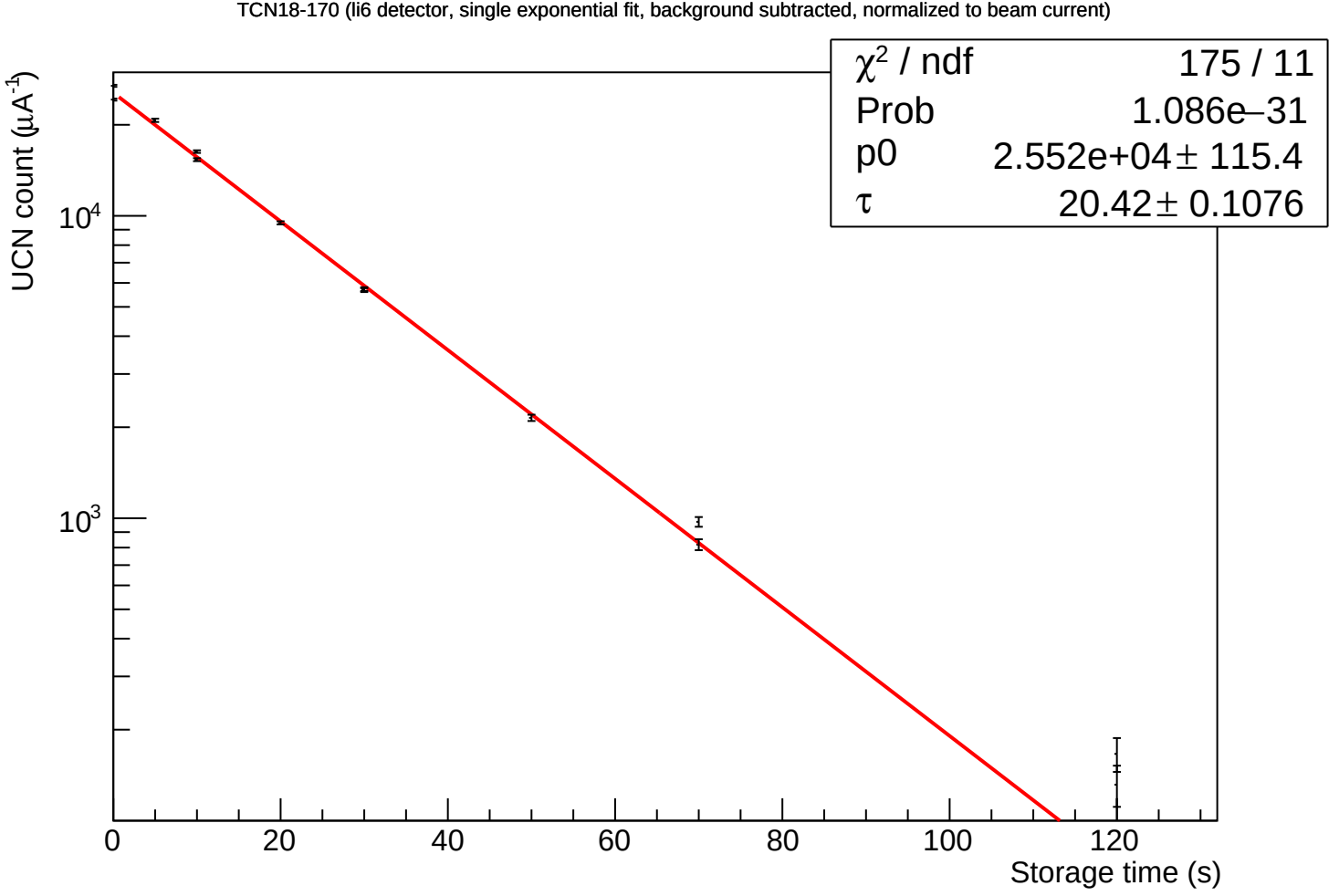
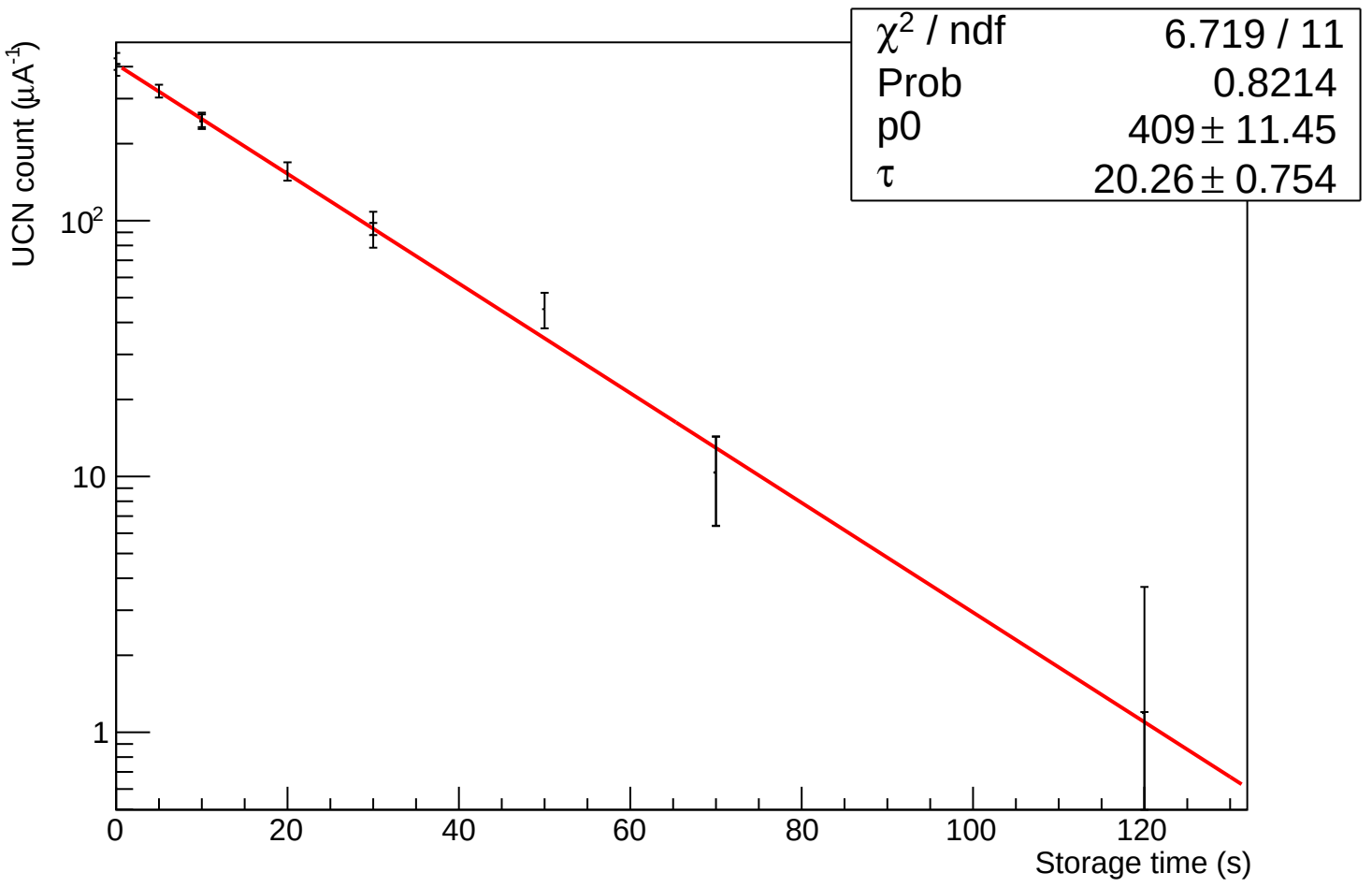
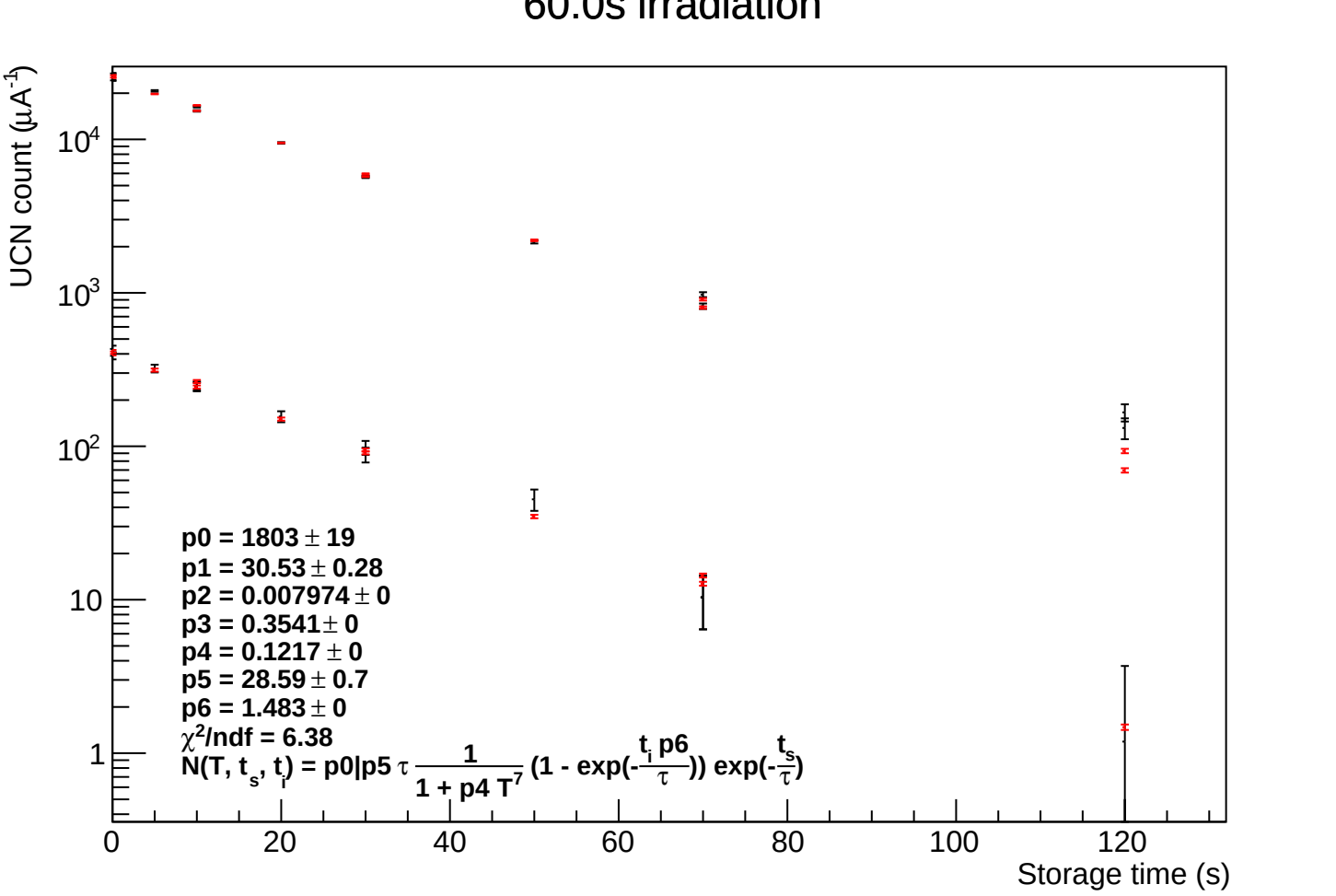
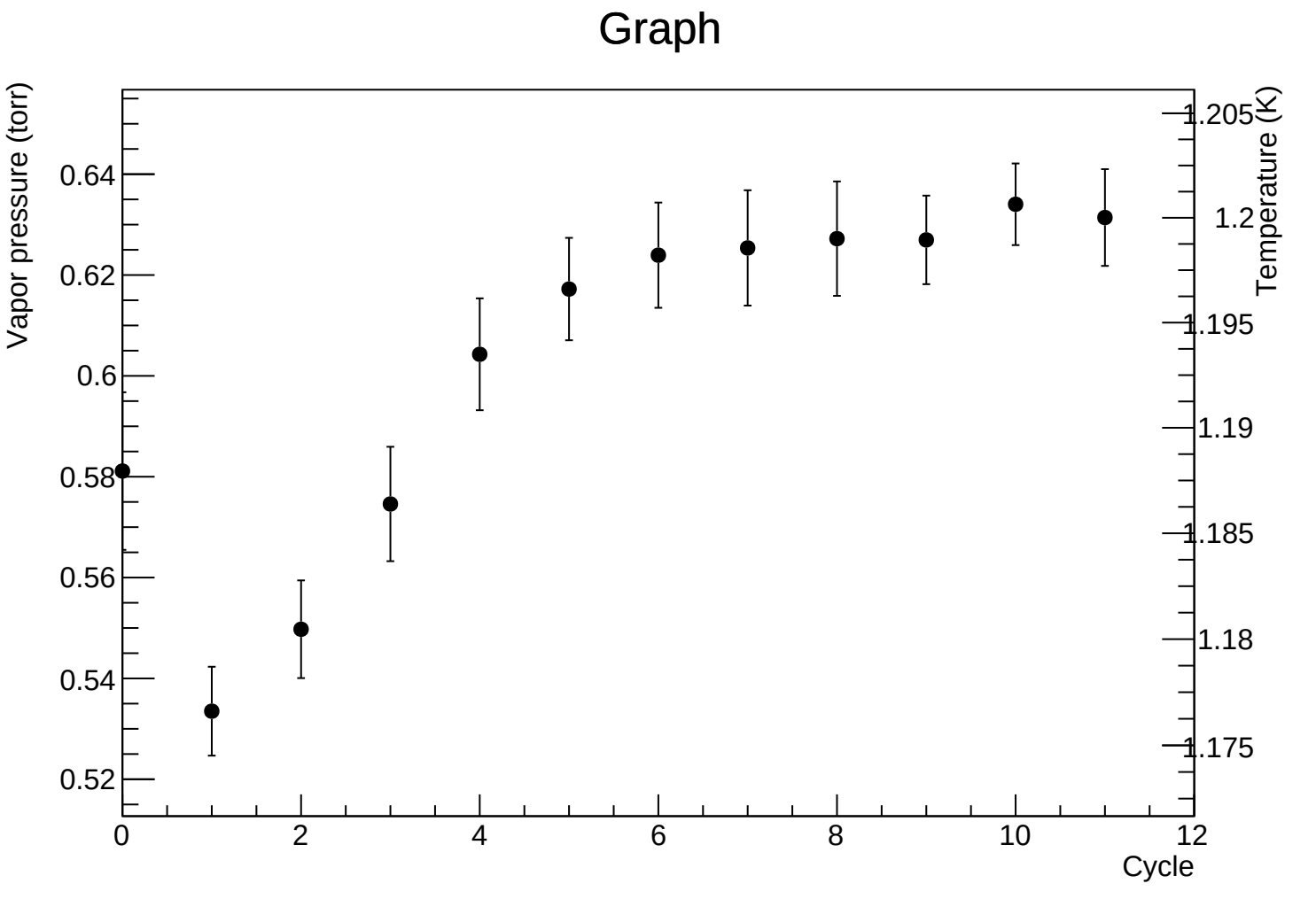
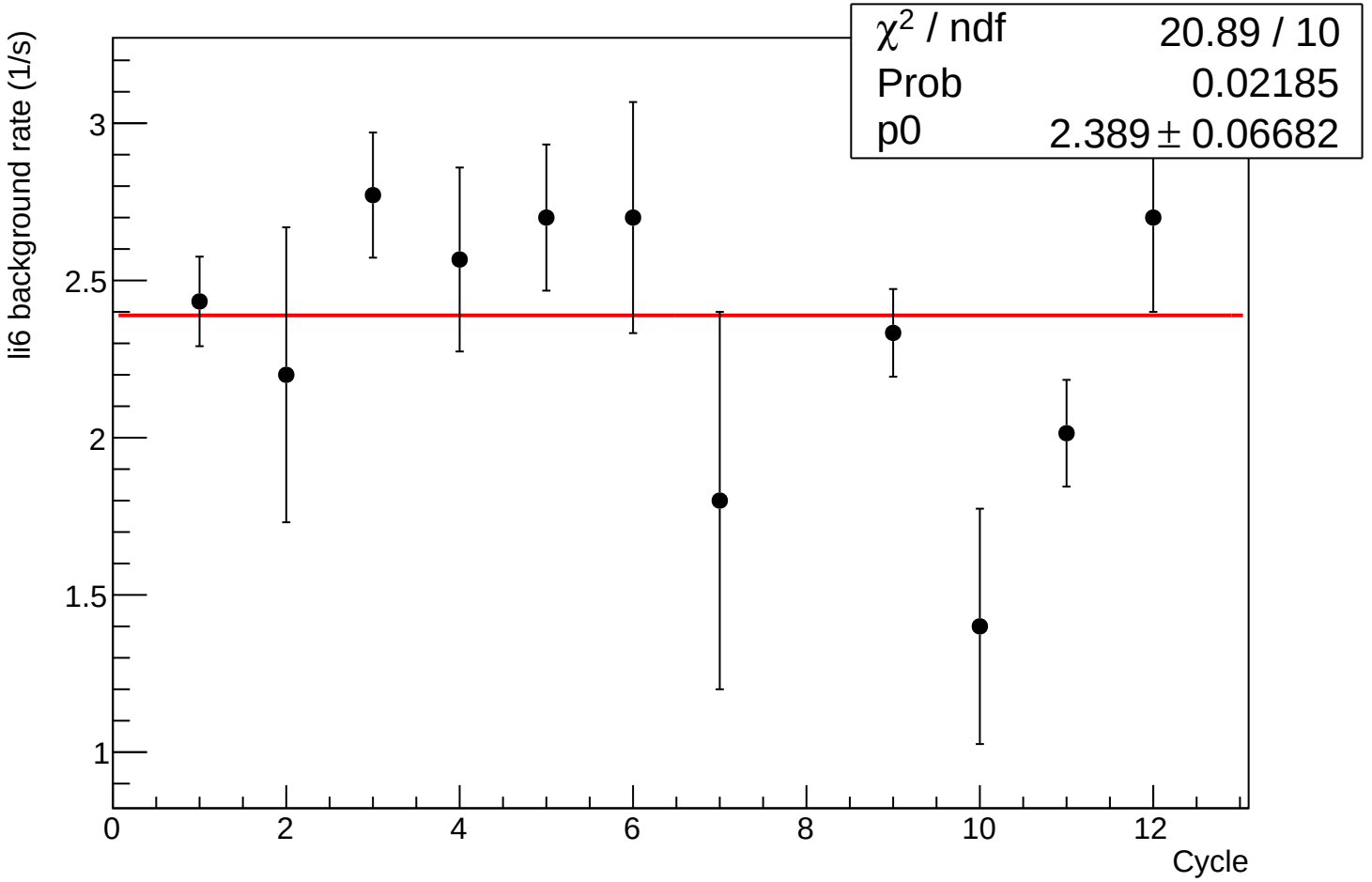
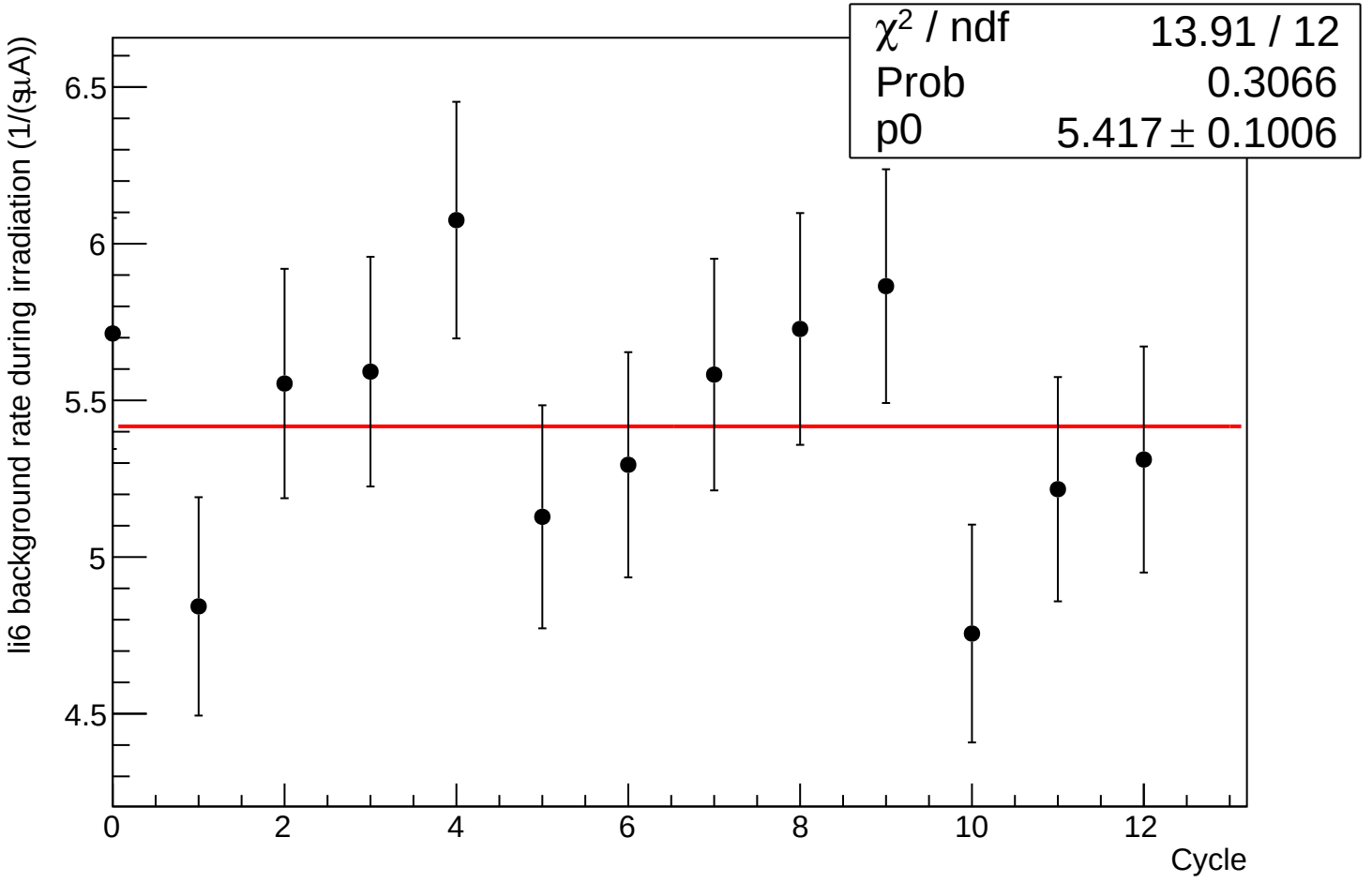

