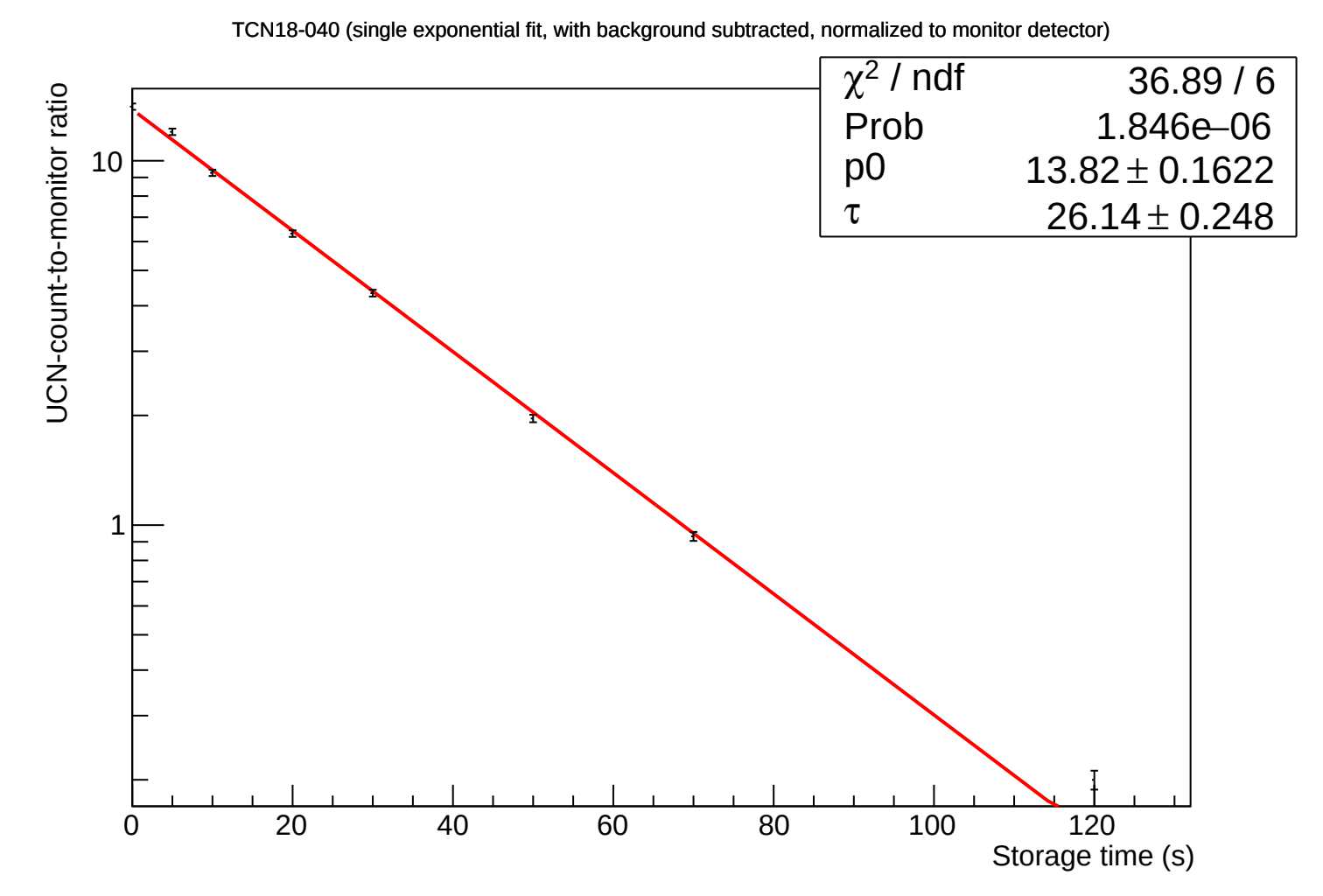
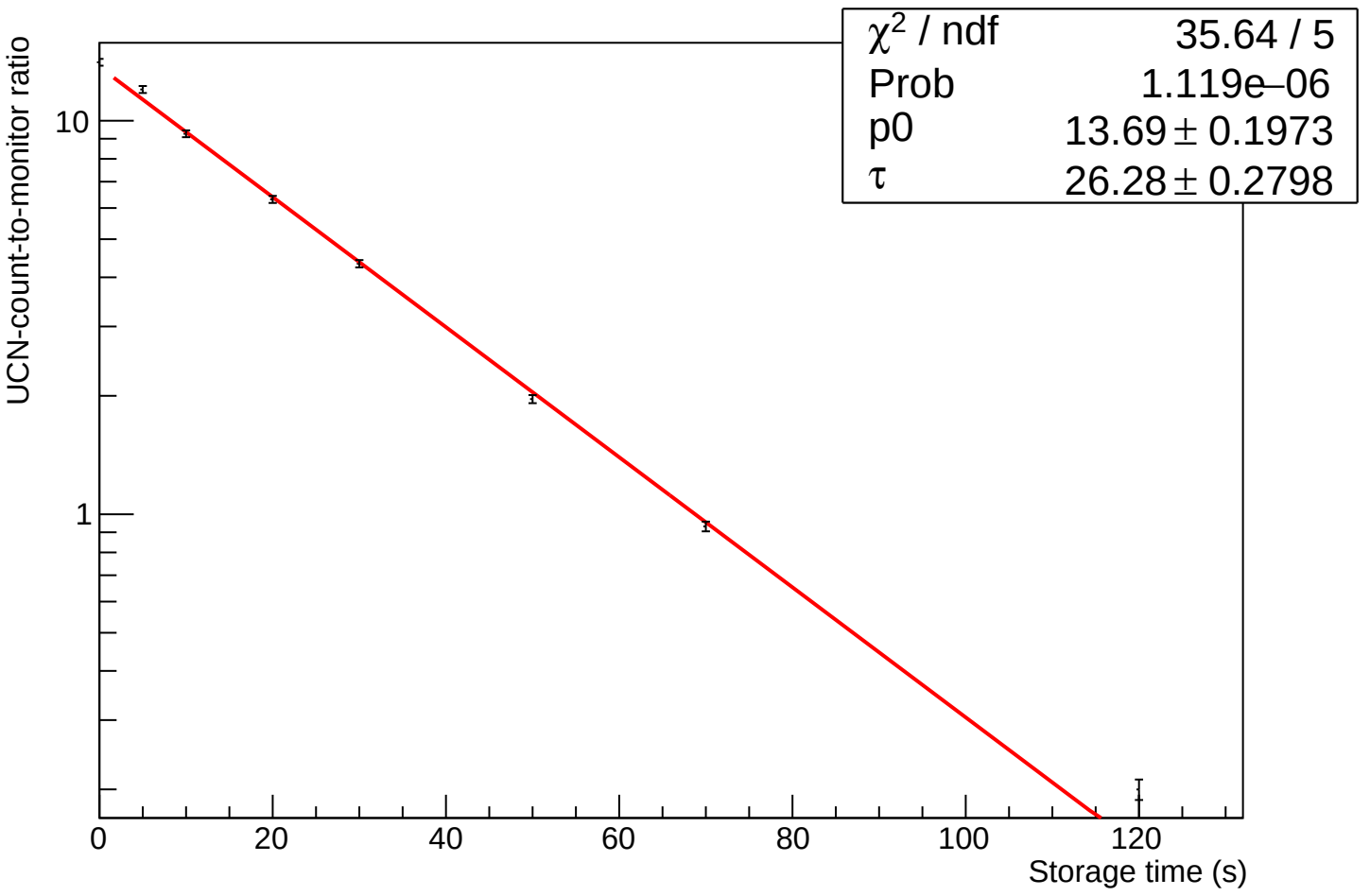
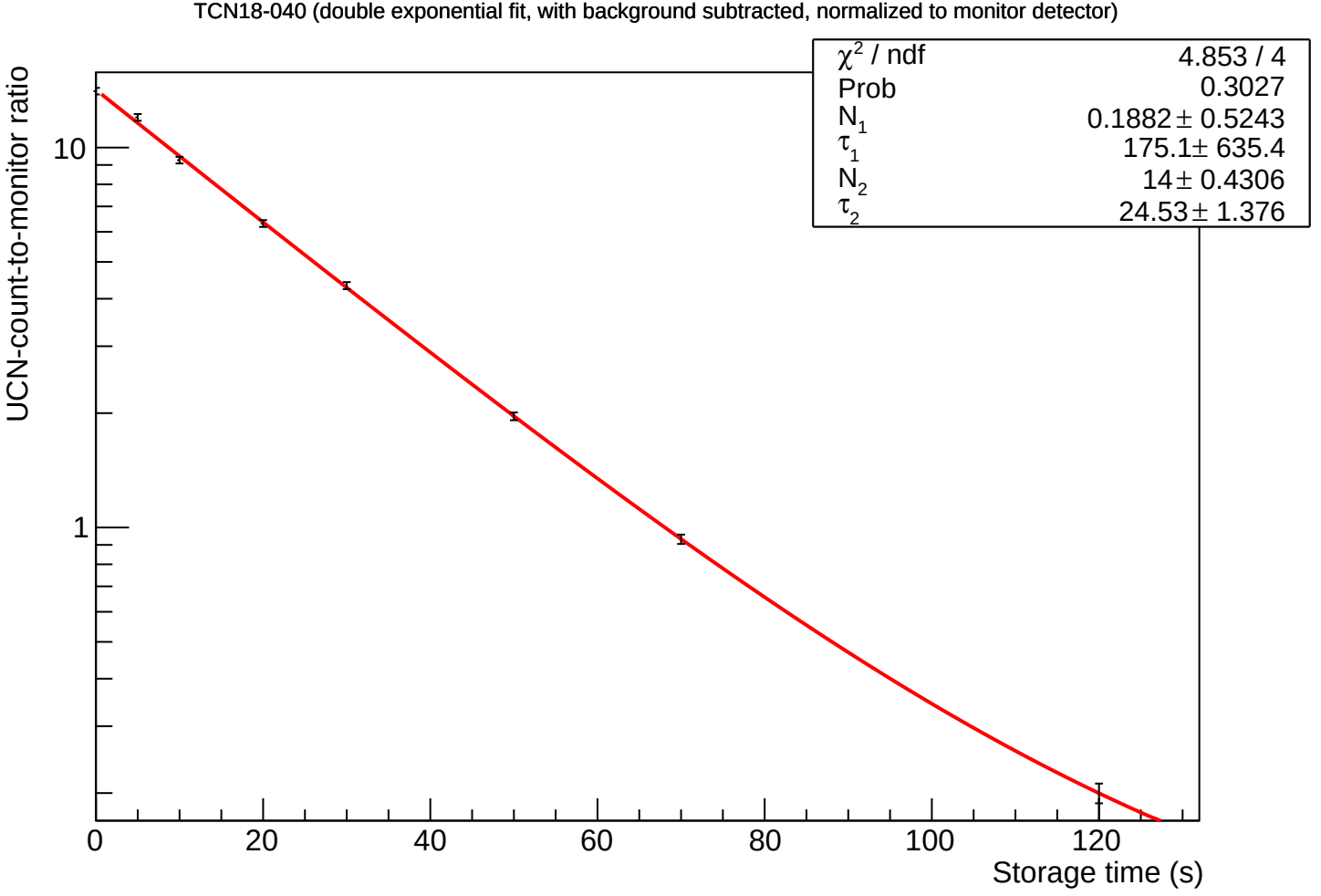
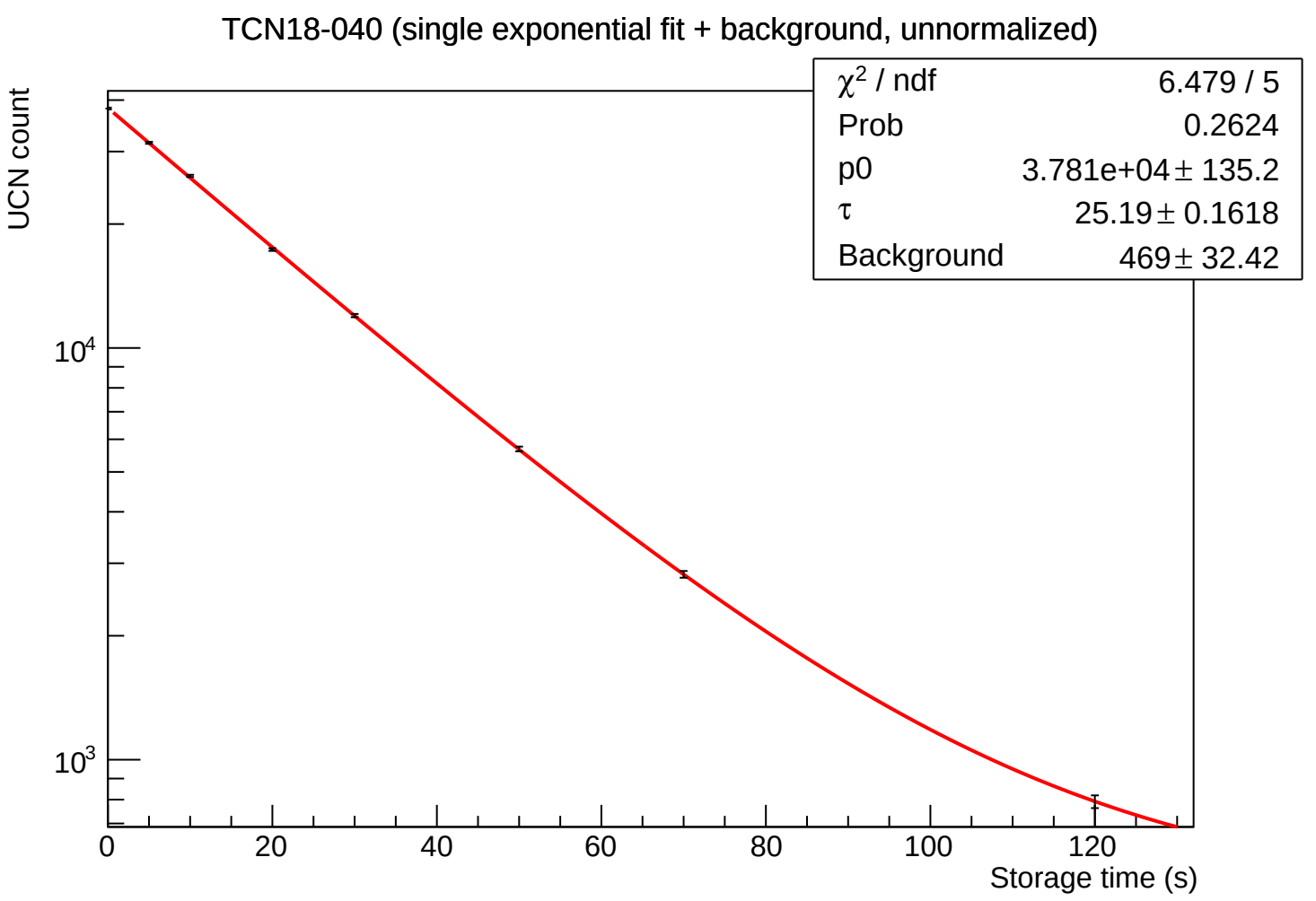
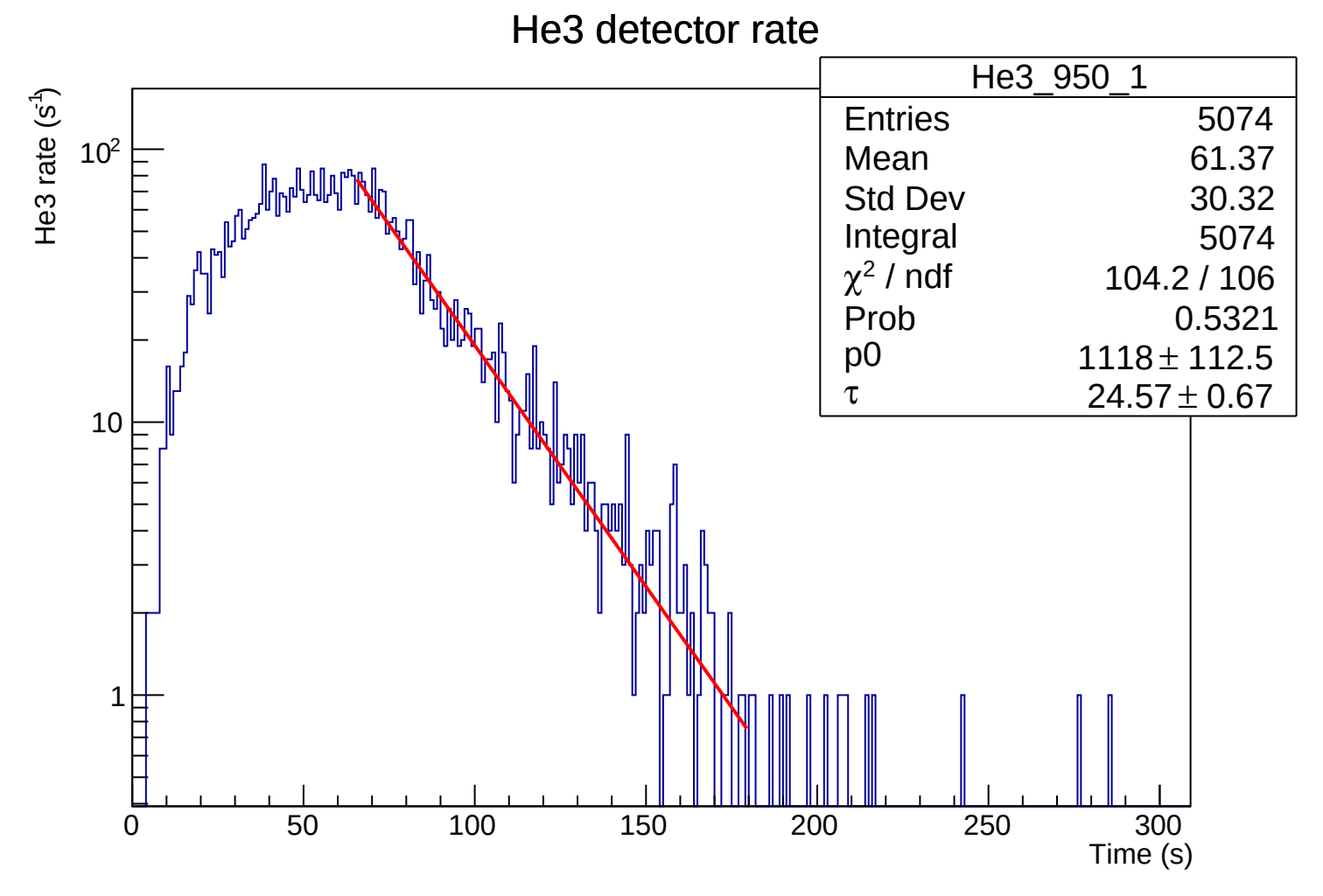
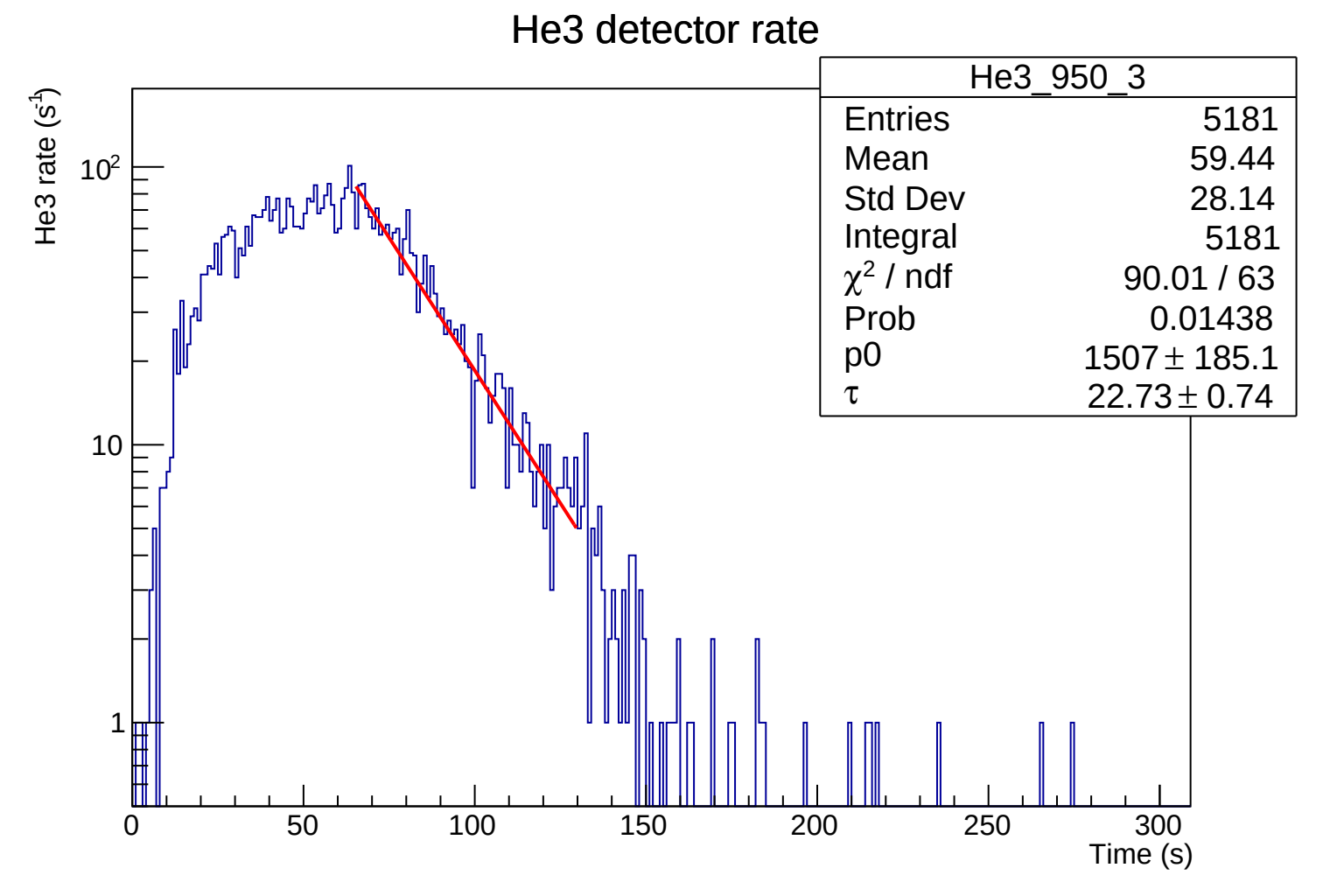

