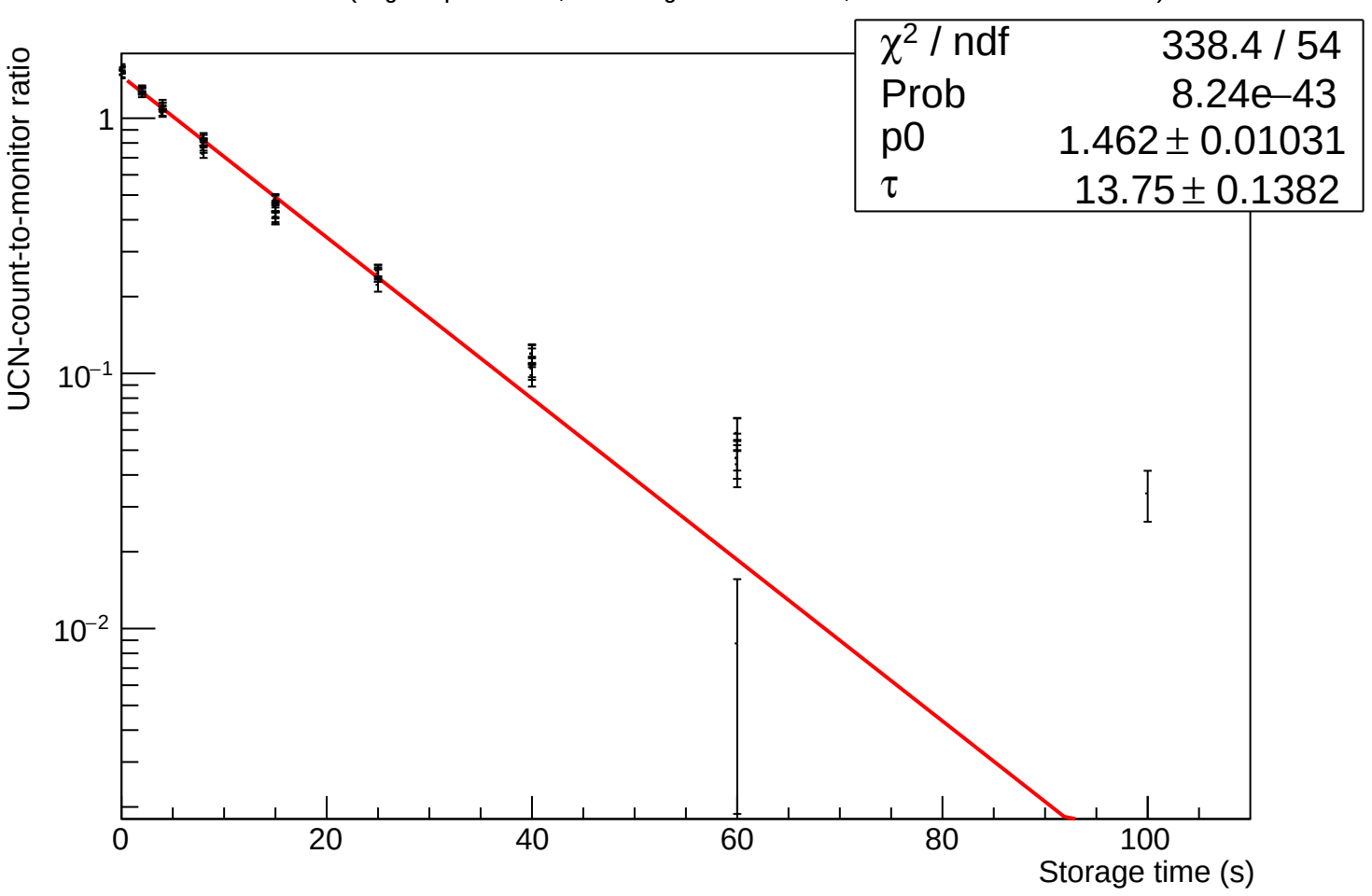
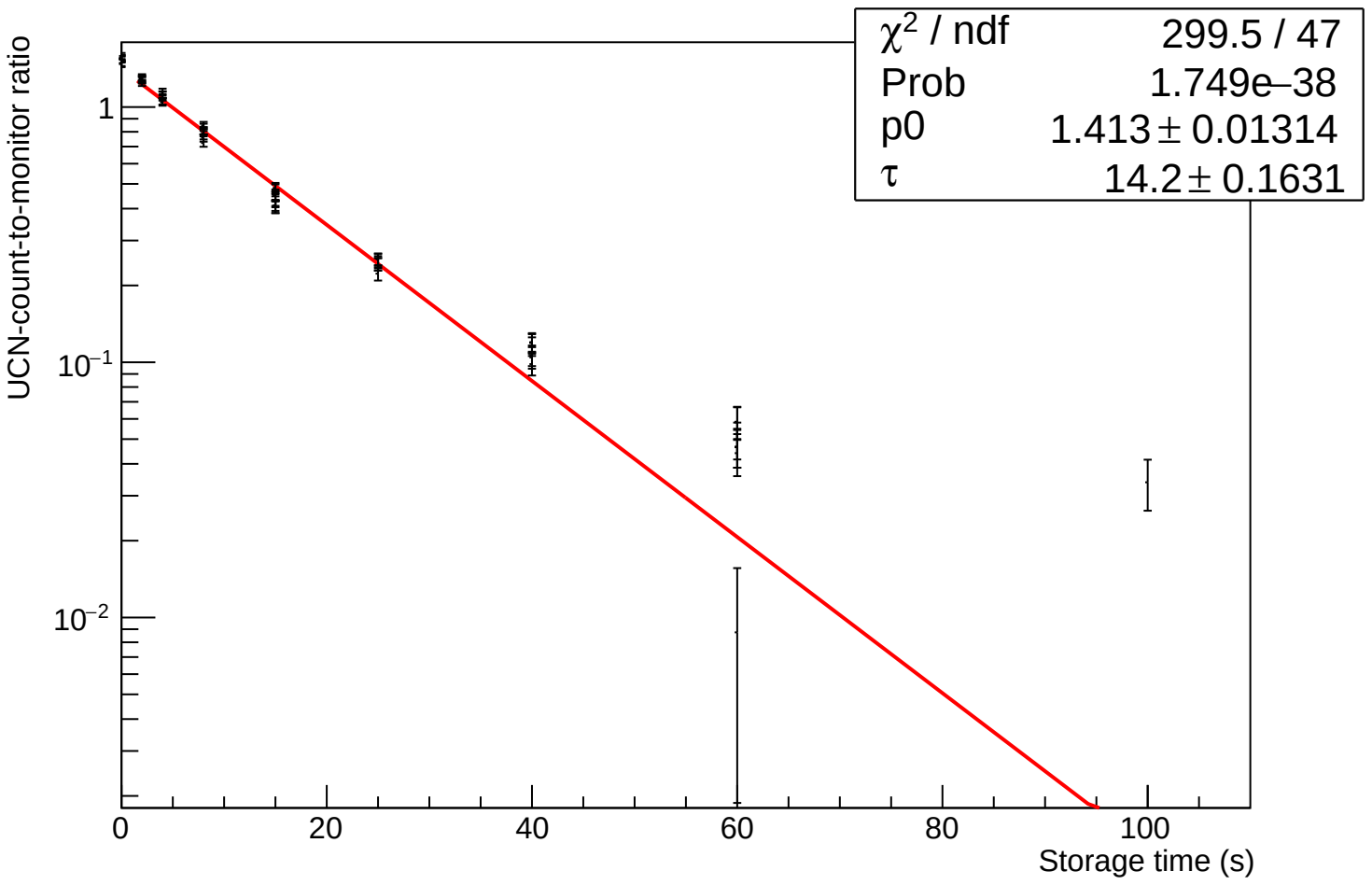
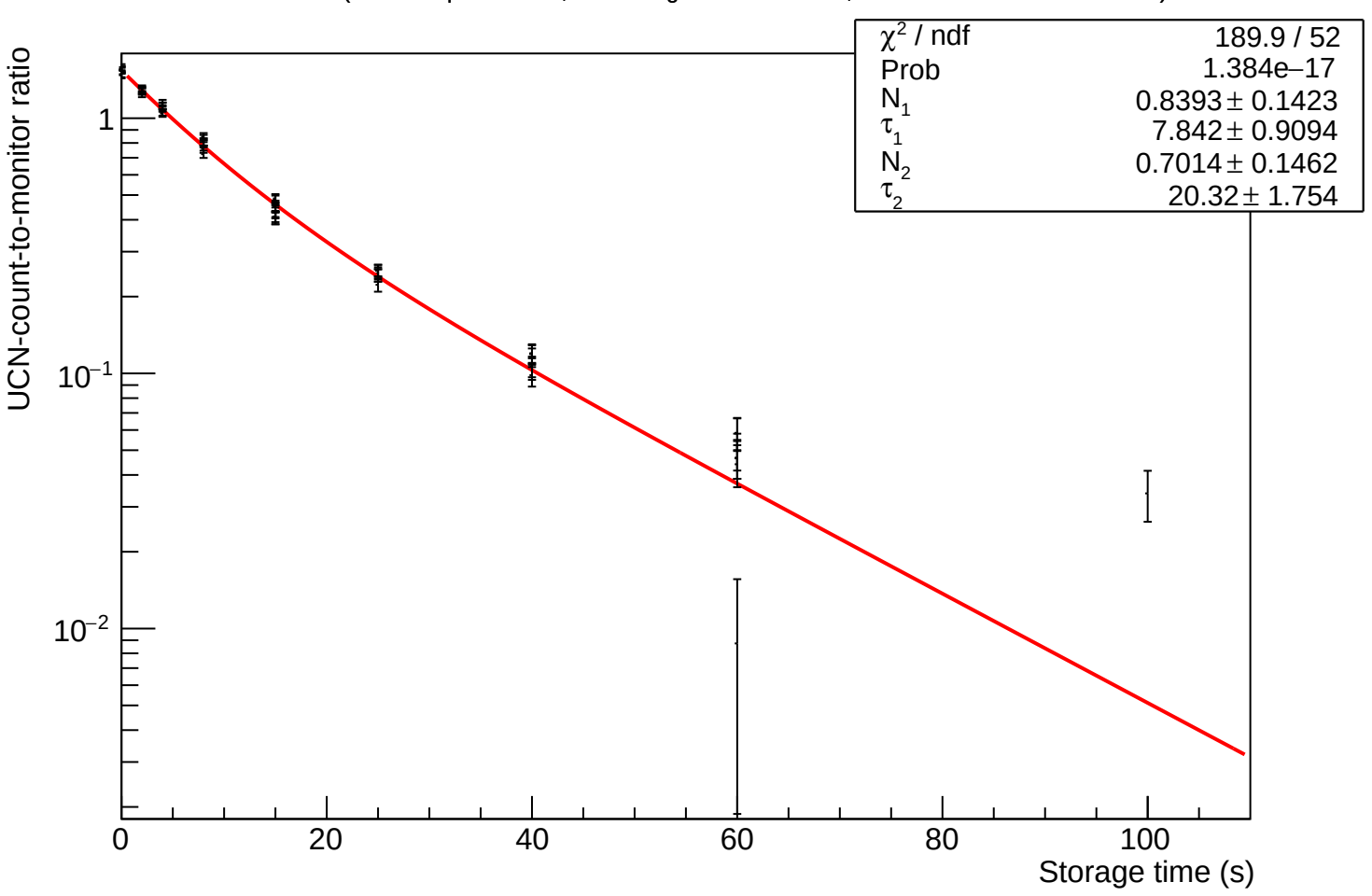
