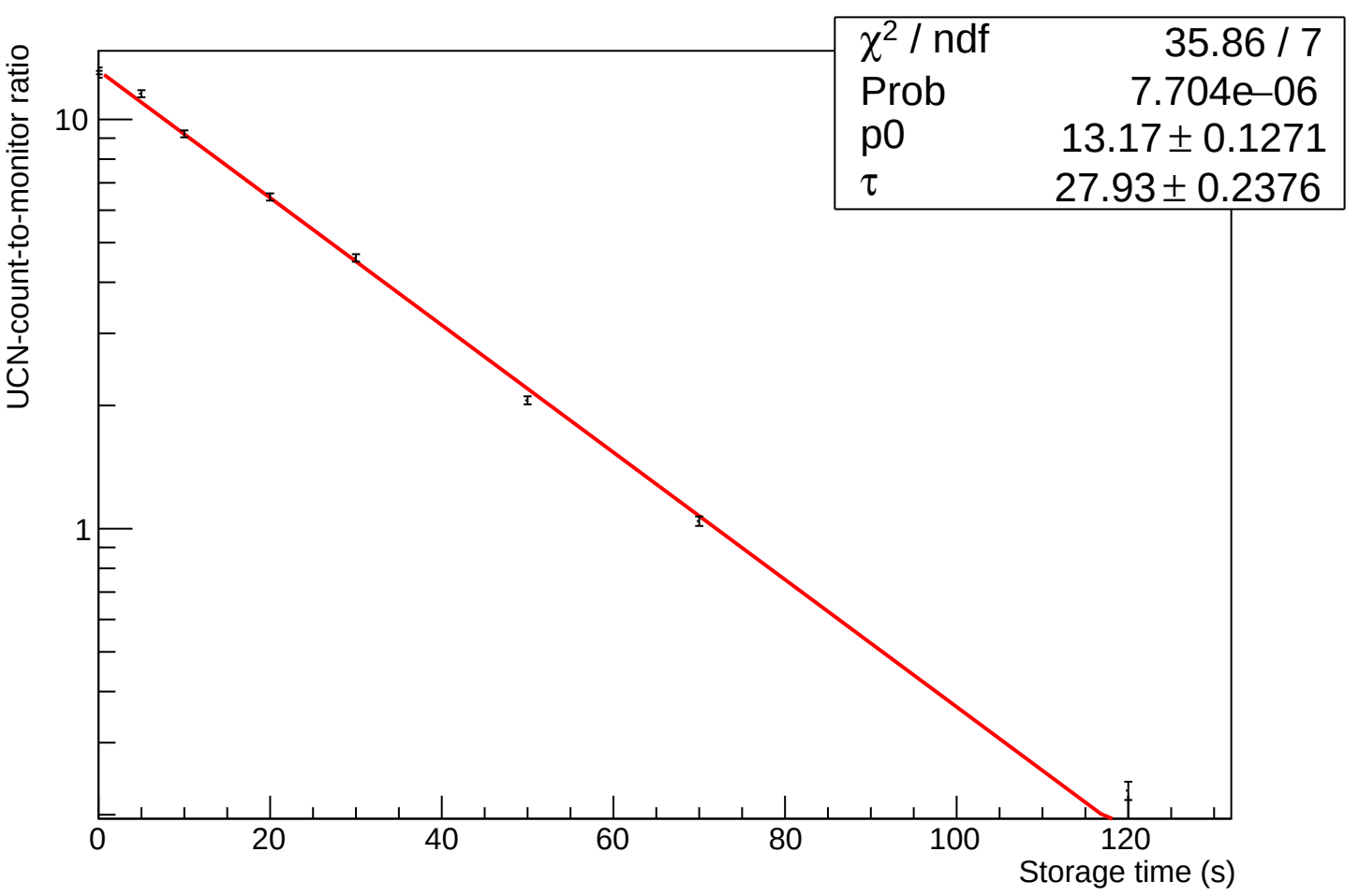
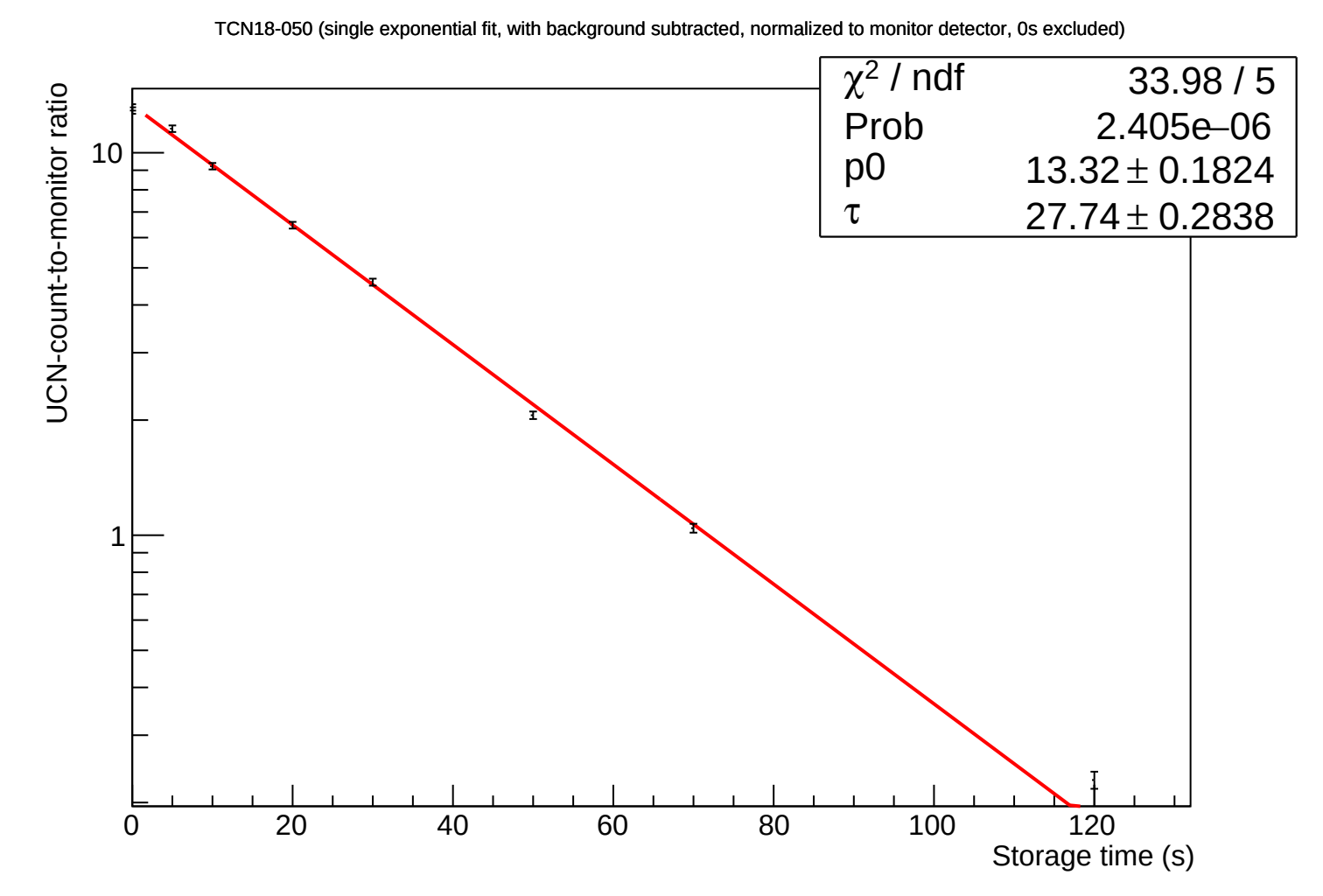
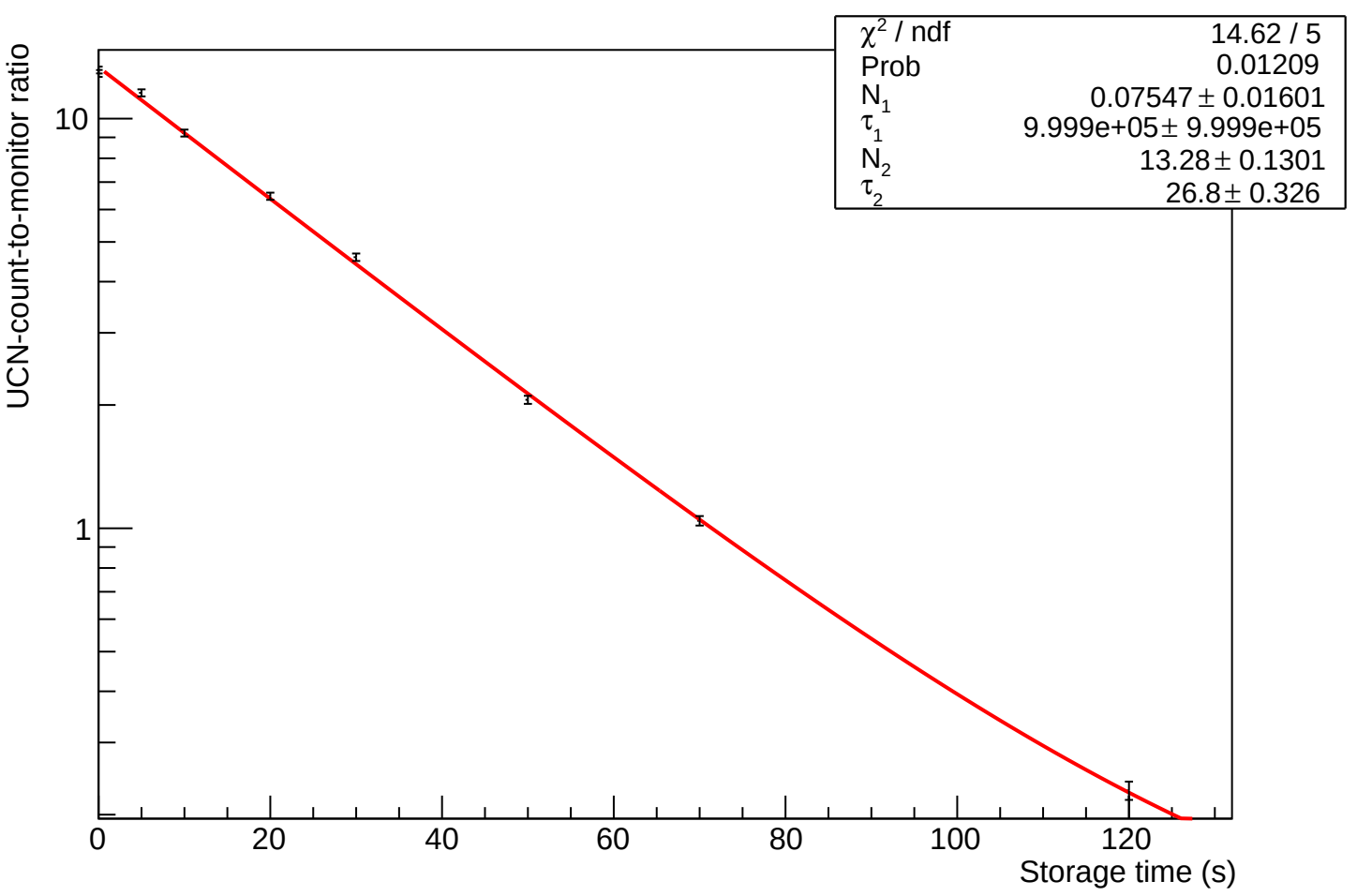
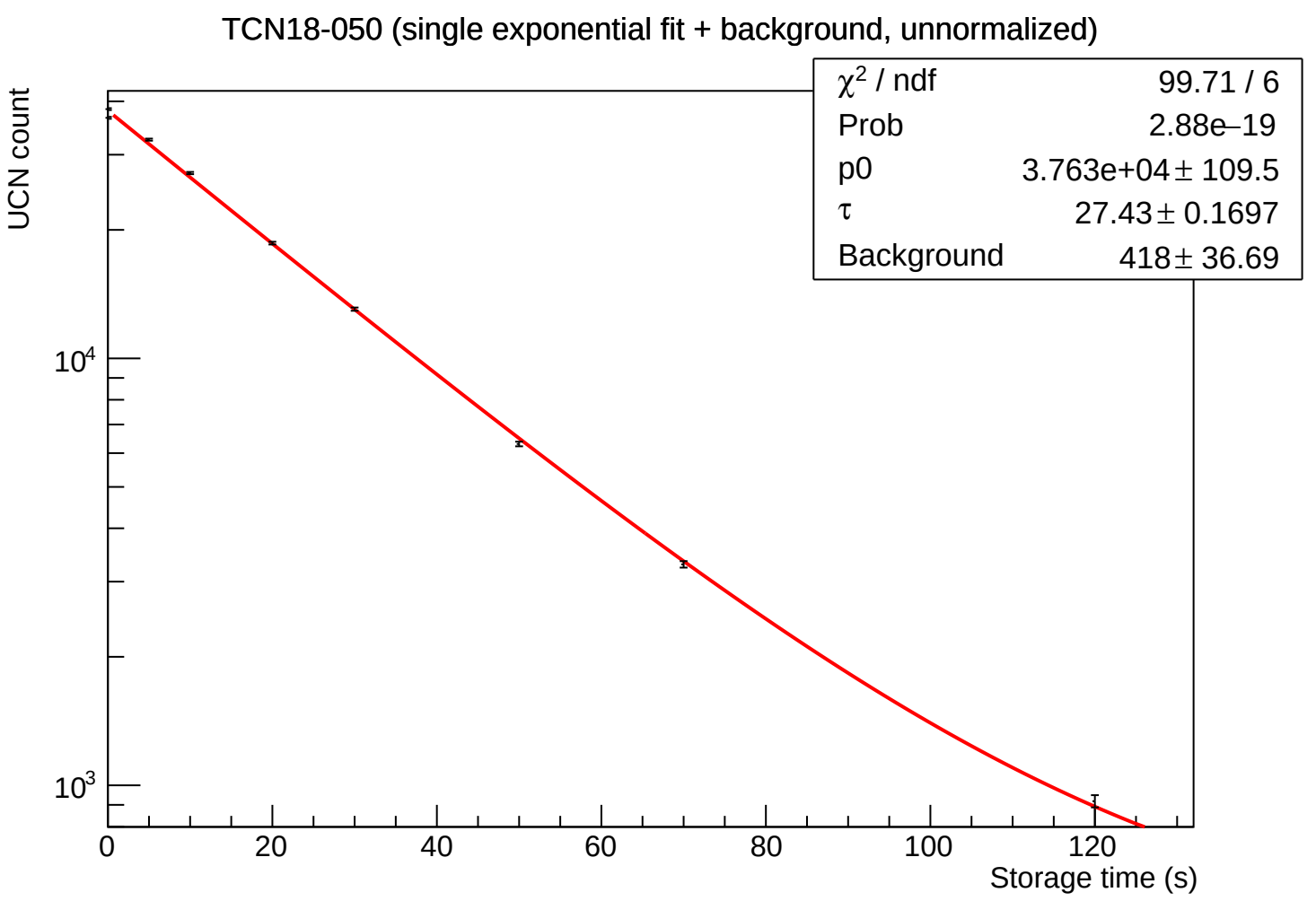
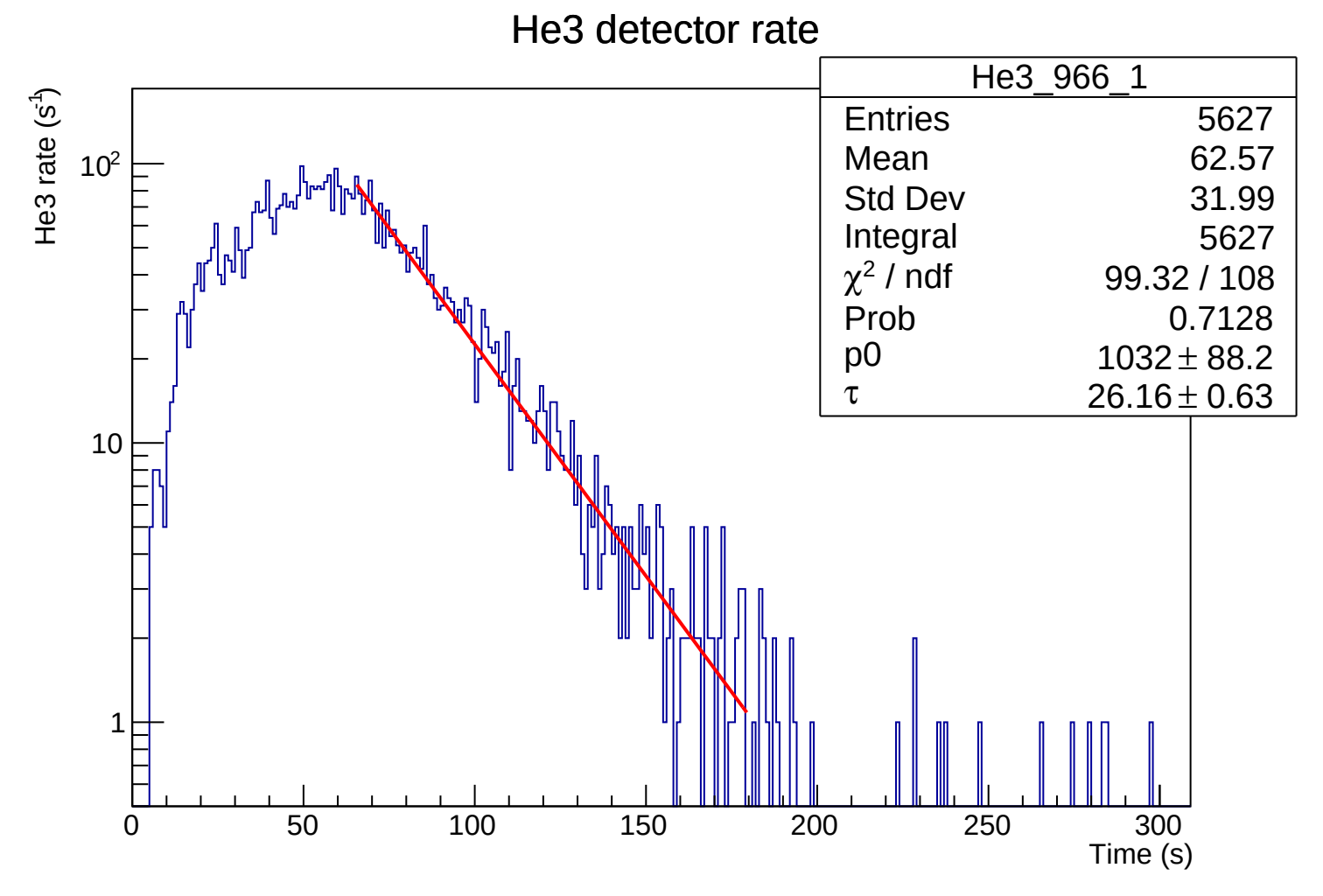
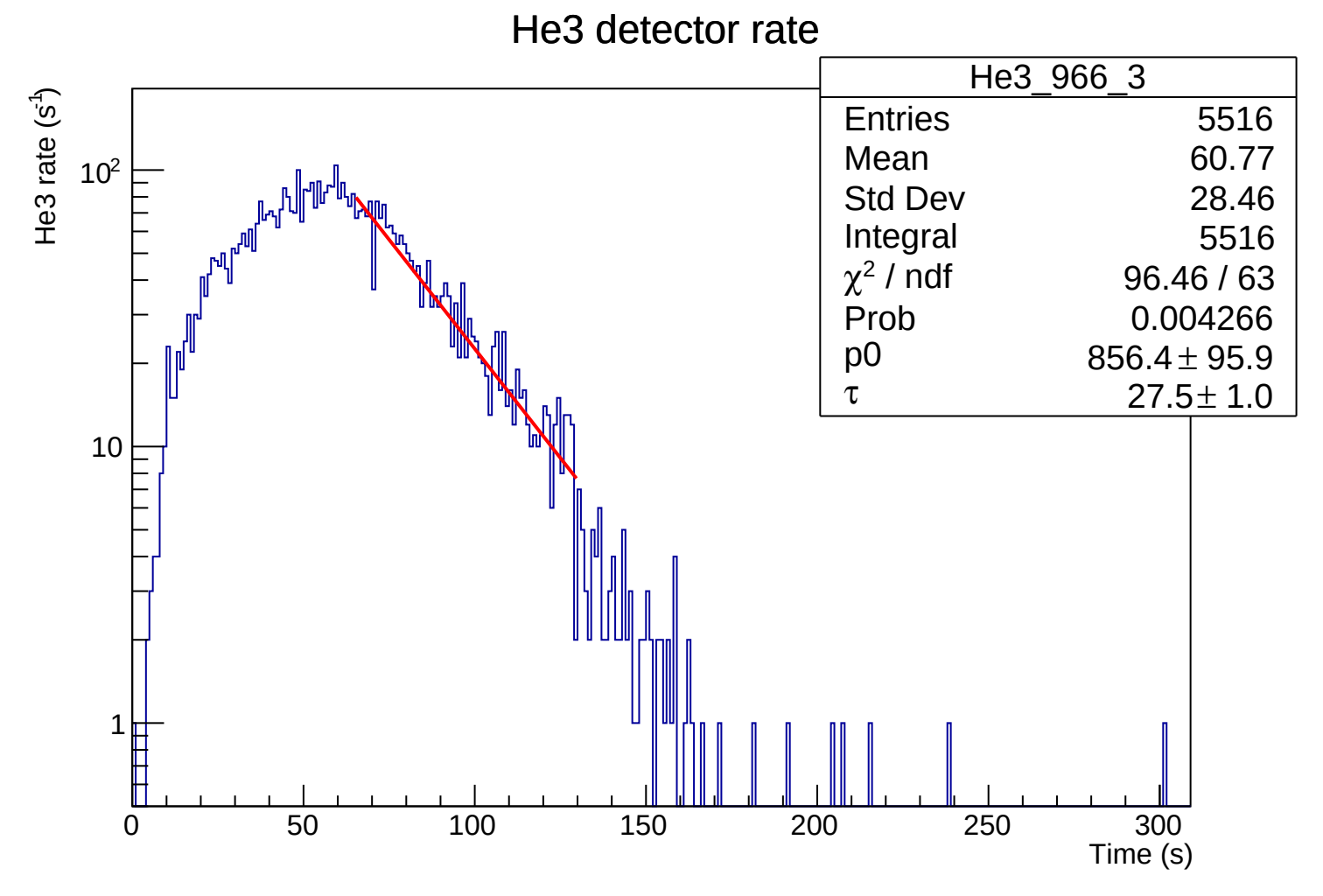

