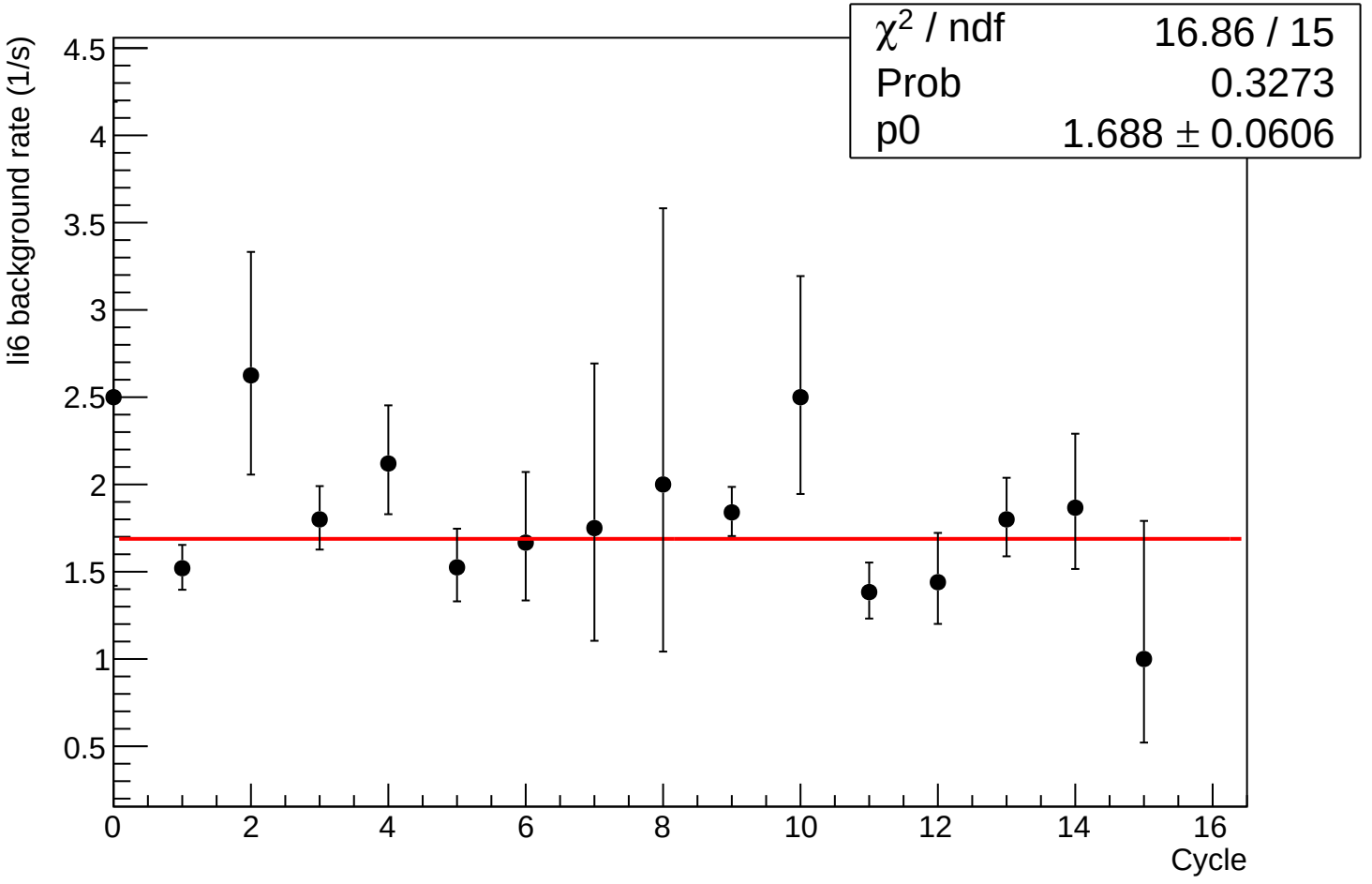
