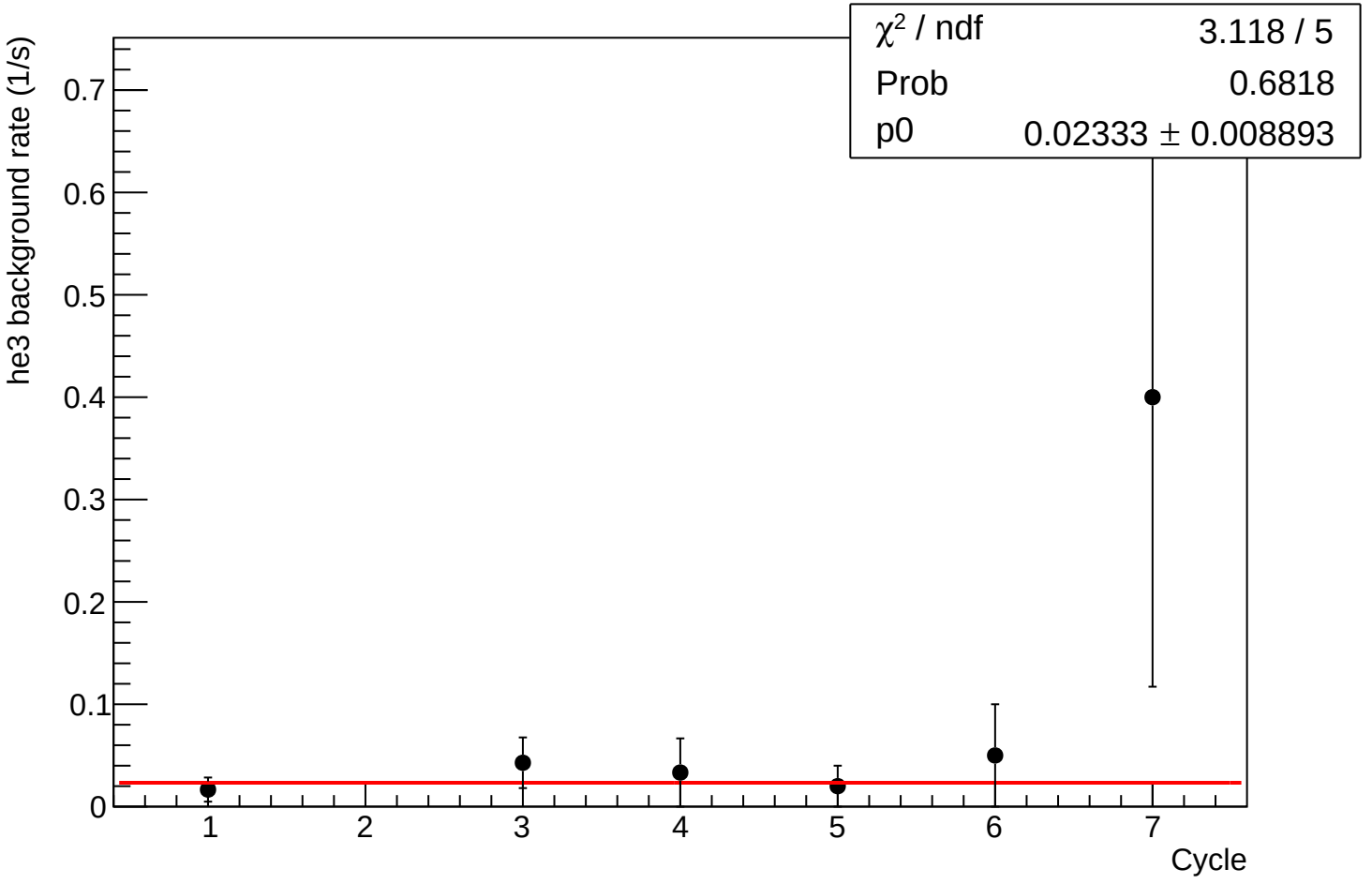

TCN18-170 (he3 detector, single exponential fit, background subtracted, normalized to beam current)
χ2 / ndf 8.438 / 6
Prob 0.2077
p0 869.7 ± 19.65
τ 32.08 ± 1.031
UCN count (μA-1)
10^2
0
20
40
60
80
100
120
Storage time (s)