TCN18-050 (single exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 35.86 / 7
Prob 7.704e–06
p0 13.17 ± 0.1271
τ 27.93 ± 0.2376
UCN-count-to-monitor ratio
10
1
0
20
40
60
80
100
120
Storage time (s)

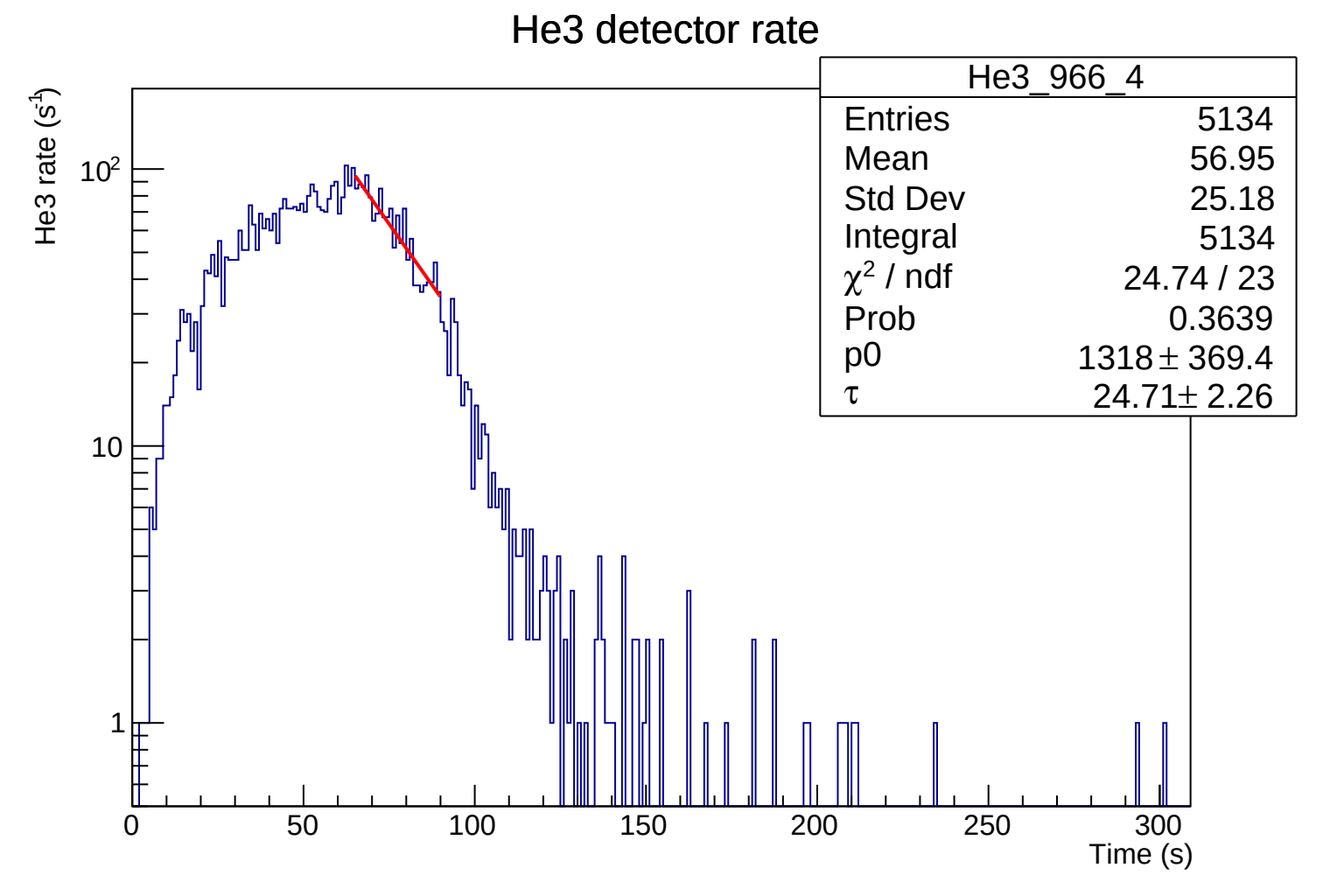

TCN18-050 (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 33.98 / 5
