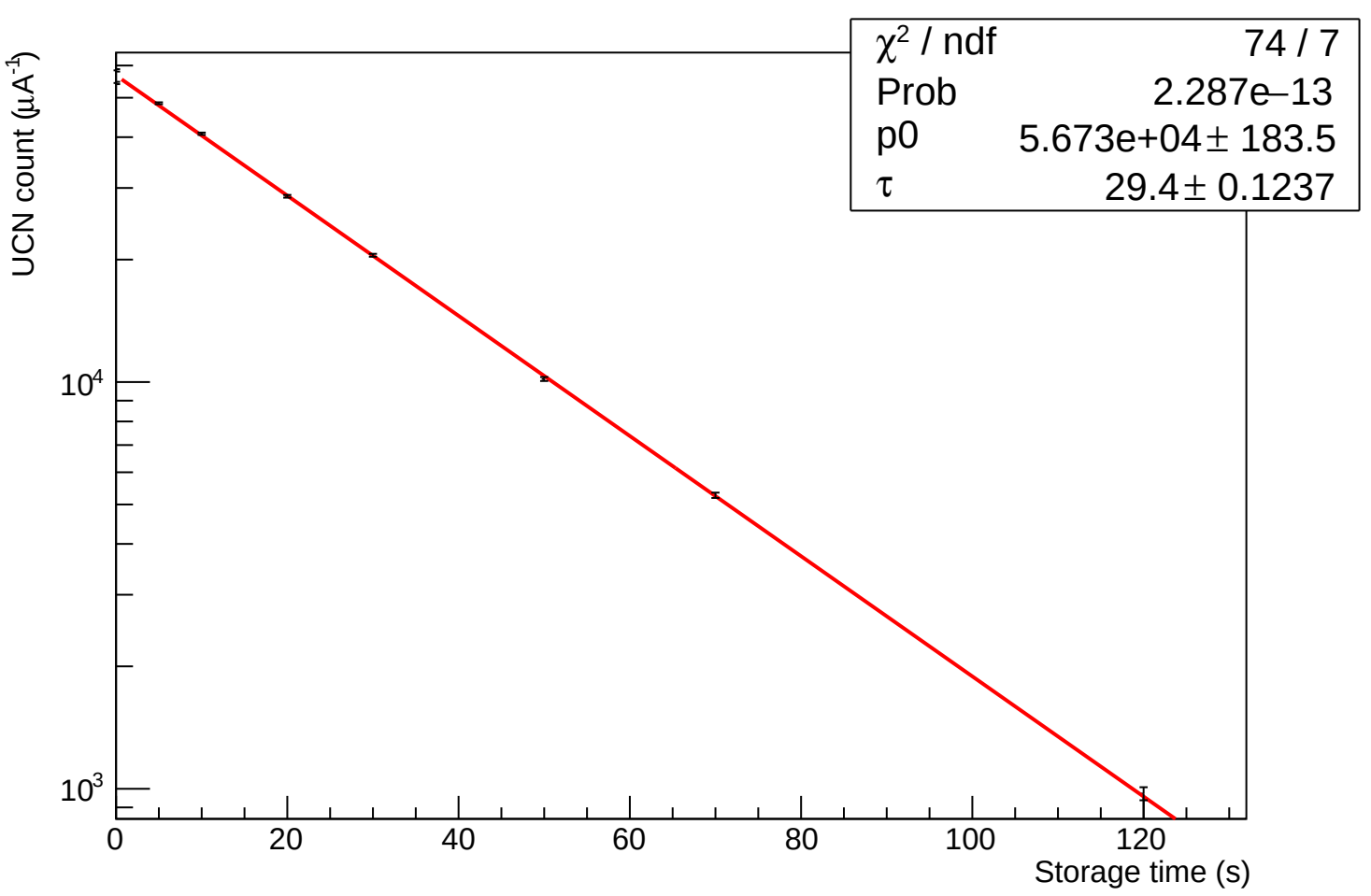
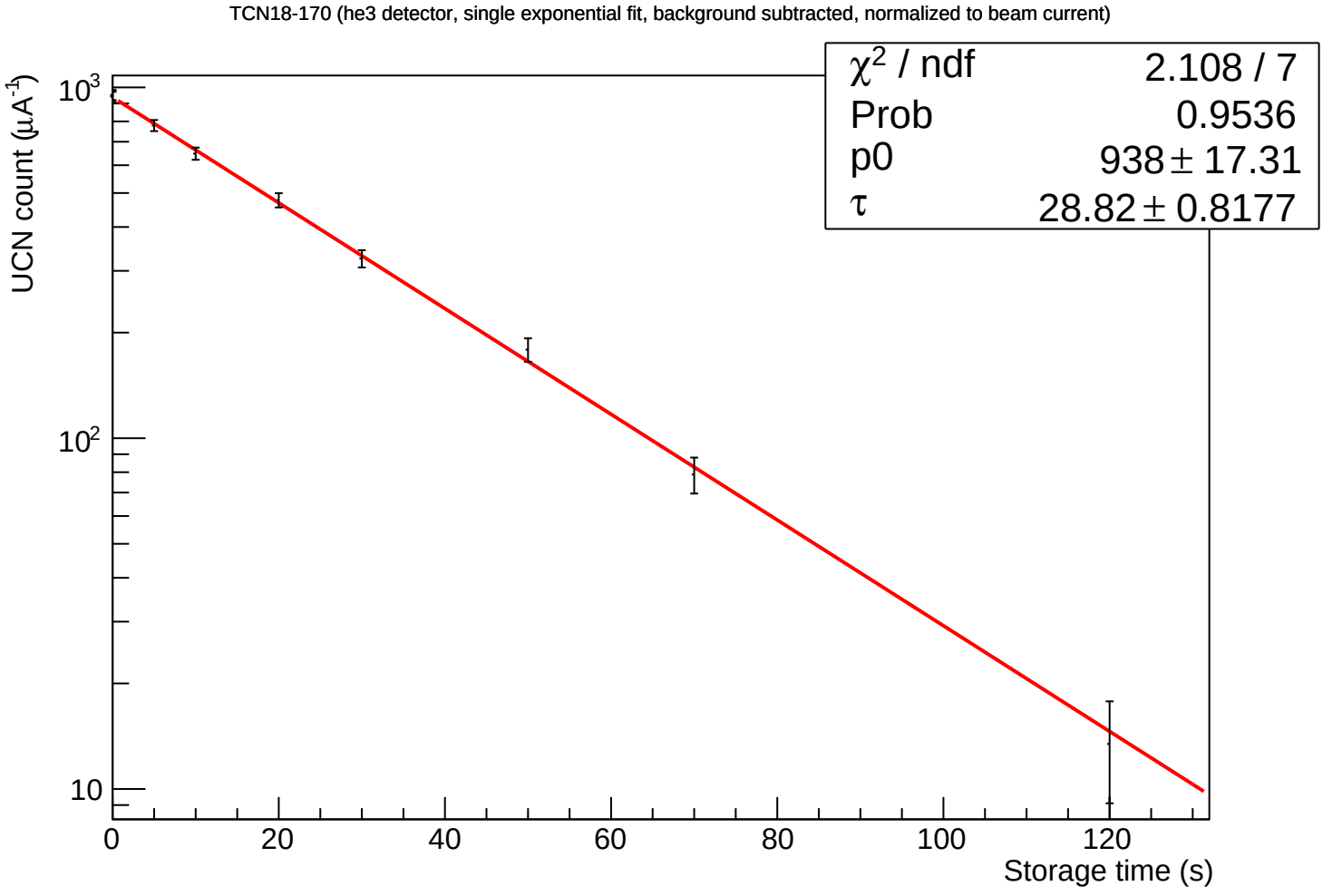
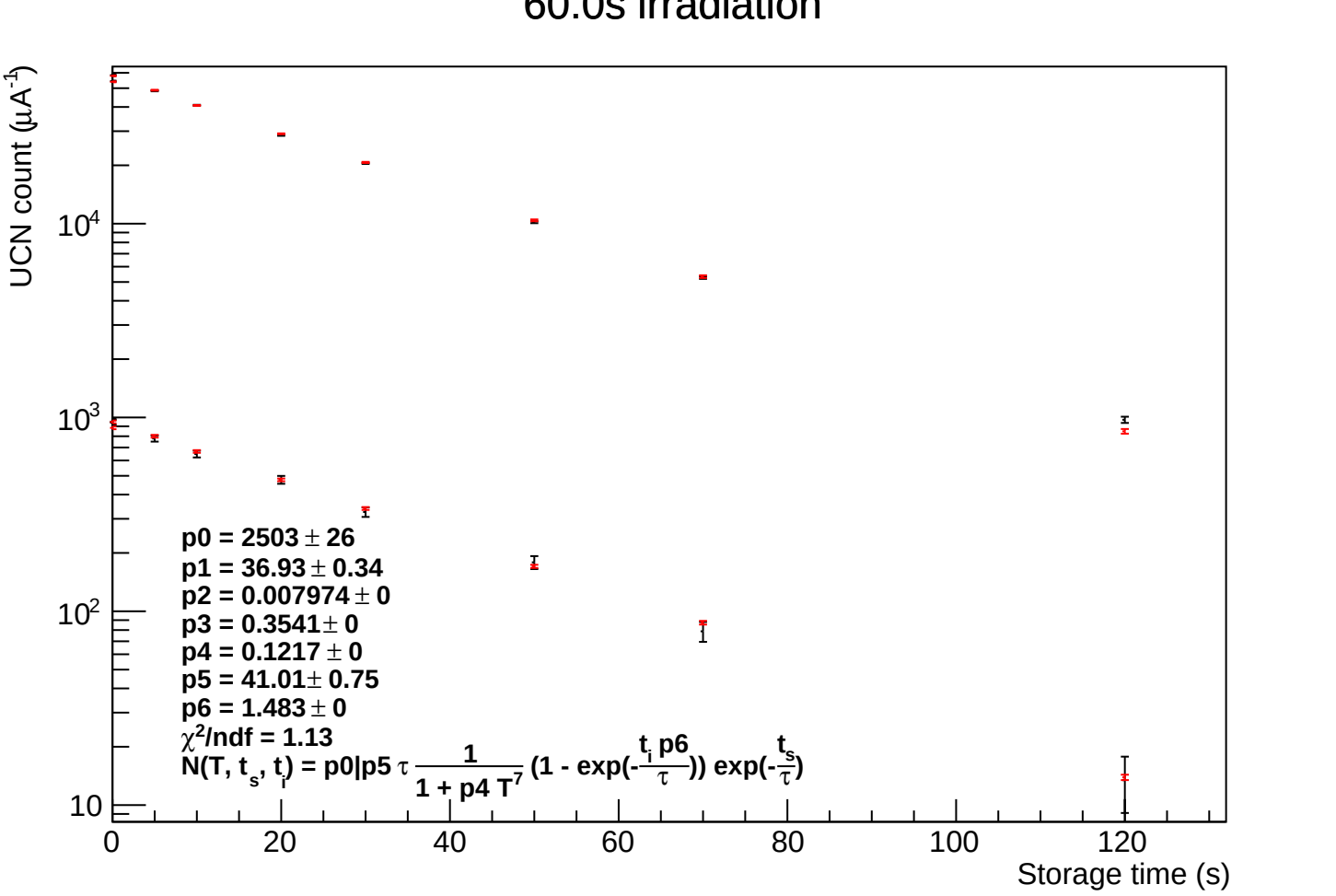
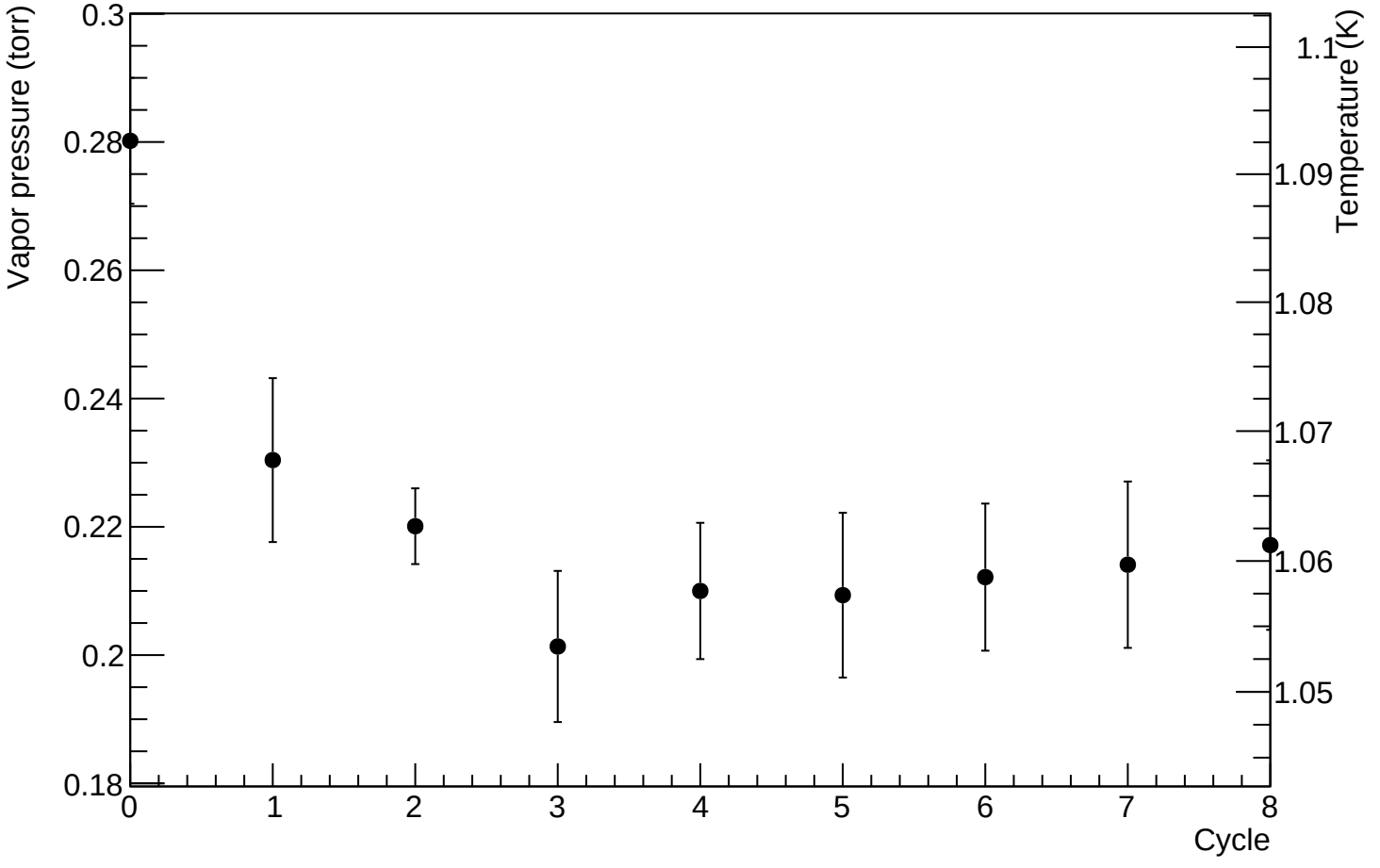
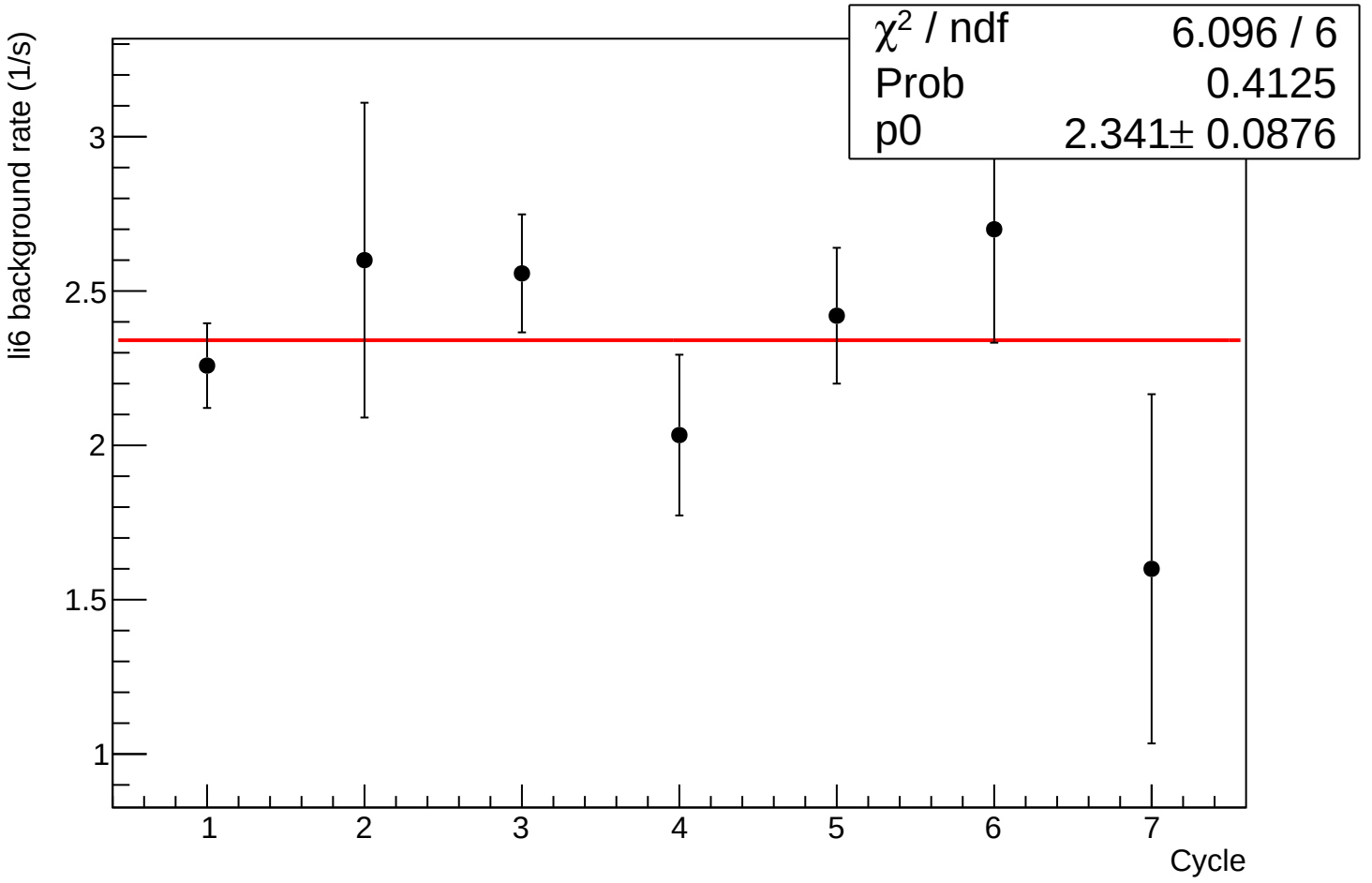
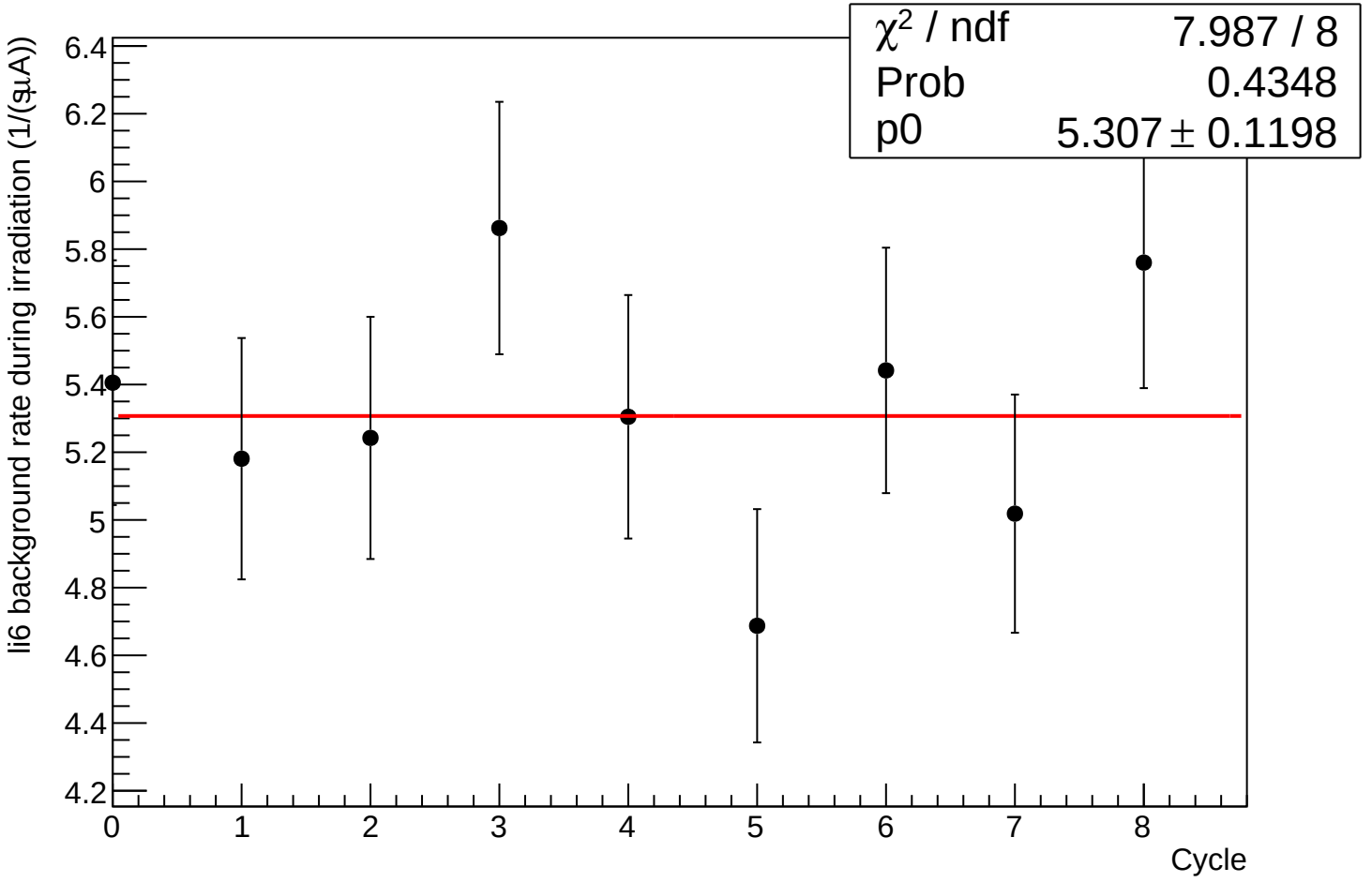

