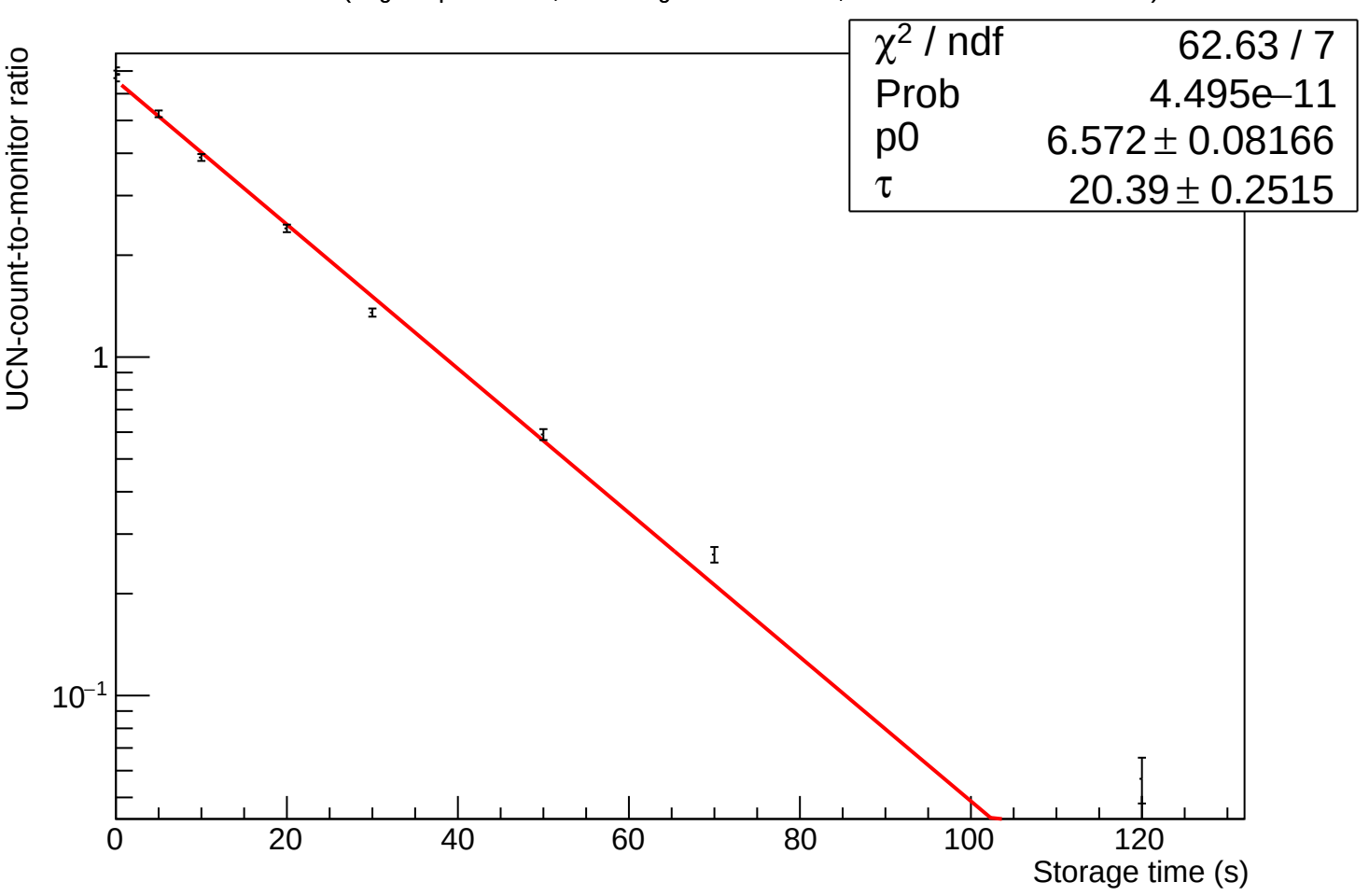
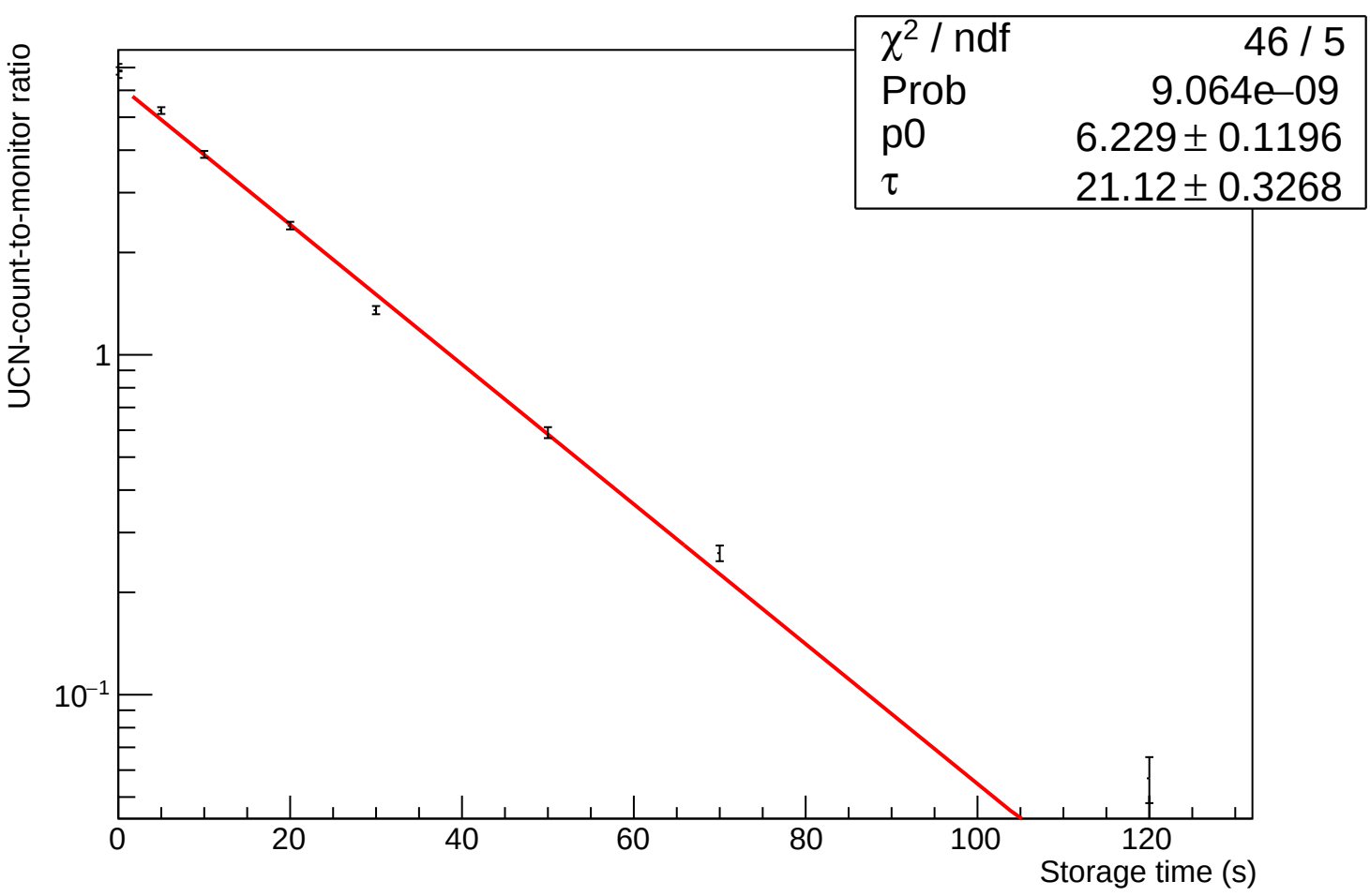
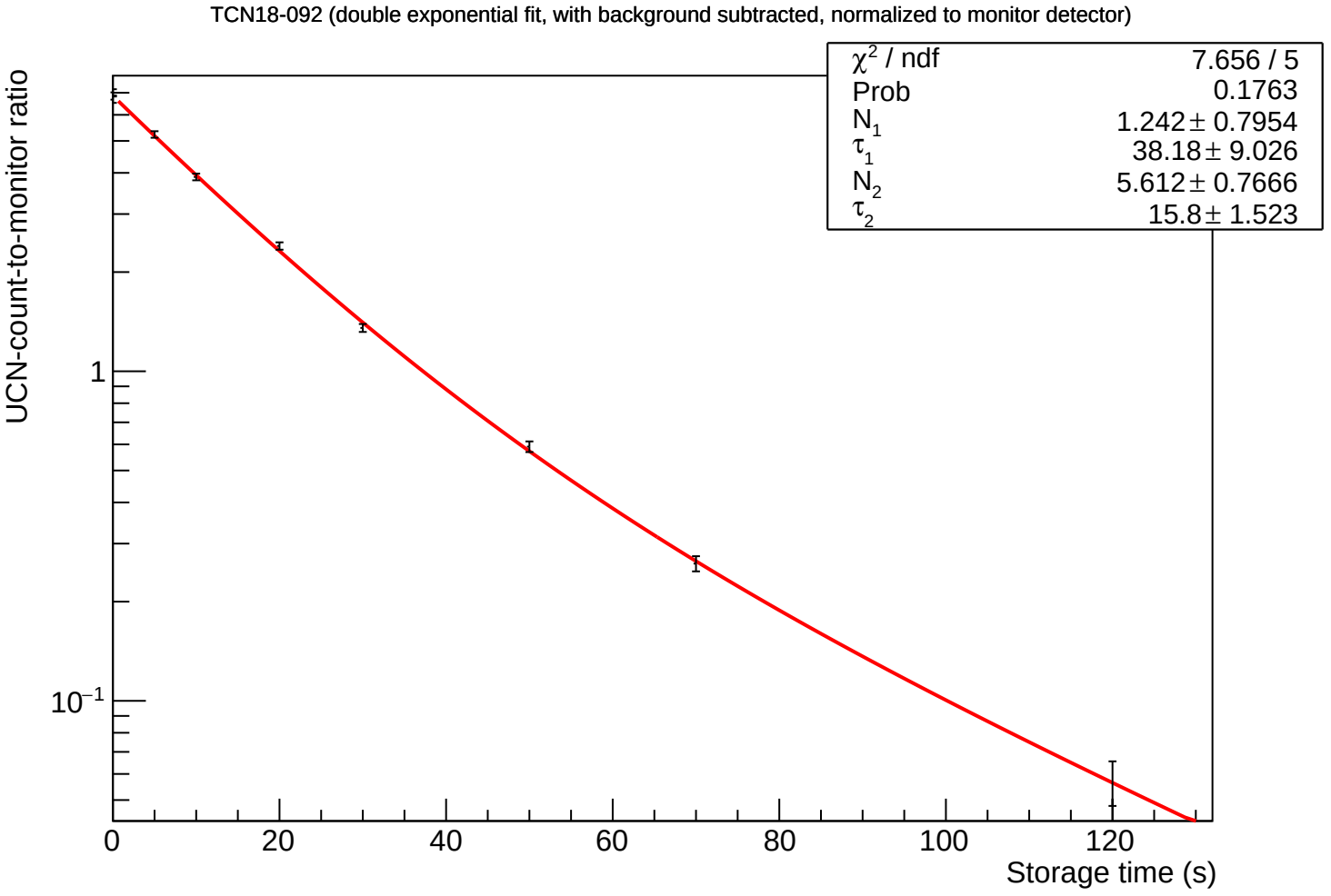
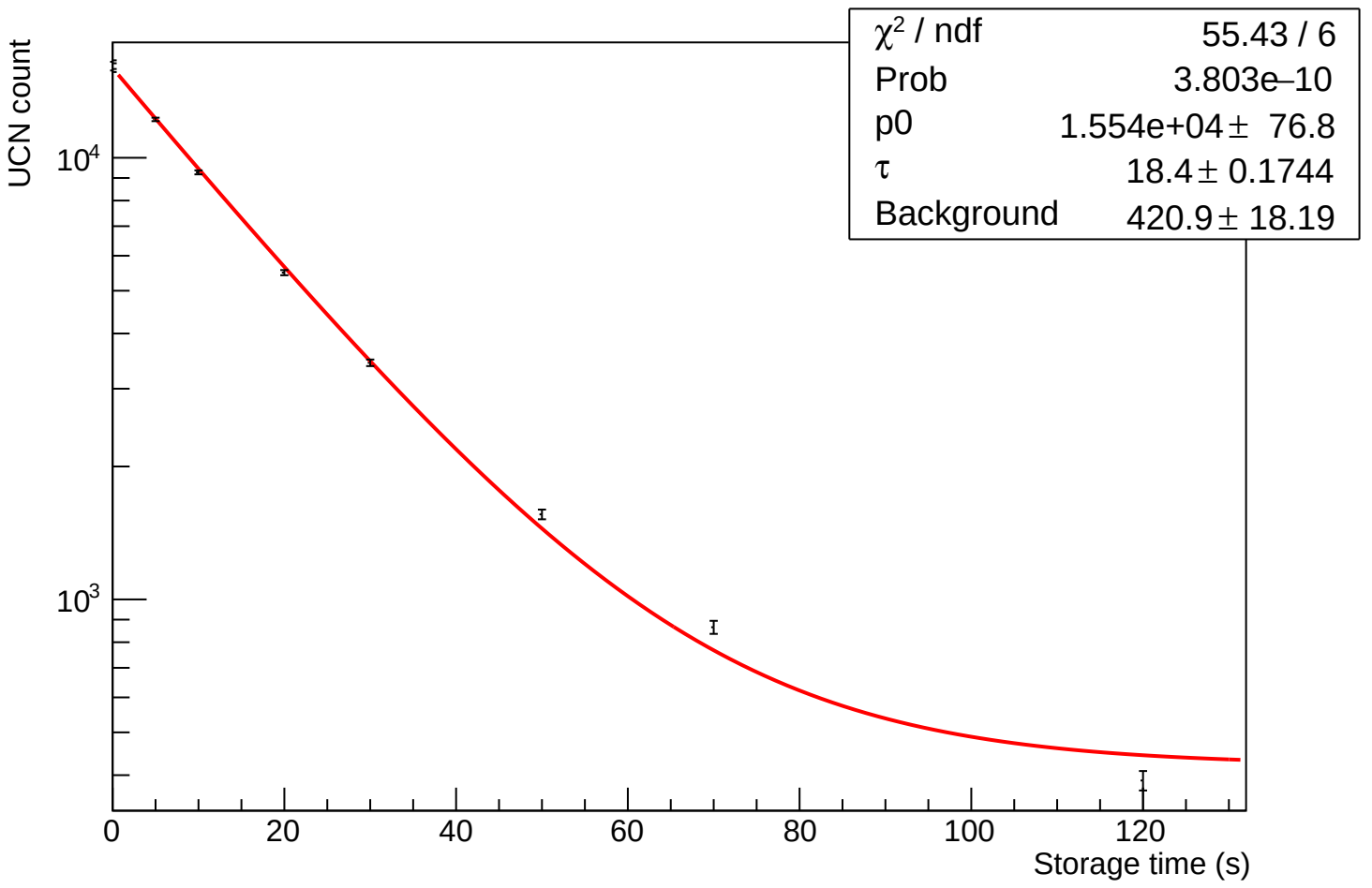
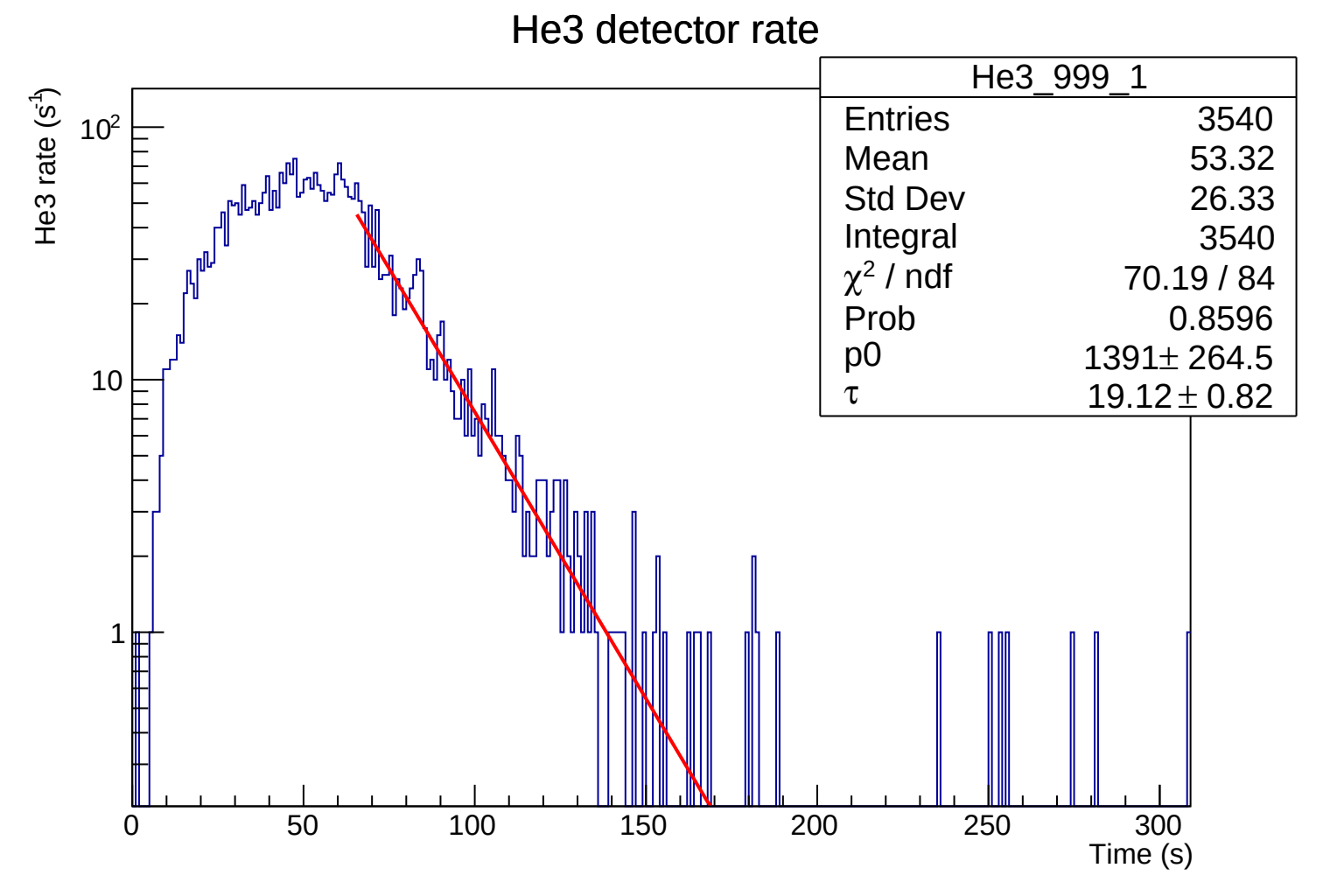
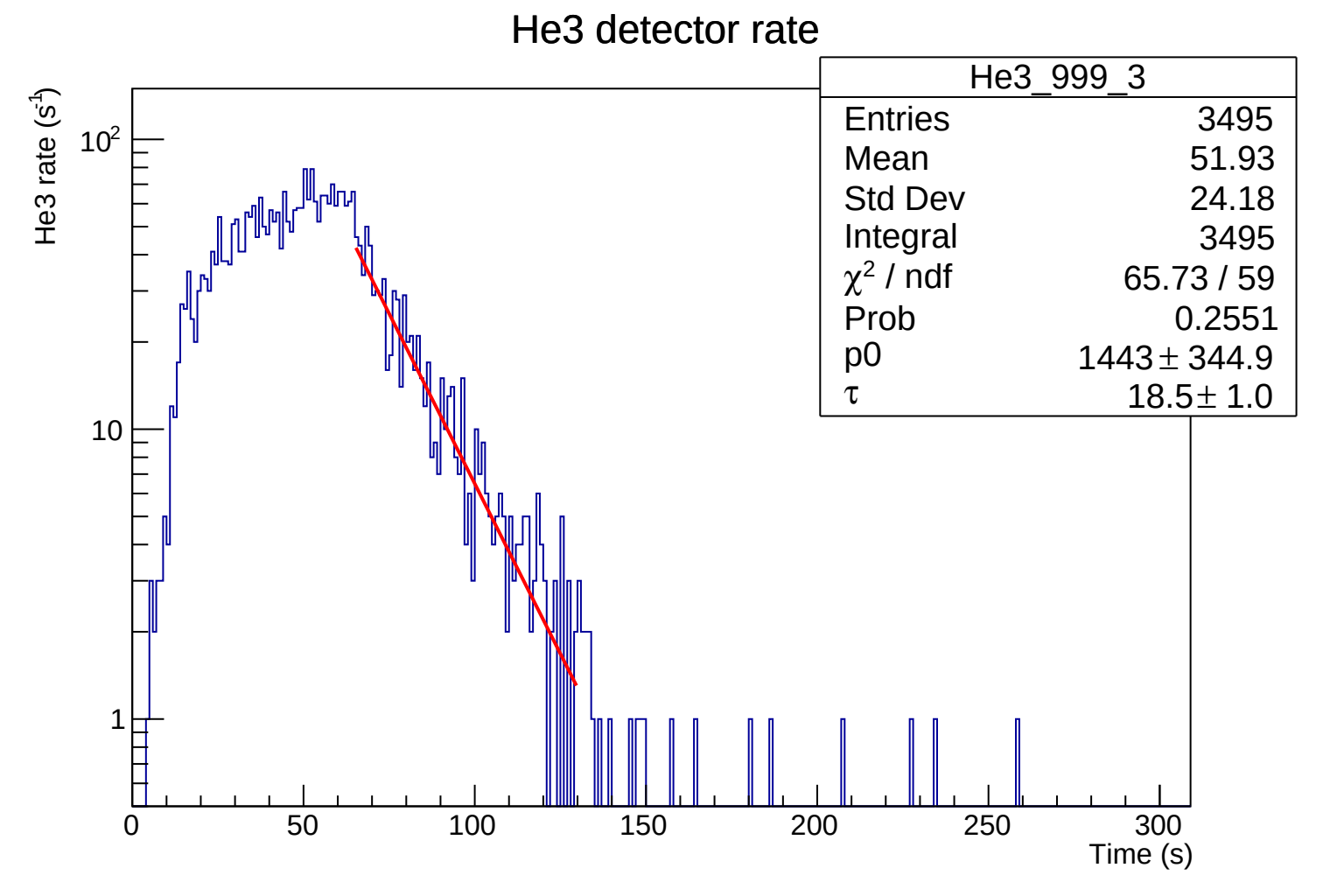

