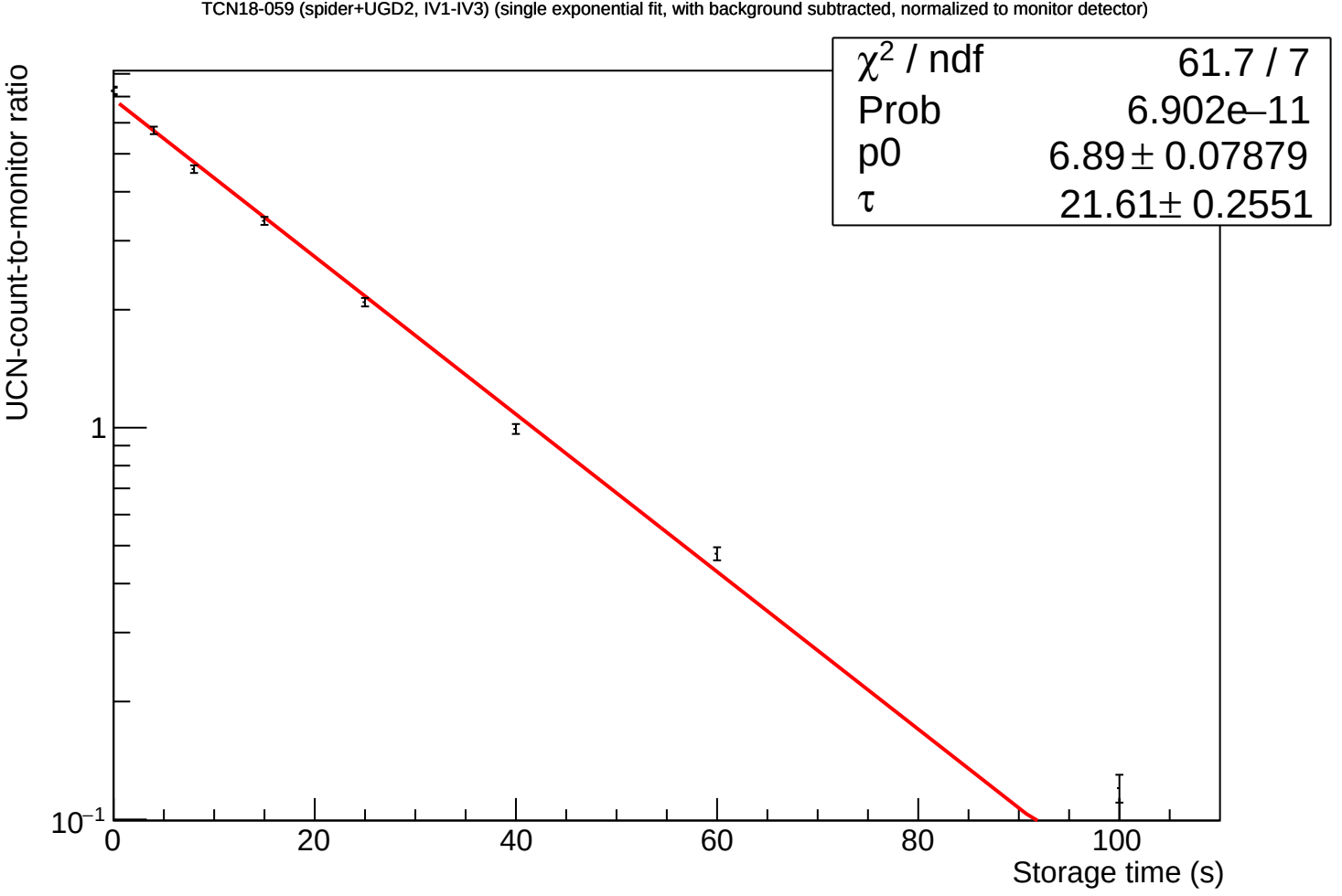
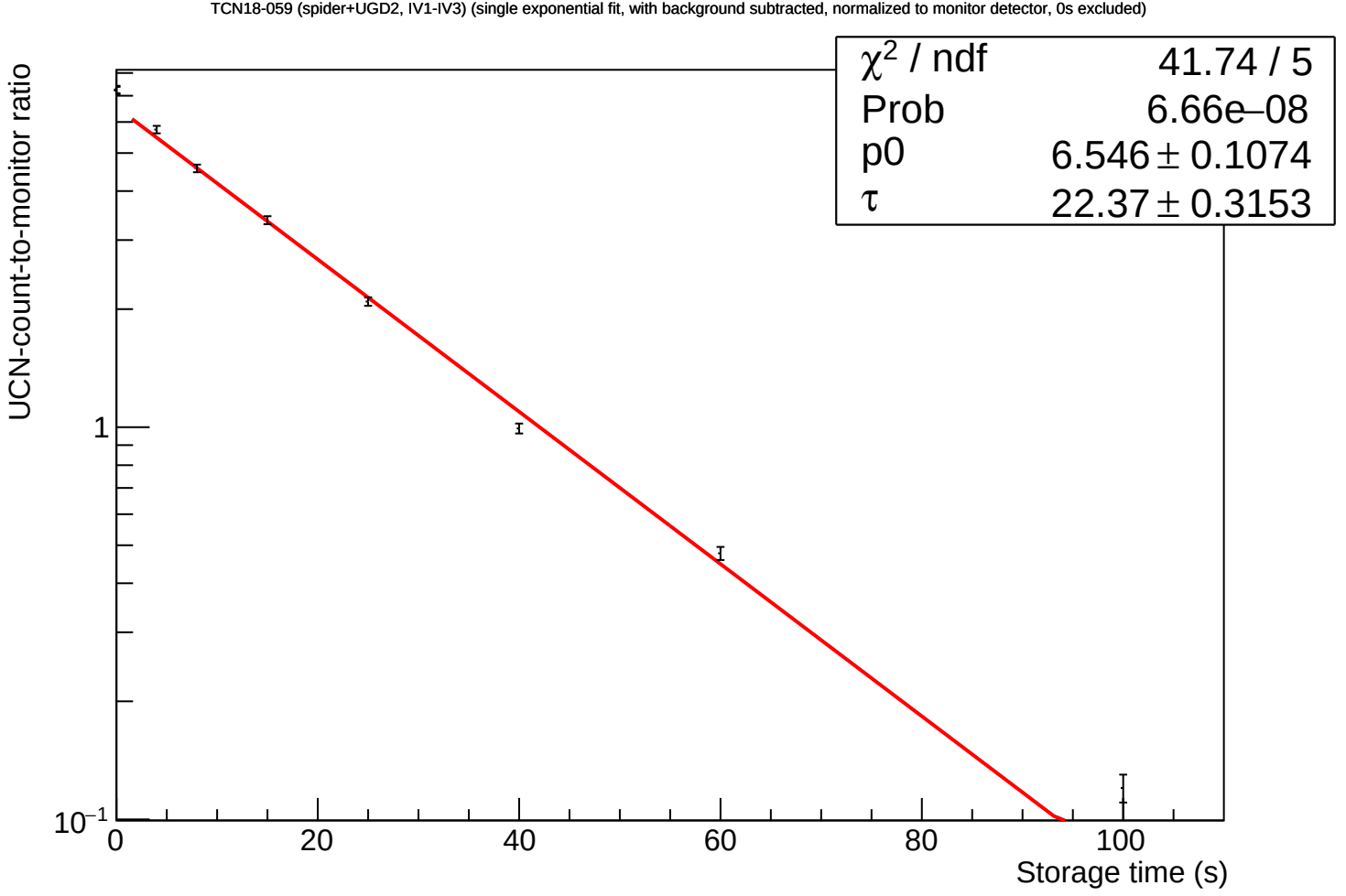
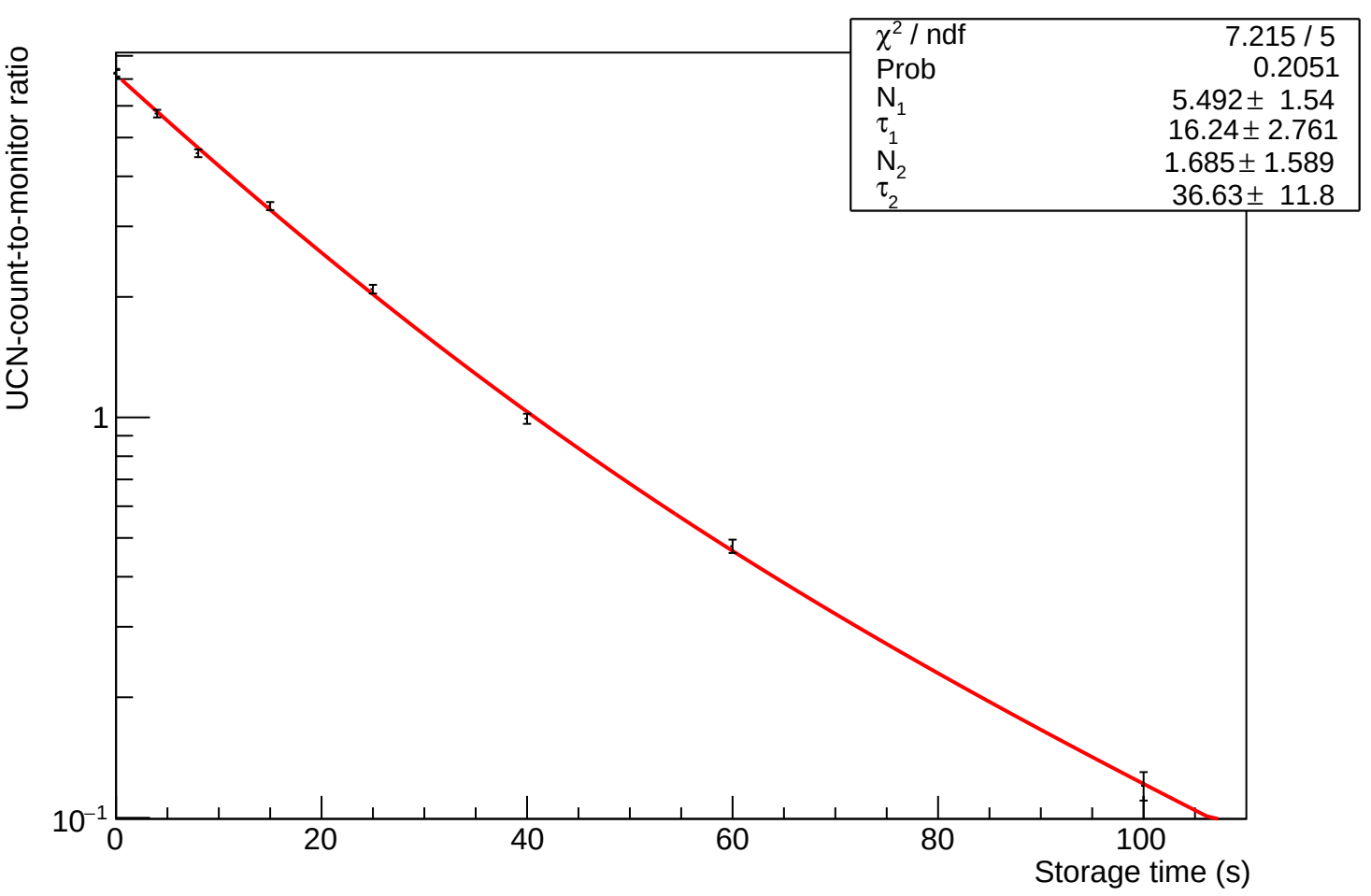
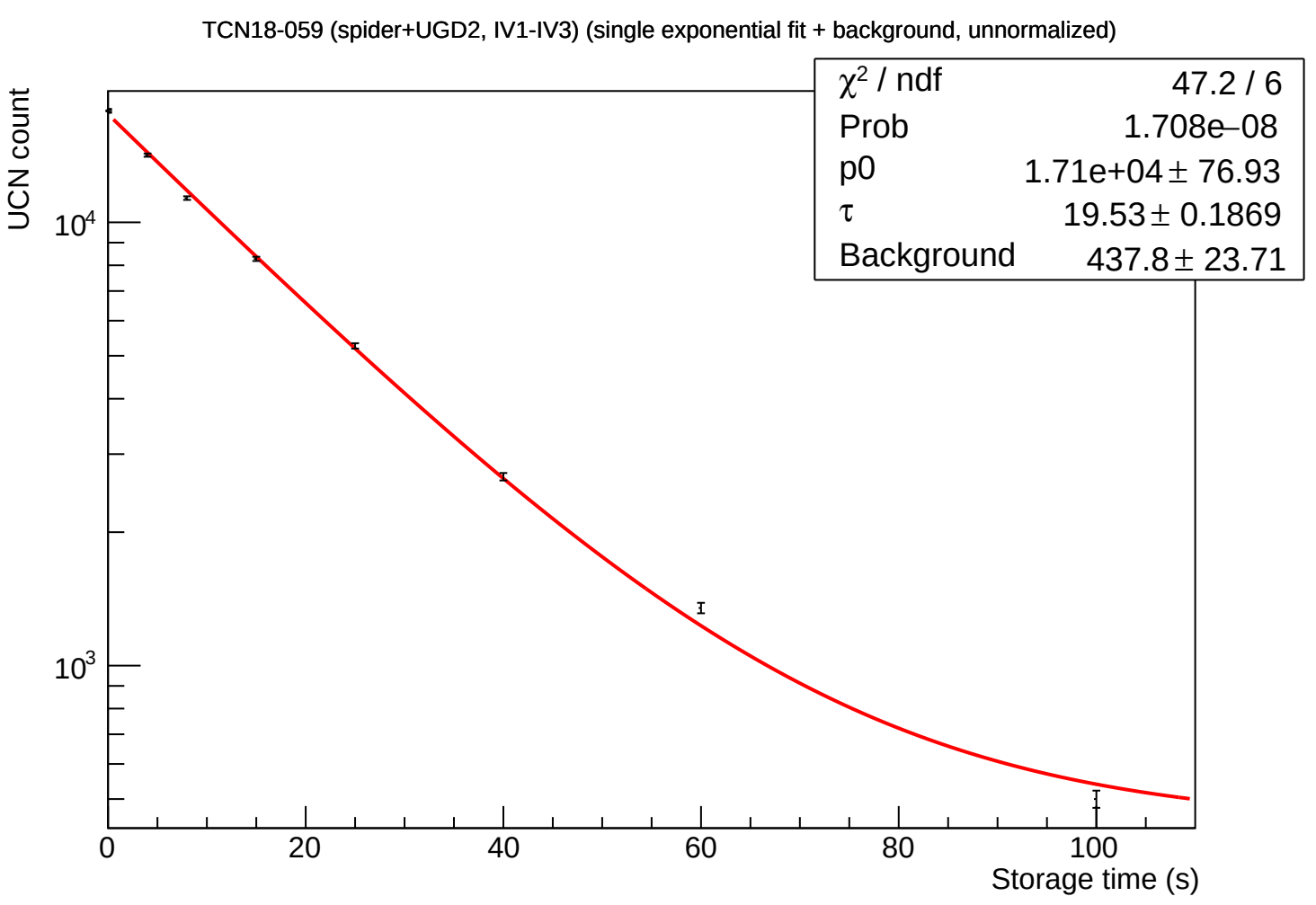
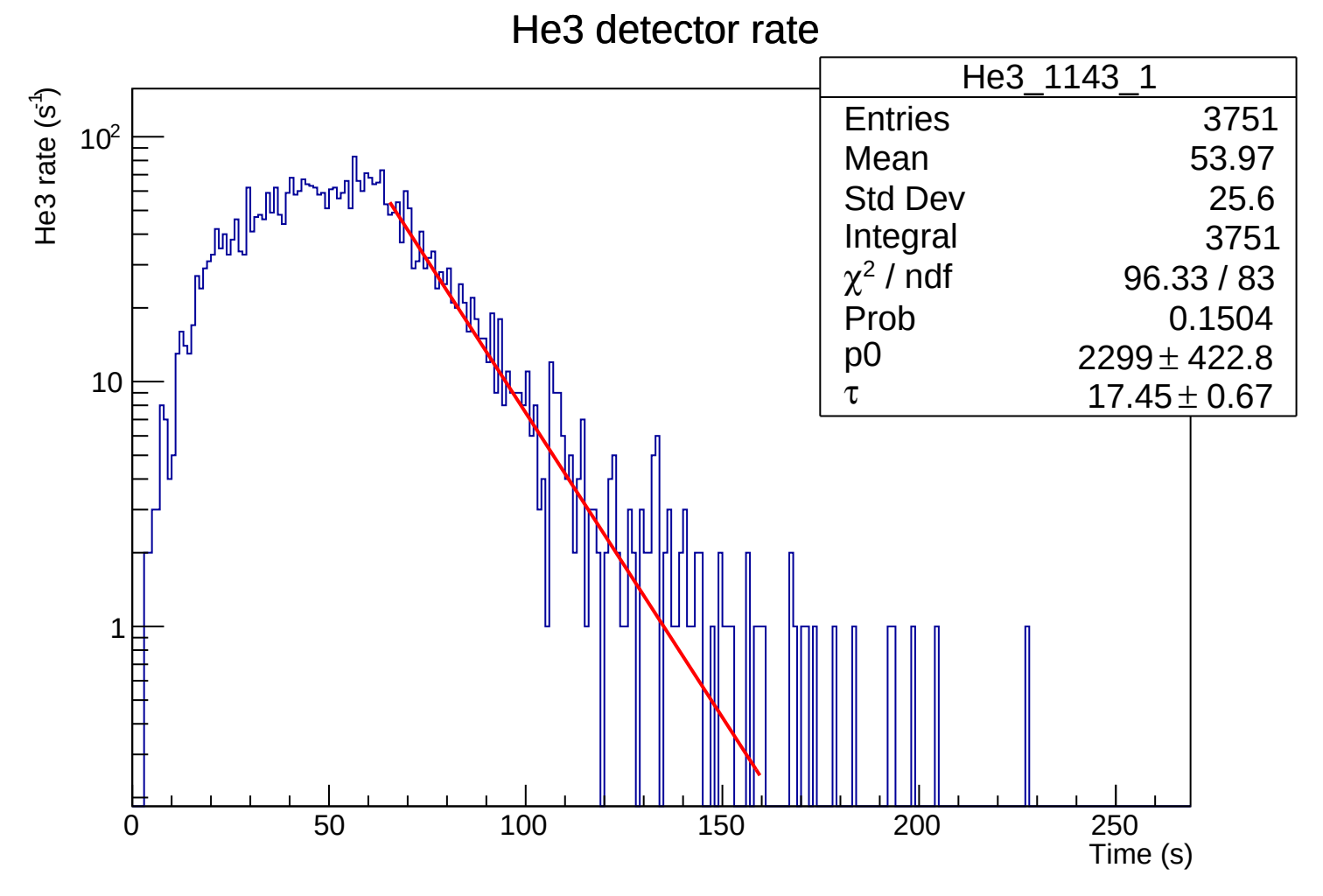
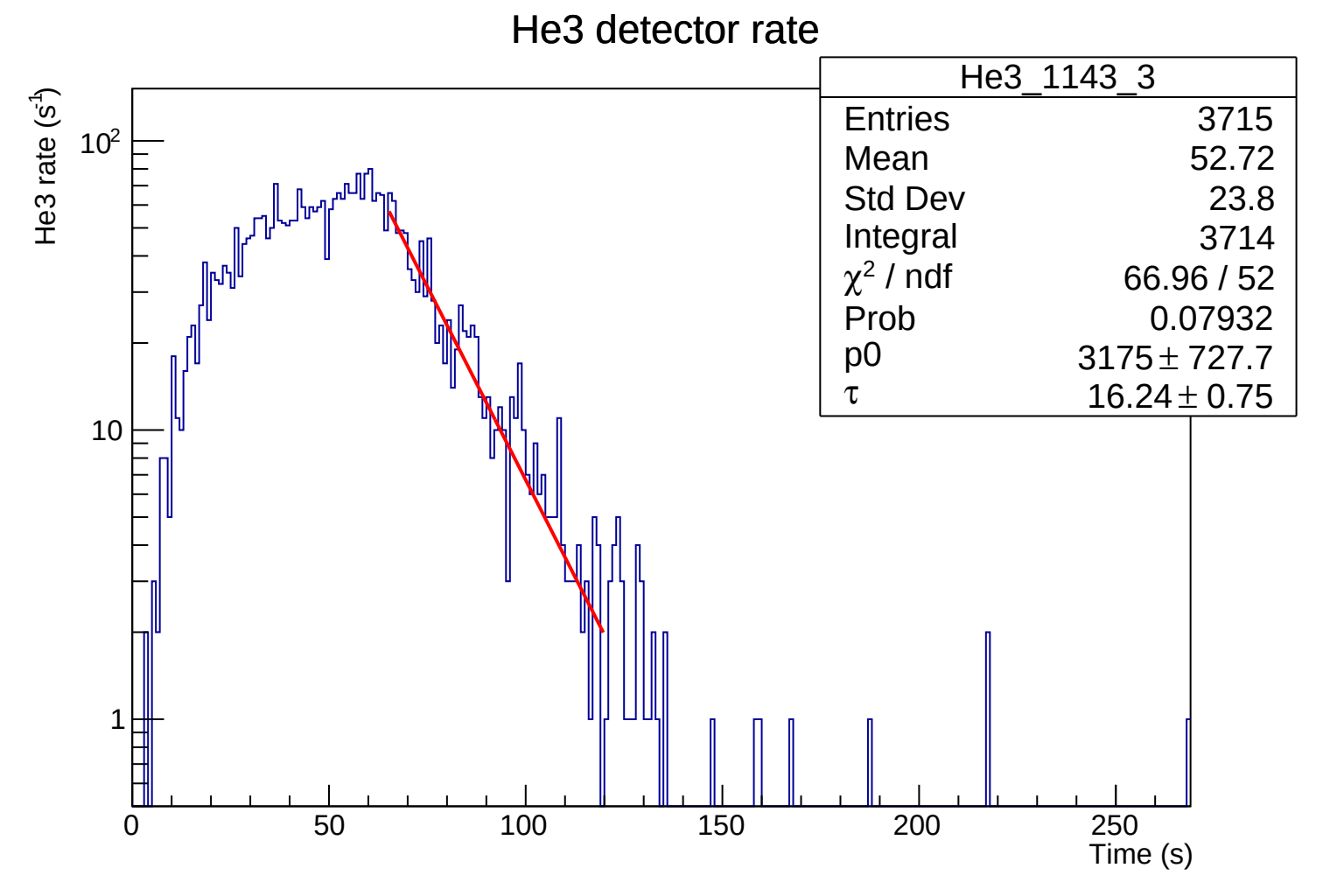

