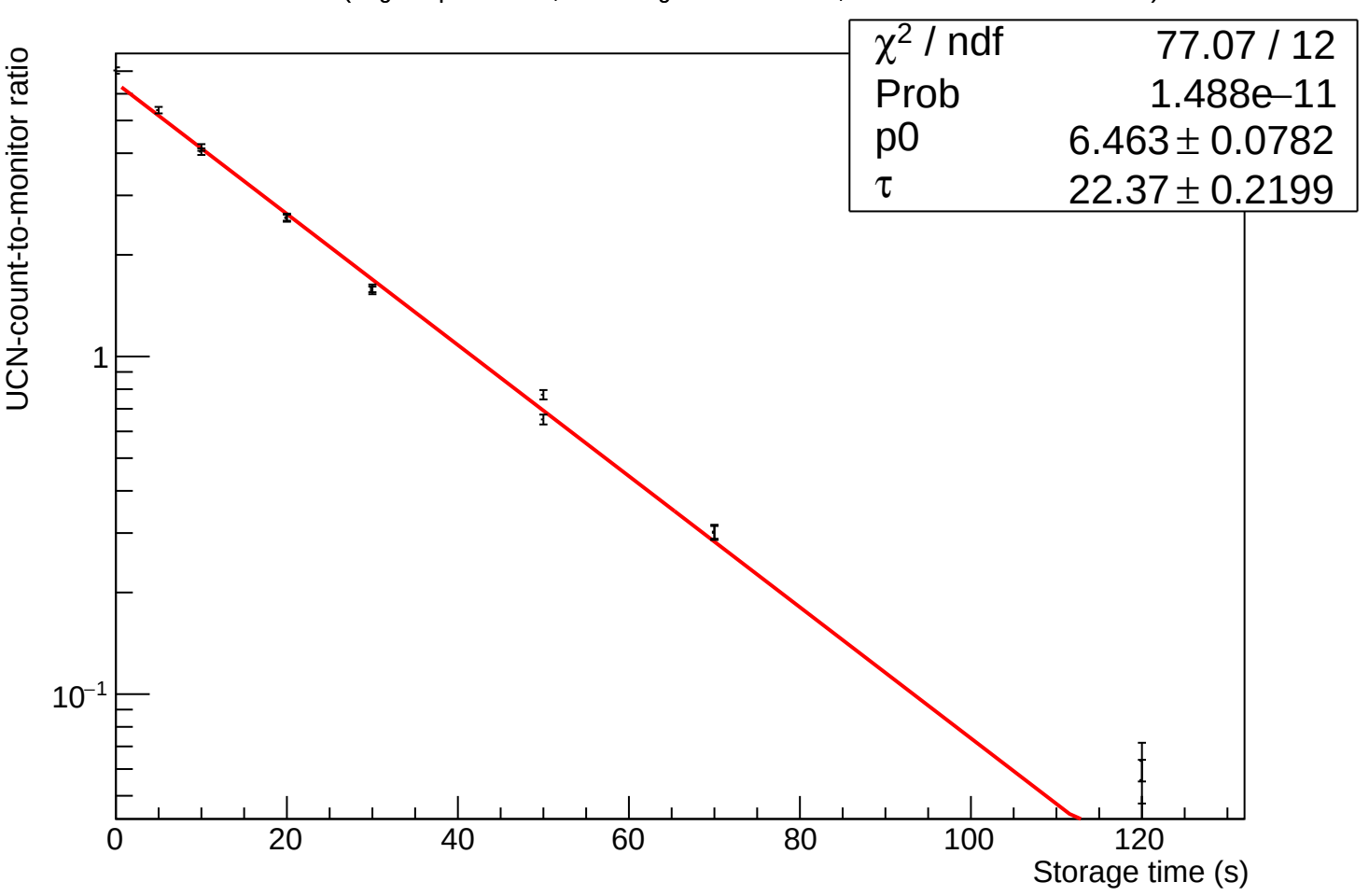
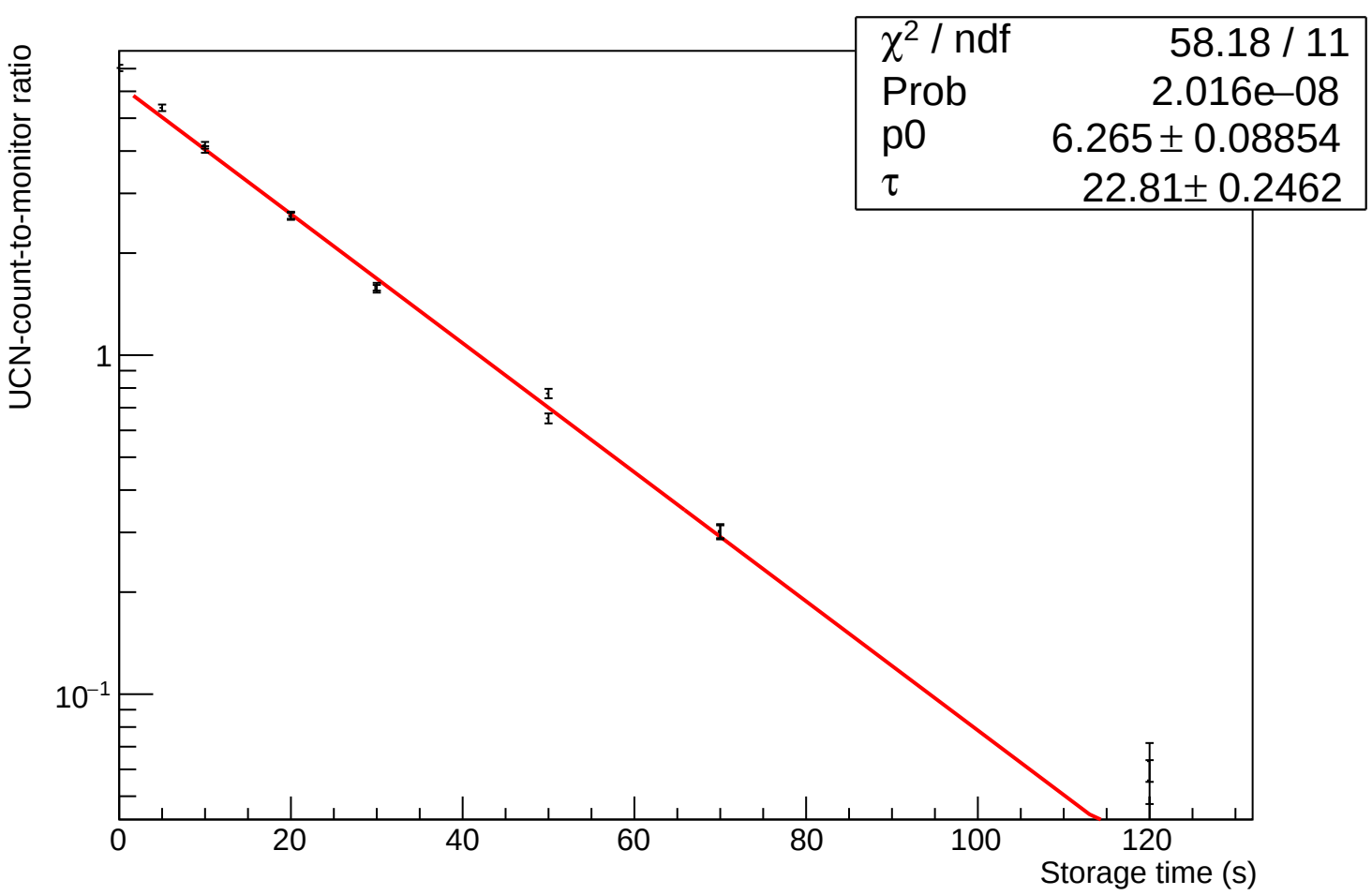