TCN18-170 (li6 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 74 / 7
Prob 2.287e−13
p0 5.673e+04 ± 183.5
τ 29.4 ± 0.1237
UCN count (μA⁻¹)
10⁴
10³
0
20
40
60
80
100
120
Storage time (s)

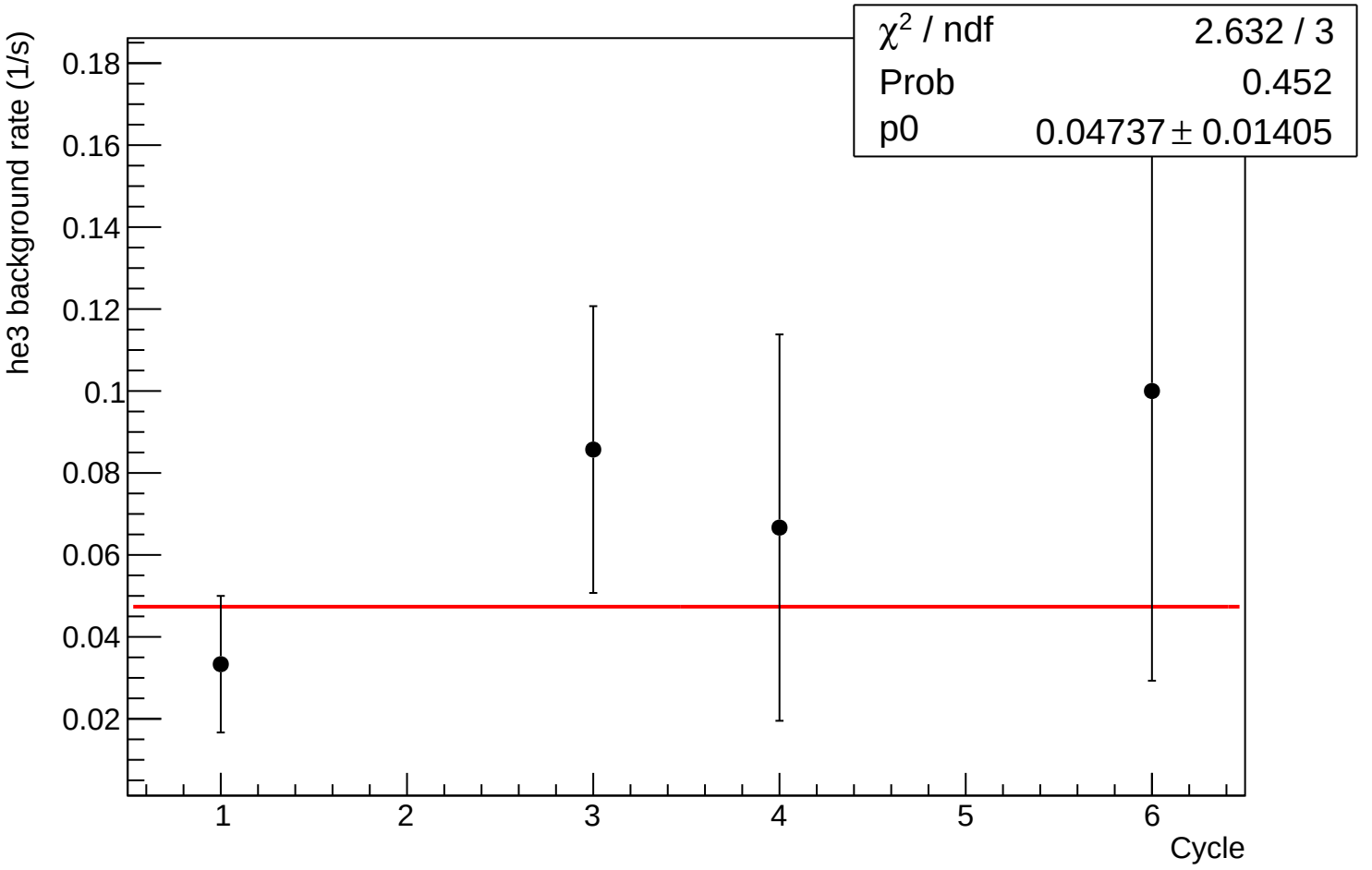