Prob 2.405e−06
p0 13.32 ± 0.1824
τ 27.74 ± 0.2838
UCN-count-to-monitor ratio
10
1
0
20
40
60
80
100
120
Storage time (s)

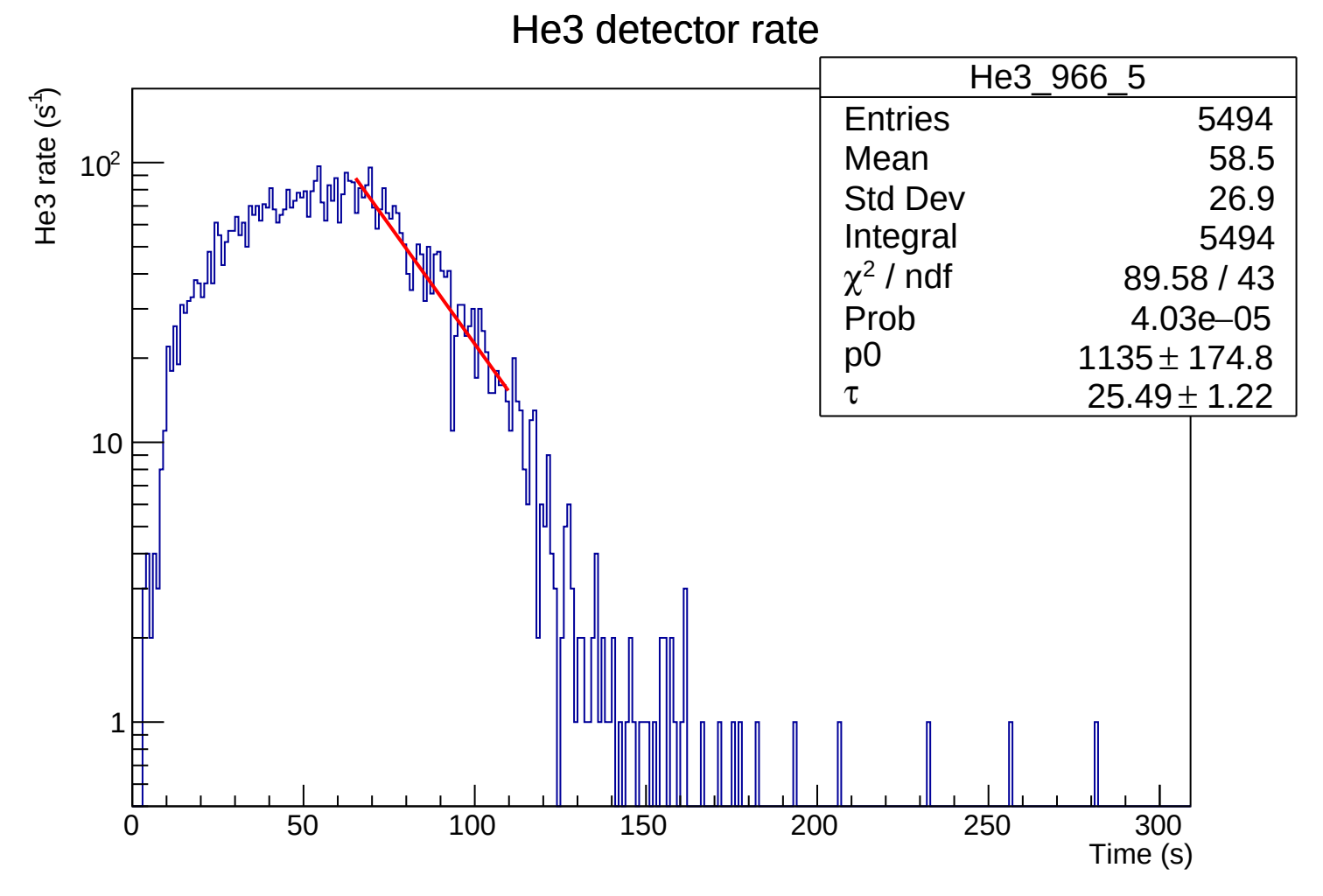

TCN18-050 (double exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 14.62 / 5
Prob 0.01209