TCN18-040 (single exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 36.89 / 6
Prob 1.846e−06
p0 13.82 ± 0.1622
τ 26.14 ± 0.248
UCN-count-to-monitor ratio
10
1
0
20
40
60
80
100
120
Storage time (s)

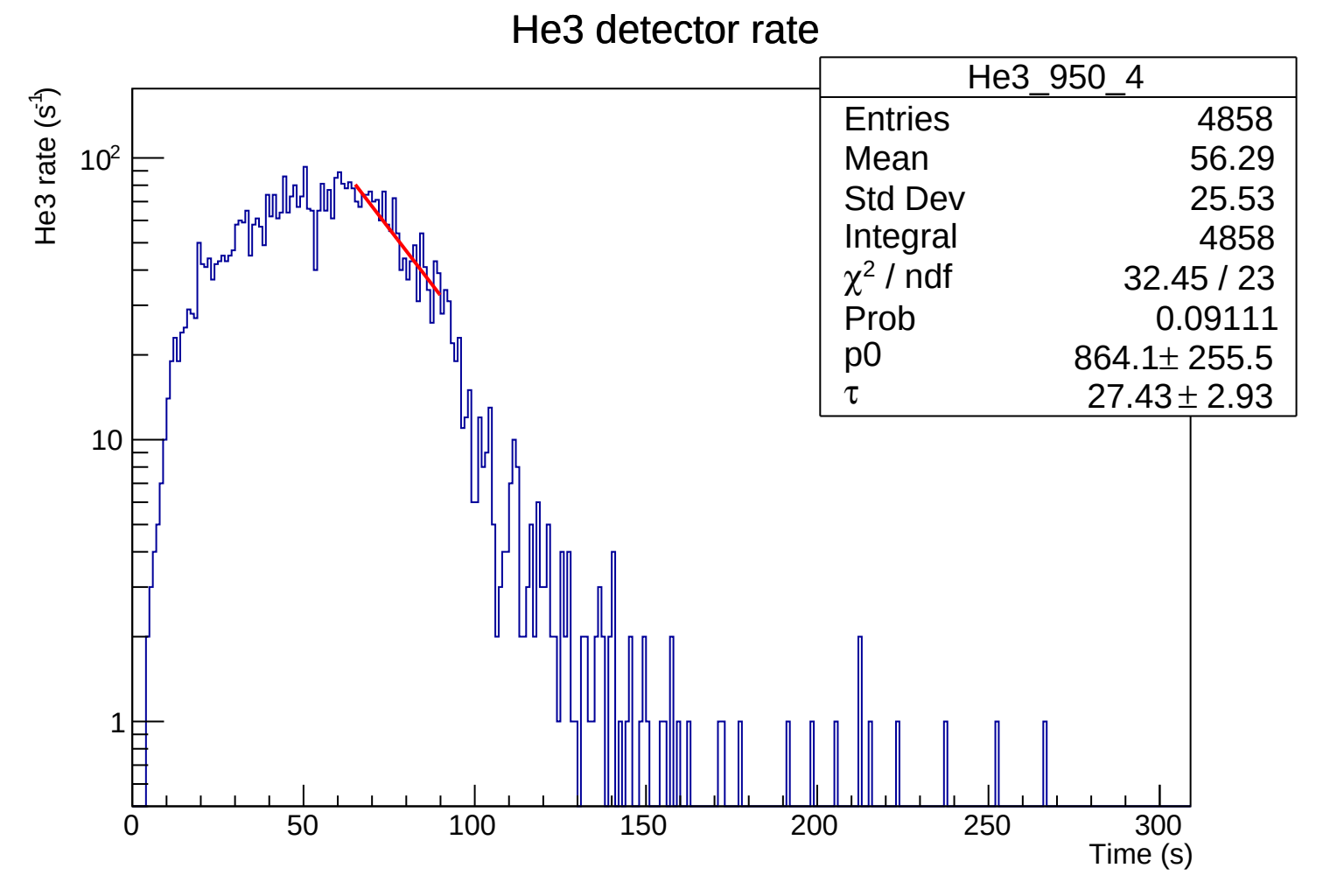

TCN18-040 (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 35.64 / 5