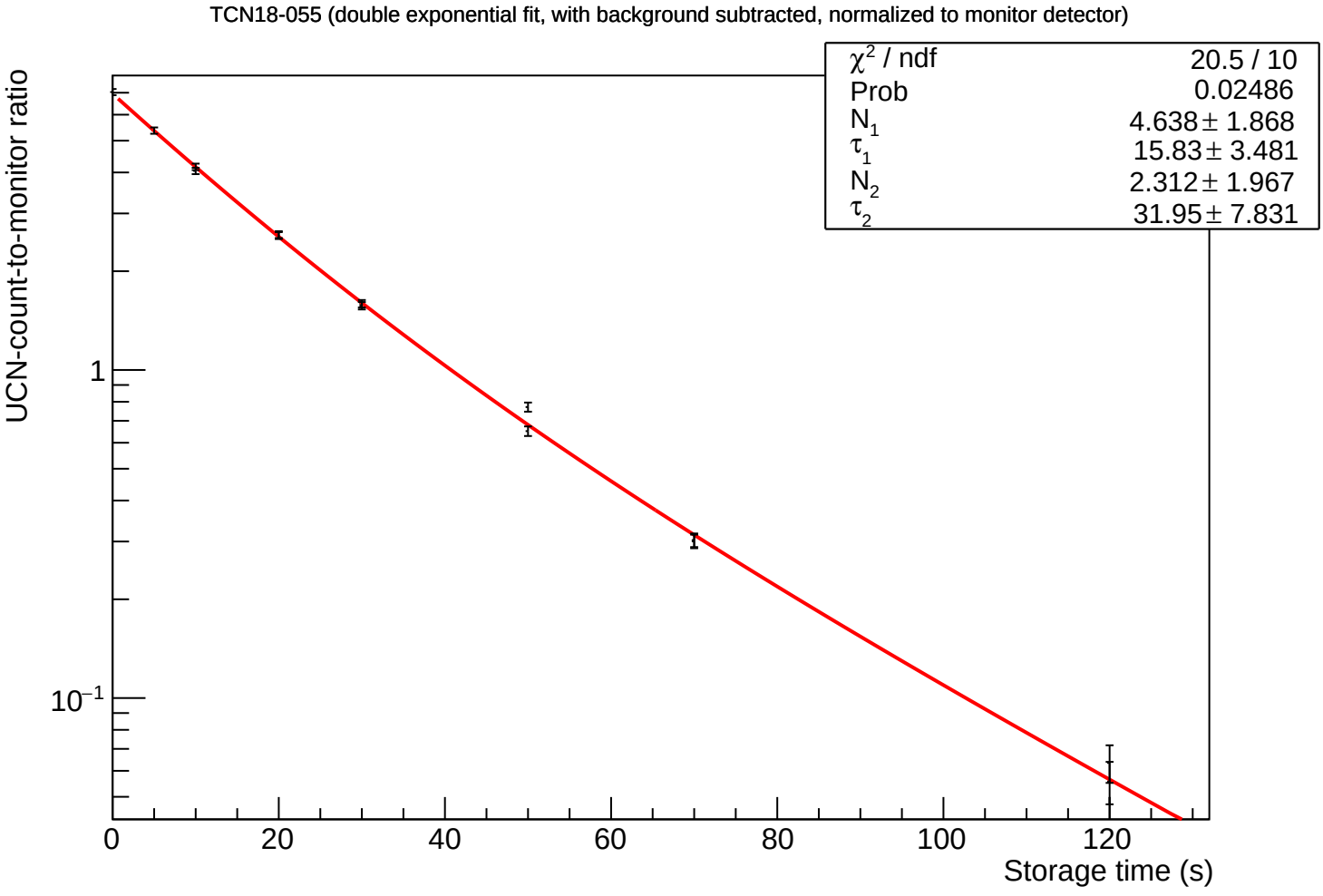
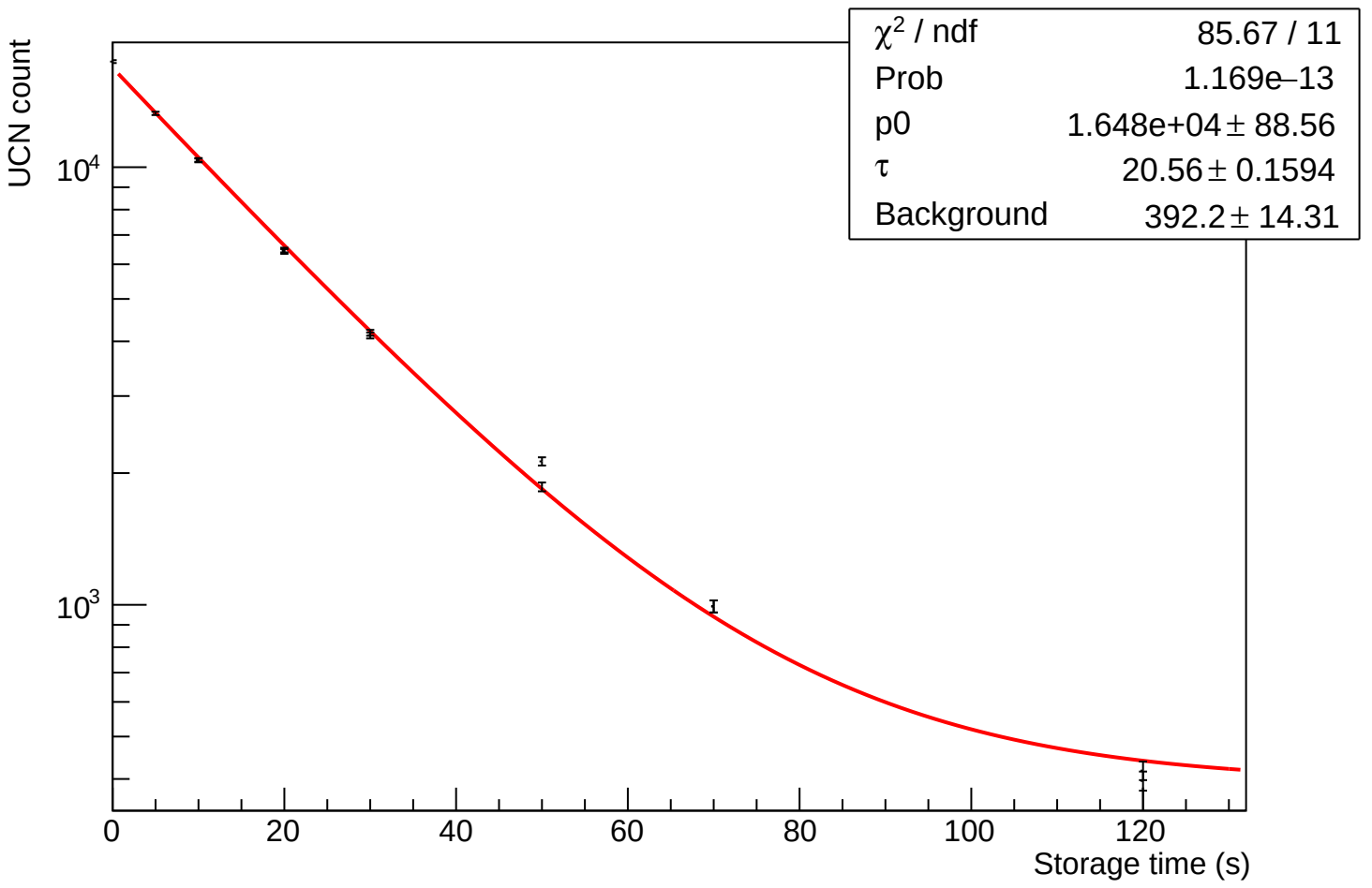