TCN18-059 (spider+UGD2, IV1-IV3) (single exponential fit, with background subtracted, normalized to monitor detector)
χ2 / ndf 61.7 / 7
Prob 6.902e–11
p0 6.89 ± 0.07879
τ 21.61 ± 0.2551
UCN-count-to-monitor ratio
1
10−1
0
20
40
60
80
100
Storage time (s)

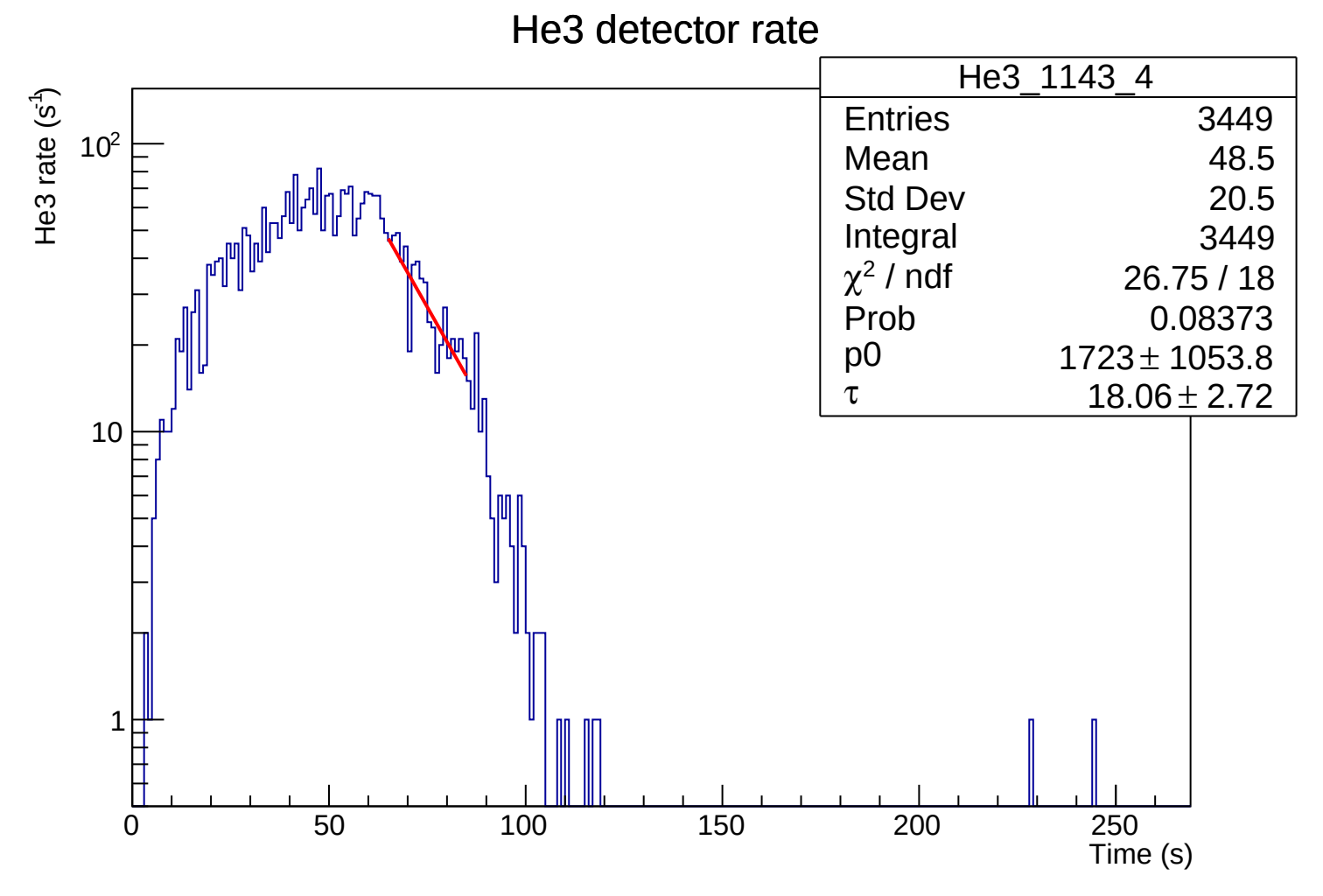