Prob 1.119e−06
p0 13.69 ± 0.1973
τ 26.28 ± 0.2798
UCN-count-to-monitor ratio
10
1
0
20
40
60
80
100
120
Storage time (s)

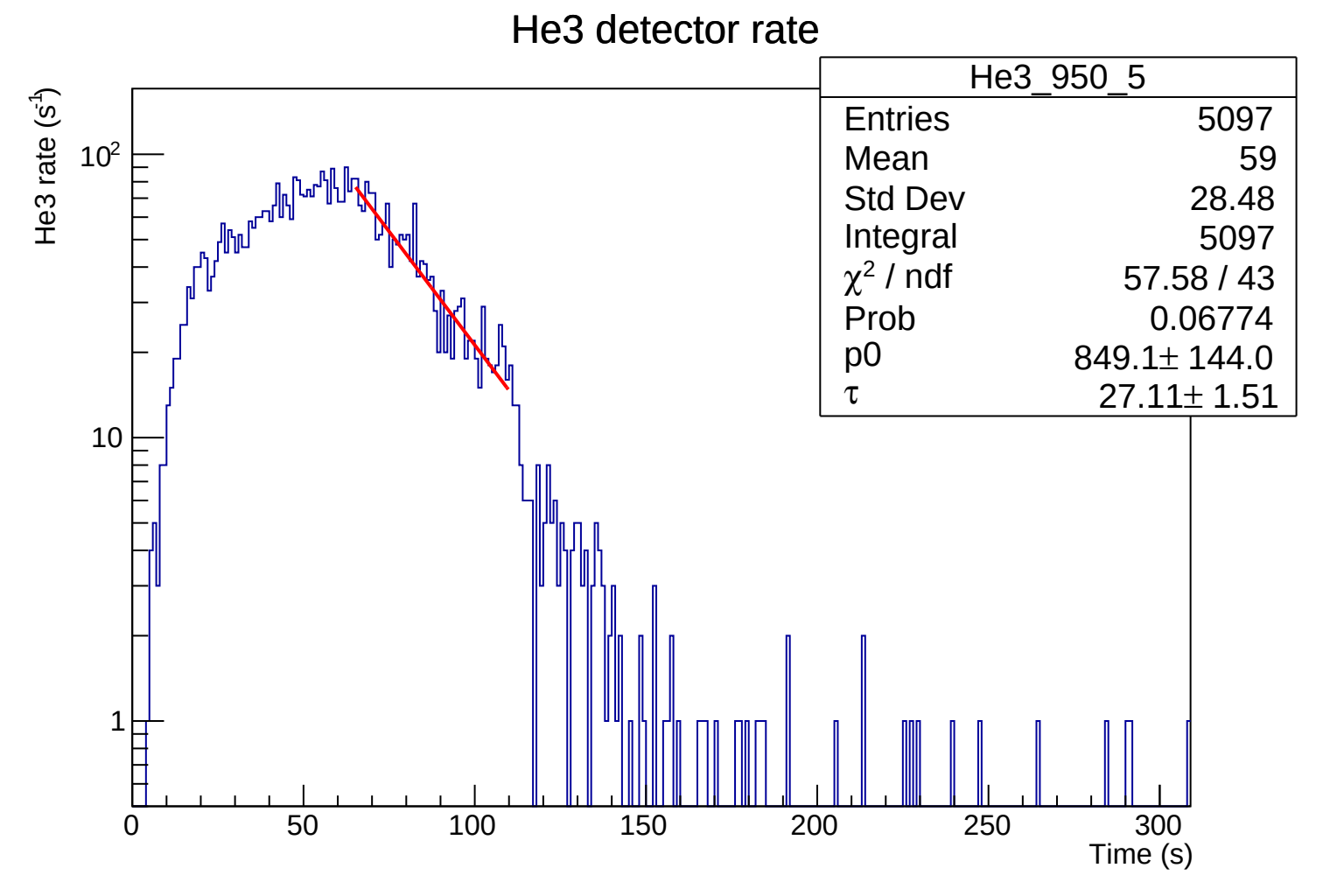

TCN18-040 (double exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 4.853 / 4
Prob 0.3027
