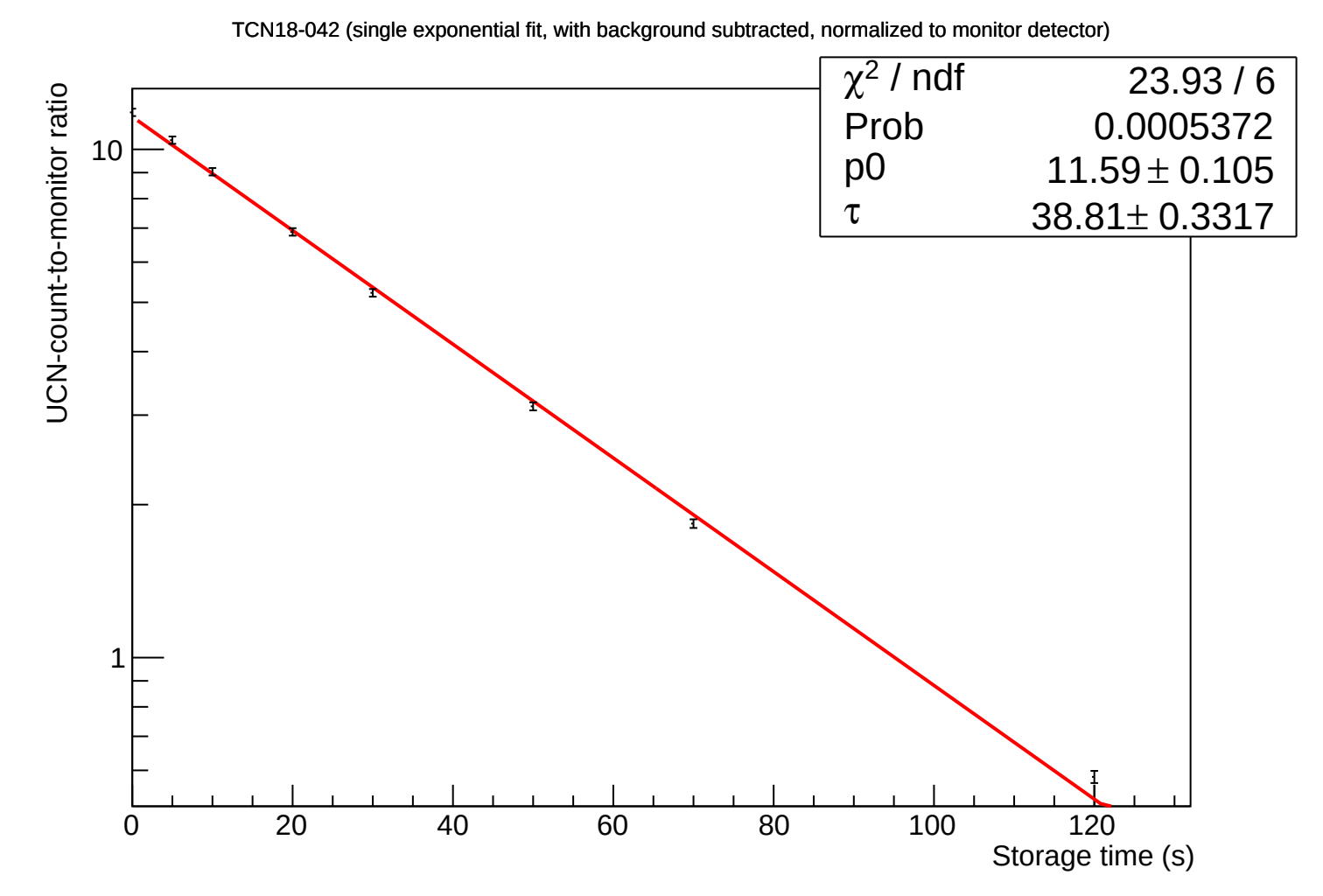
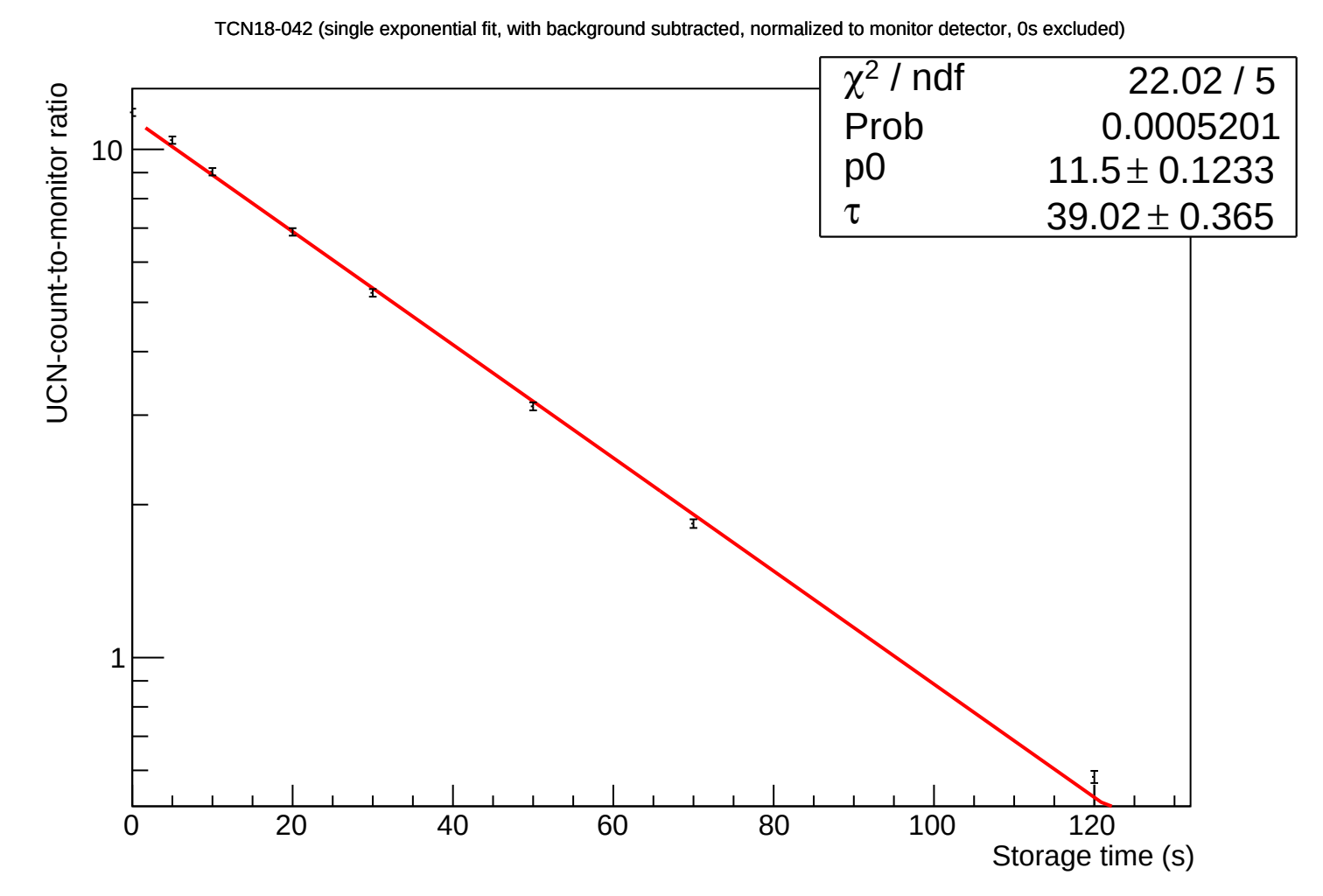
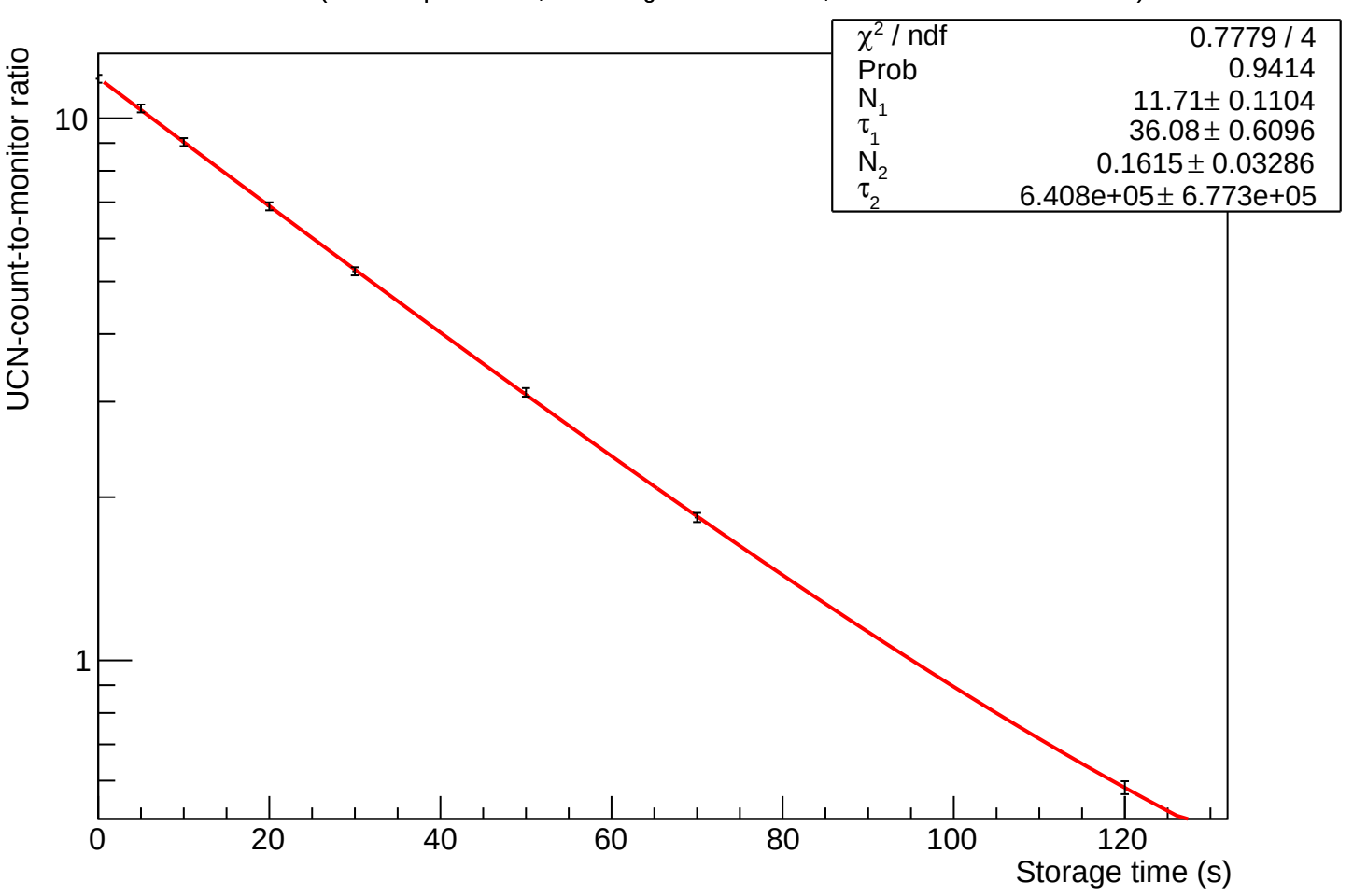
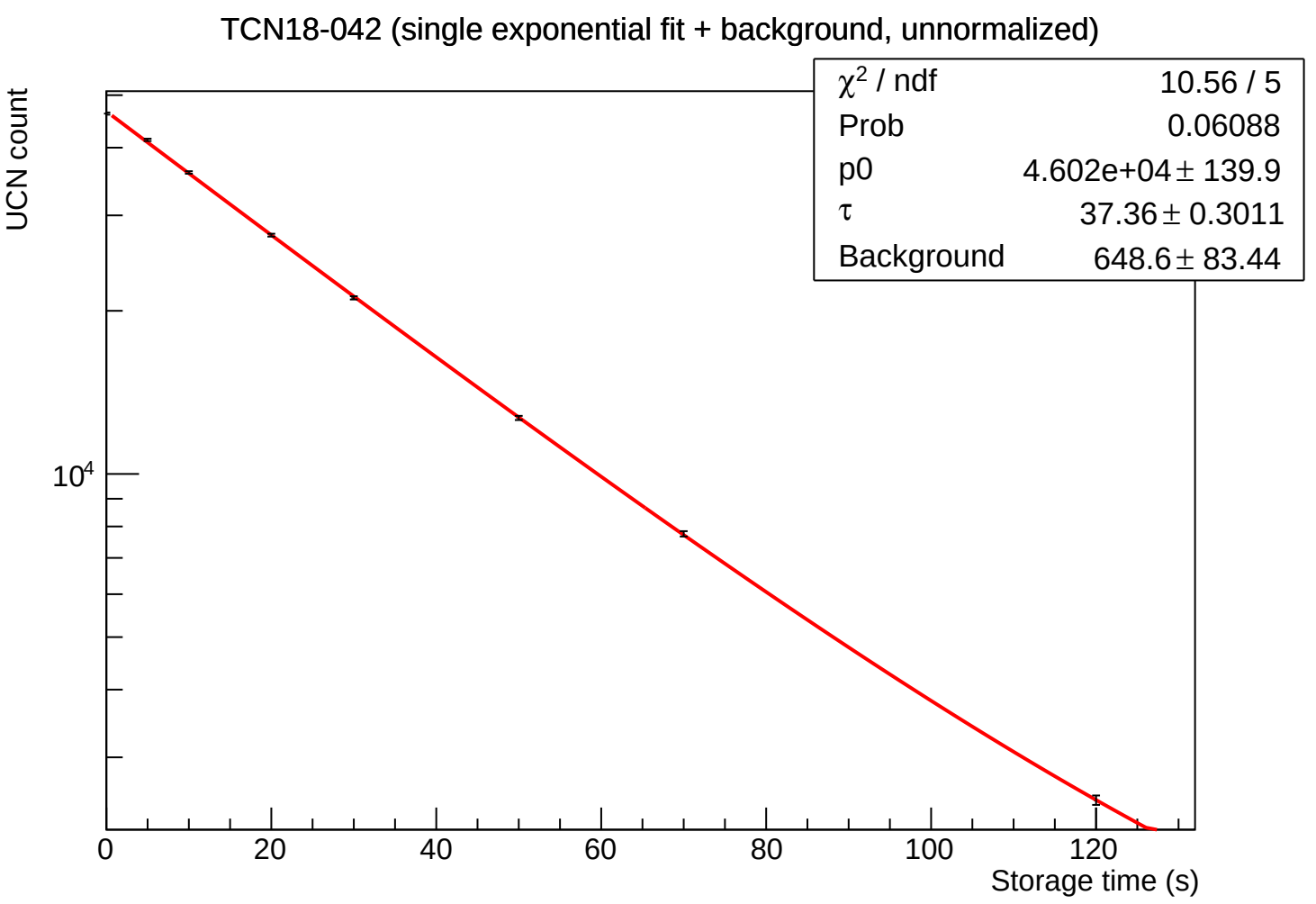
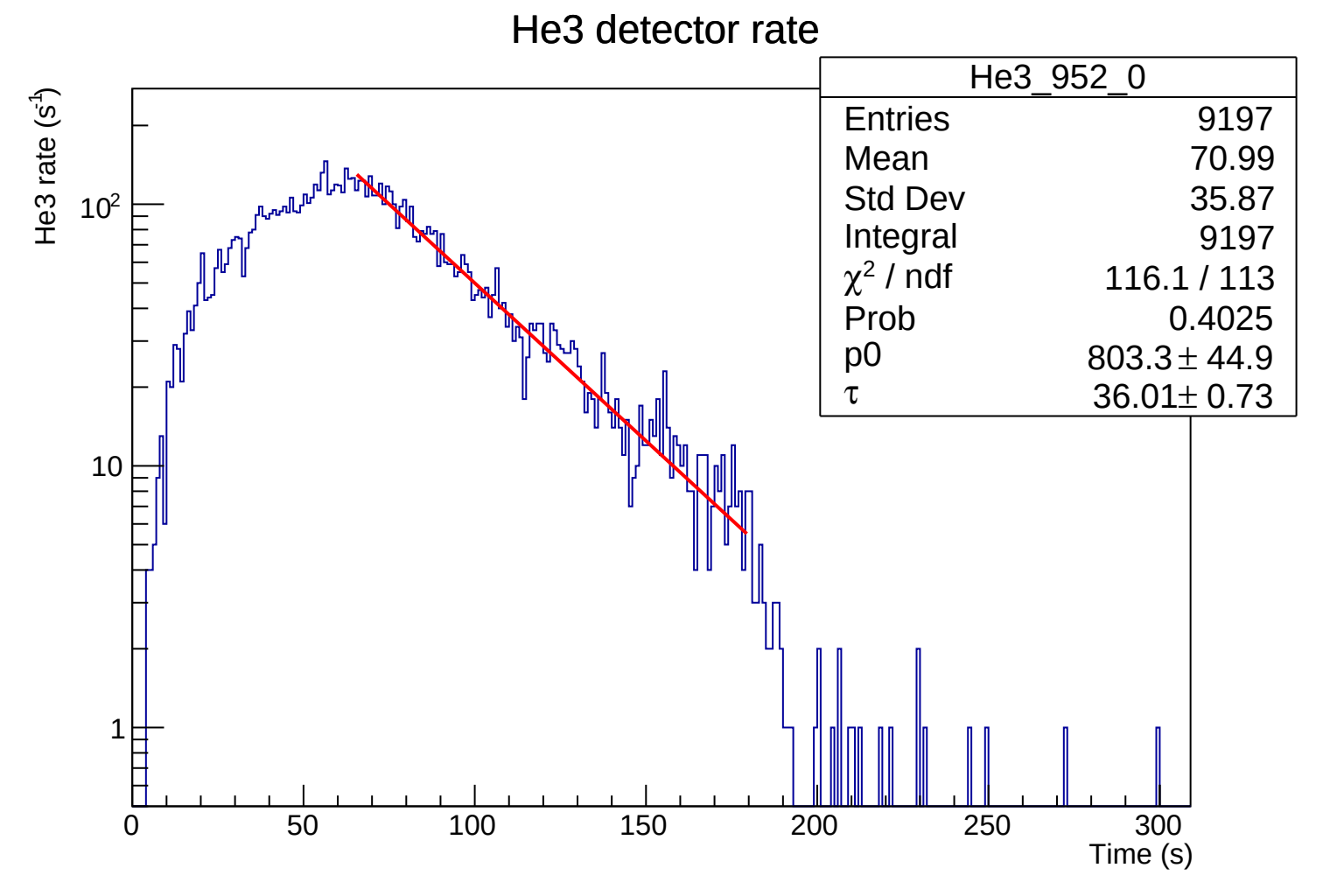
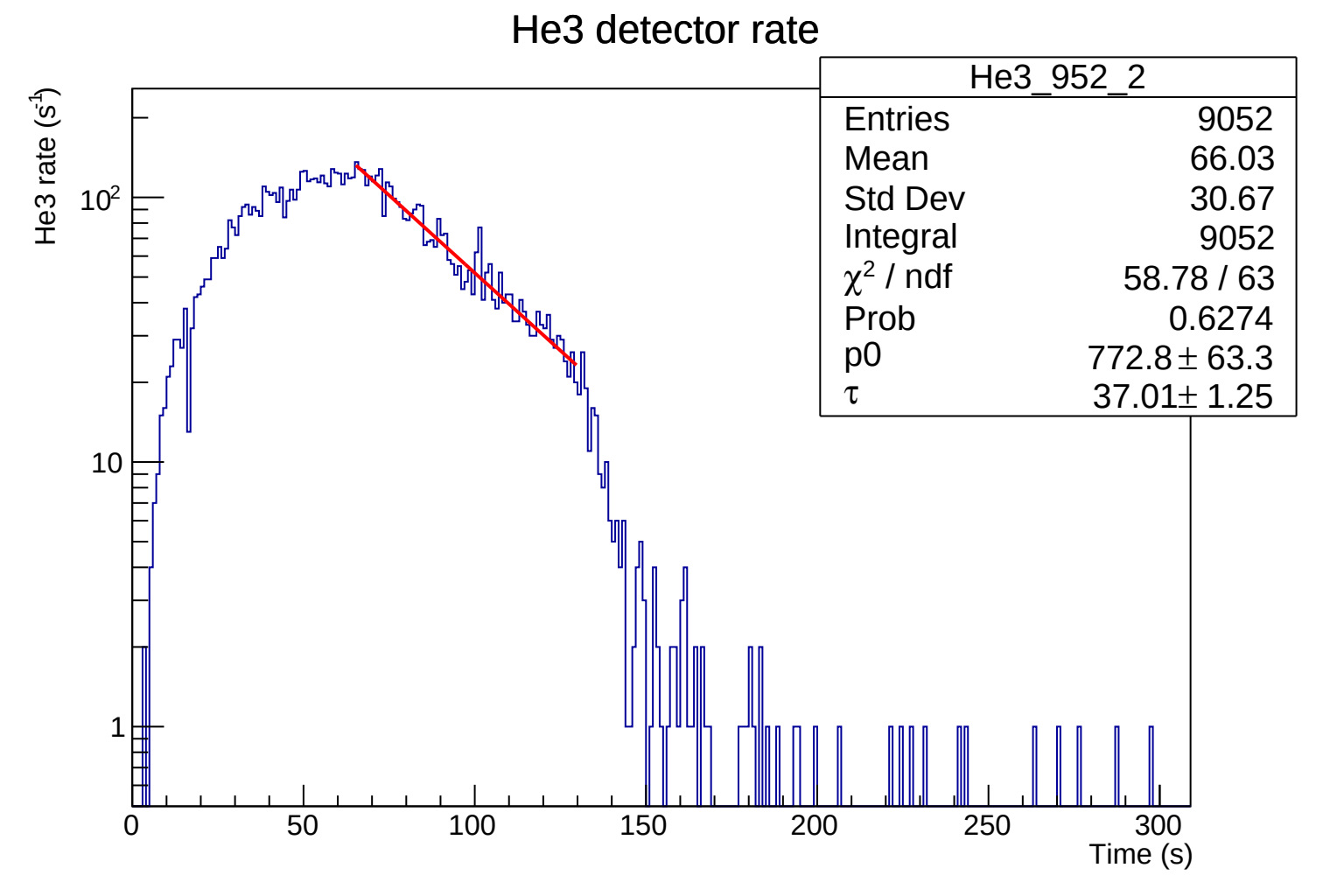