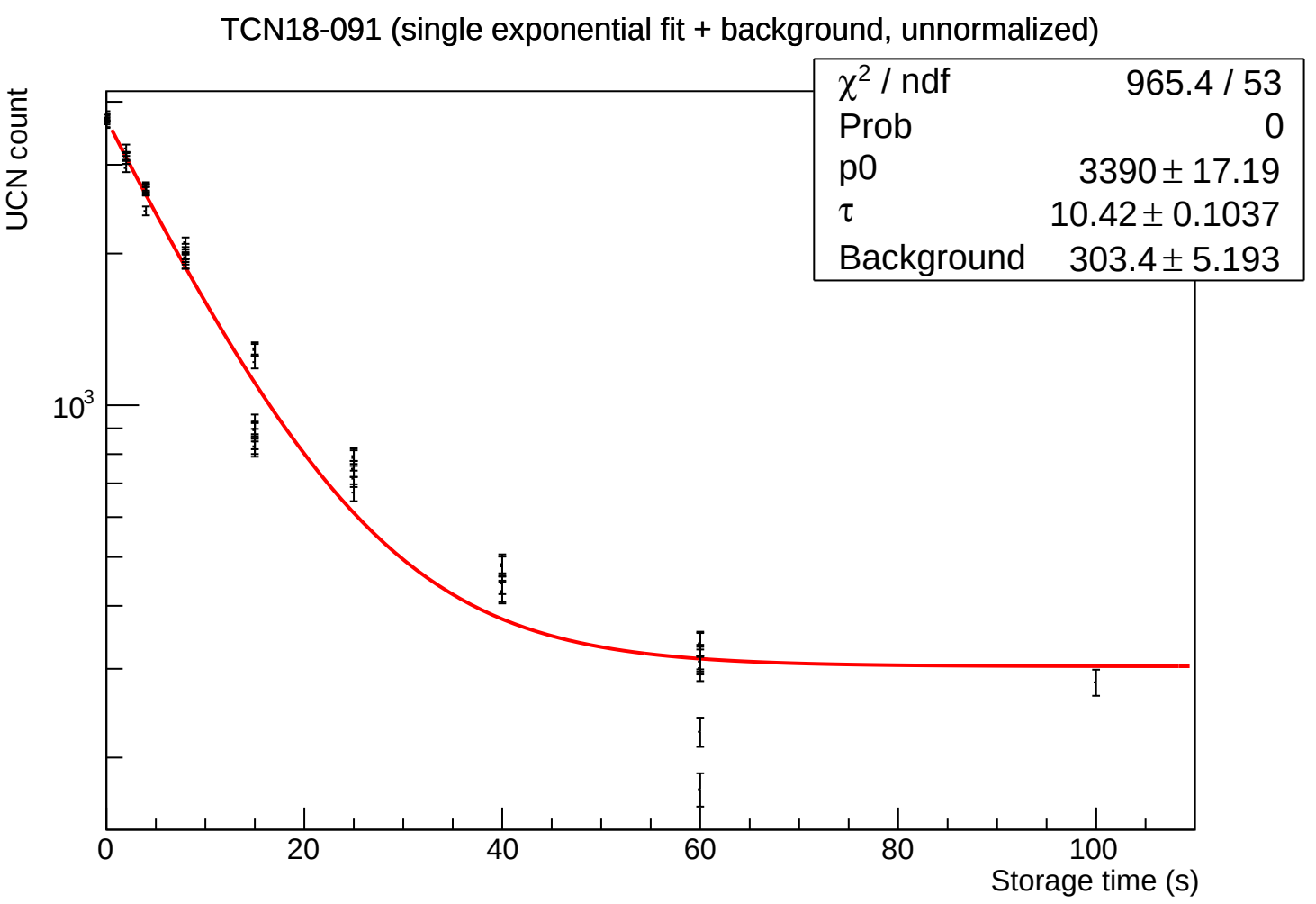
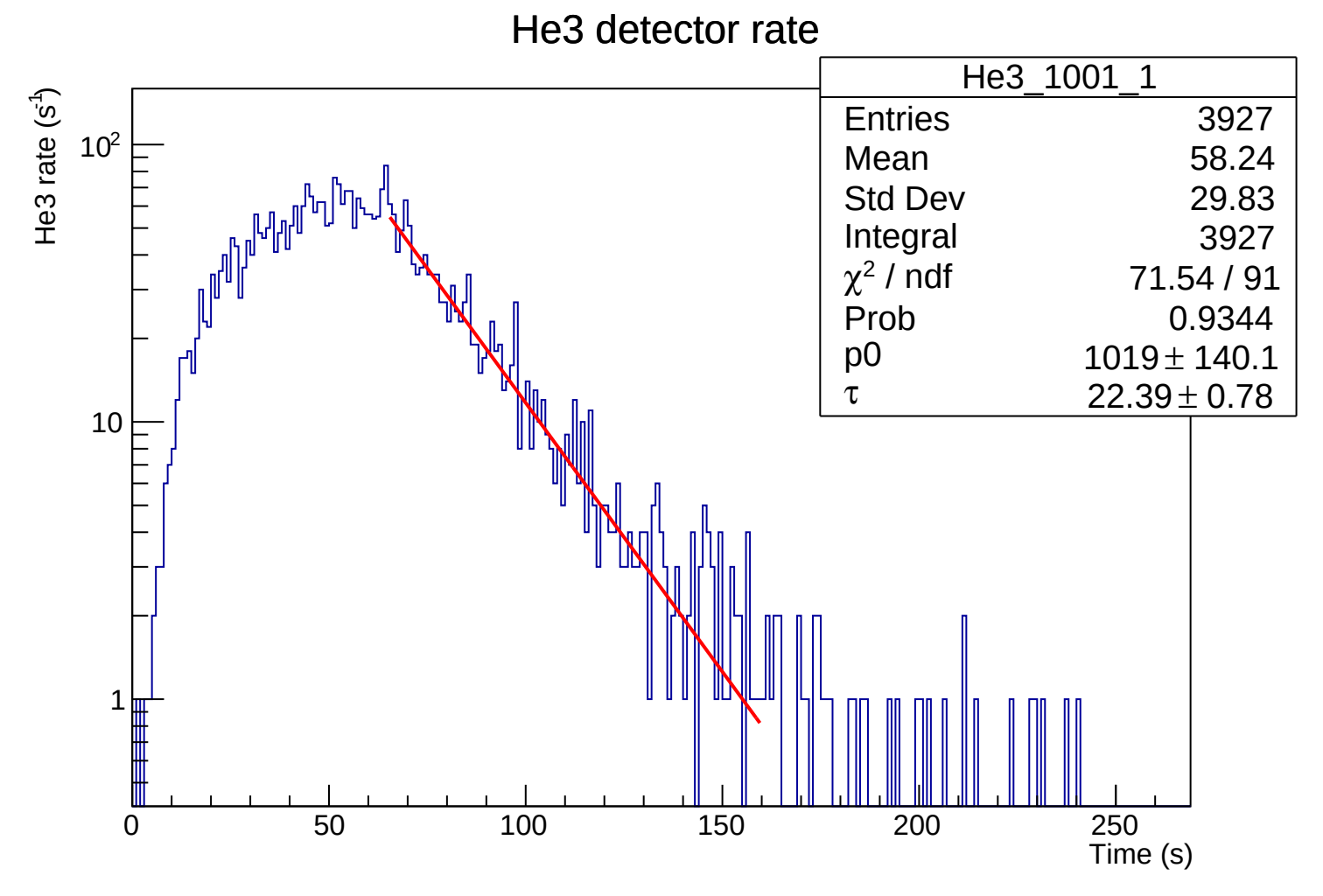
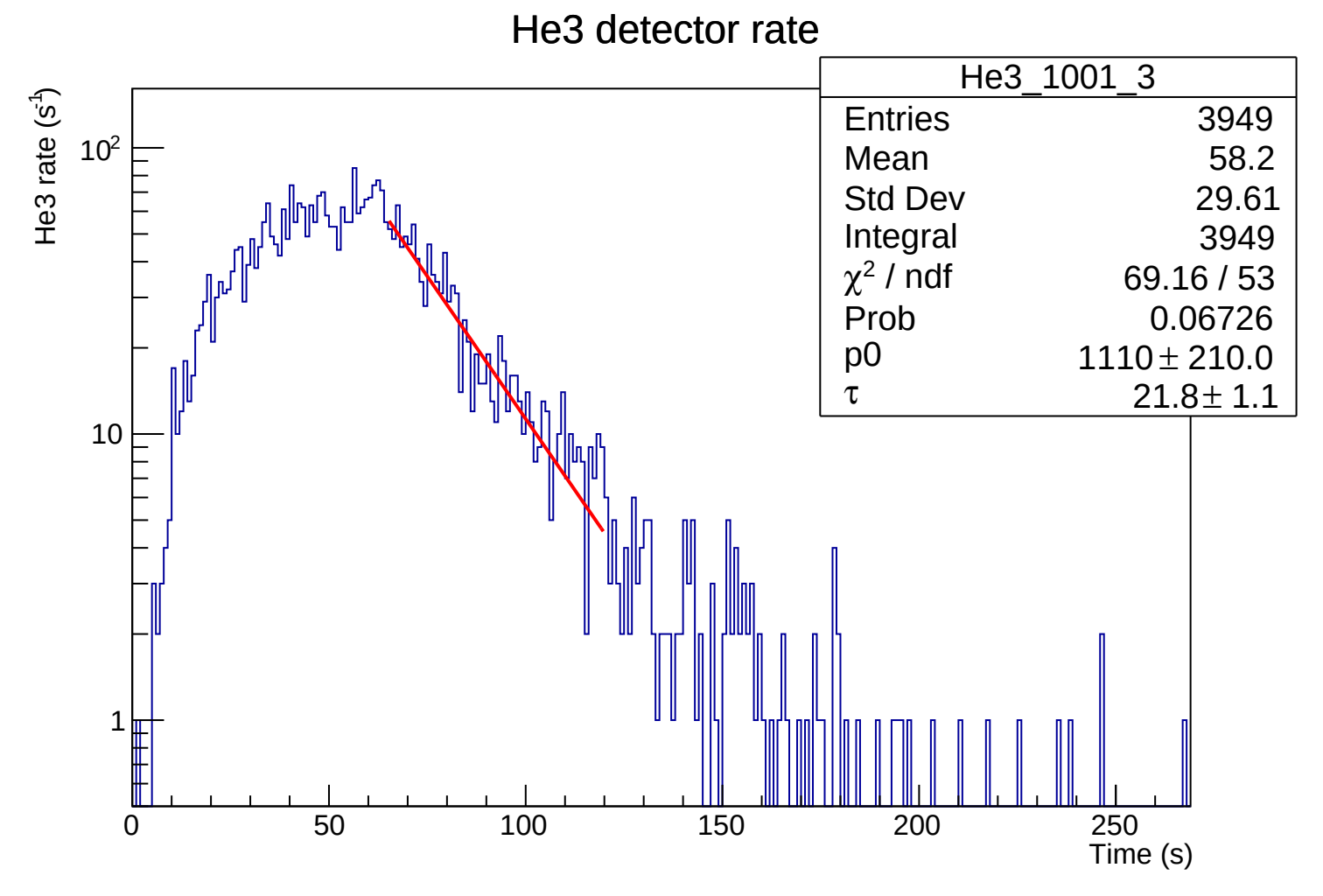

