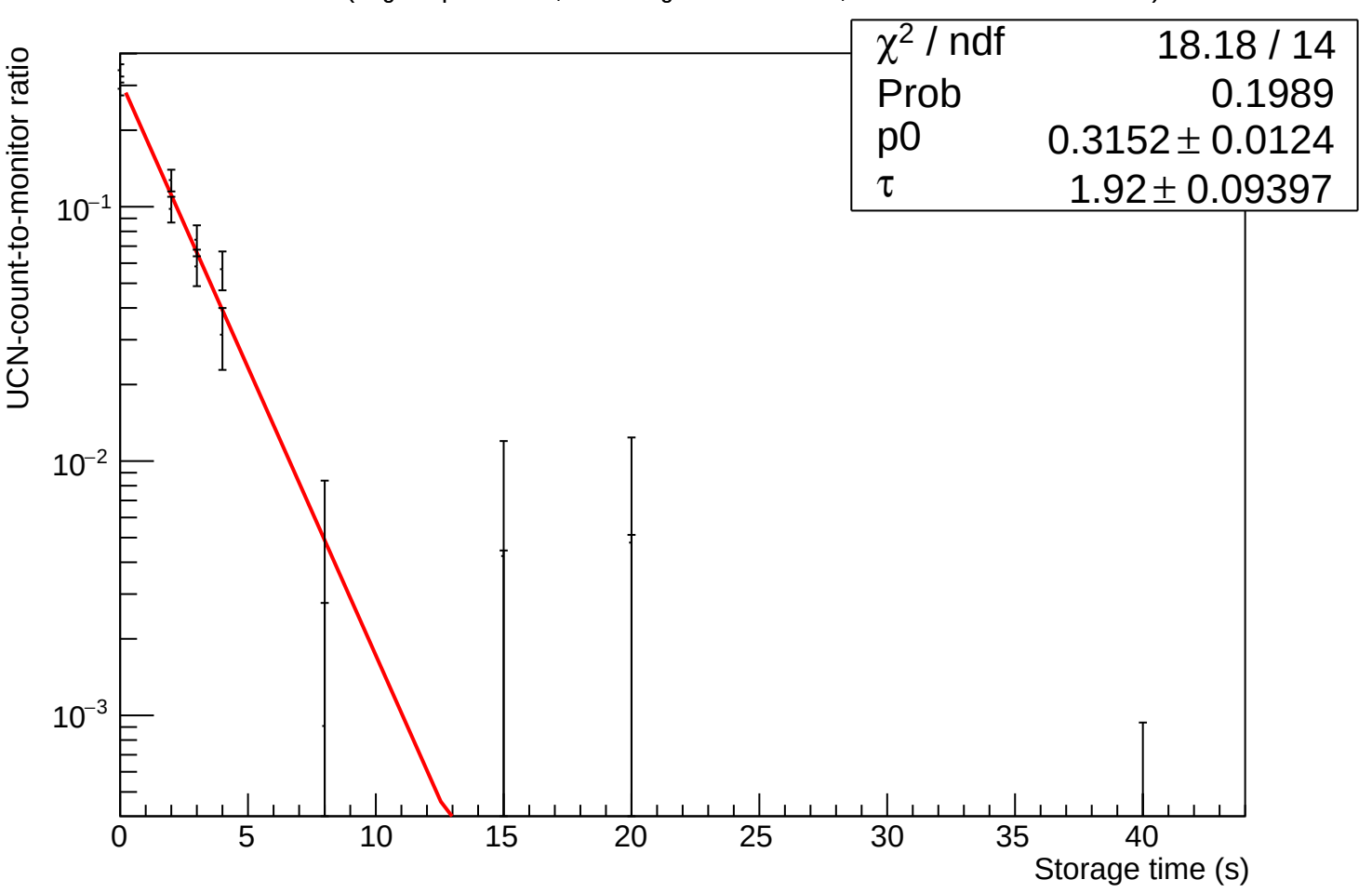
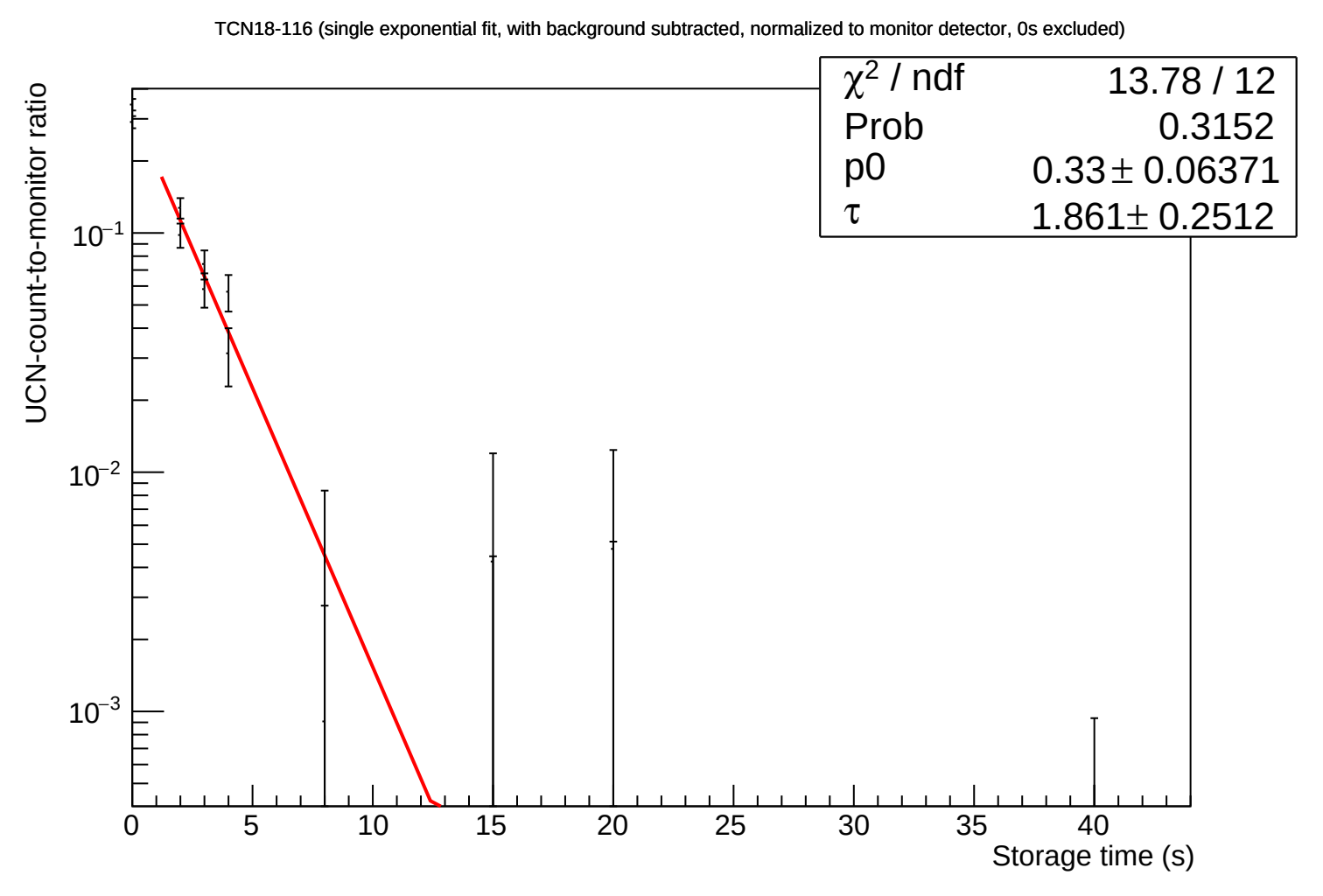
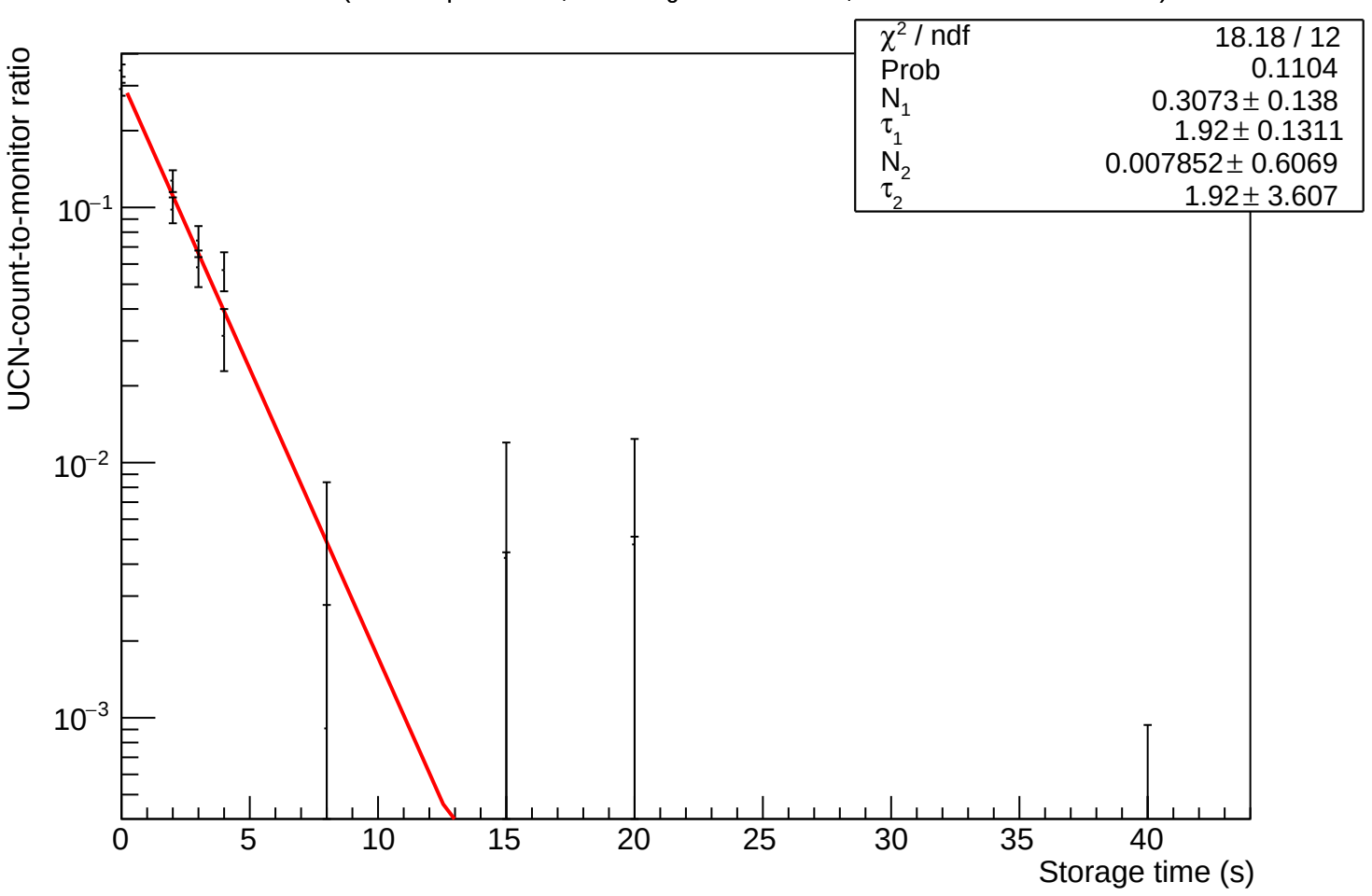
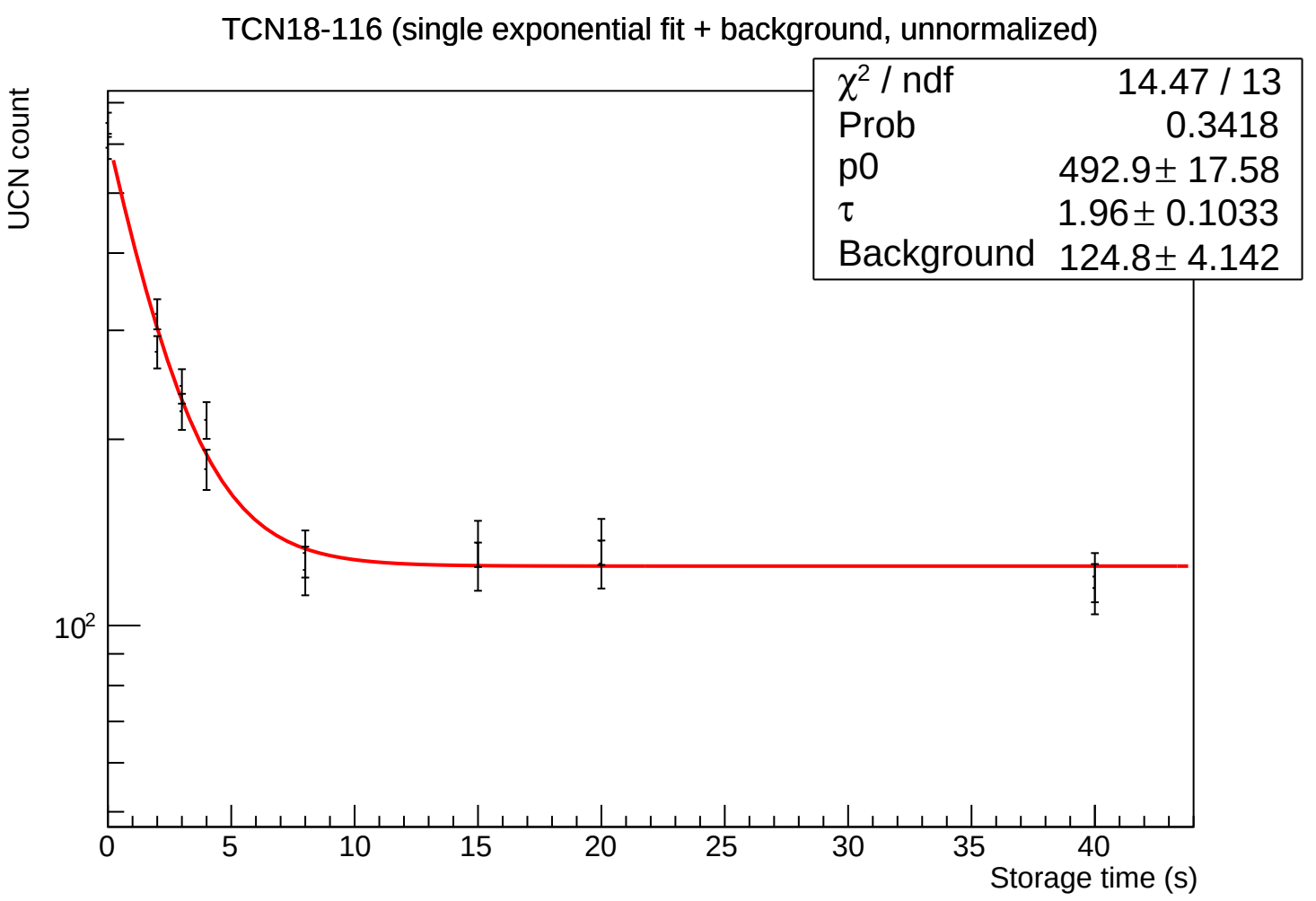
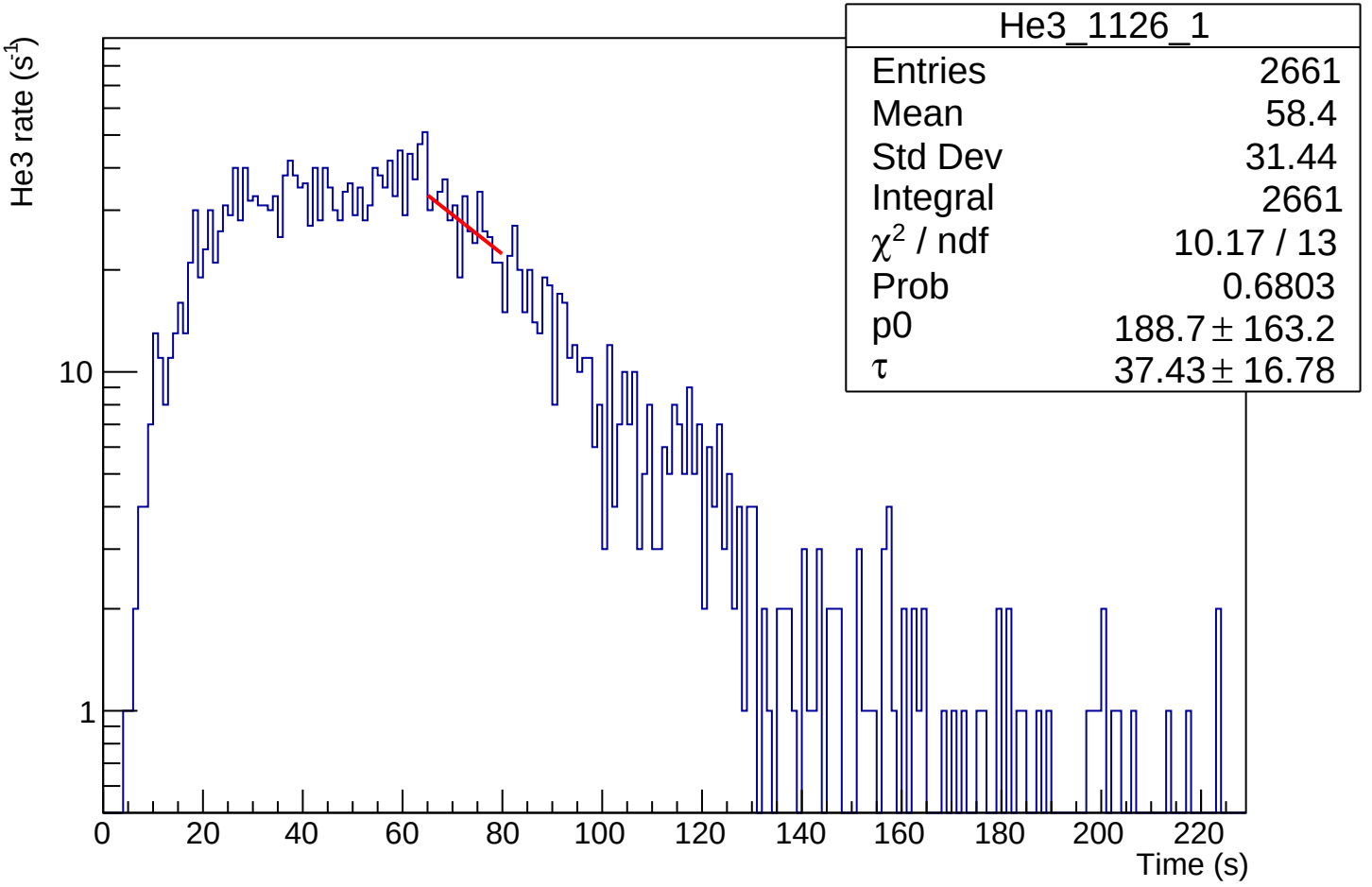
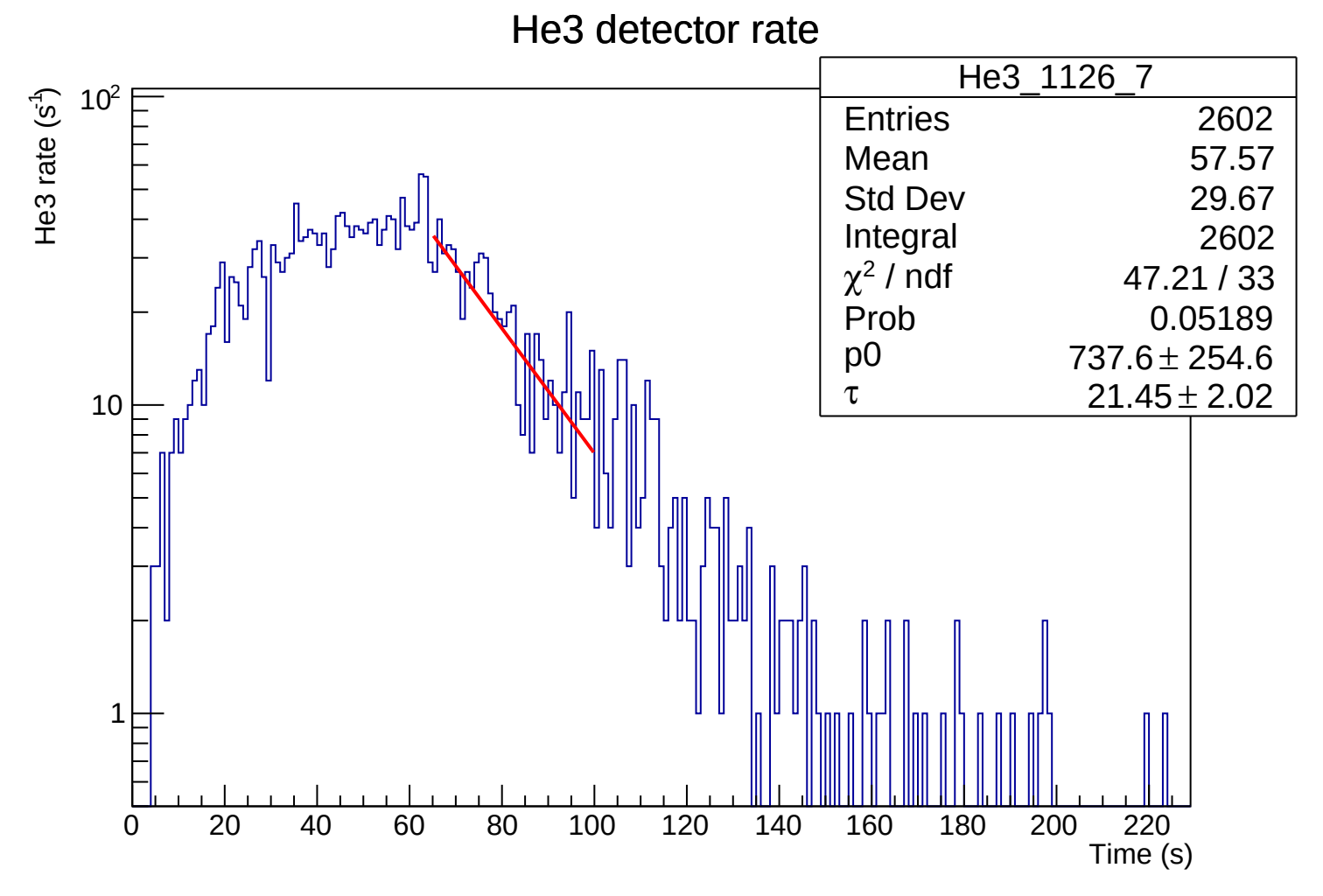