TCN18-042 (single exponential fit, with background subtracted, normalized to monitor detector)
χ2 / ndf 23.93 / 6
Prob 0.0005372
p0 11.59 ± 0.105
τ 38.81 ± 0.3317
UCN-count-to-monitor ratio
10
1
0
20
40
60
80
100
120
Storage time (s)

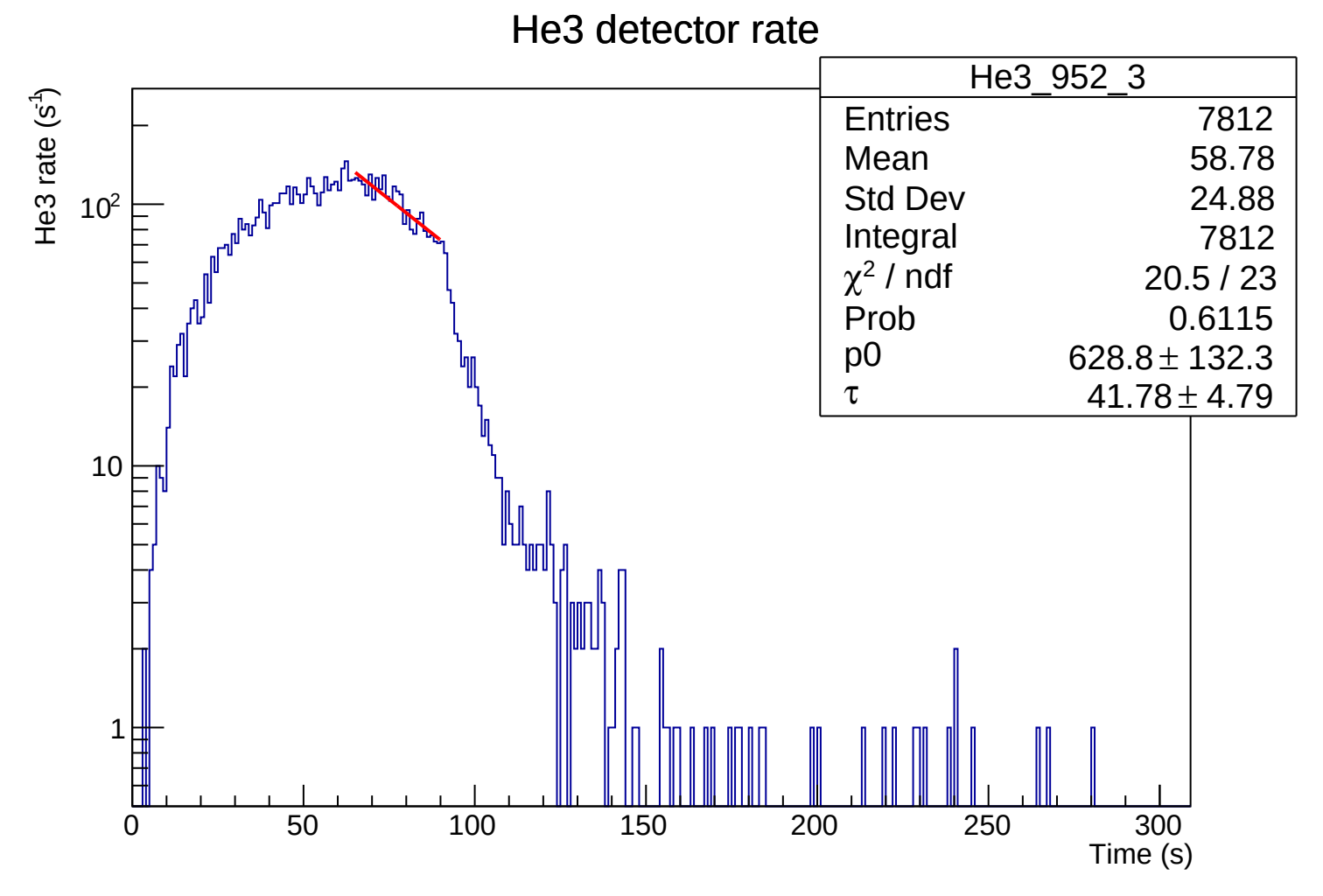