TCN18-170 (li6 detector, single exponential fit, background subtracted, normalized to beam current)
χ² / ndf 175 / 11
Prob 1.086e−31
p0 2.552e+04 ± 115.4
τ 20.42 ± 0.1076
UCN count (μA⁻¹)
10⁴
10³
0
20
40
60
80
100
120
Storage time (s)

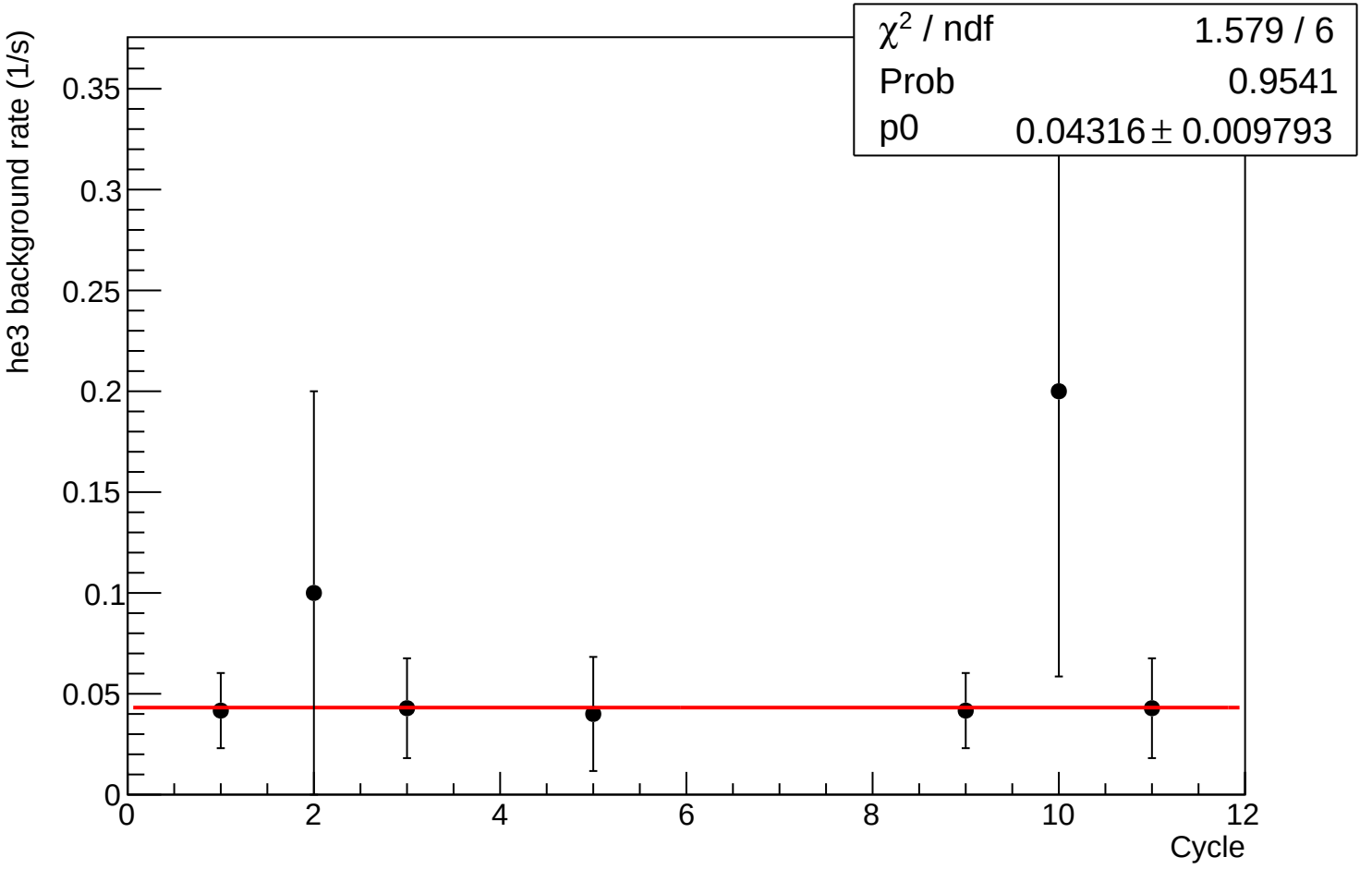

TCN18-170 (he3 detector, single exponential fit, background subtracted, normalized to beam current)
χ2 / ndf 6.719 / 11
Prob 0.8214
p0 409 ± 11.45
τ 20.26 ± 0.754
UCN count (μA-1)
10^2
10
1
0
20
40
60
80
100
120