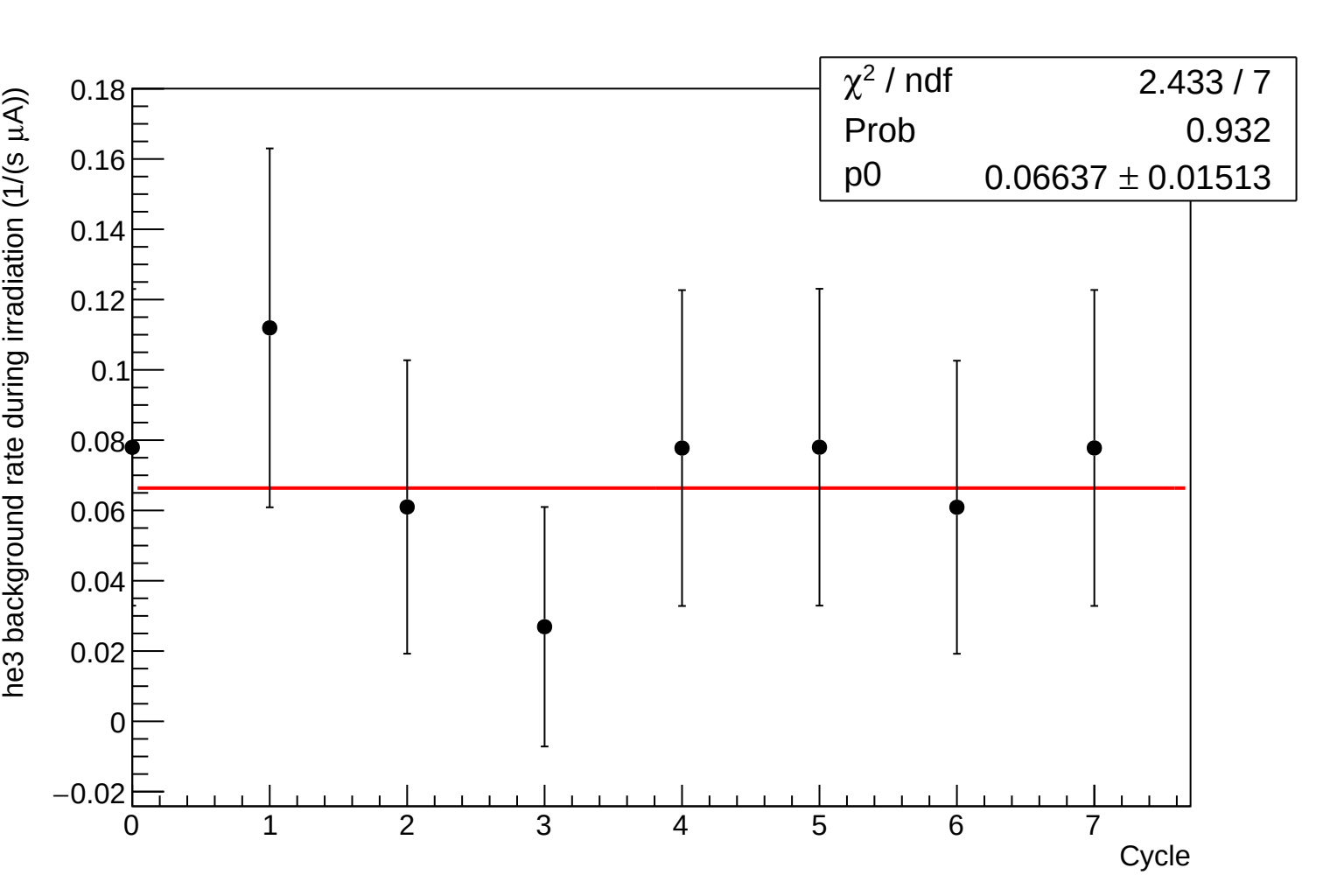

60.0s irradiation
UCN count (μA-1)
10^4
10^3
10^2
0
20
40
60
80
100
120
Storage time (s)
p0 = 2505 ± 26
p1 = 37.32 ± 0.36
p2 = 0.007384 ± 0
p3 = 0.3203 ± 0
p4 = 0.1117 ± 0
p5 = 39.59 ± 0.81
p6 = 1.321 ± 0
χ2/ndf = 2.13
N(T, ts, ti) = p0|p5 τ 1/(1 + p4 T7) (1 - exp(-ti p6/τ)) exp(-ts/τ)