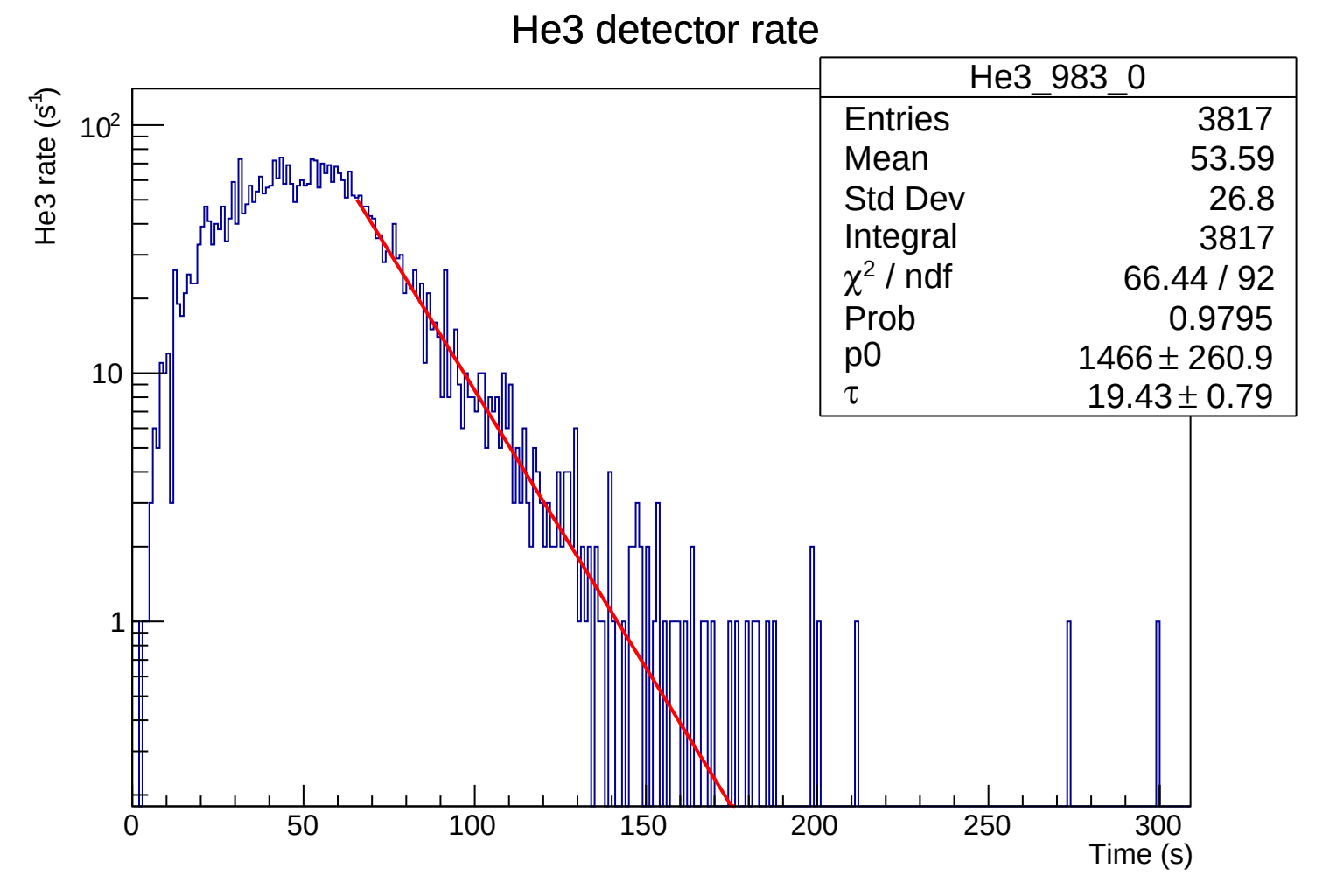
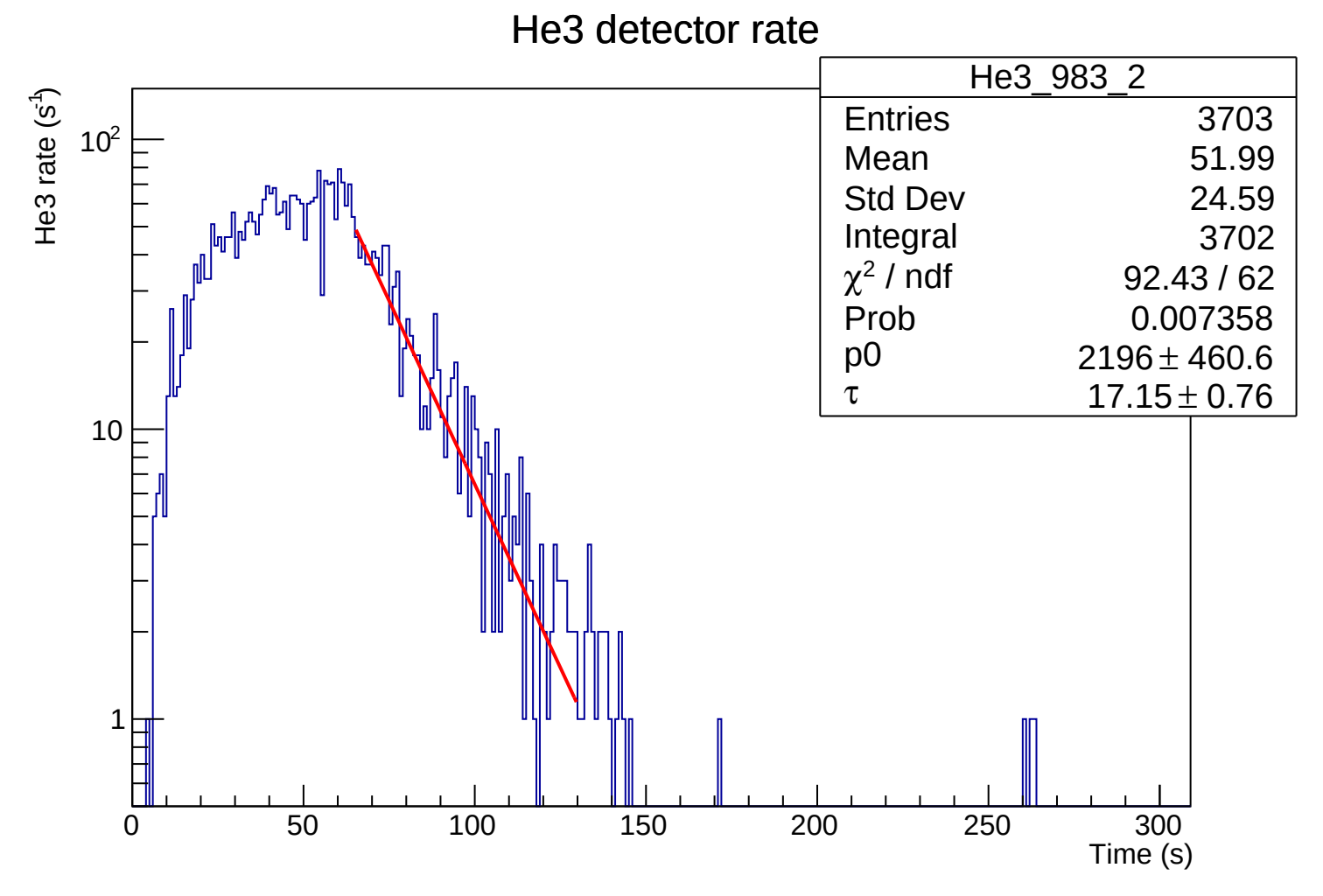