N1 0.1882 ± 0.5243
τ1 175.1 ± 635.4
N2 14 ± 0.4306
τ2 24.53 ± 1.376
UCN-count-to-monitor ratio
10
1
0
20
40
60
80
100
120
Storage time (s)

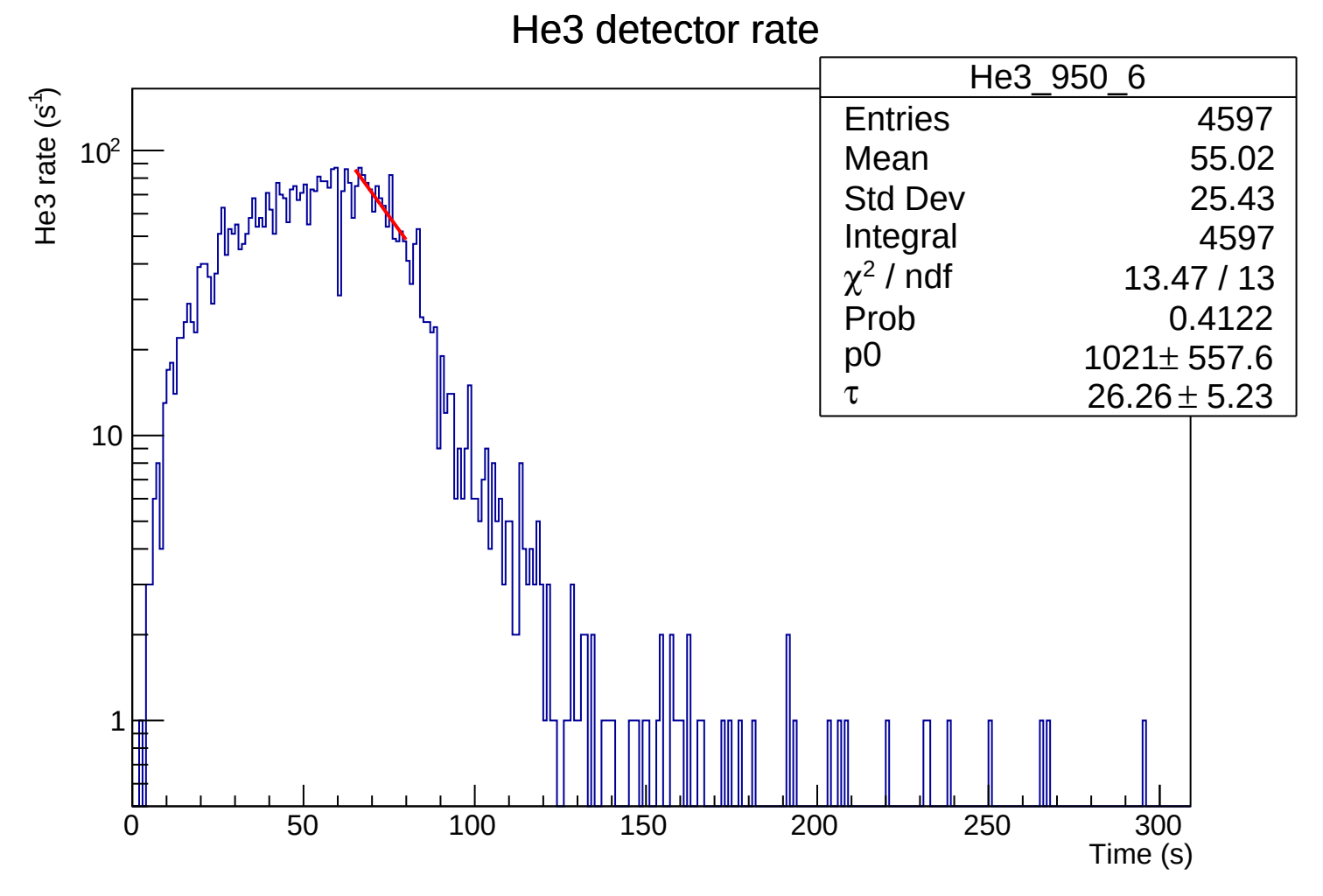

TCN18-040 (single exponential fit + background, unnormalized)
χ² / ndf 6.479 / 5