TCN18-091 (single exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 338.4 / 54
Prob 8.24e–43
p0 1.462 ± 0.01031
τ 13.75 ± 0.1382
UCN-count-to-monitor ratio
1
10⁻¹
10⁻²
0
20
40
60
80
100
Storage time (s)

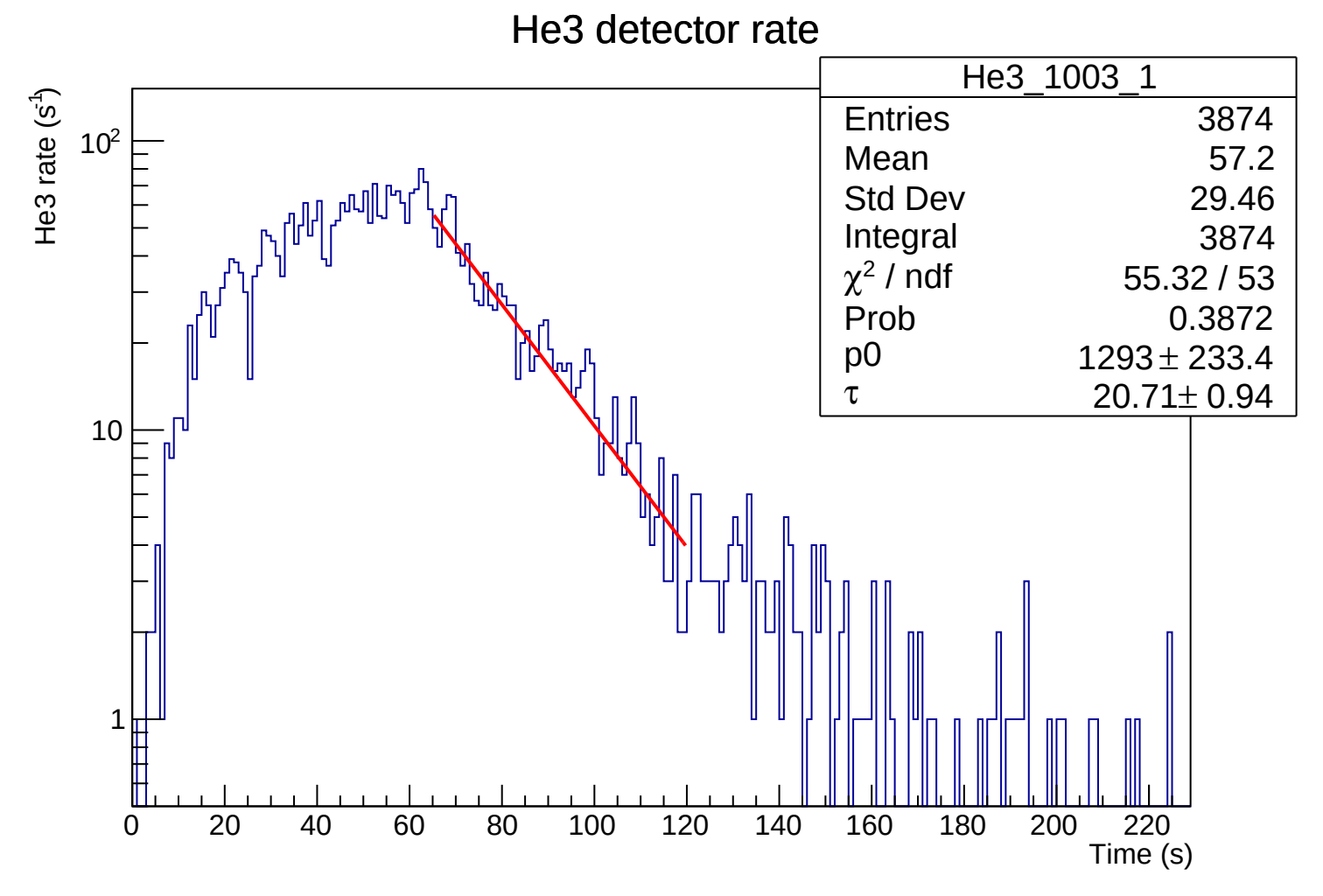

TCN18-091 (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 299.5 / 47
Prob 1.749e−38
p0 1.413 ± 0.01314
τ 14.2 ± 0.1631
UCN-count-to-monitor ratio
1
10⁻¹
10⁻²
0
20
40
60
80
100
Storage time (s)

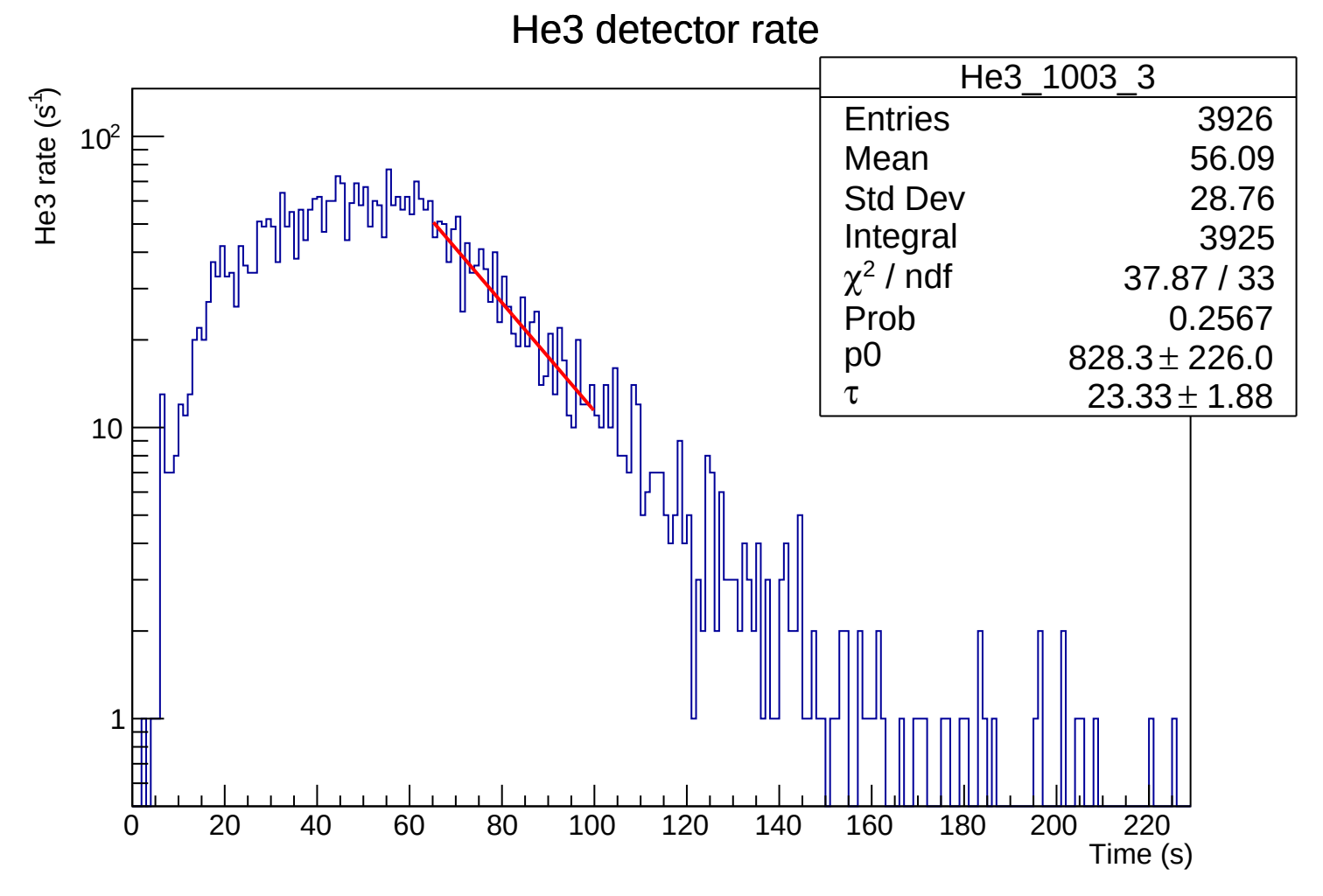

TCN18-091 (double exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 189.9 / 52
Prob 1.384e–17
N1 0.8393 ± 0.1423
τ1 7.842 ± 0.9094
N2 0.7014 ± 0.1462
τ2 20.32 ± 1.754
UCN-count-to-monitor ratio
1
10⁻¹
10⁻²
0
20
40
60
80
100
Storage time (s)

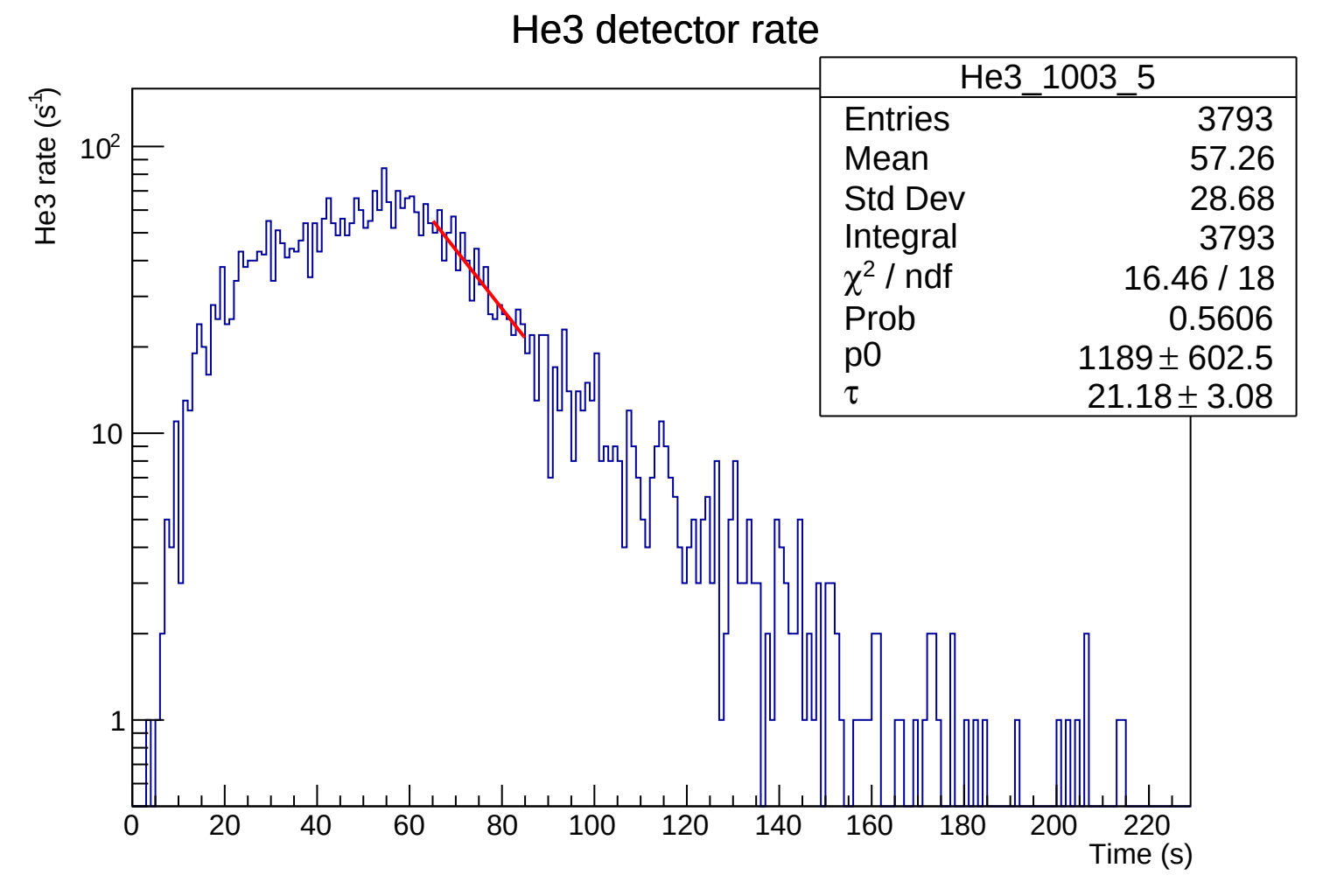

TCN18-091 (single exponential fit + background, unnormalized)
χ² / ndf 965.4 / 53
Prob 0
p0 3390 ± 17.19
τ 10.42 ± 0.1037
Background 303.4 ± 5.193
UCN count
10³
0
20
40
60
80
100
Storage time (s)

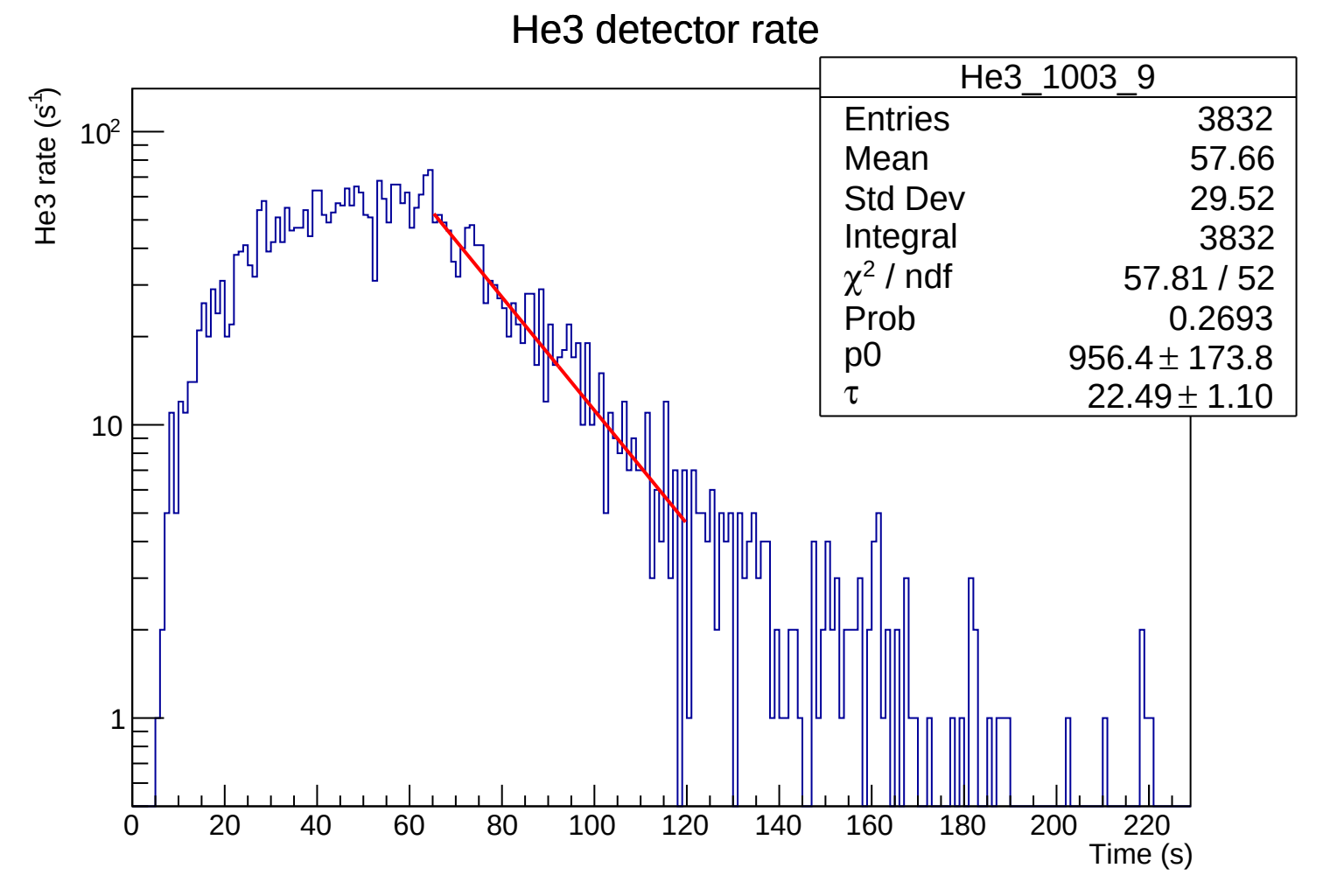

He3 detector rate
He3_1001_1
Entries 3927
Mean 58.24
Std Dev 29.83
Integral 3927
χ² / ndf 71.54 / 91
Prob 0.9344
p0 1019 ± 140.1
τ 22.39 ± 0.78
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