TCN18-092 (single exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 62.63 / 7
Prob 4.495e−11
p0 6.572 ± 0.08166
τ 20.39 ± 0.2515
UCN-count-to-monitor ratio
1
10⁻¹
0
20
40
60
80
100
120
Storage time (s)

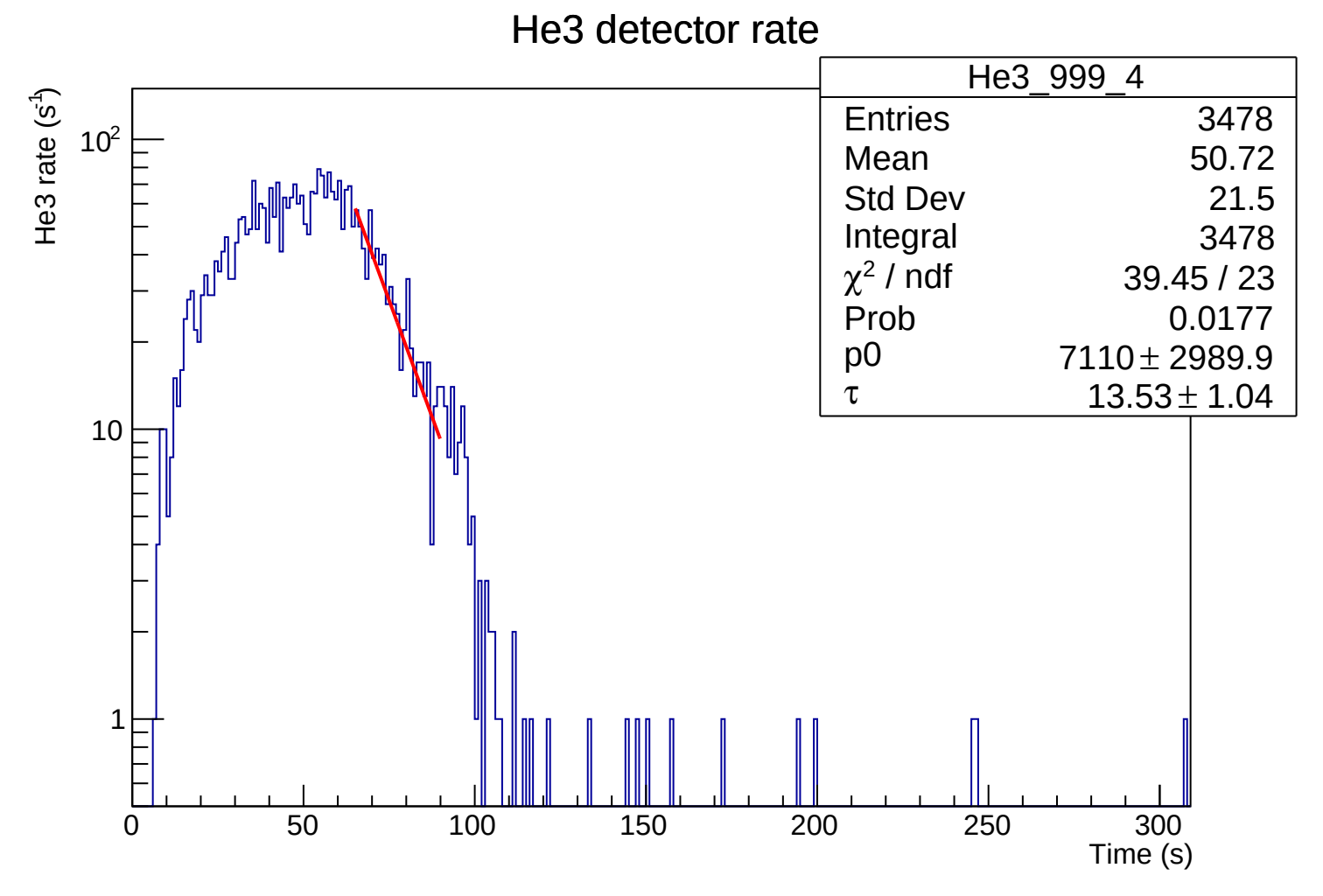

TCN18-092 (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 46 / 5