TCN18-059 (spider+UGD2, IV1-IV3) (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 41.74 / 5
Prob 6.66e–08
p0 6.546 ± 0.1074
τ 22.37 ± 0.3153
UCN-count-to-monitor ratio
1
10⁻¹
0
20
40
60
80
100
Storage time (s)

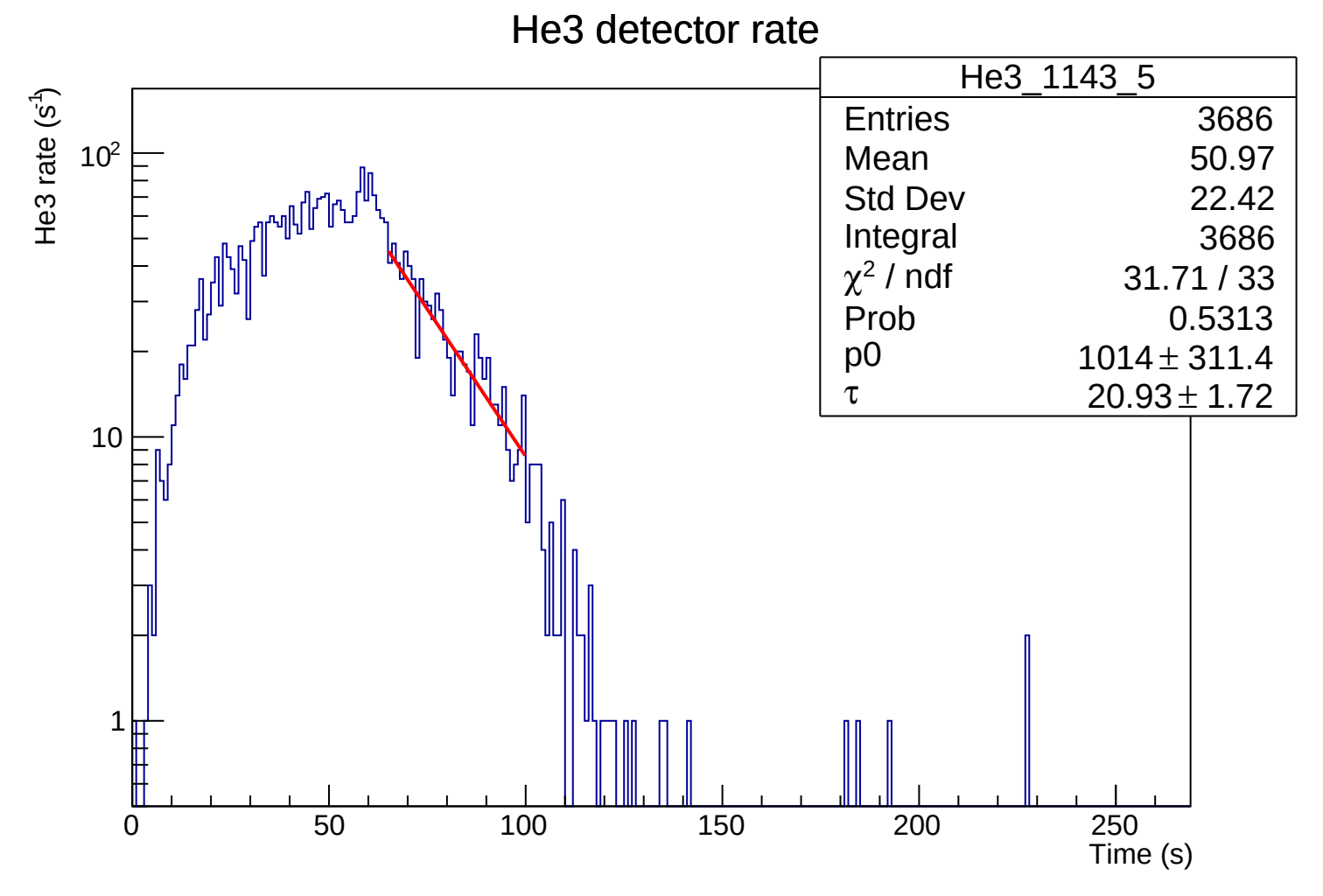