Storage time (s)

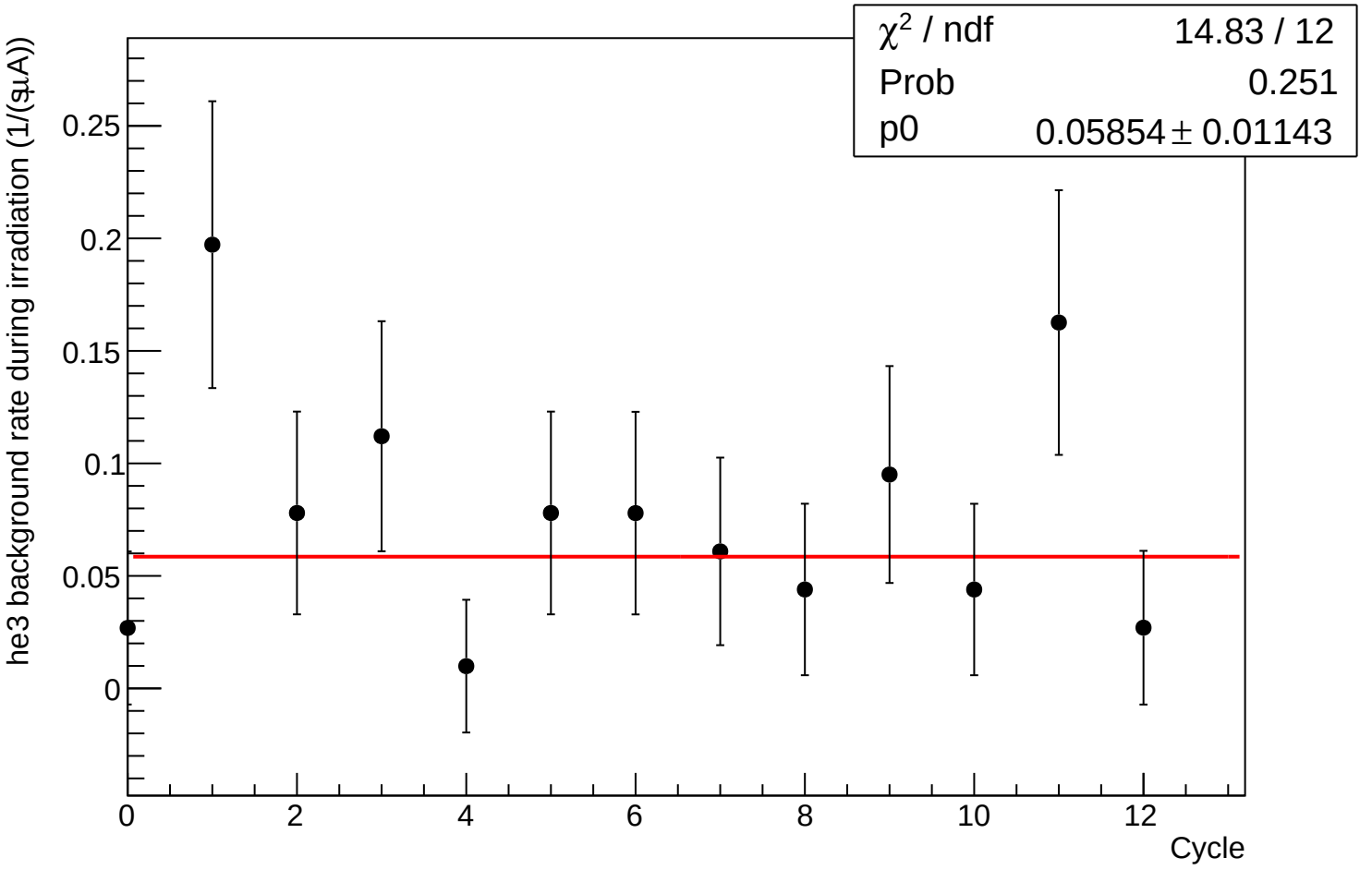

60.0s irradiation
UCN count (μA-1)
Storage time (s)
p0 = 1803 ± 19
p1 = 30.53 ± 0.28
p2 = 0.007974 ± 0
p3 = 0.3541 ± 0
p4 = 0.1217 ± 0
p5 = 28.59 ± 0.7
p6 = 1.483 ± 0
χ2/ndf = 6.38