TCN18-055 (single exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 77.07 / 12
Prob 1.488e−11
p0 6.463 ± 0.0782
τ 22.37 ± 0.2199
UCN-count-to-monitor ratio
1
10⁻¹
0
20
40
60
80
100
120
Storage time (s)

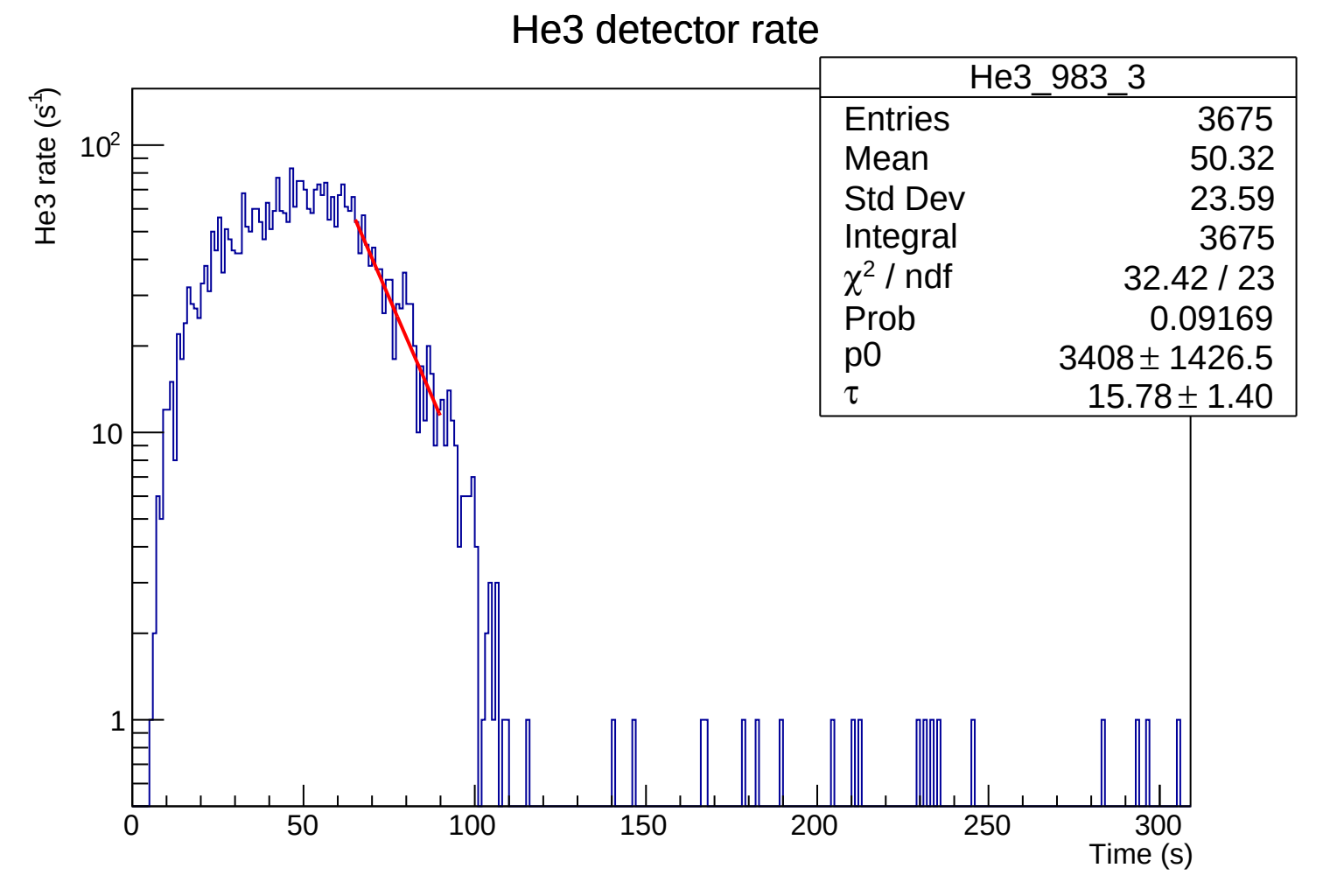

TCN18-055 (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 58.18 / 11
Prob 2.016e−08
p0 6.265 ± 0.08854
τ 22.81 ± 0.2462
UCN-count-to-monitor ratio
1
10⁻¹
0
20
40
60
80
100
120
Storage time (s)