TCN18-059 (spider+UGD2, IV1-IV3) (double exponential fit, with background subtracted, normalized to monitor detector)
χ^2 / ndf 7.215 / 5
Prob 0.2051
N_1 5.492 ± 1.54
τ_1 16.24 ± 2.761
N_2 1.685 ± 1.589
τ_2 36.63 ± 11.8
UCN-count-to-monitor ratio
1
10^{-1}
0
20
40
60
80
100
Storage time (s)


TCN18-059 (spider+UGD2, IV1-IV3) (single exponential fit + background, unnormalized)
χ² / ndf 47.2 / 6
Prob 1.708e−08
p0 1.71e+04 ± 76.93
τ 19.53 ± 0.1869
Background 437.8 ± 23.71
UCN count
10⁴
10³
0
20
40
60
80
100
Storage time (s)


He3 detector rate
He3_1143_1
Entries 3751
Mean 53.97
Std Dev 25.6
Integral 3751
χ² / ndf 96.33 / 83
Prob 0.1504
p0 2299 ± 422.8
τ 17.45 ± 0.67
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_1143_3
Entries 3715
Mean 52.72
Std Dev 23.8
Integral 3714
χ² / ndf 66.96 / 52
Prob 0.07932
p0 3175 ± 727.7
τ 16.24 ± 0.75
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_1143_4
Entries 3449
Mean 48.5
Std Dev 20.5
Integral 3449
χ² / ndf 26.75 / 18
Prob 0.08373
p0 1723 ± 1053.8
τ 18.06 ± 2.72
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_1143_5
Entries 3686
Mean 50.97
Std Dev 22.42
Integral 3686
χ² / ndf 31.71 / 33
Prob 0.5313
p0 1014 ± 311.4
τ 20.93 ± 1.72
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

Average lifetime from He3 data:

τ = 17.2557434092 +/- 0.0510356818655 s