N(T, ts, ti) = p0|p5 τ 1 / (1 + p4 T7) (1 - exp(-ti p6 / τ)) exp(-ts / τ)

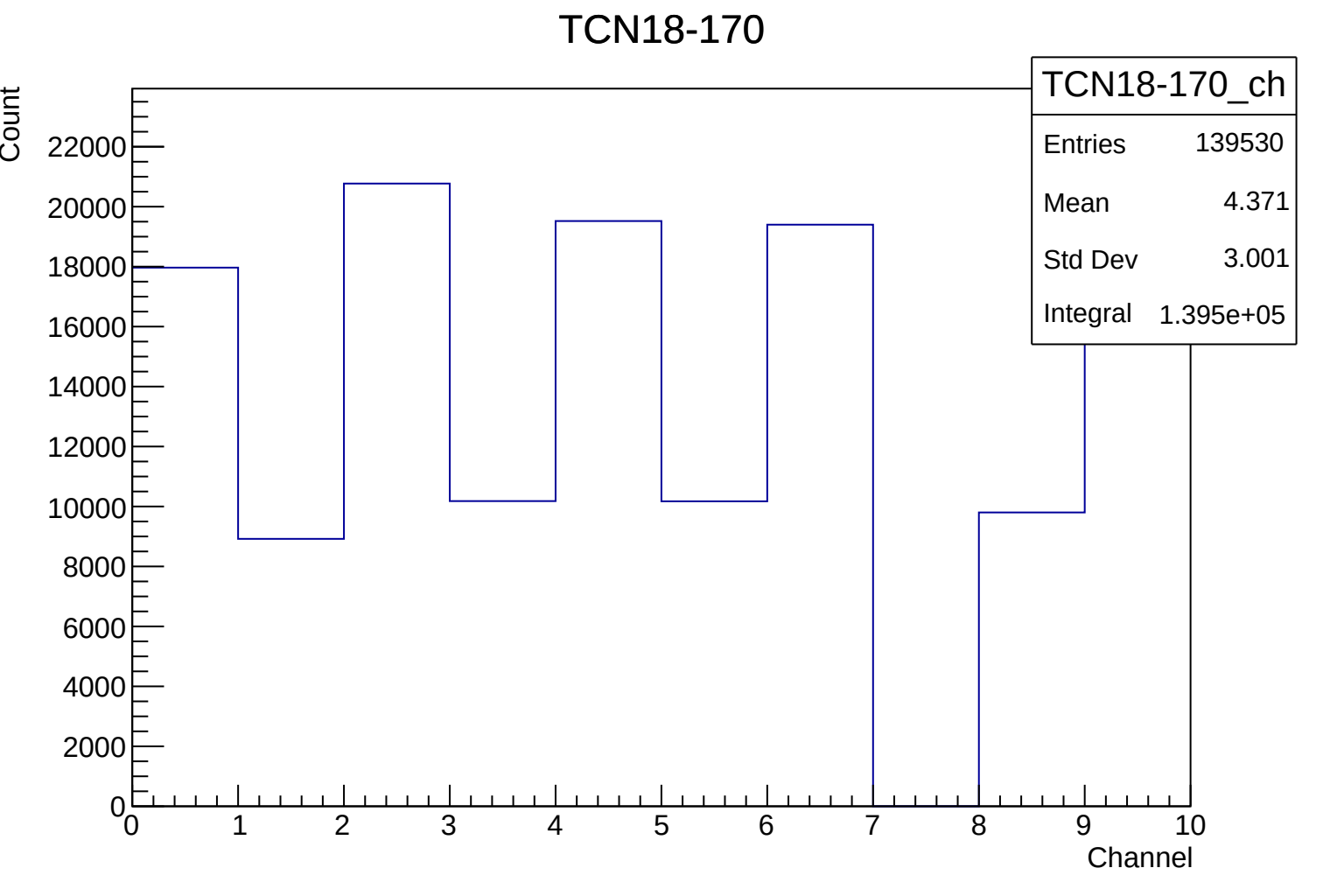

Graph
Vapor pressure (torr)
0.64
0.62
0.6
0.58
0.56
0.54
0.52
Temperature (K)
1.205
1.2
1.195
1.19
1.185
1.18
1.175
0
2
4
6
8
10
12
Cycle


li6 background rate (1/s)
Cycle
χ² / ndf 20.89 / 10
Prob 0.02185
p0 2.389 ± 0.06682
0
2
4
6
8
10
12
1
1.5
2
2.5
3


χ² / ndf 13.91 / 12
Prob 0.3066
p0 5.417 ± 0.1006
li6 background rate during irradiation (1/(μA))
6.5
6
5.5
5
4.5
0
2
4
6
8
10
12
Cycle


χ² / ndf 1.579 / 6
Prob 0.9541
p0 0.04316 ± 0.009793
he3 background rate (1/s)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0
2
4
6
8
10
12
Cycle


χ² / ndf 14.83 / 12
Prob 0.251
p0 0.05854 ± 0.01143
he3 background rate during irradiation (1/(μA))
0.25
0.2
0.15
0.1
0.05
0
0
2
4
6
8
10
12
Cycle


TCN18-170
TCN18-170_ch
Entries 139530
Mean 4.371
Std Dev 3.001
Integral 1.395e+05
Count
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
1
2
3
4
5
6
7
8
9
10
Channel