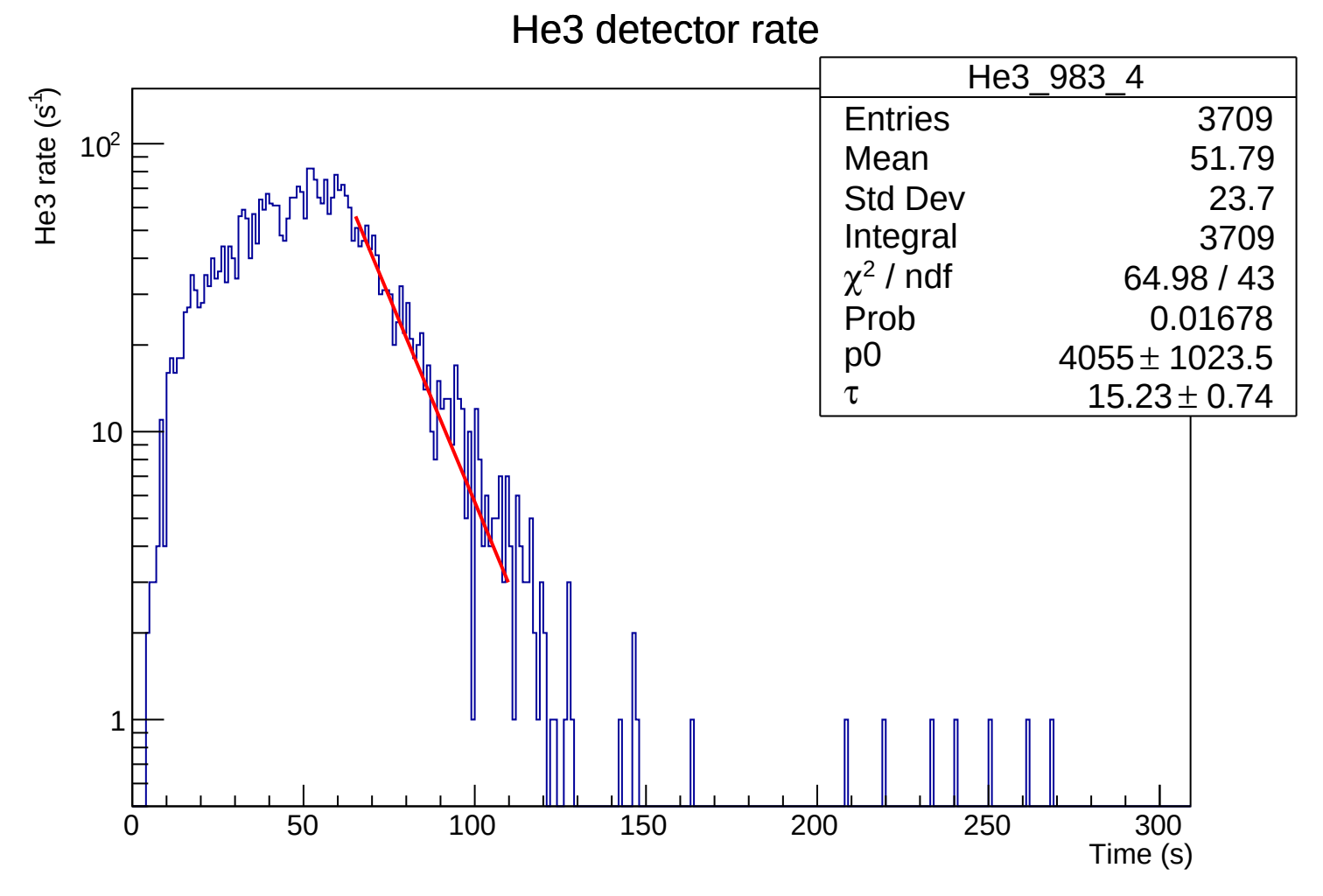

TCN18-055 (double exponential fit, with background subtracted, normalized to monitor detector)
χ^2 / ndf 20.5 / 10
Prob 0.02486
N_1 4.638 ± 1.868
τ_1 15.83 ± 3.481
N_2 2.312 ± 1.967
τ_2 31.95 ± 7.831
UCN-count-to-monitor ratio
1
10^{-1}
0
20
40
60
80
100
120
Storage time (s)

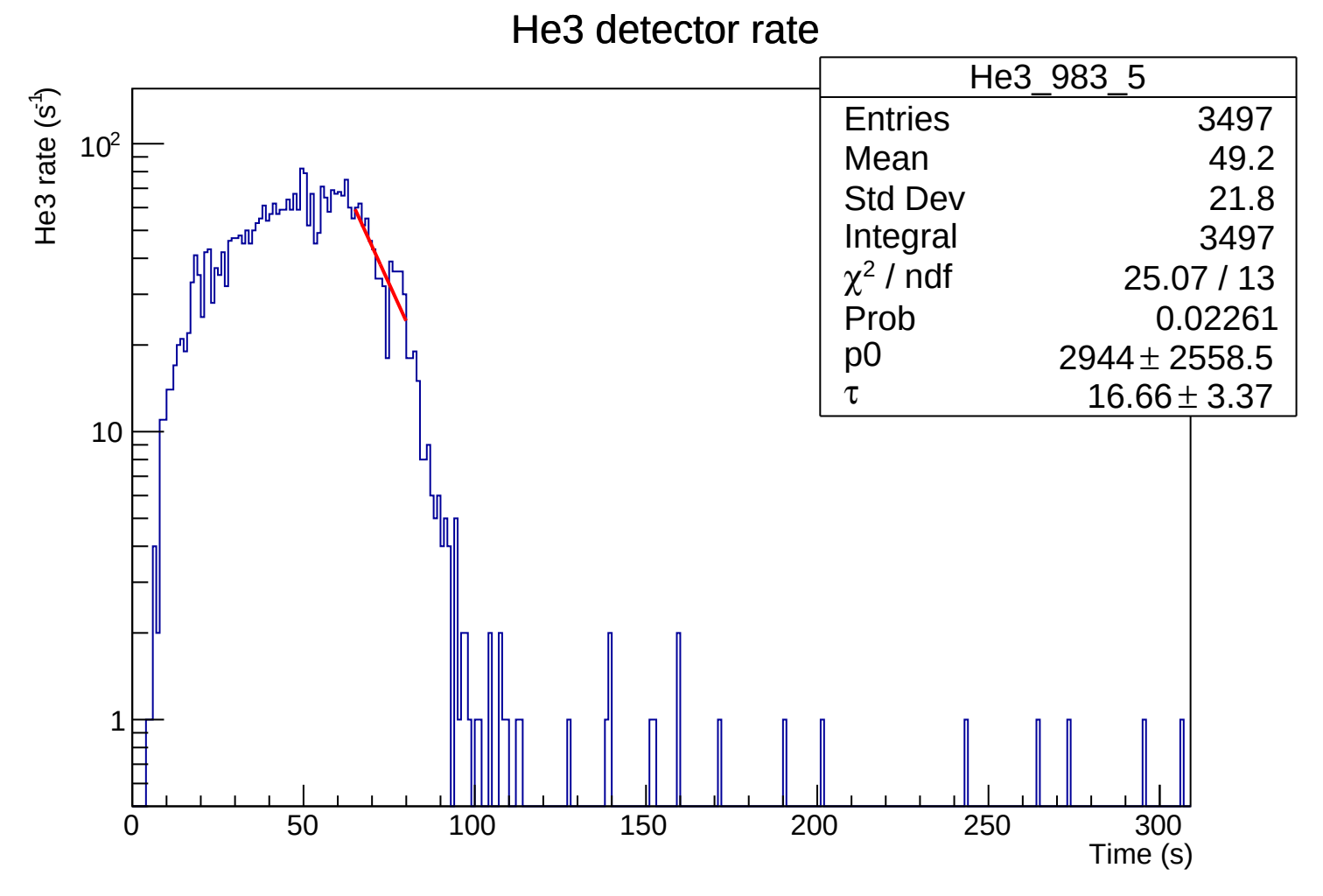

TCN18-055 (single exponential fit + background, unnormalized)
χ² / ndf 85.67 / 11
Prob 1.169e−13
p0 1.648e+04 ± 88.56
τ 20.56 ± 0.1594
Background 392.2 ± 14.31
UCN count
10⁴
10³
0
20
40
60
80
100
120
Storage time (s)