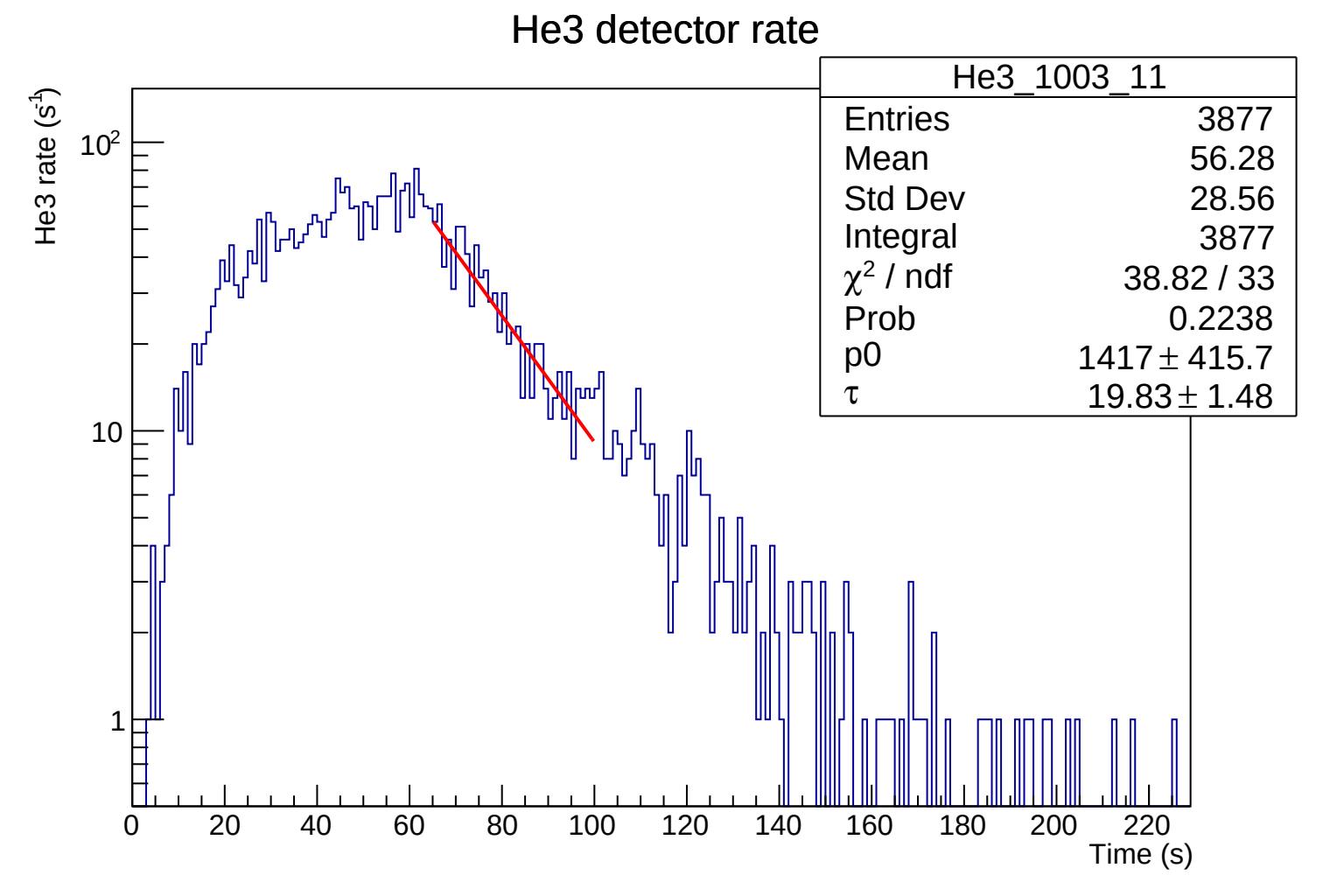

He3 detector rate
He3_1001_3
Entries 3949
Mean 58.2
Std Dev 29.61
Integral 3949
χ² / ndf 69.16 / 53
Prob 0.06726
p0 1110 ± 210.0
τ 21.8 ± 1.1
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

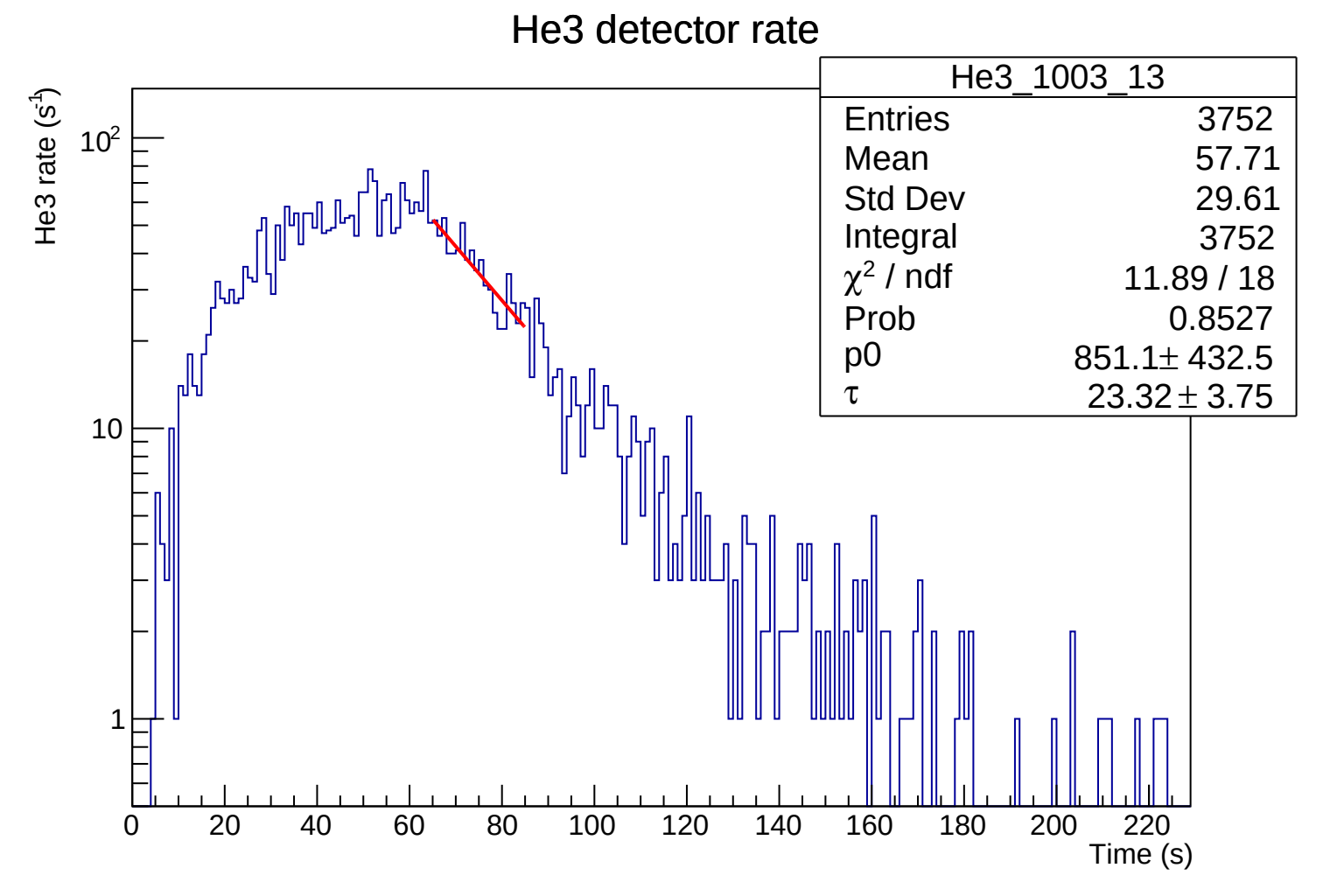

He3 detector rate
He3_1003_1
Entries 3874
Mean 57.2
Std Dev 29.46
Integral 3874
χ² / ndf 55.32 / 53
Prob 0.3872
p0 1293 ± 233.4
τ 20.71 ± 0.94
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

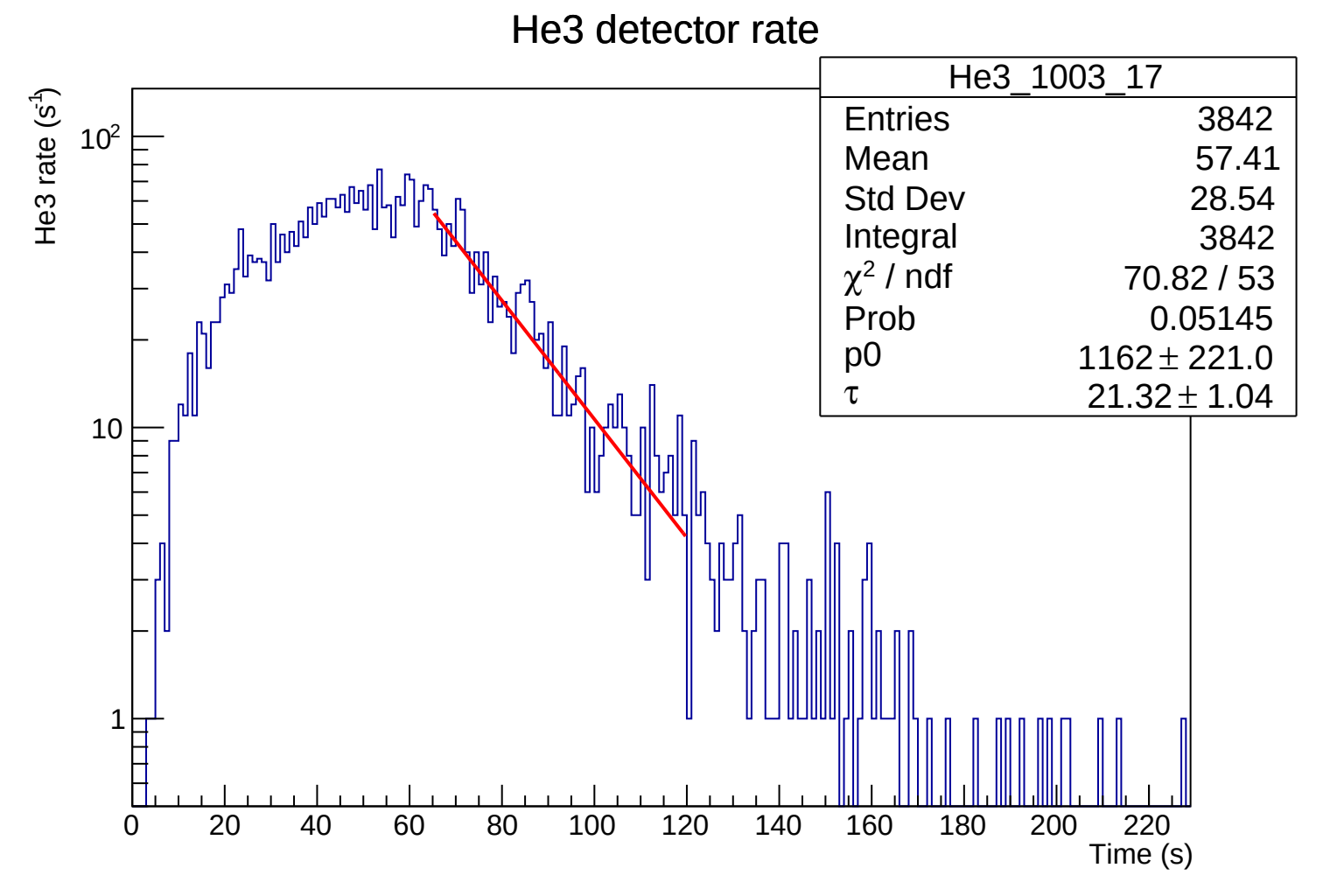

He3 detector rate
He3_1003_3
Entries 3926
Mean 56.09
Std Dev 28.76
Integral 3925
χ² / ndf 37.87 / 33
Prob 0.2567
p0 828.3 ± 226.0
τ 23.33 ± 1.88
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