TCN18-116 (single exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 18.18 / 14
Prob 0.1989
p0 0.3152 ± 0.0124
τ 1.92 ± 0.09397
UCN-count-to-monitor ratio
10⁻¹
10⁻²
10⁻³
0
5
10
15
20
25
30
35
40
Storage time (s)

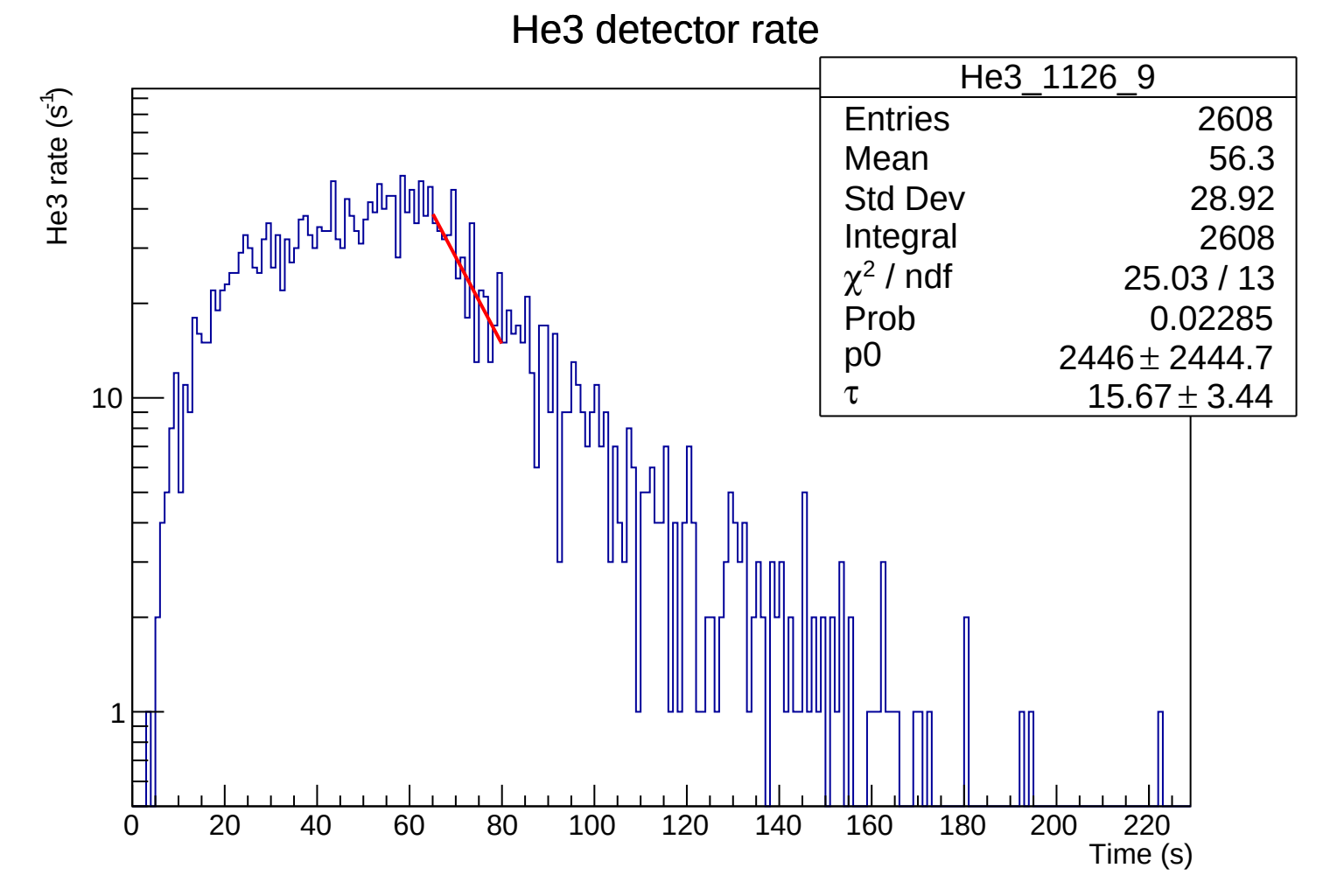