TCN18-042 (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 22.02 / 5
Prob 0.0005201
p0 11.5 ± 0.1233
τ 39.02 ± 0.365
UCN-count-to-monitor ratio
10
1
0
20
40
60
80
100
120
Storage time (s)

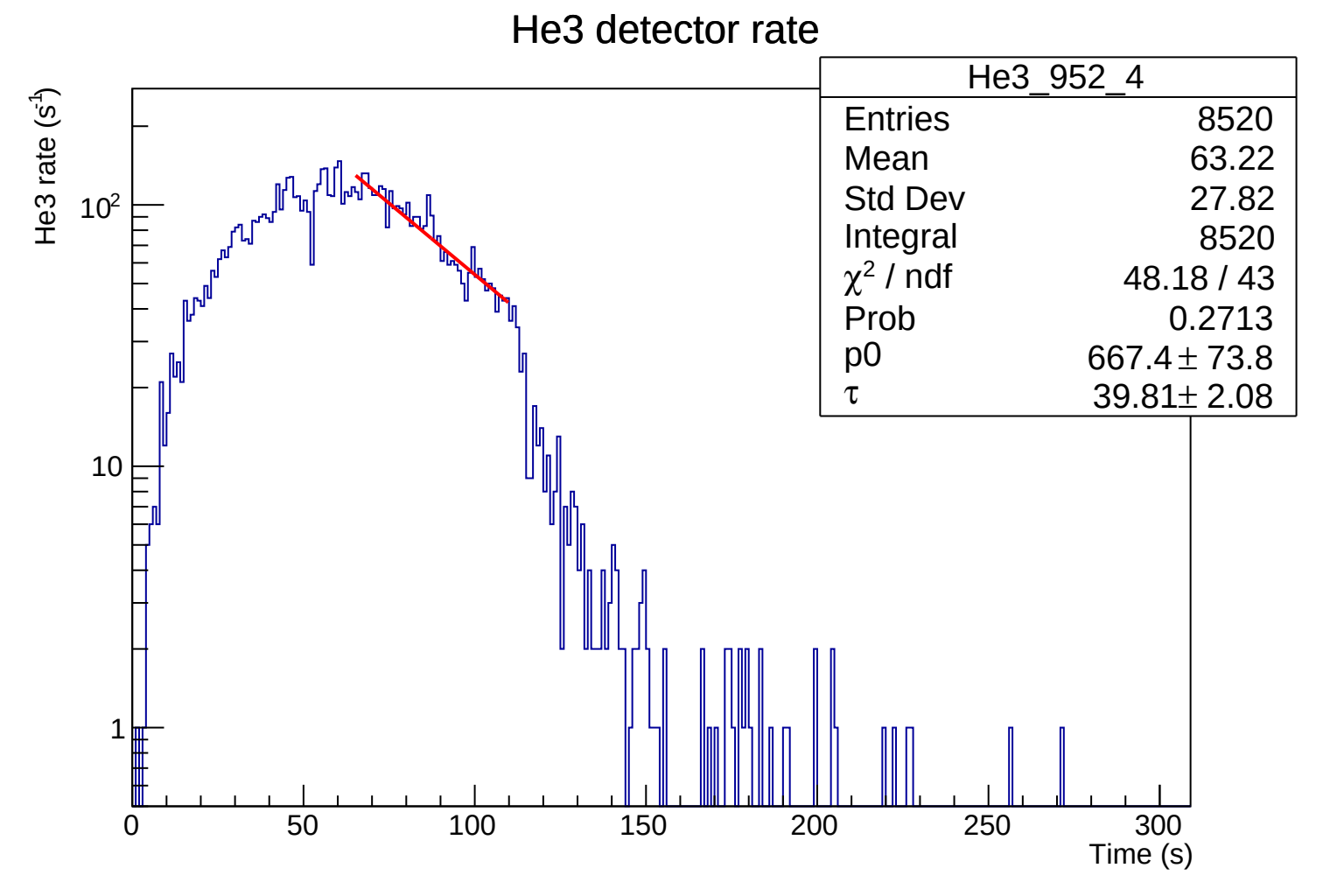

TCN18-042 (double exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 0.7779 / 4