Prob 9.064e−09
p0 6.229 ± 0.1196
τ 21.12 ± 0.3268
UCN-count-to-monitor ratio
1
10⁻¹
0
20
40
60
80
100
120
Storage time (s)

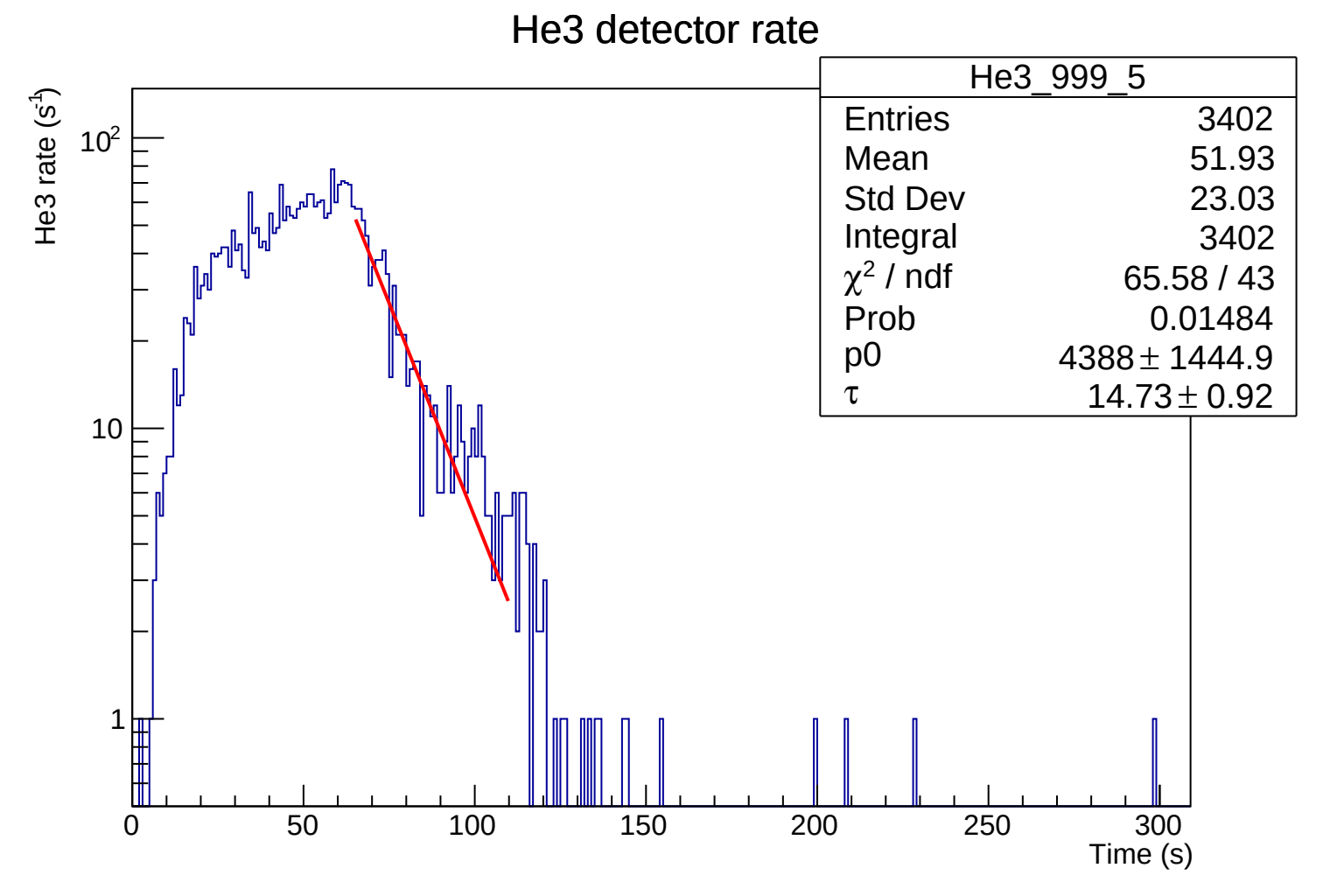

TCN18-092 (double exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 7.656 / 5