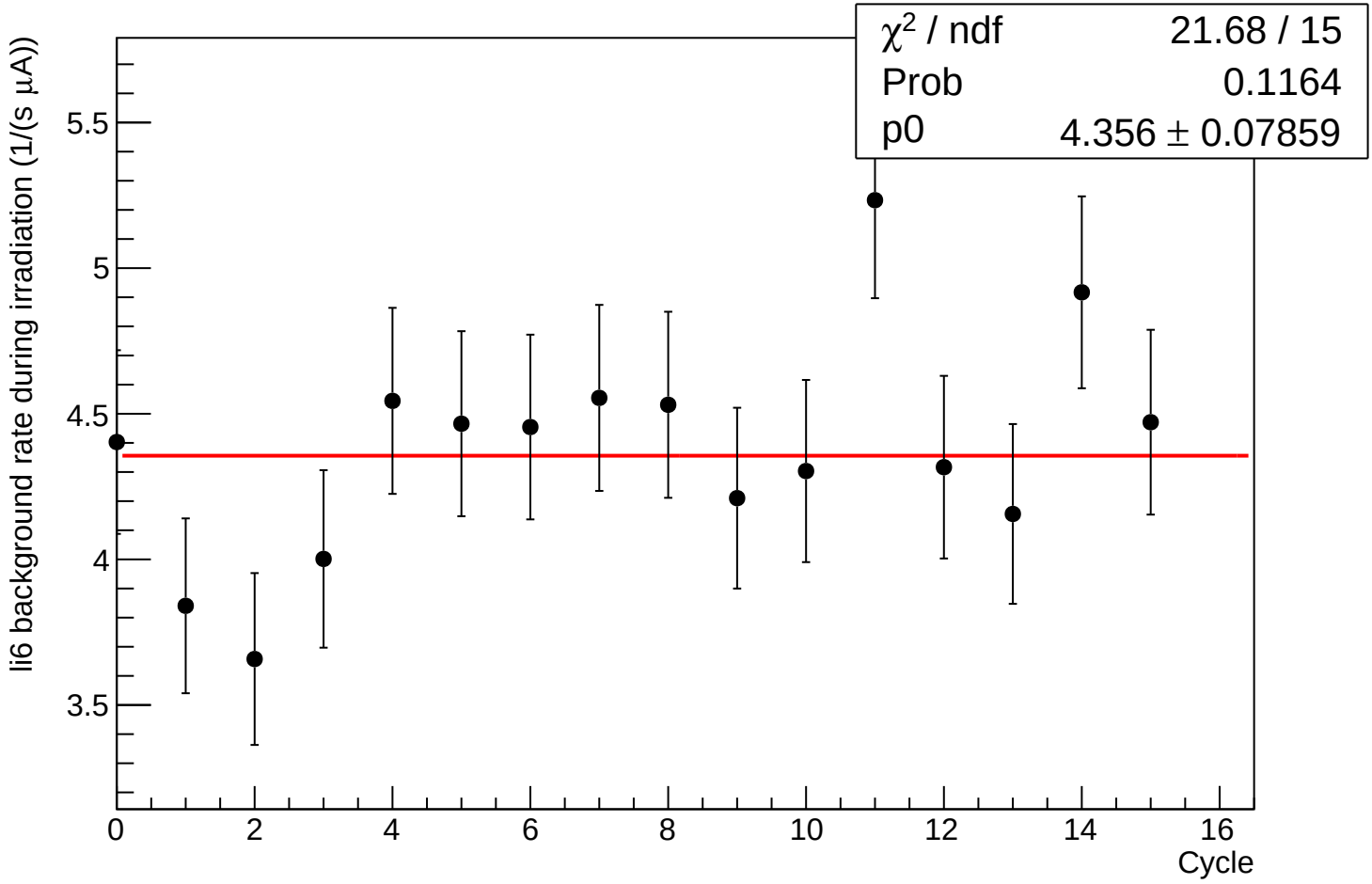