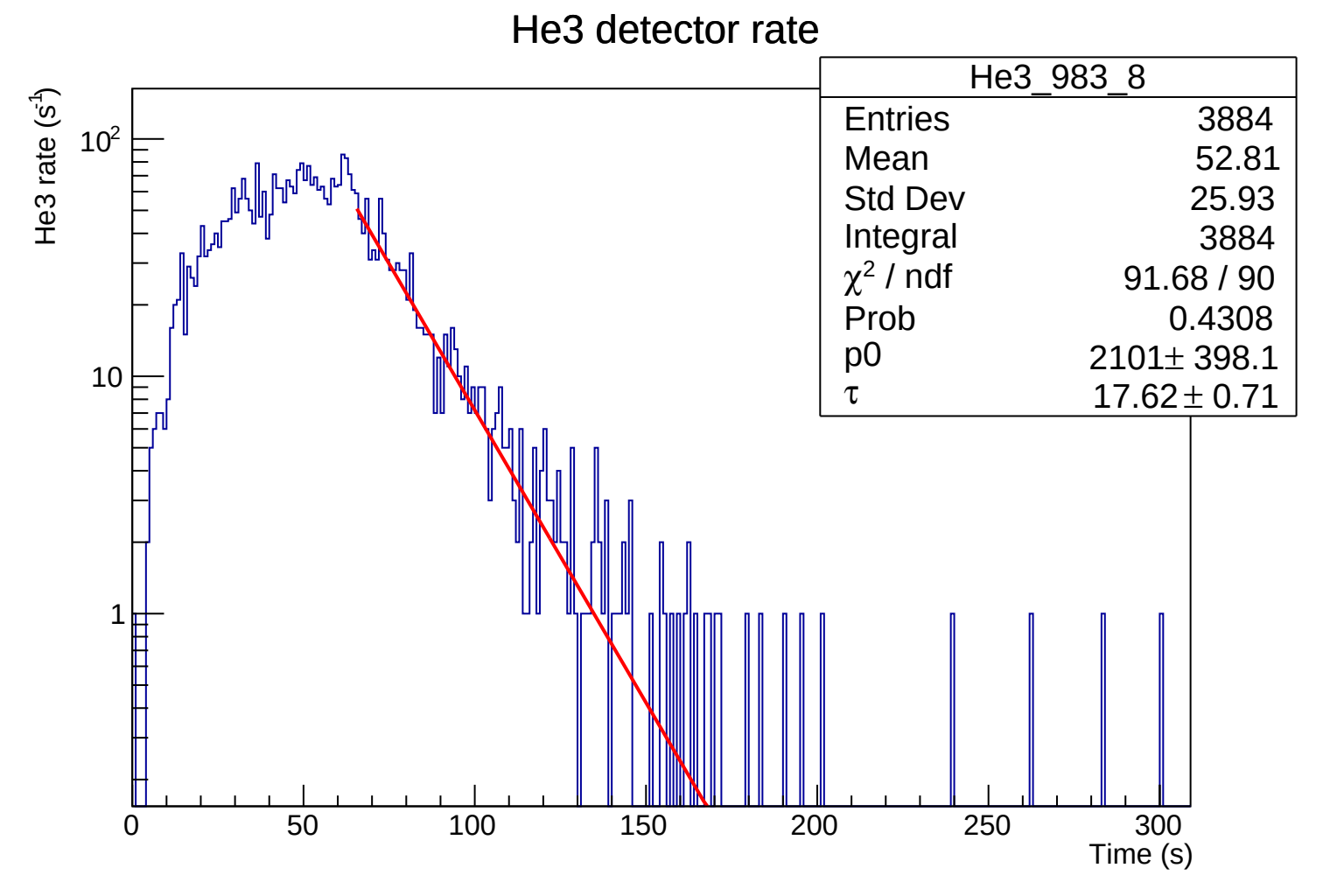

He3 detector rate
He3_983_0
Entries 3817
Mean 53.59
Std Dev 26.8
Integral 3817
χ² / ndf 66.44 / 92
Prob 0.9795
p0 1466 ± 260.9
τ 19.43 ± 0.79
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)

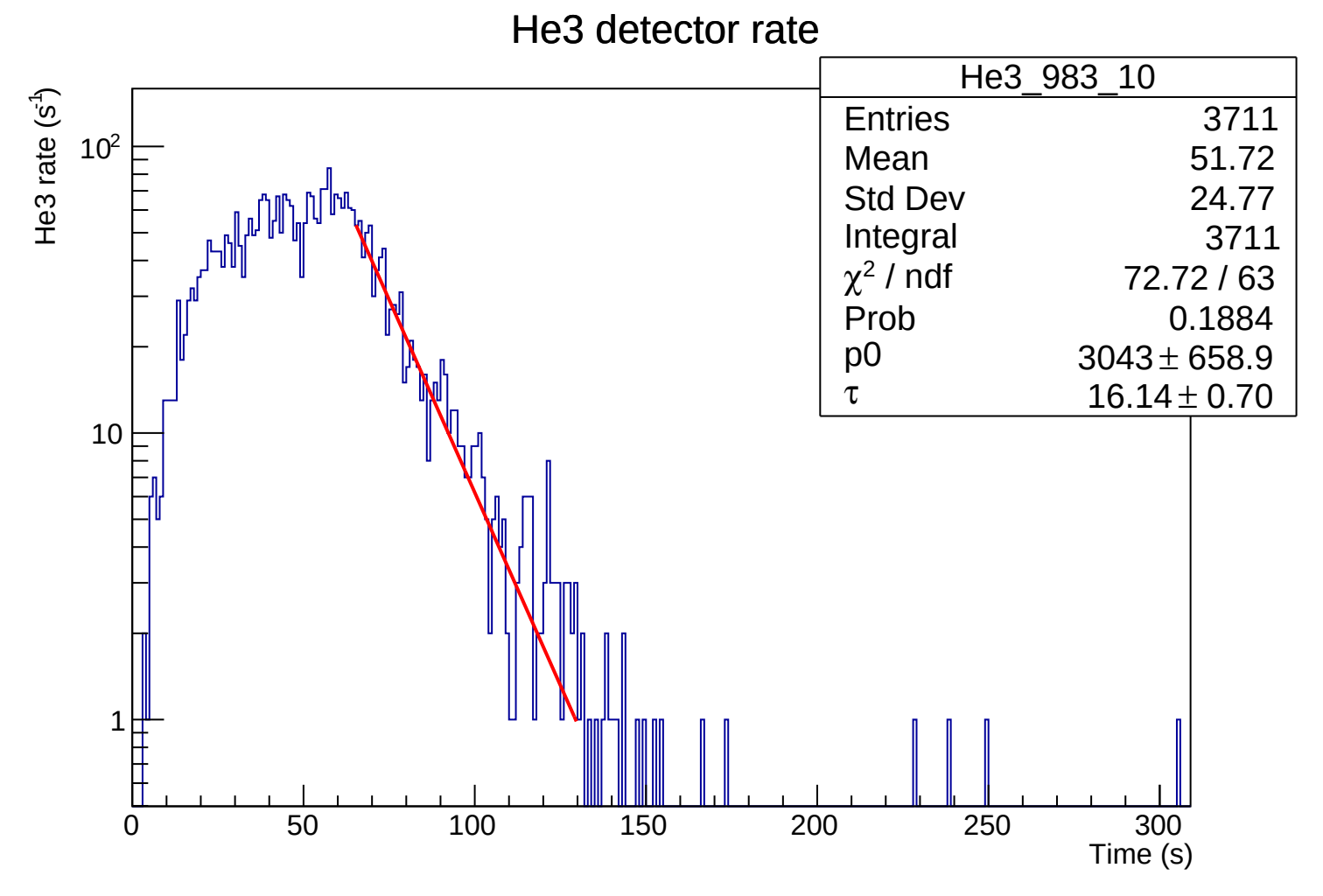

He3 detector rate
He3_983_2
Entries 3703
Mean 51.99
Std Dev 24.59
Integral 3702
χ² / ndf 92.43 / 62
Prob 0.007358
p0 2196 ± 460.6
τ 17.15 ± 0.76
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)