Prob 0.1763
N1 1.242 ± 0.7954
τ1 38.18 ± 9.026
N2 5.612 ± 0.7666
τ2 15.8 ± 1.523
UCN-count-to-monitor ratio
1
10⁻¹
0
20
40
60
80
100
120
Storage time (s)

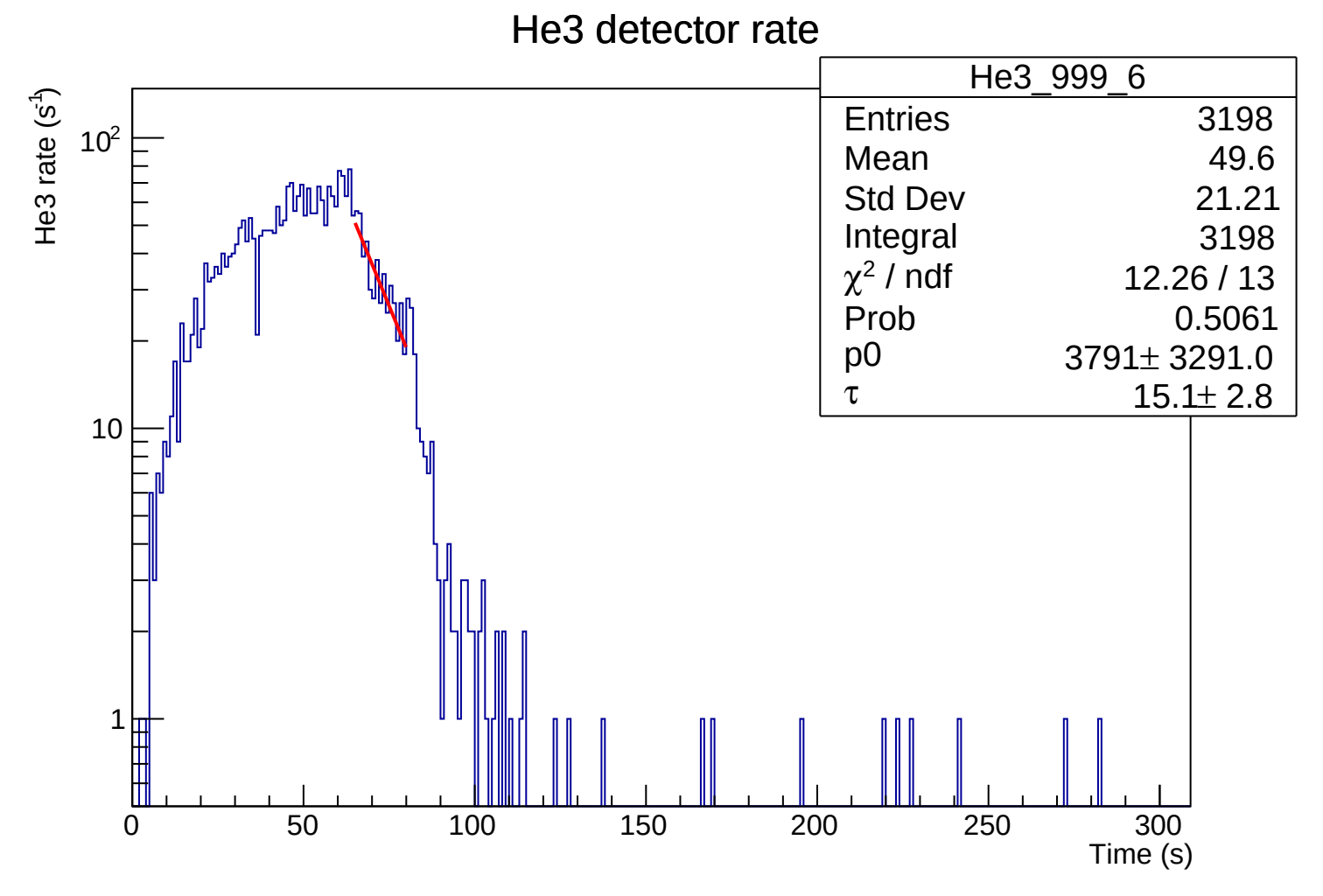

TCN18-092 (single exponential fit + background, unnormalized)
χ² / ndf 55.43 / 6