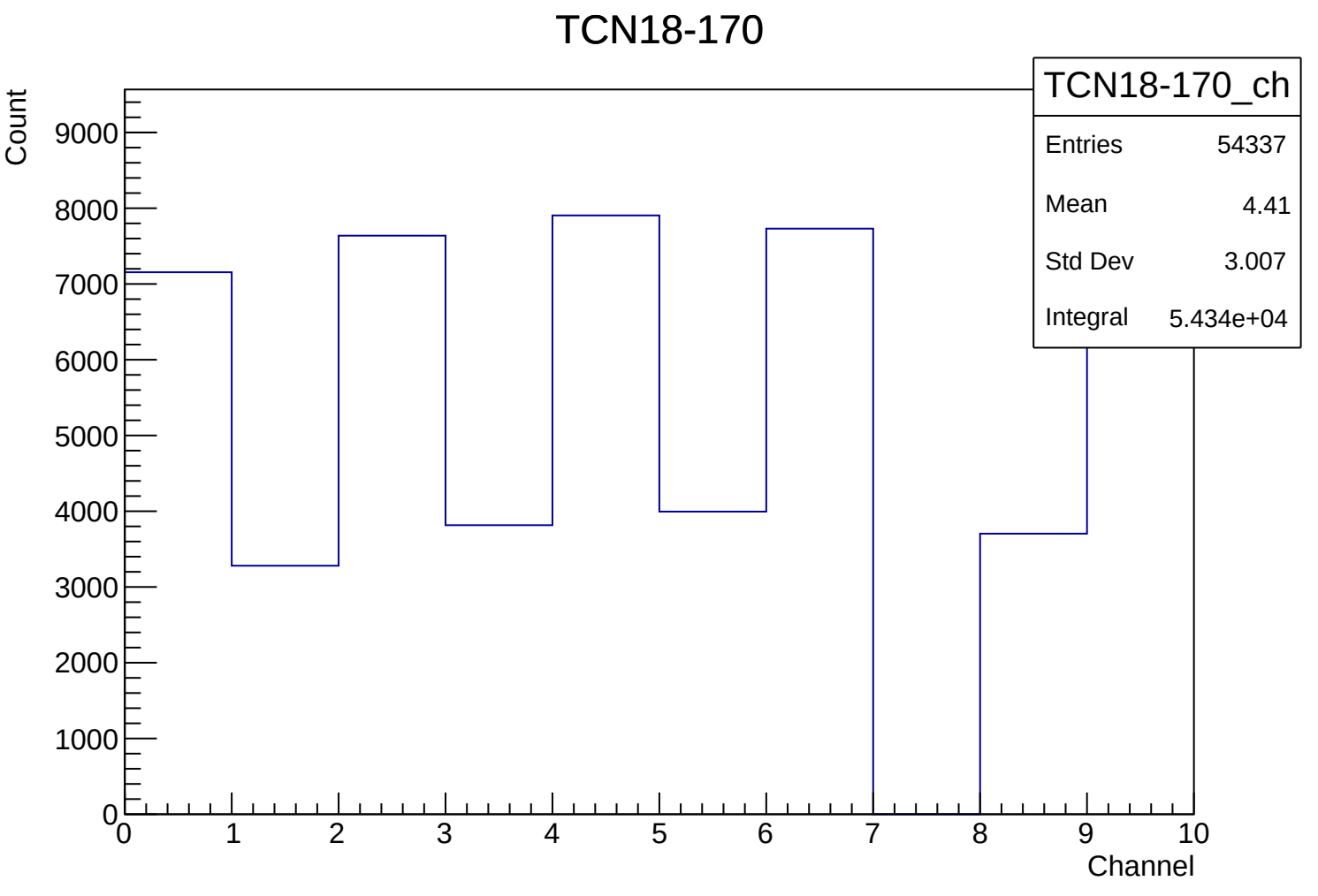

Graph
Vapor pressure (torr)
0.3
0.28
0.26
0.24
0.22
0.2
0.18
Temperature (K)
1.1
1.09
1.08
1.07
1.06
1.05
0
1
2
3
4
5
6
7
Cycle