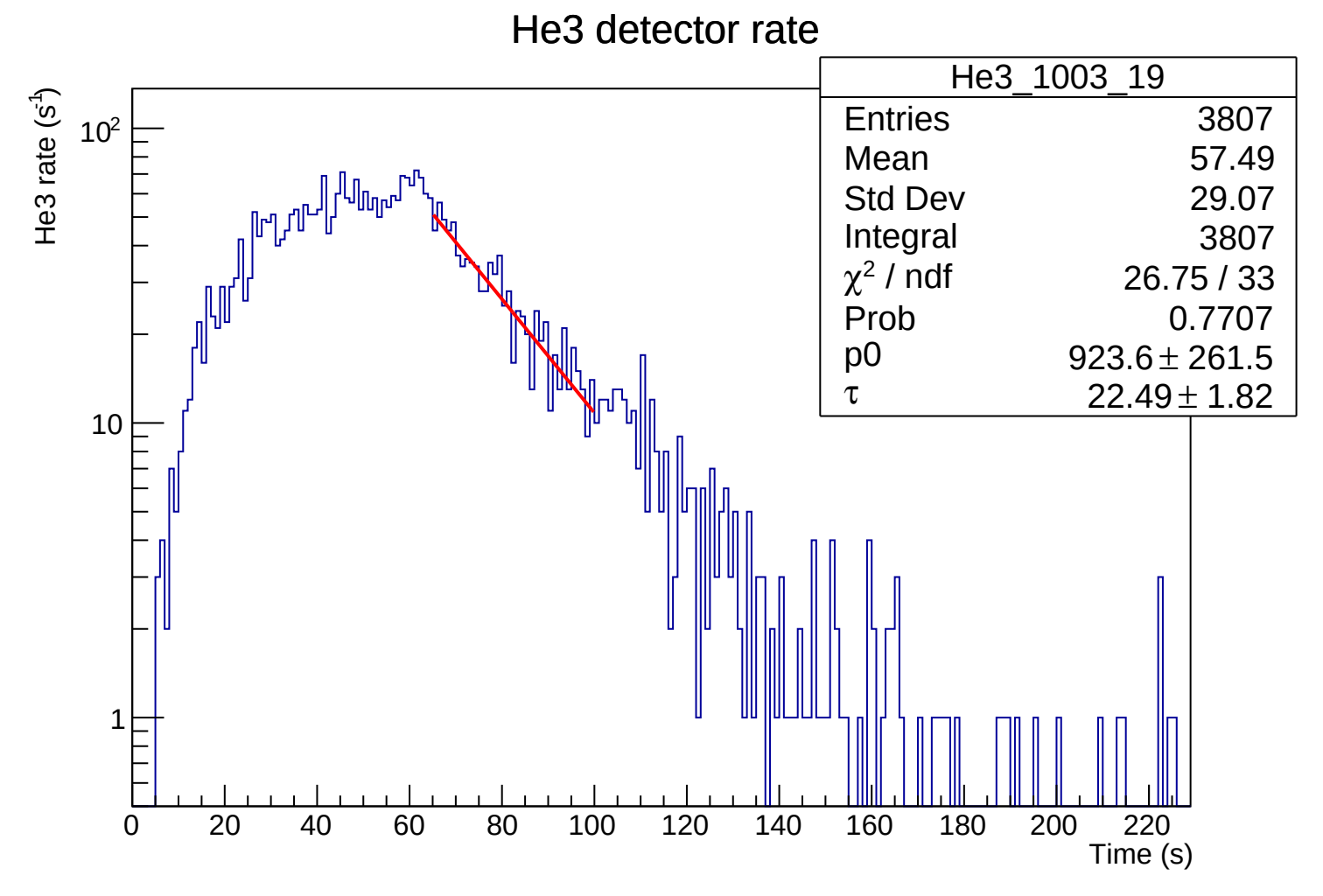

He3 detector rate
He3_1003_5
Entries 3793
Mean 57.26
Std Dev 28.68
Integral 3793
χ² / ndf 16.46 / 18
Prob 0.5606
p0 1189 ± 602.5
τ 21.18 ± 3.08
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

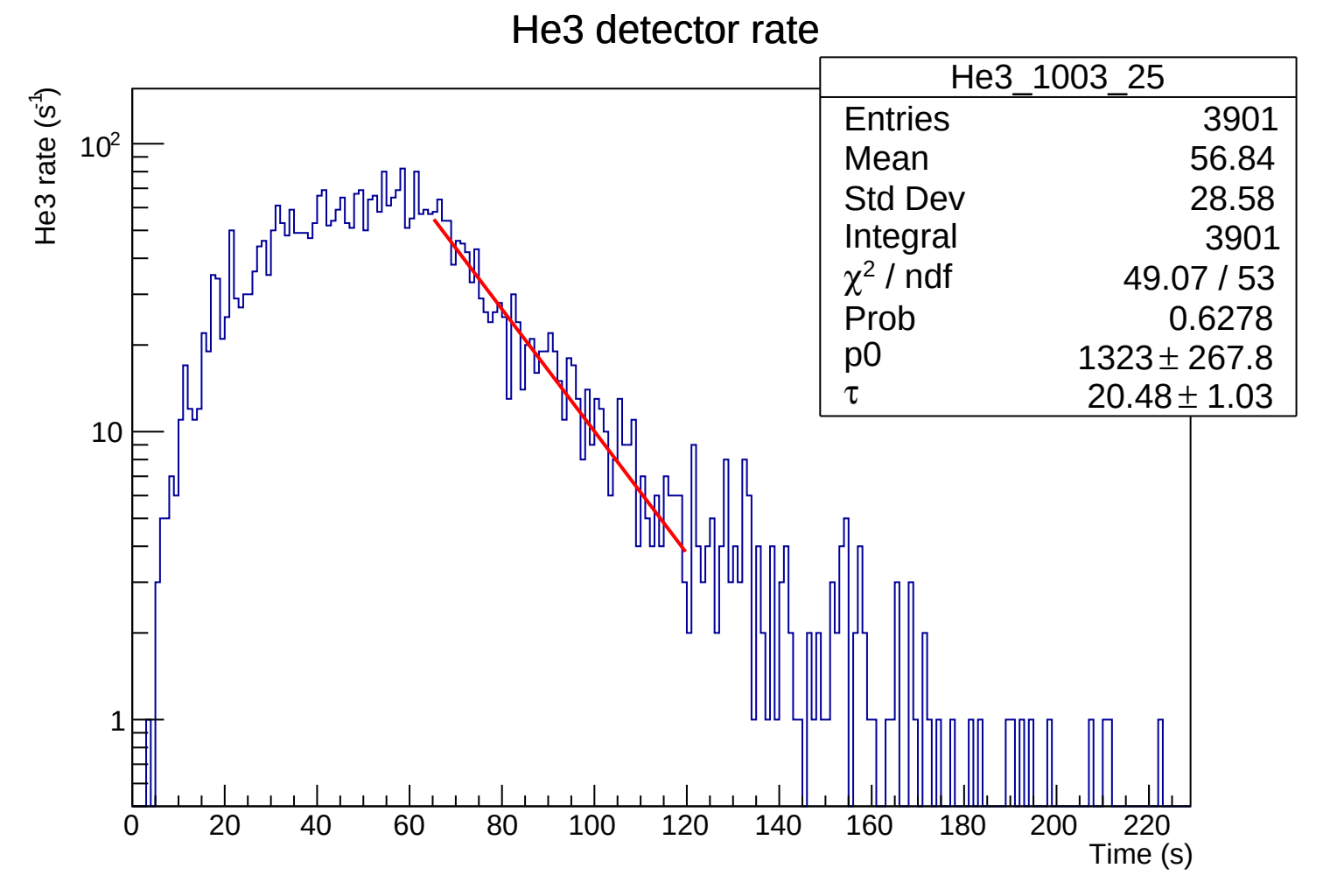

He3 detector rate
He3_1003_9
Entries 3832
Mean 57.66
Std Dev 29.52
Integral 3832
χ² / ndf 57.81 / 52
Prob 0.2693
p0 956.4 ± 173.8
τ 22.49 ± 1.10
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

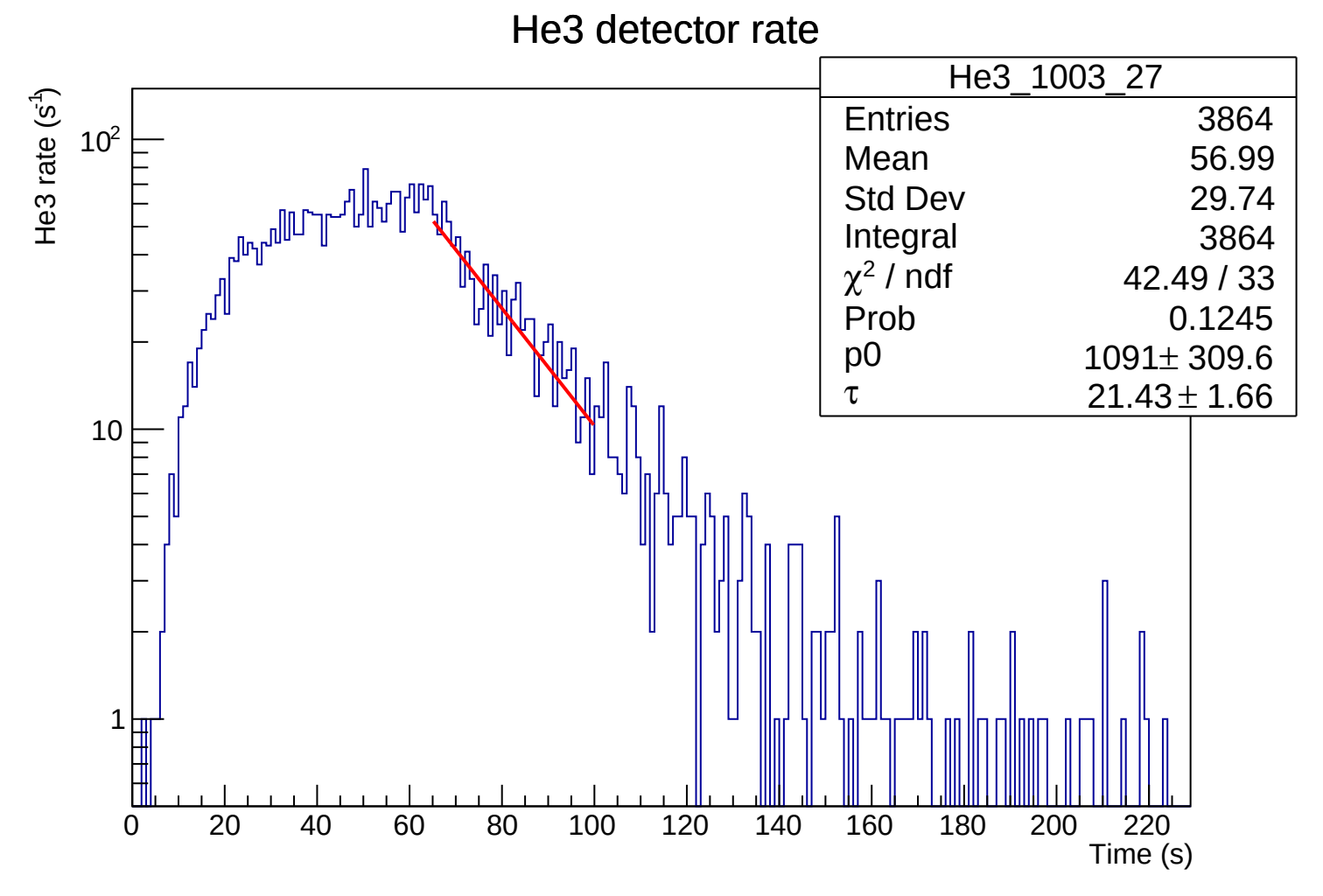

He3 detector rate
He3_1003_11
Entries 3877
Mean 56.28
Std Dev 28.56
Integral 3877
χ² / ndf 38.82 / 33
Prob 0.2238
p0 1417 ± 415.7
τ 19.83 ± 1.48
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