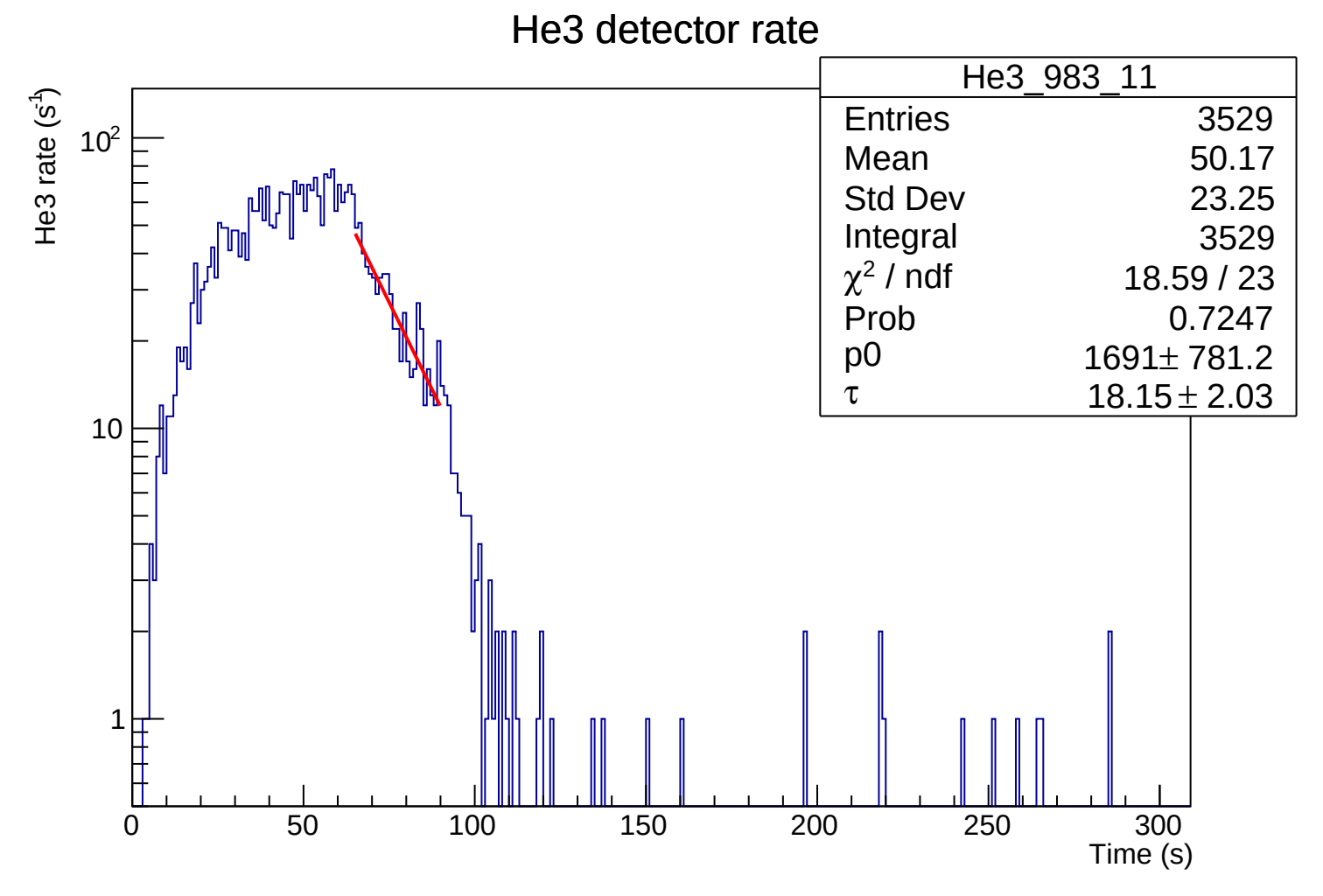

He3 detector rate
He3_983_3
Entries 3675
Mean 50.32
Std Dev 23.59
Integral 3675
χ² / ndf 32.42 / 23
Prob 0.09169
p0 3408 ± 1426.5
τ 15.78 ± 1.40
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)