TCN18-170 (he3 detector, single exponential fit, background subtracted, normalized to beam current)
χ2 / ndf 2.108 / 7
Prob 0.9536
p0 938 ± 17.31
τ 28.82 ± 0.8177
UCN count (μA-1)
10^3
10^2
10
0
20
40
60
80
100
120
Storage time (s)

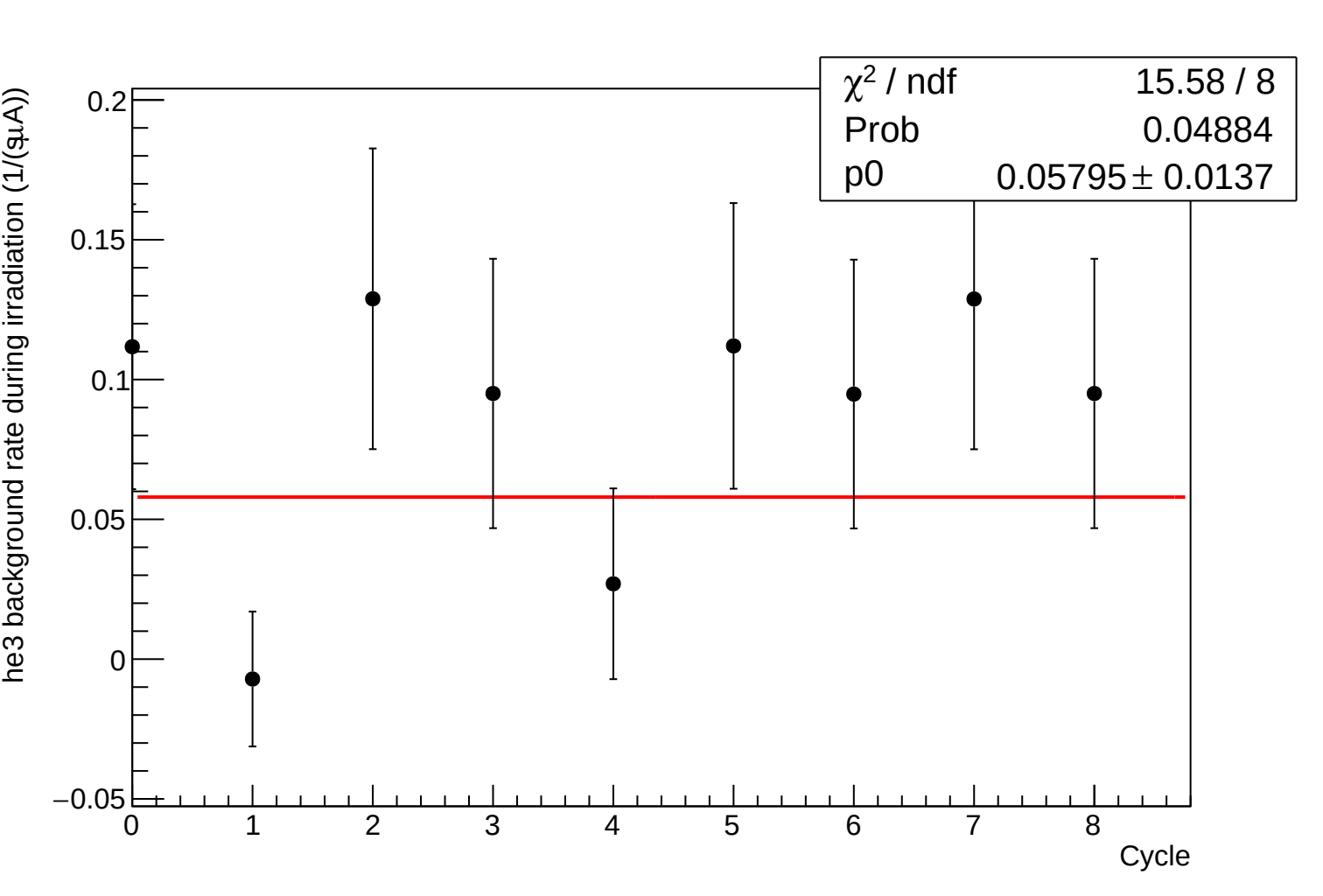

60.0s irradiation
UCN count (μA-1)
Storage time (s)
p0 = 2503 ± 26
p1 = 36.93 ± 0.34
p2 = 0.007974 ± 0
p3 = 0.3541 ± 0
p4 = 0.1217 ± 0
p5 = 41.01 ± 0.75
p6 = 1.483 ± 0
χ2/ndf = 1.13