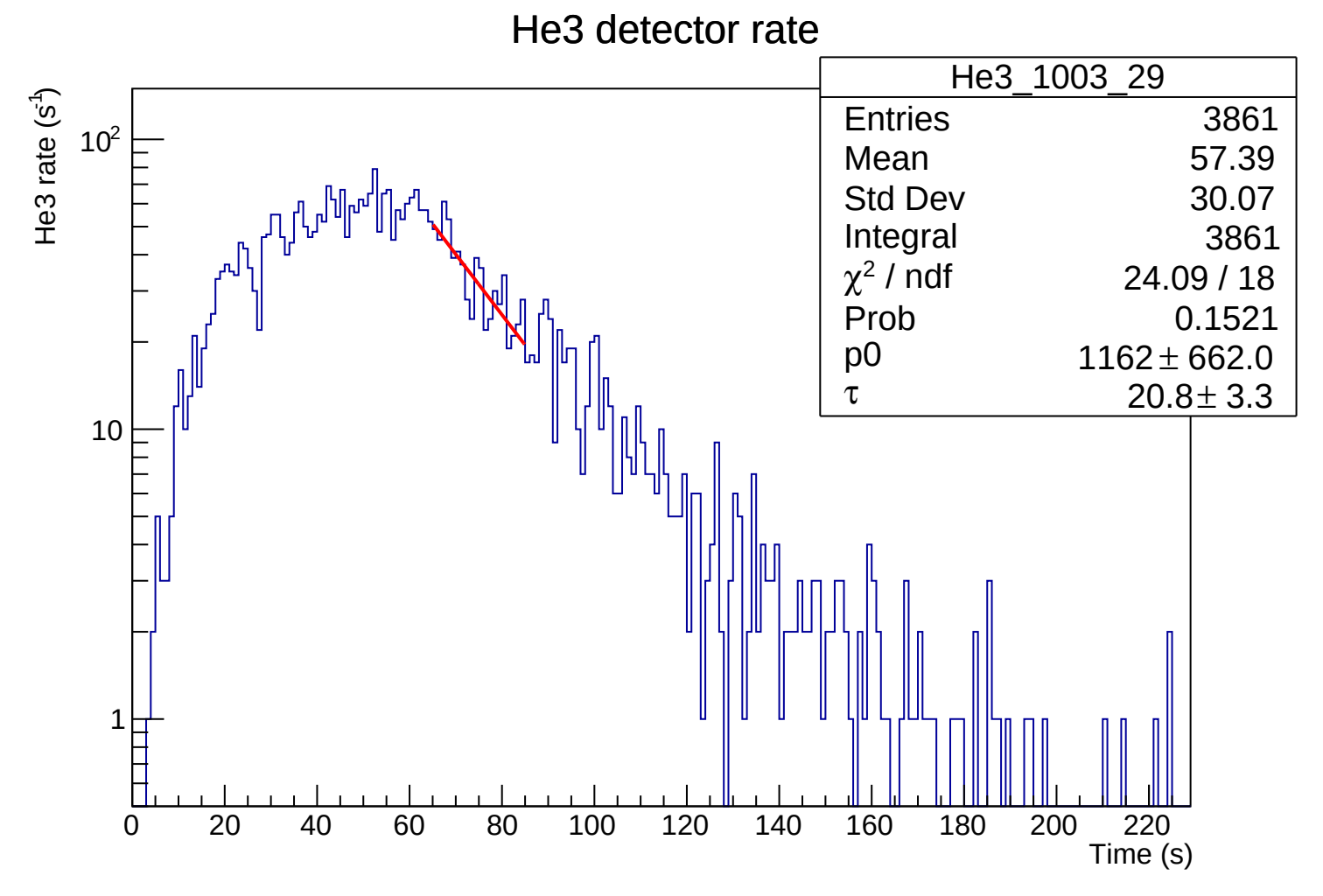

He3 detector rate
He3_1003_13
Entries 3752
Mean 57.71
Std Dev 29.61
Integral 3752
χ² / ndf 11.89 / 18
Prob 0.8527
p0 851.1± 432.5
τ 23.32 ± 3.75
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

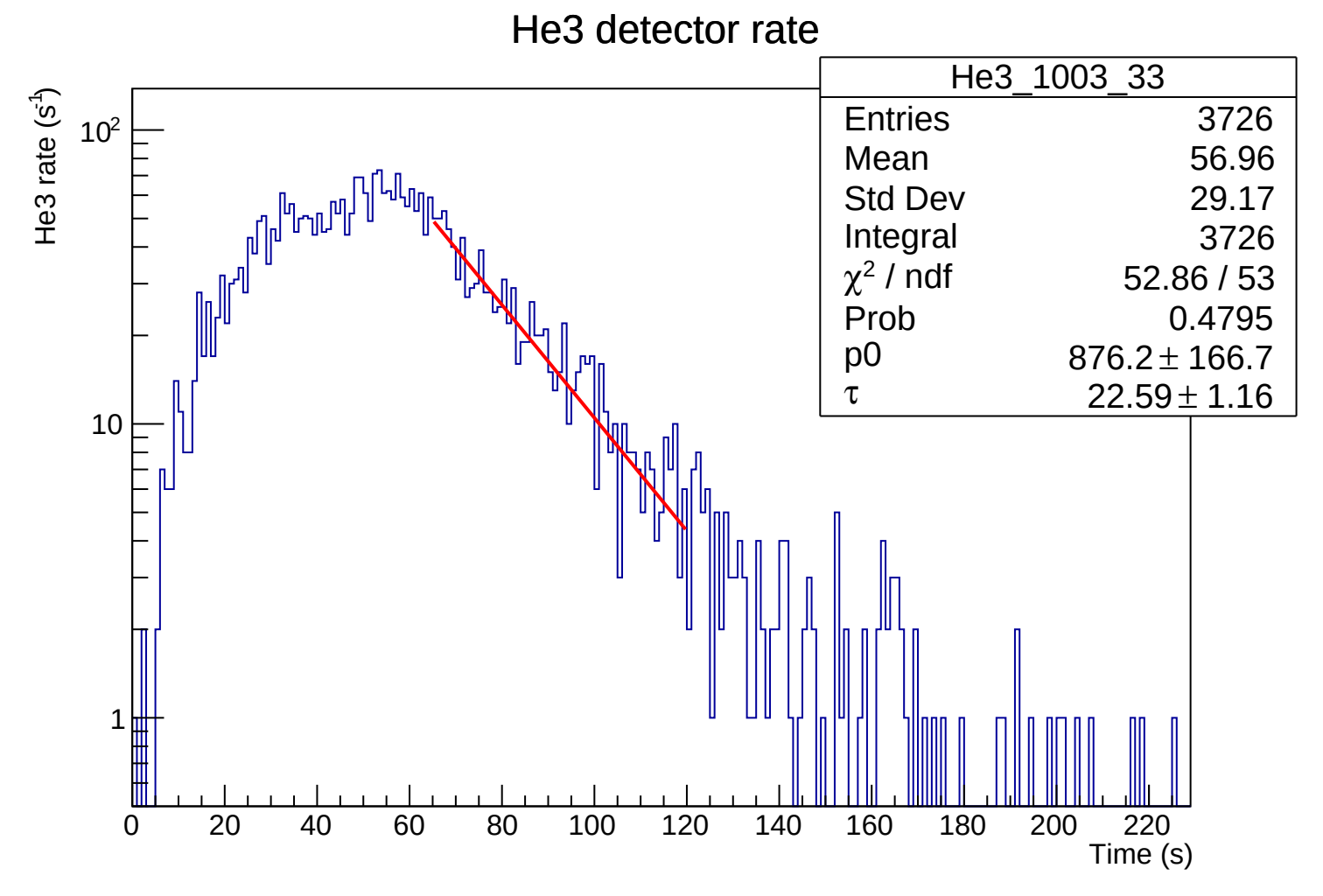

He3 detector rate
He3_1003_17
Entries 3842
Mean 57.41
Std Dev 28.54
Integral 3842
χ² / ndf 70.82 / 53
Prob 0.05145
p0 1162 ± 221.0
τ 21.32 ± 1.04
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

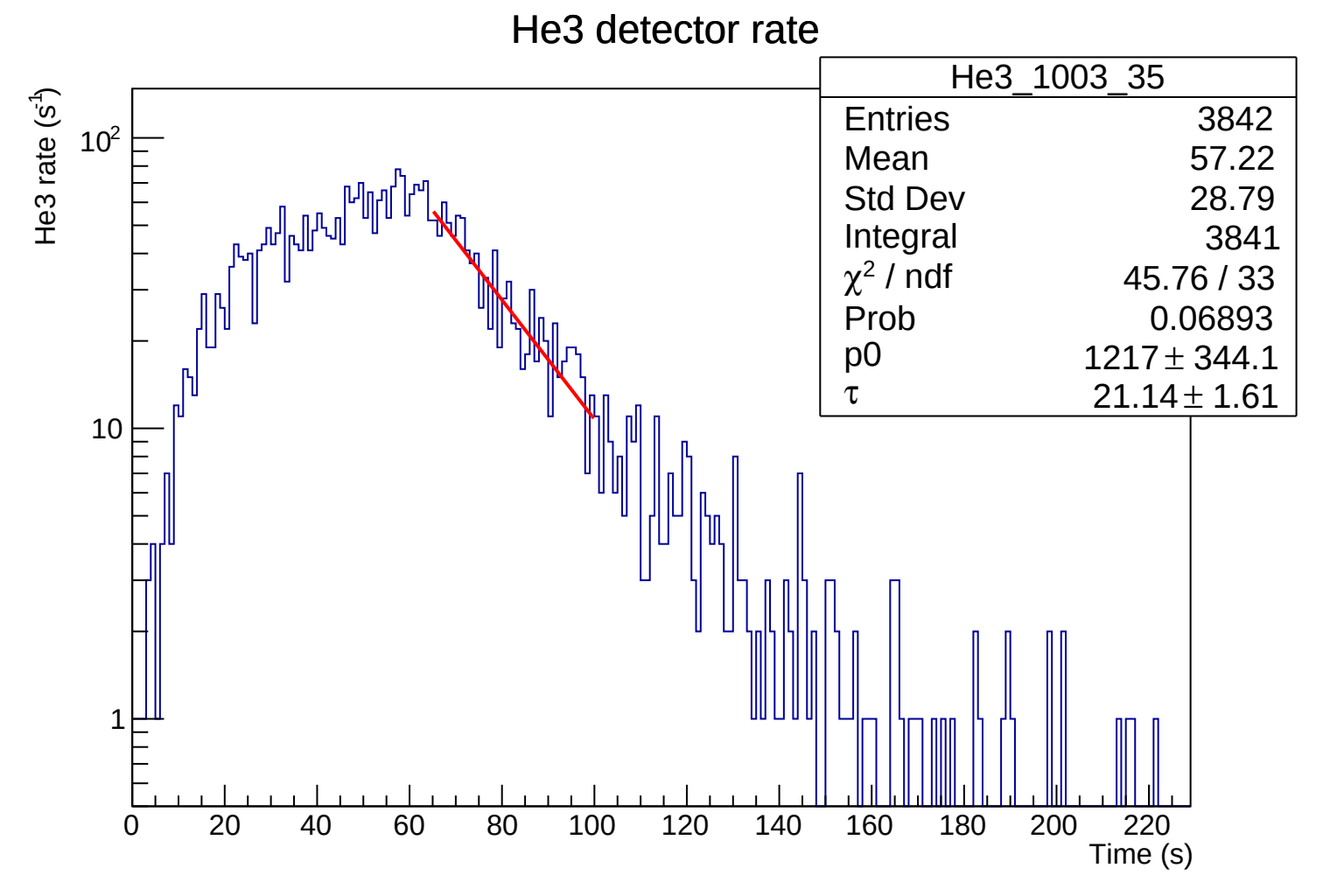

He3 detector rate
He3_1003_19
Entries 3807
Mean 57.49
Std Dev 29.07
Integral 3807
χ² / ndf 26.75 / 33
Prob 0.7707
p0 923.6 ± 261.5
τ 22.49 ± 1.82
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