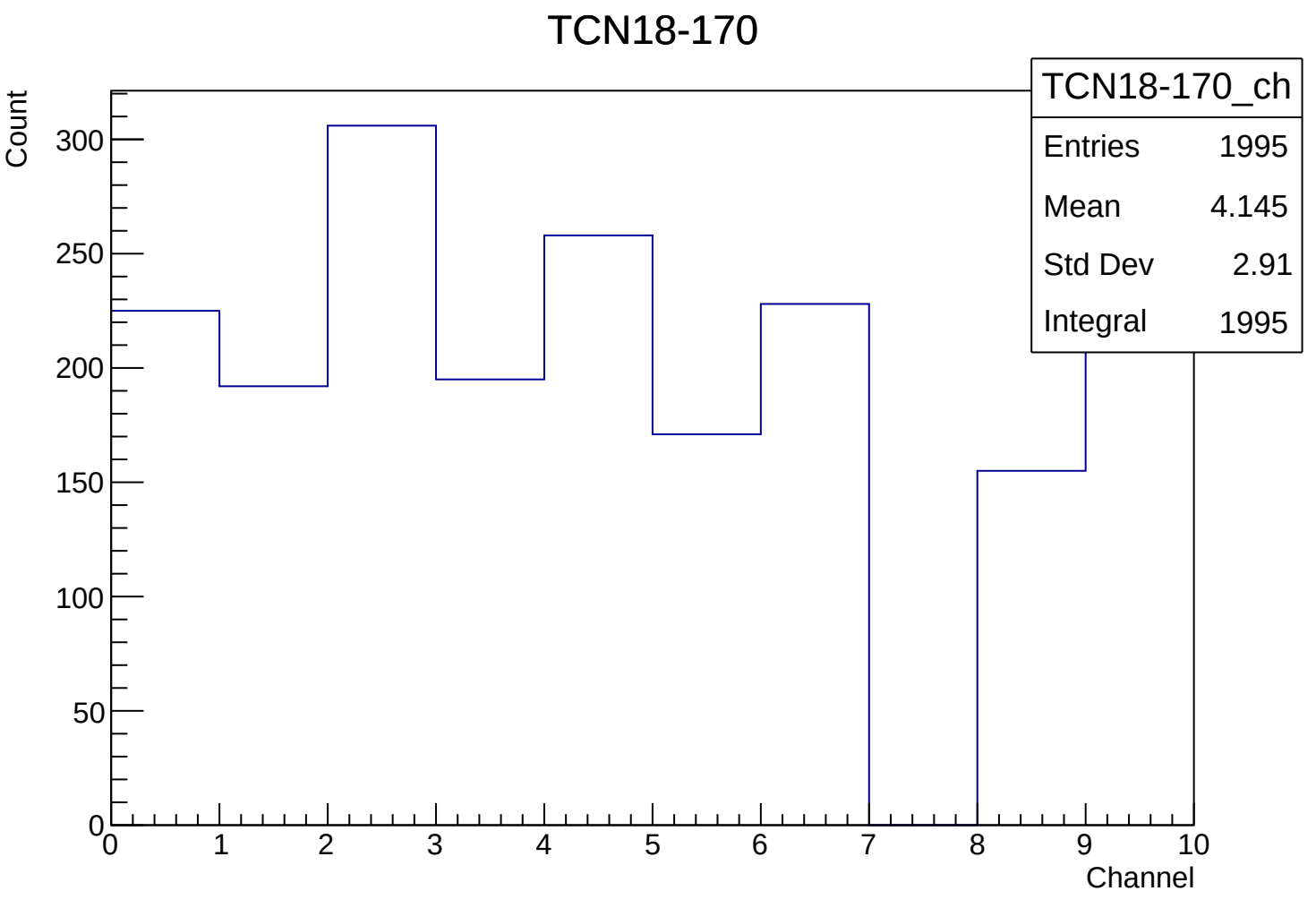

χ^2 / ndf 3.668 / 6
Prob 0.7215
p0 2.339 ± 0.08757
li6 background rate (1/s)
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1
2
3
4
5
6
7
Cycle

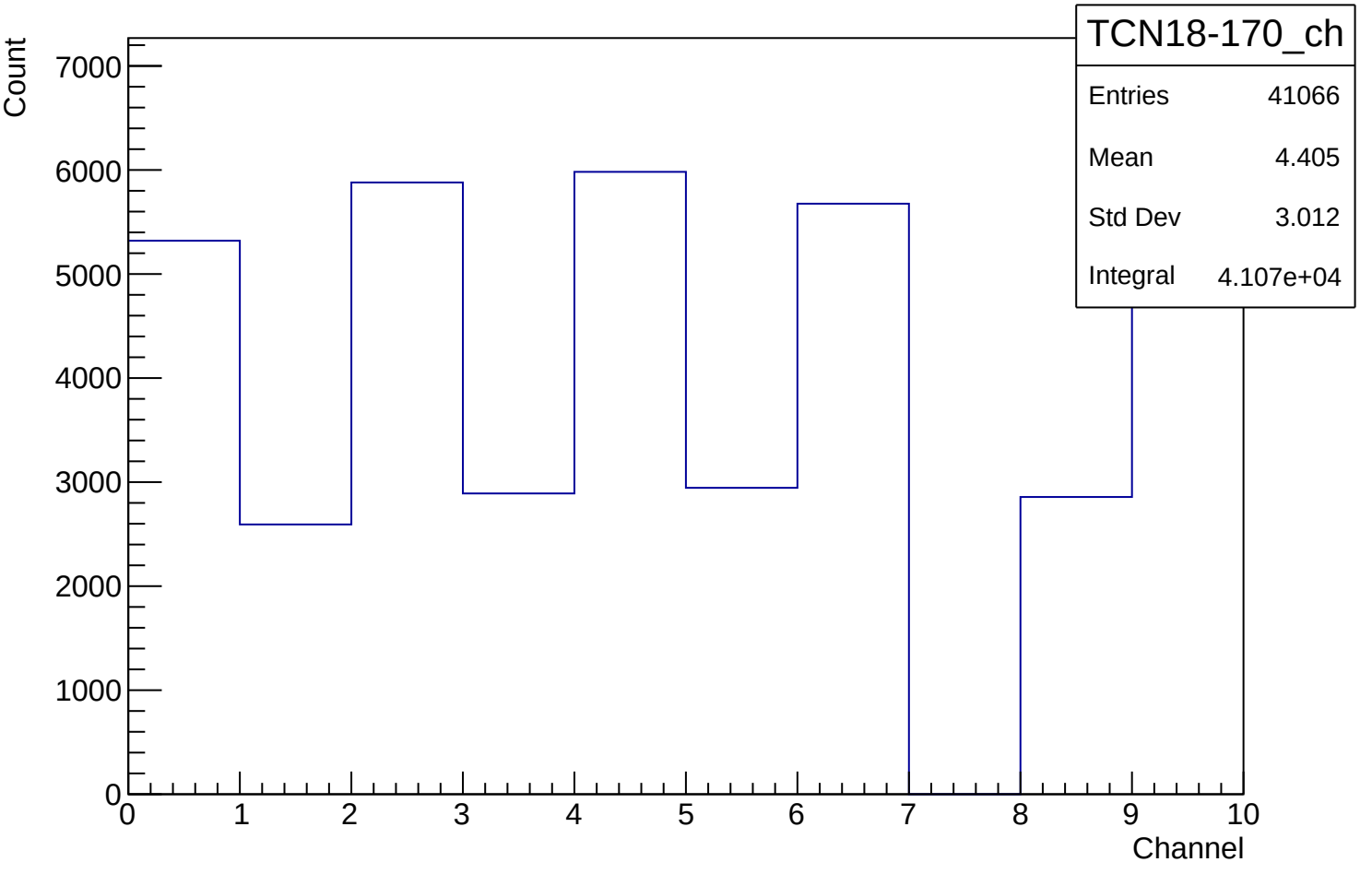

χ² / ndf 4.231 / 7
Prob 0.7529
p0 5.286 ± 0.1269
li6 background rate during irradiation (1/(s μA))
Cycle
6
5.8
5.6
5.4
5.2
5
4.8
4.6
4.4
4.2
0
1
2
3
4
5
6
7