Prob 0.9414
N1 11.71 ± 0.1104
τ1 36.08 ± 0.6096
N2 0.1615 ± 0.03286
τ2 6.408e+05 ± 6.773e+05
UCN-count-to-monitor ratio
10
1
0
20
40
60
80
100
120
Storage time (s)

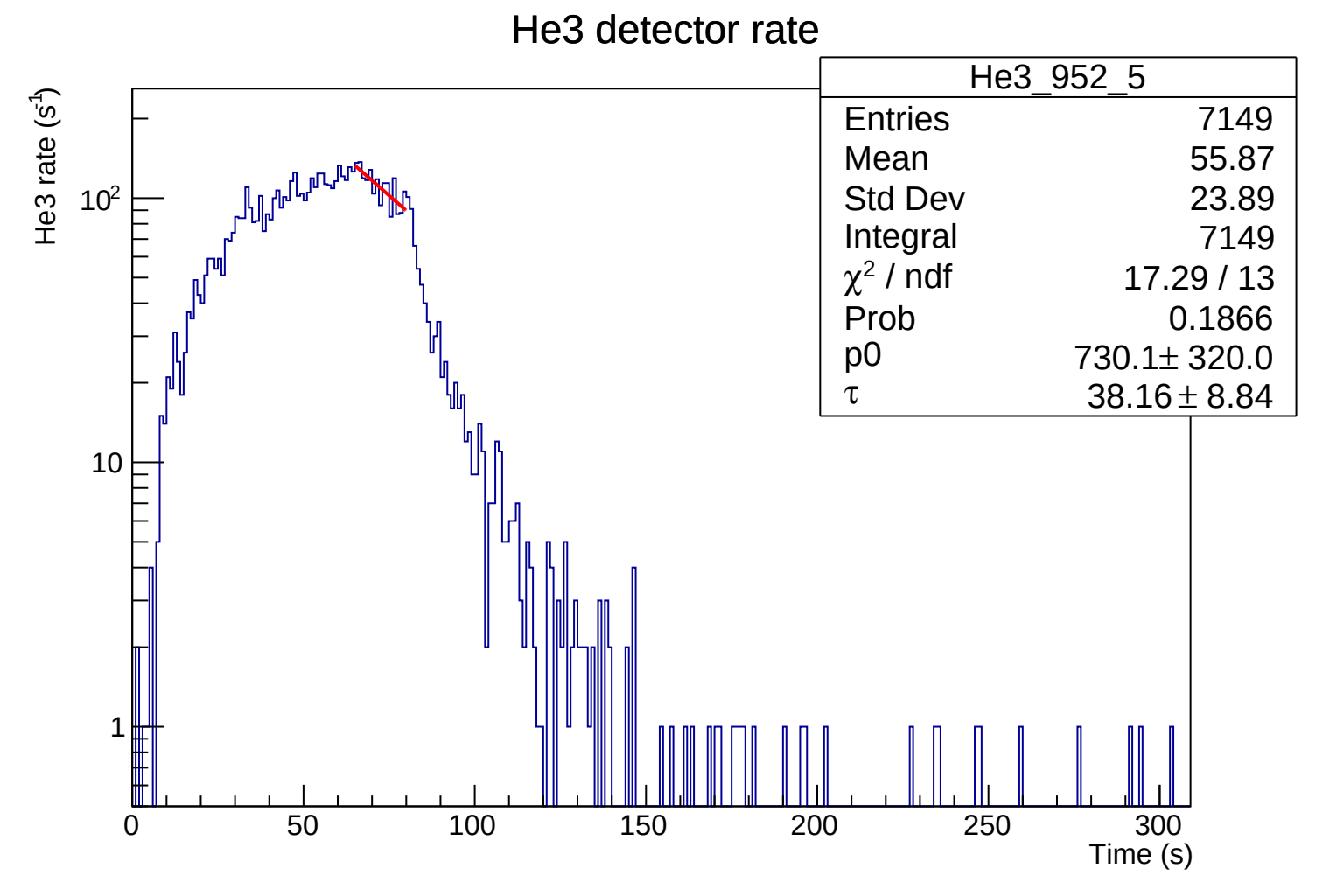

TCN18-042 (single exponential fit + background, unnormalized)