N1 0.07547 ± 0.01601
τ1 9.999e+05 ± 9.999e+05
N2 13.28 ± 0.1301
τ2 26.8 ± 0.326
UCN-count-to-monitor ratio
10
1
0
20
40
60
80
100
120
Storage time (s)

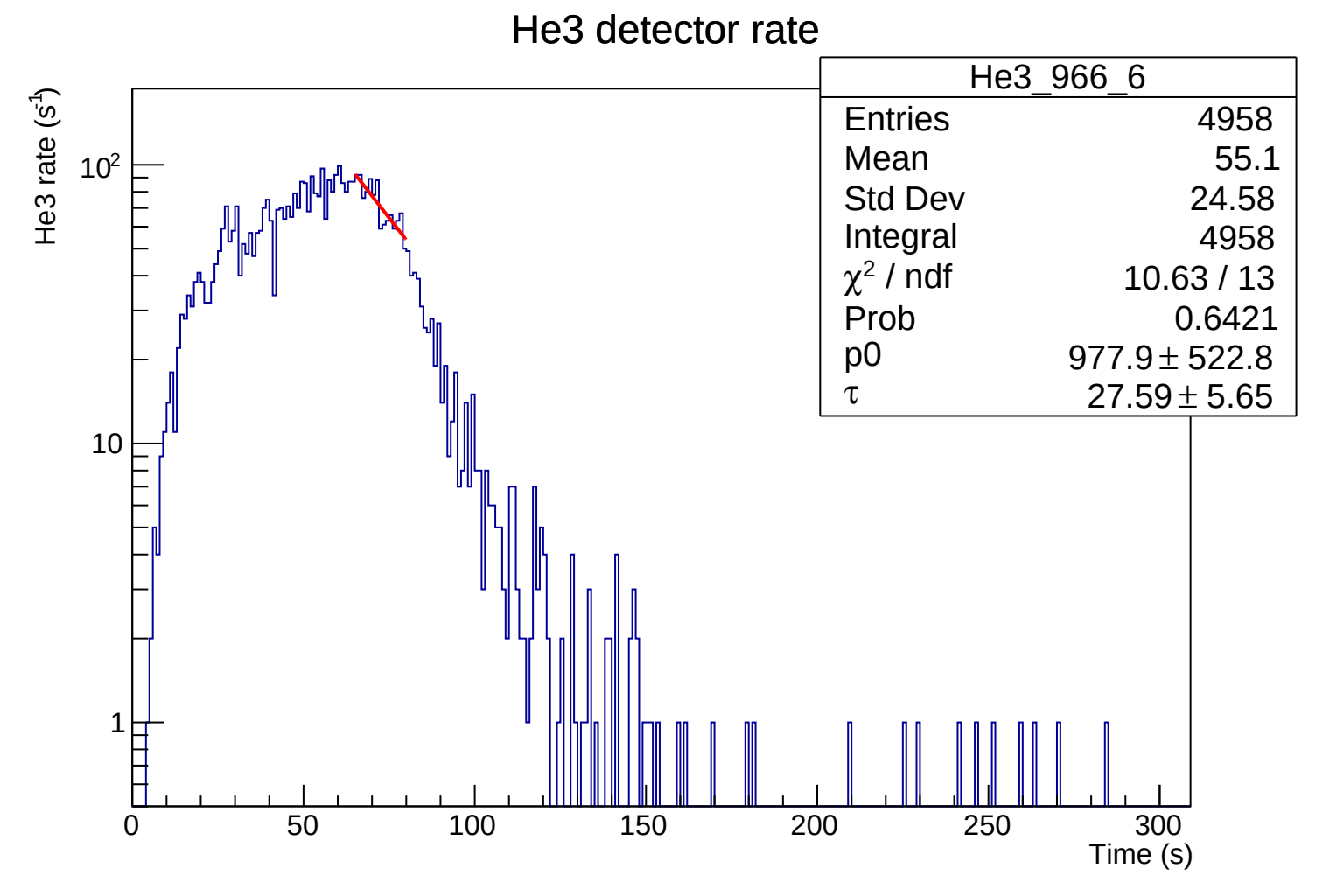

TCN18-050 (single exponential fit + background, unnormalized)
χ² / ndf 99.71 / 6