Prob 0.2624
p0 3.781e+04 ± 135.2
τ 25.19 ± 0.1618
Background 469 ± 32.42
UCN count
10⁴
10³
0
20
40
60
80
100
120
Storage time (s)


He3 detector rate
He3_950_1
Entries 5074
Mean 61.37
Std Dev 30.32
Integral 5074
χ² / ndf 104.2 / 106
Prob 0.5321
p0 1118 ± 112.5
τ 24.57 ± 0.67
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_950_3
Entries 5181
Mean 59.44
Std Dev 28.14
Integral 5181
χ² / ndf 90.01 / 63
Prob 0.01438
p0 1507 ± 185.1
τ 22.73 ± 0.74
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_950_4
Entries 4858
Mean 56.29
Std Dev 25.53
Integral 4858
χ² / ndf 32.45 / 23
Prob 0.09111
p0 864.1± 255.5
τ 27.43 ± 2.93
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_950_5
Entries 5097
Mean 59
Std Dev 28.48
Integral 5097
χ² / ndf 57.58 / 43
Prob 0.06774
p0 849.1± 144.0
τ 27.11± 1.51
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_950_6
Entries 4597
Mean 55.02
Std Dev 25.43
Integral 4597
χ² / ndf 13.47 / 13
Prob 0.4122
p0 1021 ± 557.6
τ 26.26 ± 5.23
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)

Average lifetime from He3 data:

τ = 24.1751993194 +/- 0.0467528389837 s