χ^2 / ndf 10.56 / 5
Prob 0.06088
p0 4.602e+04 ± 139.9
τ 37.36 ± 0.3011
Background 648.6 ± 83.44
UCN count
10^4
0
20
40
60
80
100
120
Storage time (s)


He3 detector rate
He3_952_0
Entries 9197
Mean 70.99
Std Dev 35.87
Integral 9197
χ² / ndf 116.1 / 113
Prob 0.4025
p0 803.3 ± 44.9
τ 36.01 ± 0.73
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_952_2
Entries 9052
Mean 66.03
Std Dev 30.67
Integral 9052
χ² / ndf 58.78 / 63
Prob 0.6274
p0 772.8 ± 63.3
τ 37.01 ± 1.25
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_952_3
Entries 7812
Mean 58.78
Std Dev 24.88
Integral 7812
χ² / ndf 20.5 / 23
Prob 0.6115
p0 628.8 ± 132.3
τ 41.78 ± 4.79
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_952_4
Entries 8520
Mean 63.22
Std Dev 27.82
Integral 8520
χ² / ndf 48.18 / 43
Prob 0.2713
p0 667.4 ± 73.8
τ 39.81 ± 2.08
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_952_5
Entries 7149
Mean 55.87
Std Dev 23.89
Integral 7149
χ² / ndf 17.29 / 13
Prob 0.1866
p0 730.1± 320.0
τ 38.16 ± 8.84
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)

Average lifetime from He3 data:

τ = 36.6455786802 +/- 0.125395152081 s