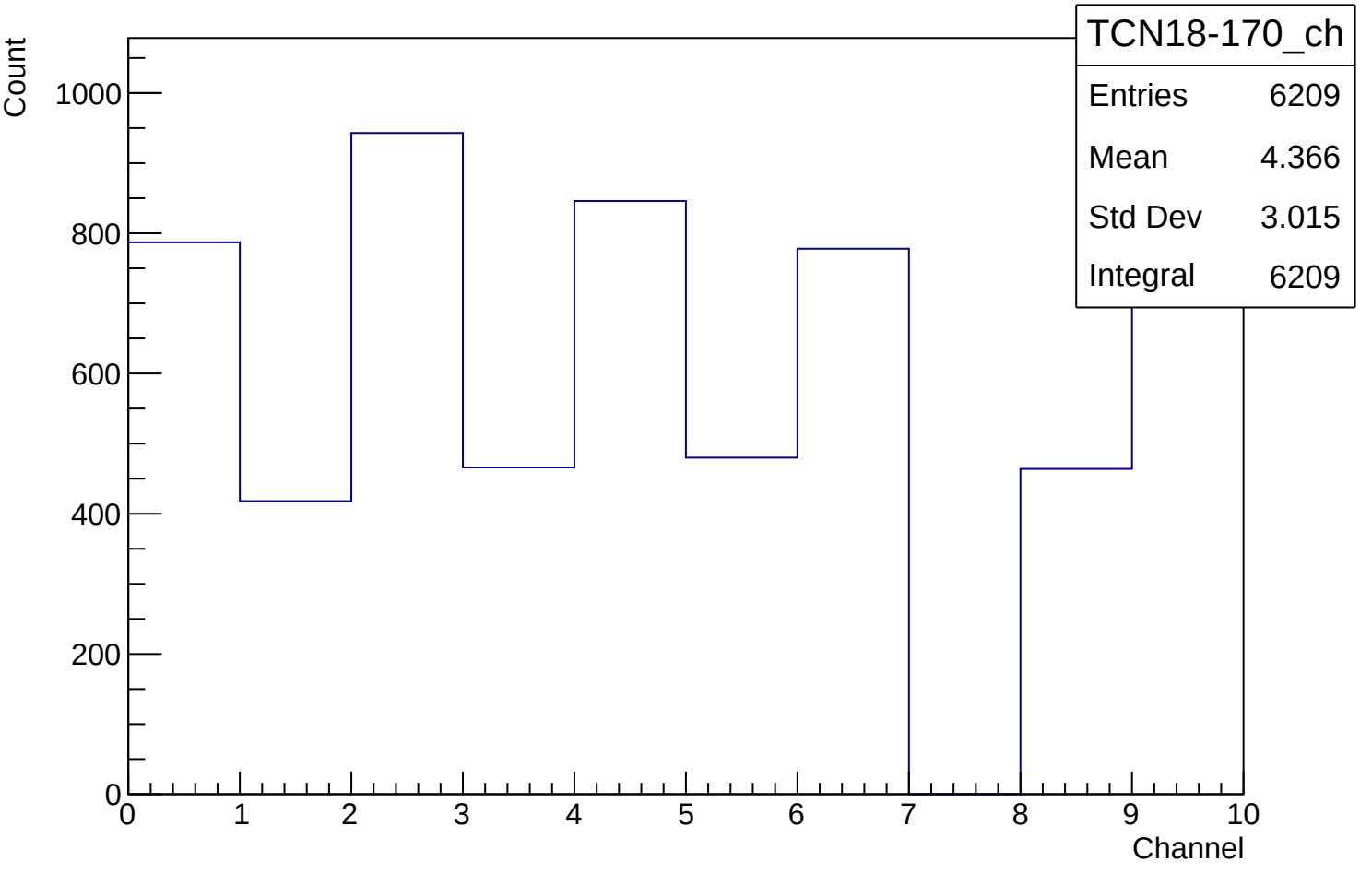

χ² / ndf 3.118 / 5
Prob 0.6818
p0 0.02333 ± 0.008893
he3 background rate (1/s)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
1
2
3
4
5
6
7
Cycle