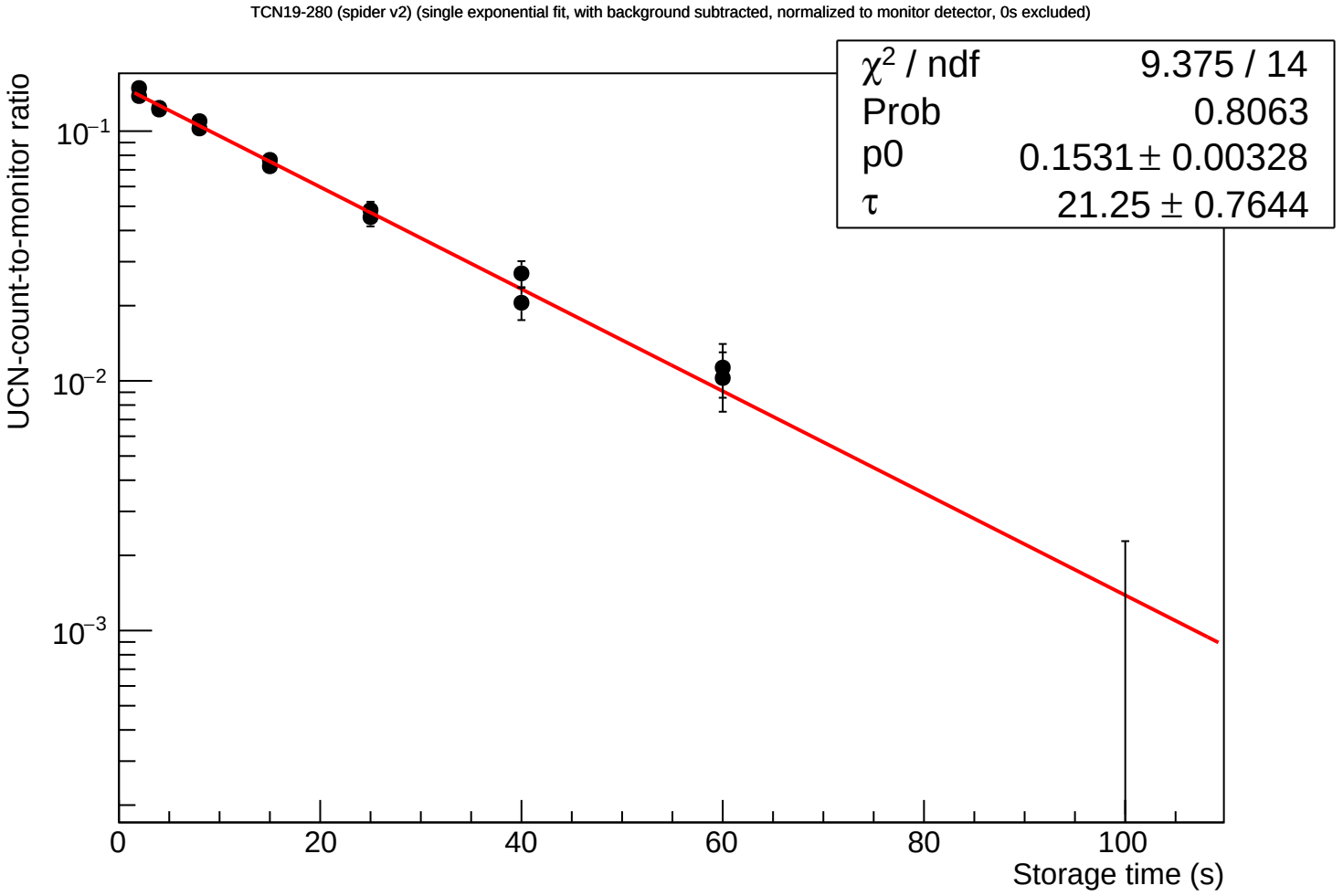