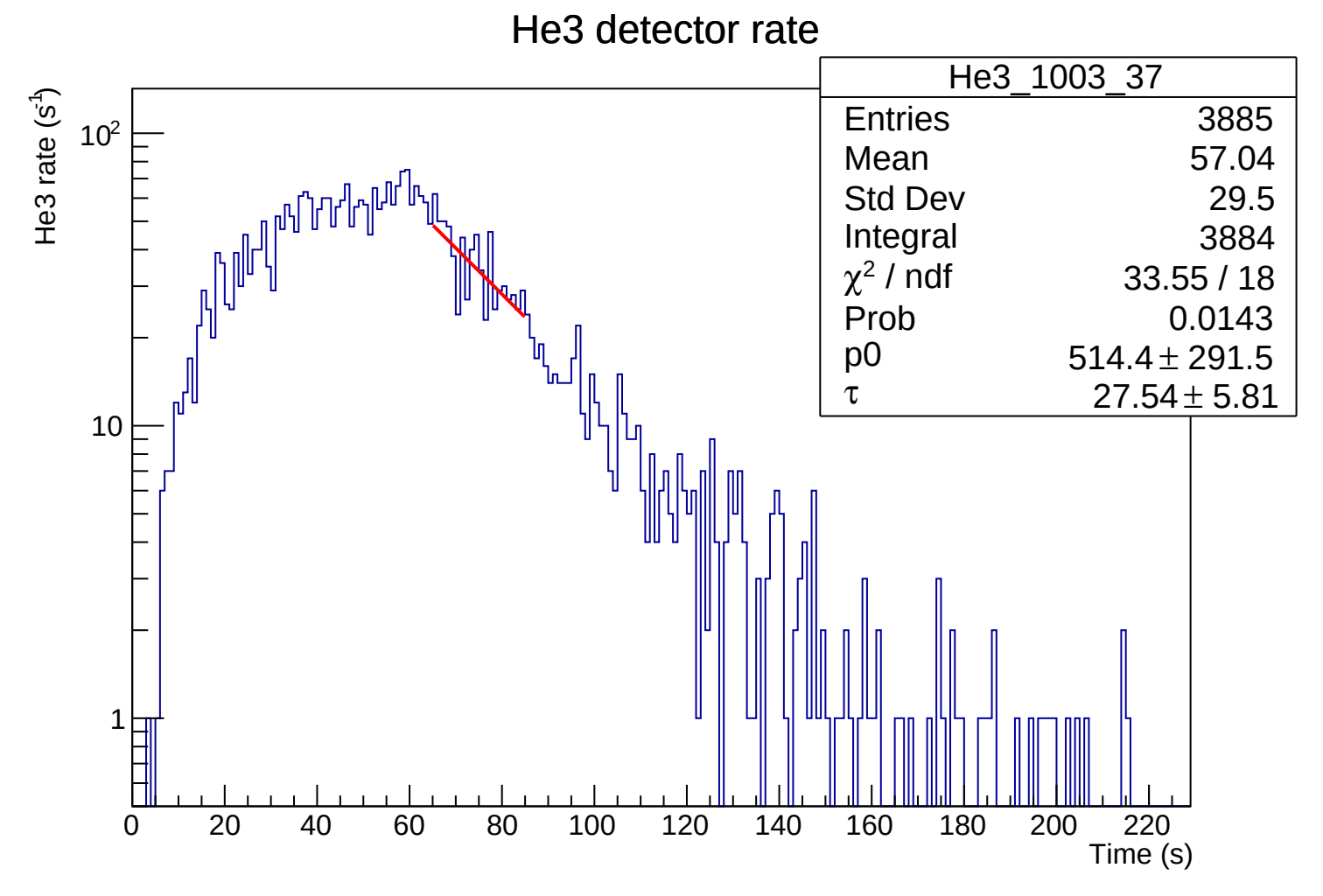

He3 detector rate
He3_1003_25
Entries 3901
Mean 56.84
Std Dev 28.58
Integral 3901
χ² / ndf 49.07 / 53
Prob 0.6278
p0 1323 ± 267.8
τ 20.48 ± 1.03
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

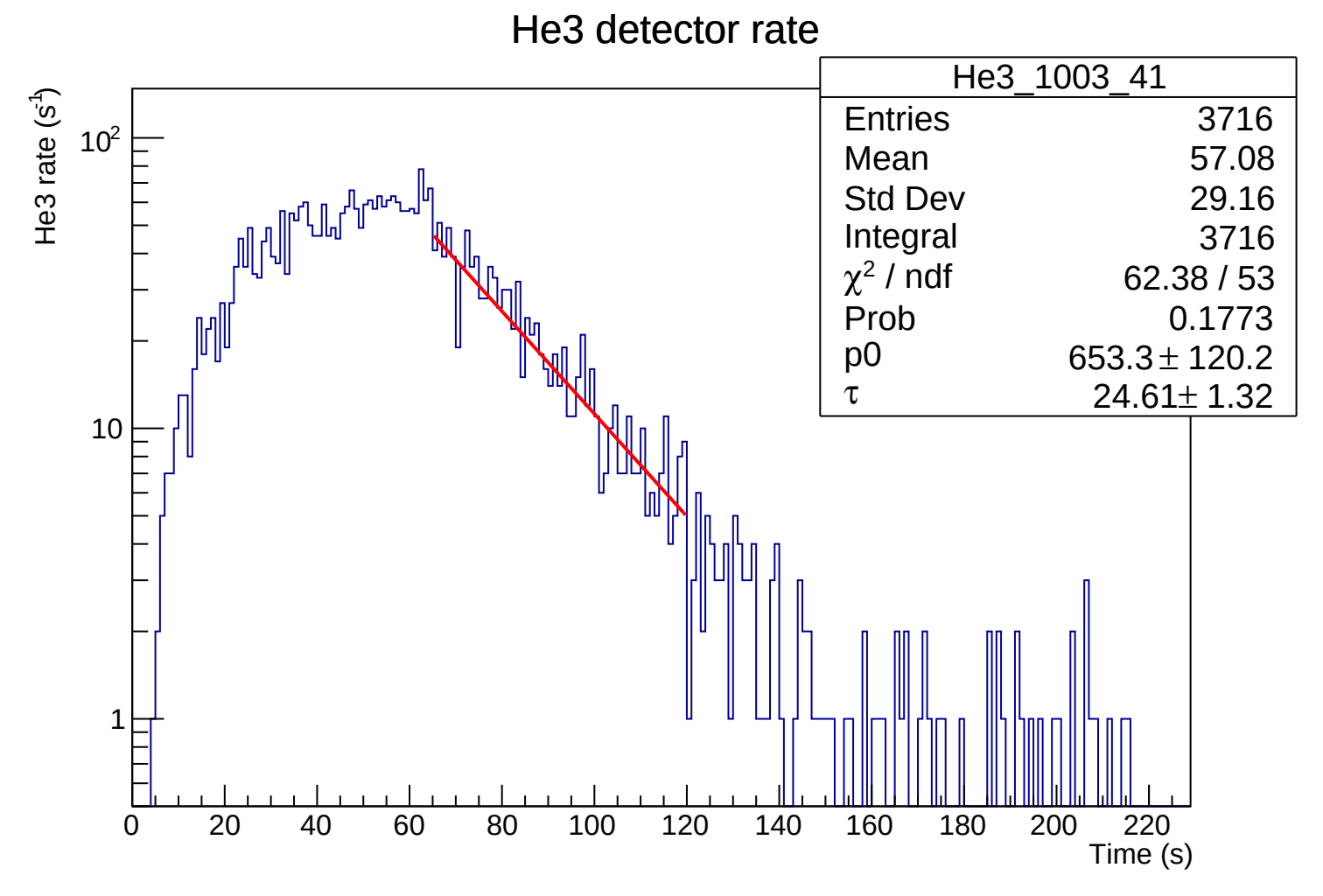

He3 detector rate
He3_1003_27
Entries 3864
Mean 56.99
Std Dev 29.74
Integral 3864
χ² / ndf 42.49 / 33
Prob 0.1245
p0 1091± 309.6
τ 21.43 ± 1.66
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

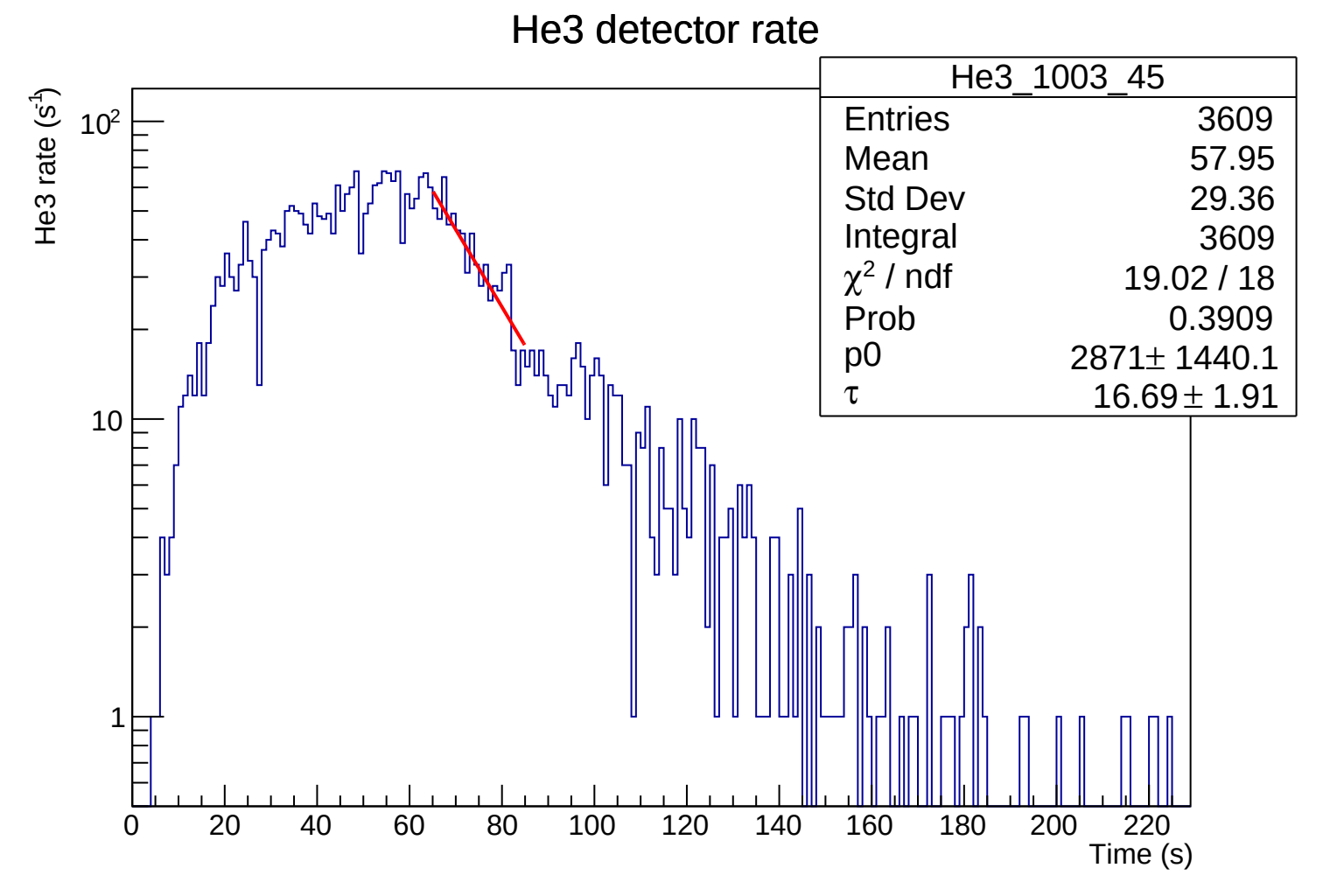

He3 detector rate
He3_1003_29
Entries 3861
Mean 57.39
Std Dev 30.07
Integral 3861
χ² / ndf 24.09 / 18
Prob 0.1521
p0 1162 ± 662.0
τ 20.8 ± 3.3
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