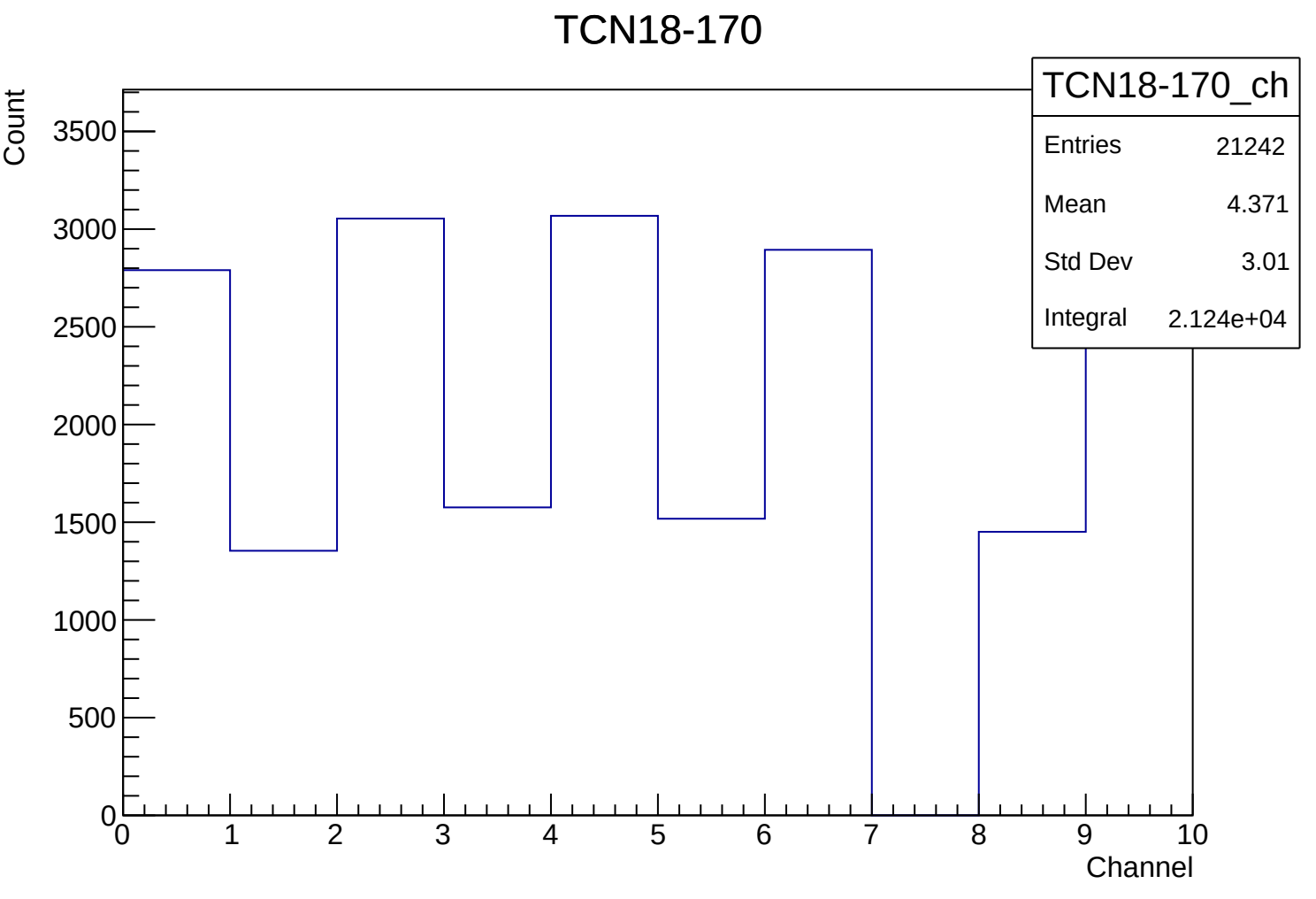

χ² / ndf 2.433 / 7
Prob 0.932
p0 0.06637 ± 0.01513
he3 background rate during irradiation (1/(s μA))
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
−0.02
0
1
2
3
4
5
6
7
Cycle