N(T, ts, ti) = p0|p5 τ 1 / (1 + p4 T7) (1 - exp(-ti p6 / τ)) exp(-ts / τ)

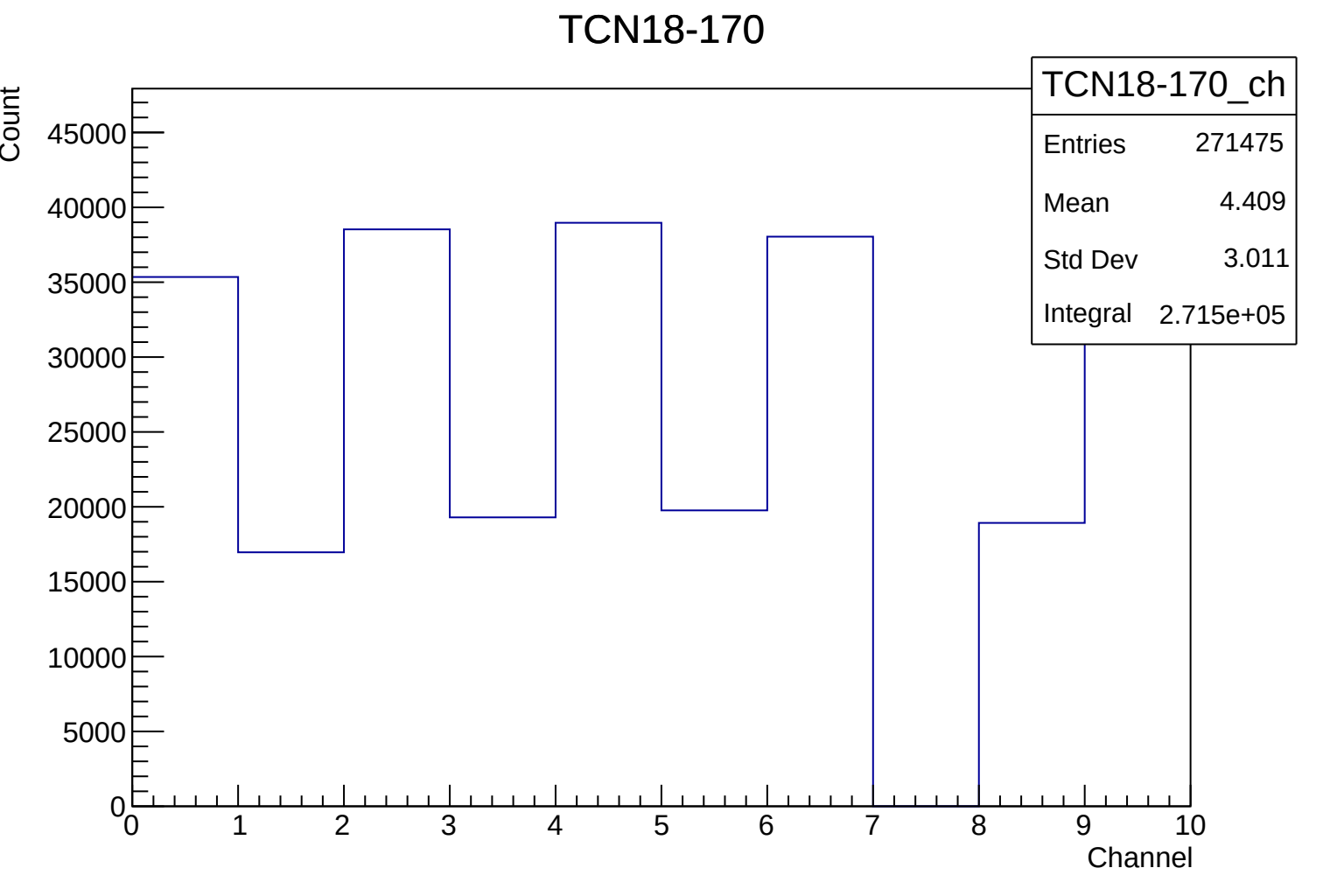

Graph
Vapor pressure (torr)
0.3
0.28
0.26
0.24
0.22
0.2
0.18
Temperature (K)
1.1
1.09
1.08
1.07
1.06
1.05
0
1
2
3
4
5
6
7
8
Cycle


li6 background rate (1/s)
3
2.5
2
1.5
1
1
2
3
4
5
6
7
Cycle
χ² / ndf 6.096 / 6
Prob 0.4125
p0 2.341± 0.0876


χ² / ndf 7.987 / 8
Prob 0.4348
p0 5.307 ± 0.1198
li6 background rate during irradiation (1/(μA))
Cycle
6.4
6.2
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
8


χ² / ndf 2.632 / 3
Prob 0.452
p0 0.04737 ± 0.01405
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 15.58 / 8
Prob 0.04884
p0 0.05795 ± 0.0137
he3 background rate during irradiation (1/(μA))
Cycle
0.2
0.15
0.1
0.05
0
−0.05
0
1
2
3
4
5
6
7
8


TCN18-170
TCN18-170_ch
Entries 271475
Mean 4.409
Std Dev 3.011
Integral 2.715e+05
Count
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
0 1 2 3 4 5 6 7 8 9 10
Channel