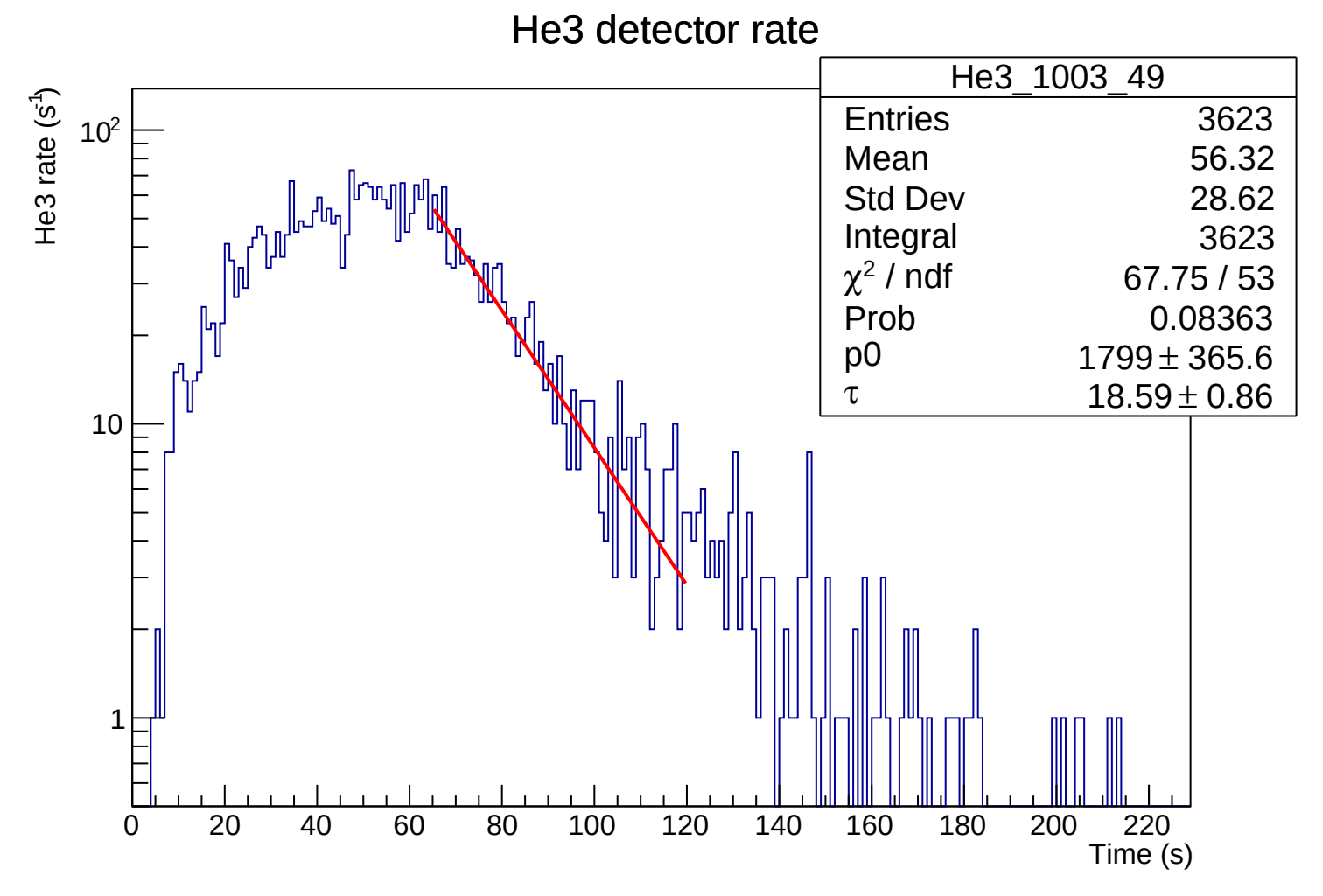

He3 detector rate
He3_1003_33
Entries 3726
Mean 56.96
Std Dev 29.17
Integral 3726
χ² / ndf 52.86 / 53
Prob 0.4795
p0 876.2 ± 166.7
τ 22.59 ± 1.16
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

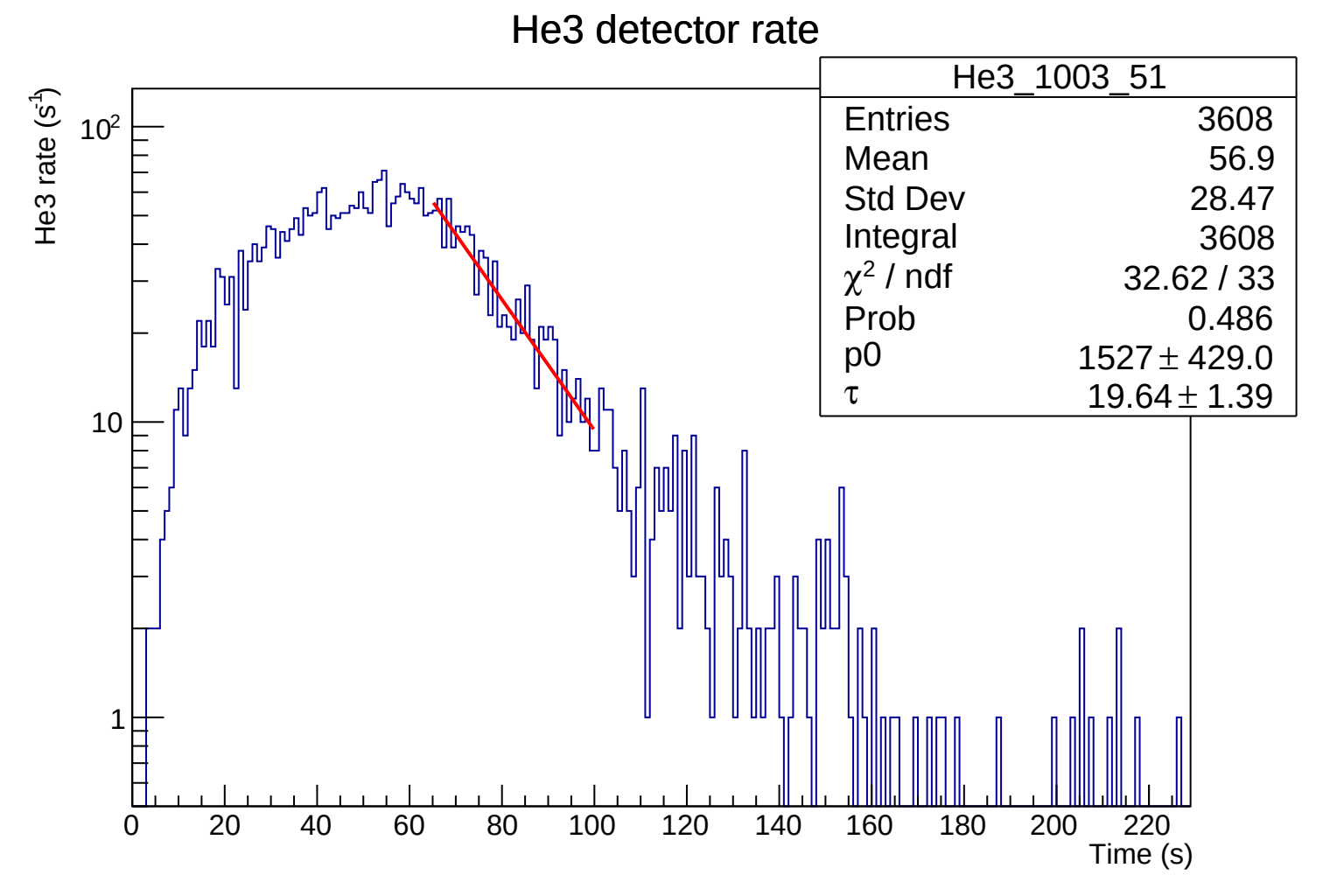

He3 detector rate
He3_1003_35
Entries 3842
Mean 57.22
Std Dev 28.79
Integral 3841
χ² / ndf 45.76 / 33
Prob 0.06893
p0 1217 ± 344.1
τ 21.14 ± 1.61
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

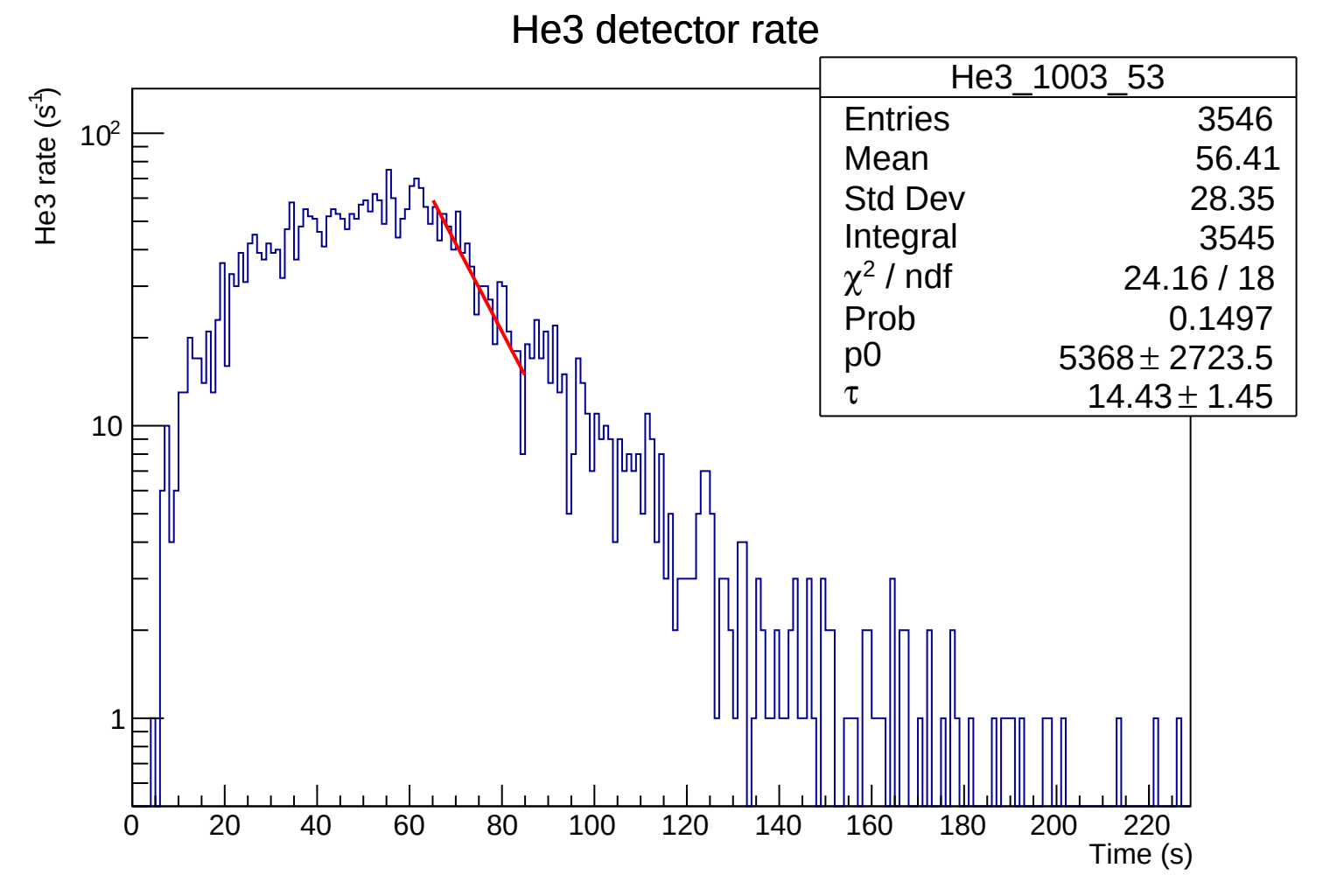

He3 detector rate
He3_1003_37
Entries 3885
Mean 57.04
Std Dev 29.5
Integral 3884
χ² / ndf 33.55 / 18
Prob 0.0143
p0 514.4 ± 291.5
τ 27.54 ± 5.81
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)


He3 detector rate
He3_1003_41
Entries 3716
Mean 57.08
Std Dev 29.16
Integral 3716
χ² / ndf 62.38 / 53
Prob 0.1773
p0 653.3 ± 120.2
τ 24.61 ± 1.32
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)


He3 detector rate
He3_1003_45
Entries 3609
Mean 57.95
Std Dev 29.36
Integral 3609
χ² / ndf 19.02 / 18
Prob 0.3909
p0 2871± 1440.1
τ 16.69± 1.91
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)


He3 detector rate
He3_1003_49
Entries 3623
Mean 56.32
Std Dev 28.62
Integral 3623
χ² / ndf 67.75 / 53
Prob 0.08363
p0 1799 ± 365.6
τ 18.59 ± 0.86
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)


He3 detector rate
He3_1003_51
Entries 3608
Mean 56.9
Std Dev 28.47
Integral 3608
χ² / ndf 32.62 / 33
Prob 0.486
p0 1527 ± 429.0
τ 19.64 ± 1.39
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)


He3 detector rate
He3_1003_53
Entries 3546
Mean 56.41
Std Dev 28.35
Integral 3545
χ² / ndf 24.16 / 18
Prob 0.1497
p0 5368 ± 2723.5
τ 14.43 ± 1.45
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
220
Time (s)

Average lifetime from He3 data:

τ = 20.9775324063 +/- 0.0065793786581 s