Prob 2.88e−19
p0 3.763e+04 ± 109.5
τ 27.43 ± 0.1697
Background 418 ± 36.69
UCN count
10⁴
10³
0
20
40
60
80
100
120
Storage time (s)


He3 detector rate
He3_966_1
Entries 5627
Mean 62.57
Std Dev 31.99
Integral 5627
χ² / ndf 99.32 / 108
Prob 0.7128
p0 1032 ± 88.2
τ 26.16 ± 0.63
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_966_3
Entries 5516
Mean 60.77
Std Dev 28.46
Integral 5516
χ² / ndf 96.46 / 63
Prob 0.004266
p0 856.4 ± 95.9
τ 27.5 ± 1.0
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_966_4
Entries 5134
Mean 56.95
Std Dev 25.18
Integral 5134
χ² / ndf 24.74 / 23
Prob 0.3639
p0 1318 ± 369.4
τ 24.71 ± 2.26
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_966_5
Entries 5494
Mean 58.5
Std Dev 26.9
Integral 5494
χ² / ndf 89.58 / 43
Prob 4.03e–05
p0 1135 ± 174.8
τ 25.49 ± 1.22
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_966_6
Entries 4958
Mean 55.1
Std Dev 24.58
Integral 4958
χ² / ndf 10.63 / 13
Prob 0.6421
p0 977.9 ± 522.8
τ 27.59 ± 5.65
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)

Average lifetime from He3 data:

τ = 26.3263801392 +/- 0.050256266 s