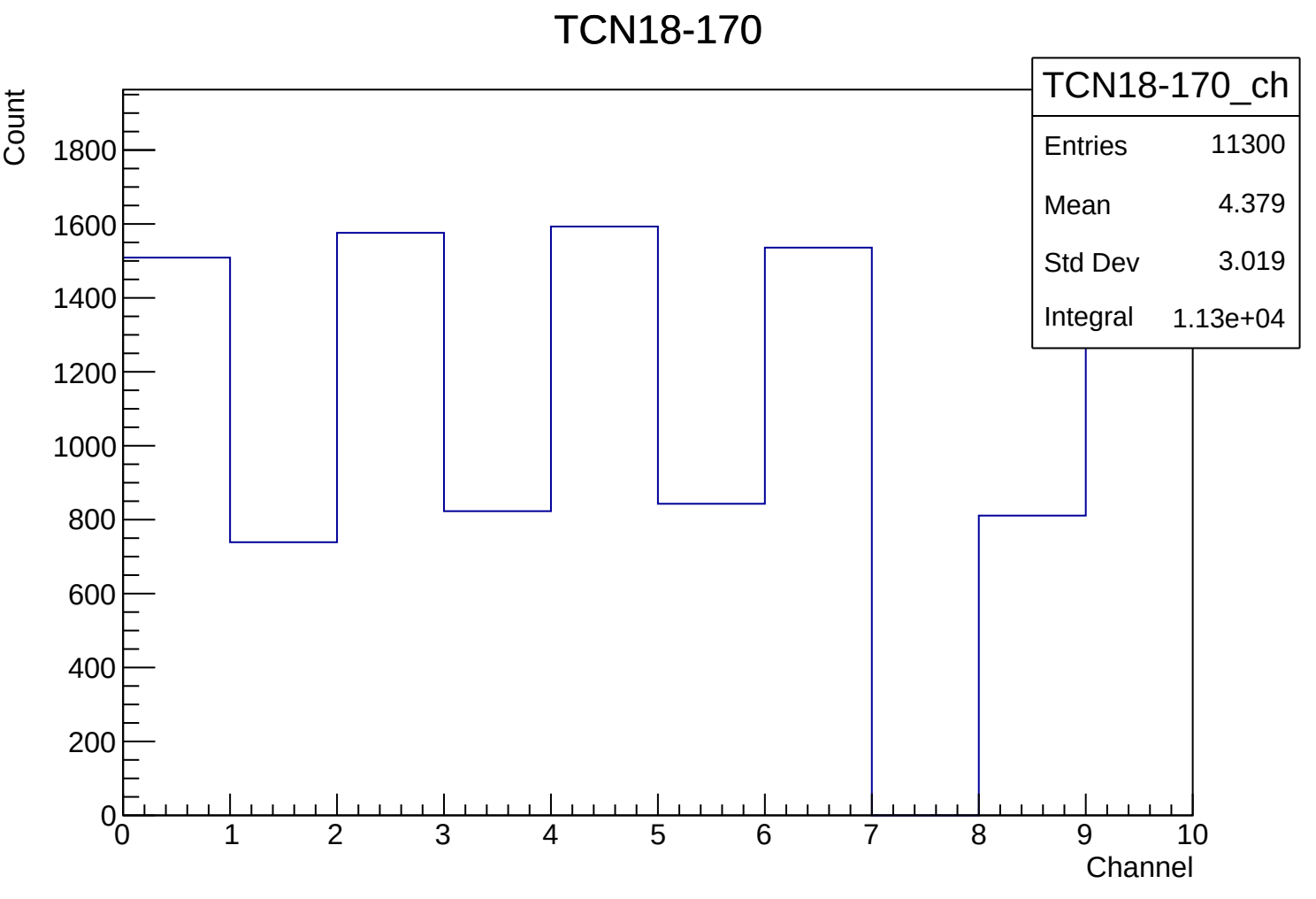

TCN18-170
TCN18-170_ch
Entries 54337
Mean 4.41
Std Dev 3.007
Integral 5.434e+04
Count
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel

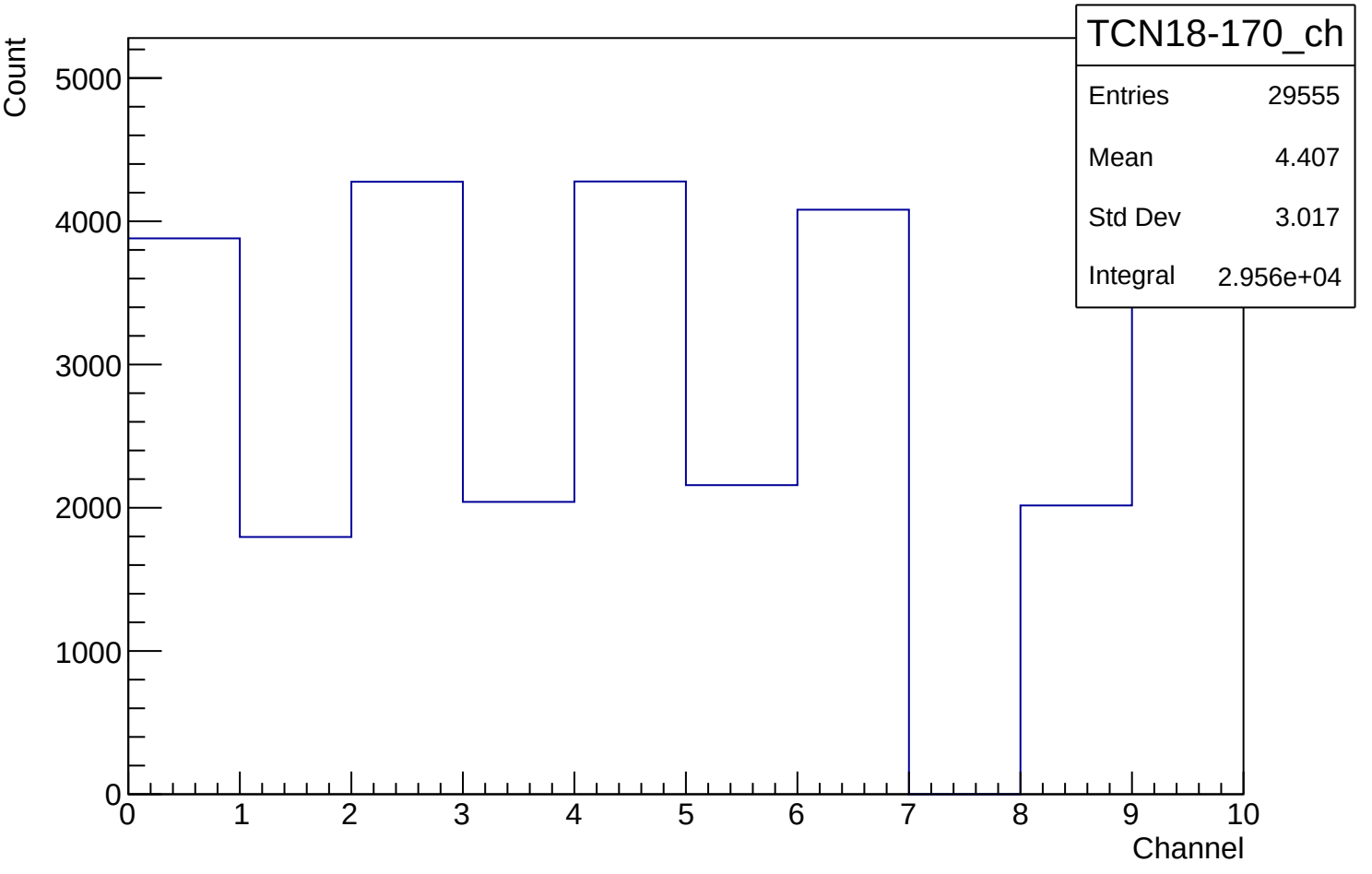

TCN18-170
TCN18-170_ch
Entries 1995
Mean 4.145
Std Dev 2.91
Integral 1995
Count
300
250
200
150
100
50
0
0
1
2
3
4
5
6
7
8
9
10
Channel