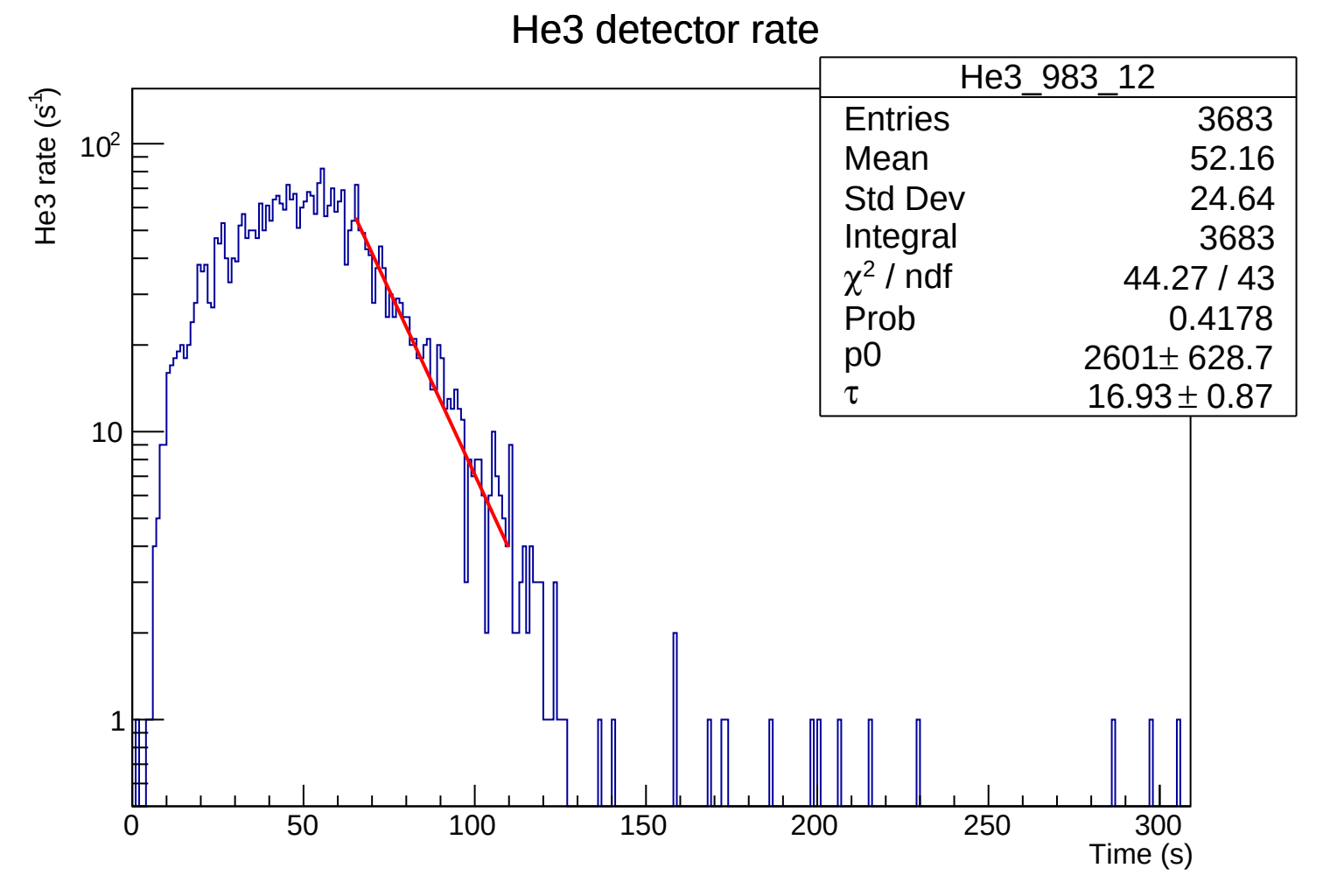

He3 detector rate
He3_983_4
Entries 3709
Mean 51.79
Std Dev 23.7
Integral 3709
χ² / ndf 64.98 / 43
Prob 0.01678
p0 4055 ± 1023.5
τ 15.23 ± 0.74
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)

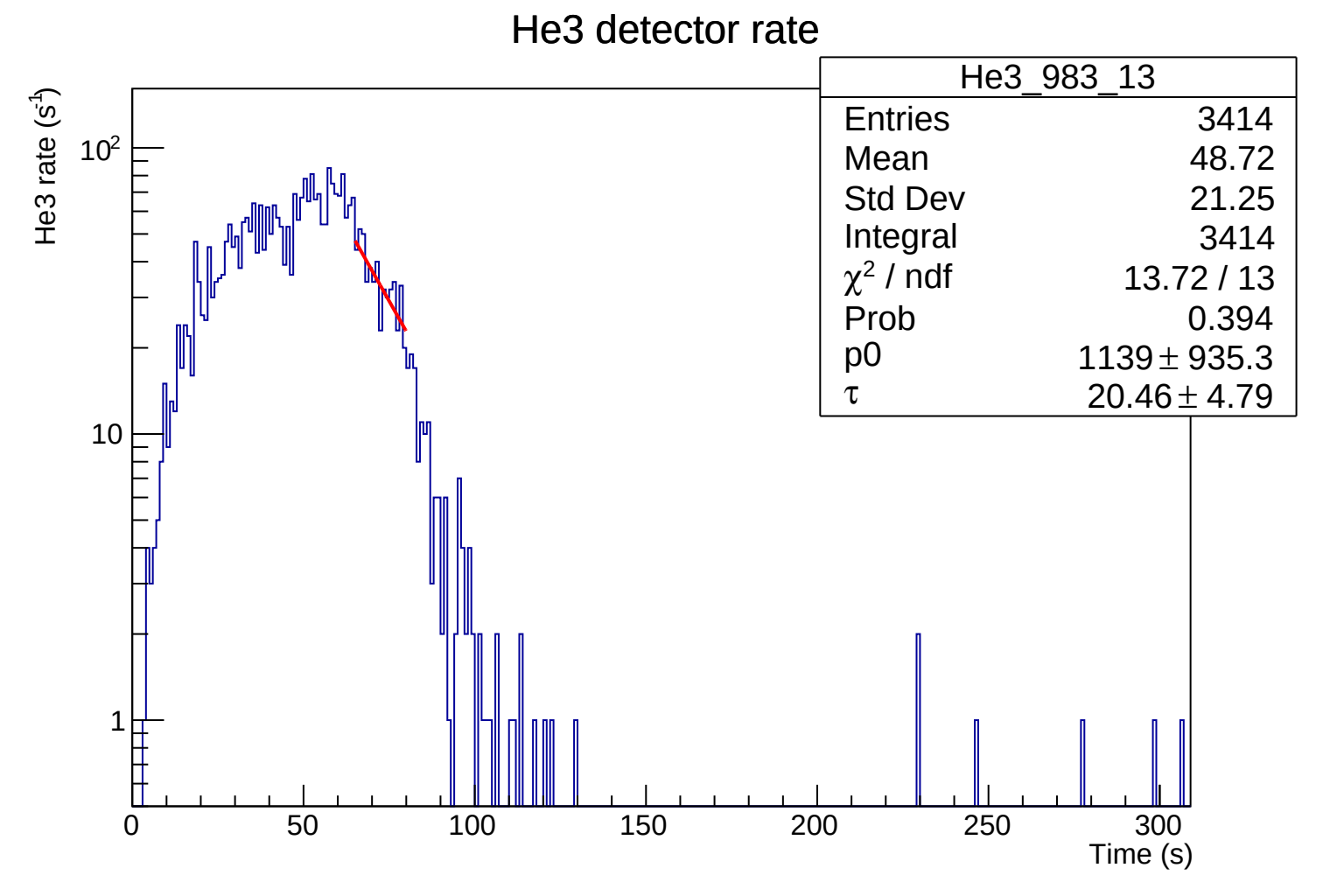

He3 detector rate
He3_983_5
Entries 3497
Mean 49.2
Std Dev 21.8
Integral 3497
χ² / ndf 25.07 / 13
Prob 0.02261
p0 2944 ± 2558.5
τ 16.66 ± 3.37
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_983_8
Entries 3884
Mean 52.81
Std Dev 25.93
Integral 3884
χ² / ndf 91.68 / 90
Prob 0.4308
p0 2101± 398.1
τ 17.62 ± 0.71
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_983_10
Entries 3711
Mean 51.72
Std Dev 24.77
Integral 3711
χ² / ndf 72.72 / 63
Prob 0.1884
p0 3043 ± 658.9
τ 16.14 ± 0.70
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_983_11
Entries 3529
Mean 50.17
Std Dev 23.25
Integral 3529
χ² / ndf 18.59 / 23
Prob 0.7247
p0 1691 ± 781.2
τ 18.15 ± 2.03
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_983_12
Entries 3683
Mean 52.16
Std Dev 24.64
Integral 3683
χ² / ndf 44.27 / 43
Prob 0.4178
p0 2601 ± 628.7
τ 16.93 ± 0.87
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)


He3 detector rate
He3_983_13
Entries 3414
Mean 48.72
Std Dev 21.25
Integral 3414
χ² / ndf 13.72 / 13
Prob 0.394
p0 1139 ± 935.3
τ 20.46 ± 4.79
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
300
Time (s)

Average lifetime from He3 data:

τ = 17.0088459377 +/- 0.00767846178561 s