Prob 3.803e−10
p0 1.554e+04 ± 76.8
τ 18.4 ± 0.1744
Background 420.9 ± 18.19
UCN count
10⁴
10³
0
20
40
60
80
100
120
Storage time (s)


He3 detector rate
He3_999_1
Entries 3540
Mean 53.32
Std Dev 26.33
Integral 3540
χ² / ndf 70.19 / 84
Prob 0.8596
p0 1391± 264.5
τ 19.12 ± 0.82
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_999_3
Entries 3495
Mean 51.93
Std Dev 24.18
Integral 3495
χ² / ndf 65.73 / 59
Prob 0.2551
p0 1443 ± 344.9
τ 18.5 ± 1.0
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_999_4
Entries 3478
Mean 50.72
Std Dev 21.5
Integral 3478
χ² / ndf 39.45 / 23
Prob 0.0177
p0 7110 ± 2989.9
τ 13.53 ± 1.04
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_999_5
Entries 3402
Mean 51.93
Std Dev 23.03
Integral 3402
χ² / ndf 65.58 / 43
Prob 0.01484
p0 4388 ± 1444.9
τ 14.73 ± 0.92
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_999_6
Entries 3198
Mean 49.6
Std Dev 21.21
Integral 3198
χ² / ndf 12.26 / 13
Prob 0.5061
p0 3791± 3291.0
τ 15.1± 2.8
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)

Average lifetime from He3 data:

τ = 16.6751491377 +/- 0.0447155346776 s