TCN18-116 (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ2 / ndf 13.78 / 12
Prob 0.3152
p0 0.33 ± 0.06371
τ 1.861 ± 0.2512
UCN-count-to-monitor ratio
10−1
10−2
10−3
0
5
10
15
20
25
30
35
40
Storage time (s)

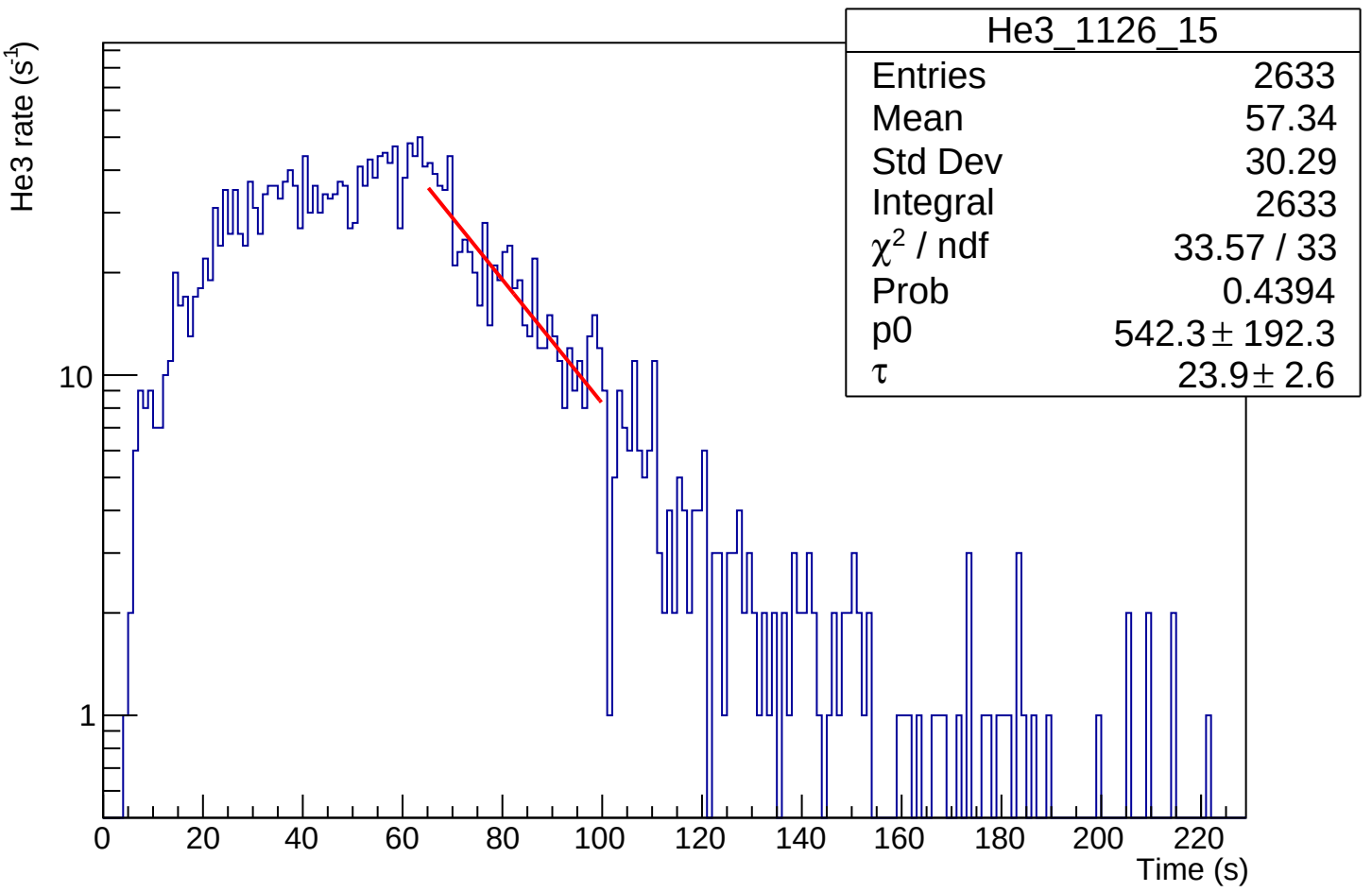

TCN18-116 (double exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 18.18 / 12
Prob 0.1104
N1 0.3073 ± 0.138
τ1 1.92 ± 0.1311
N2 0.007852 ± 0.6069
τ2 1.92 ± 3.607
UCN-count-to-monitor ratio
10⁻¹
10⁻²
10⁻³
0
5
10
15
20
25
30
35
40
Storage time (s)


TCN18-116 (single exponential fit + background, unnormalized)
χ² / ndf 14.47 / 13
Prob 0.3418
p0 492.9± 17.58
τ 1.96± 0.1033
Background 124.8± 4.142
UCN count
10²
0
5
10
15
20
25
30
35
40
Storage time (s)


He3 detector rate
He3_1126_1
Entries 2661
Mean 58.4
Std Dev 31.44
Integral 2661
χ² / ndf 10.17 / 13
Prob 0.6803
p0 188.7 ± 163.2
τ 37.43 ± 16.78
He3 rate (s⁻¹)
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)


He3 detector rate
He3_1126_7
Entries 2602
Mean 57.57
Std Dev 29.67
Integral 2602
χ² / ndf 47.21 / 33
Prob 0.05189
p0 737.6 ± 254.6
τ 21.45 ± 2.02
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)


He3 detector rate
He3_1126_9
Entries 2608
Mean 56.3
Std Dev 28.92
Integral 2608
χ² / ndf 25.03 / 13
Prob 0.02285
p0 2446 ± 2444.7
τ 15.67 ± 3.44
He3 rate (s⁻¹)
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)


He3 detector rate
He3_1126_15
Entries 2633
Mean 57.34
Std Dev 30.29
Integral 2633
χ² / ndf 33.57 / 33
Prob 0.4394
p0 542.3 ± 192.3
τ 23.9 ± 2.6
He3 rate (s⁻¹)
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

Average lifetime from He3 data:

τ = 21.3245853164 +/- 4.26552741388 s