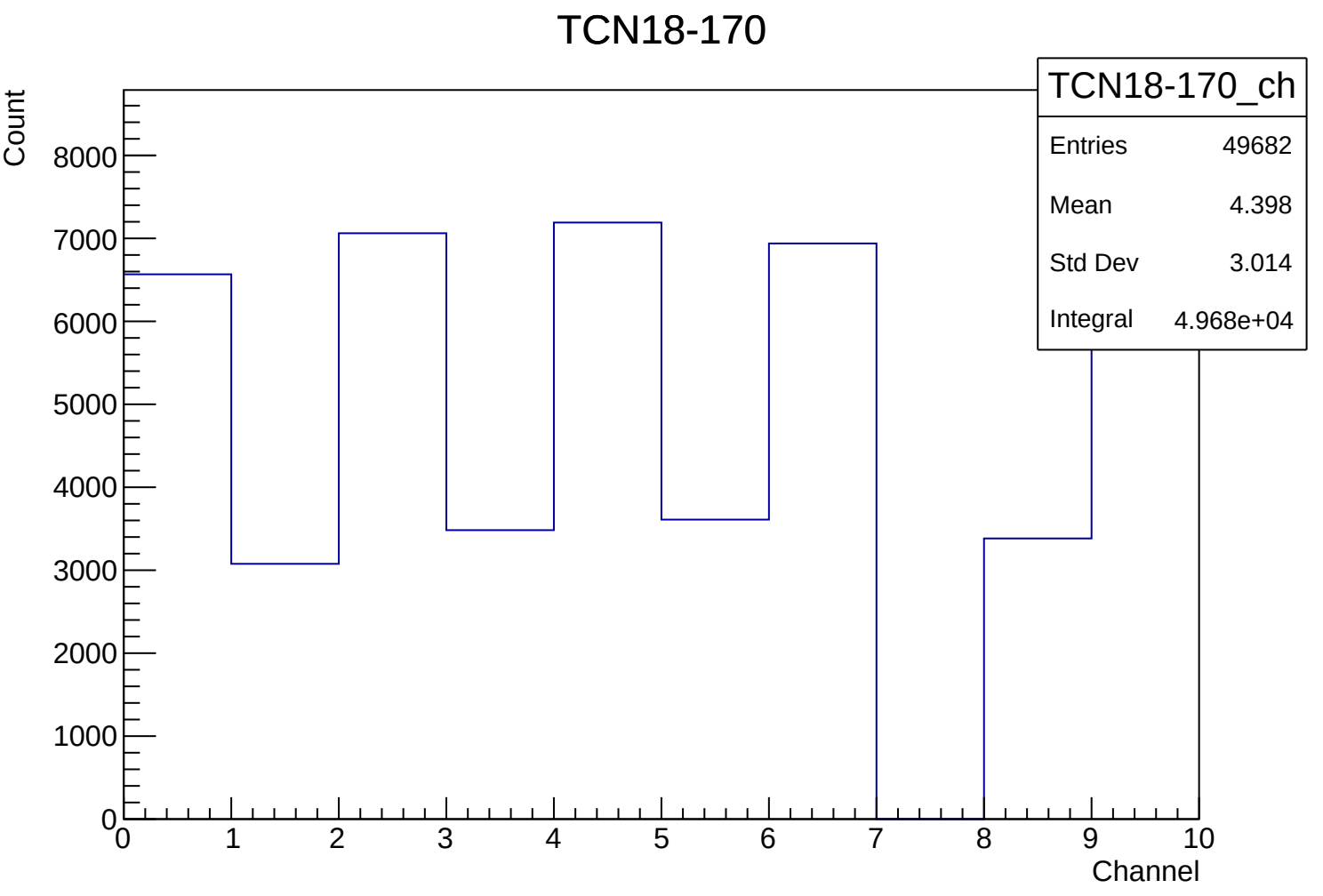

TCN18-170
TCN18-170_ch
Entries 41066
Mean 4.405
Std Dev 3.012
Integral 4.107e+04
Count
7000
6000
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-170
TCN18-170_ch
Entries 6209
Mean 4.366
Std Dev 3.015
Integral 6209
Count
1000
800
600
400
200
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-170
TCN18-170_ch
Entries 21242
Mean 4.371
Std Dev 3.01
Integral 2.124e+04
Count
3500
3000
2500
2000
1500
1000
500
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-170
TCN18-170_ch
Entries 11300
Mean 4.379
Std Dev 3.019
Integral 1.13e+04
Count
0
200
400
600
800
1000
1200
1400
1600
1800
0
1
2
3
4
5
6
7
8
9
10
Channel


TCN18-170
TCN18-170_ch
Entries 29555
Mean 4.407
Std Dev 3.017
Integral 2.956e+04
Count
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel


TCN18-170
TCN18-170_ch
Entries 49682
Mean 4.398
Std Dev 3.014
Integral 4.968e+04
Count
8000
7000
6000
5000
4000
3000
2000
1000
0
0 1 2 3 4 5 6 7 8 9 10
Channel