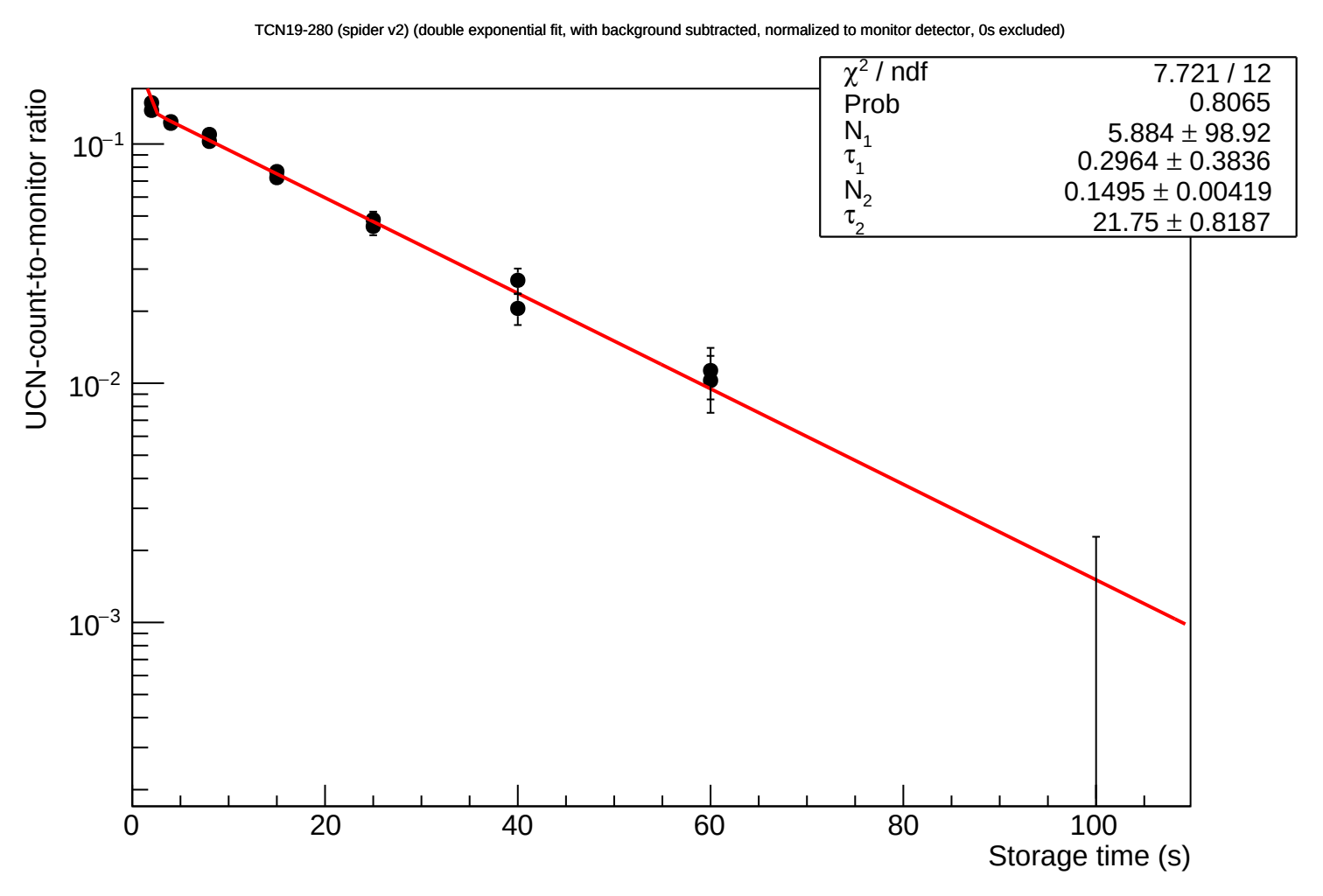
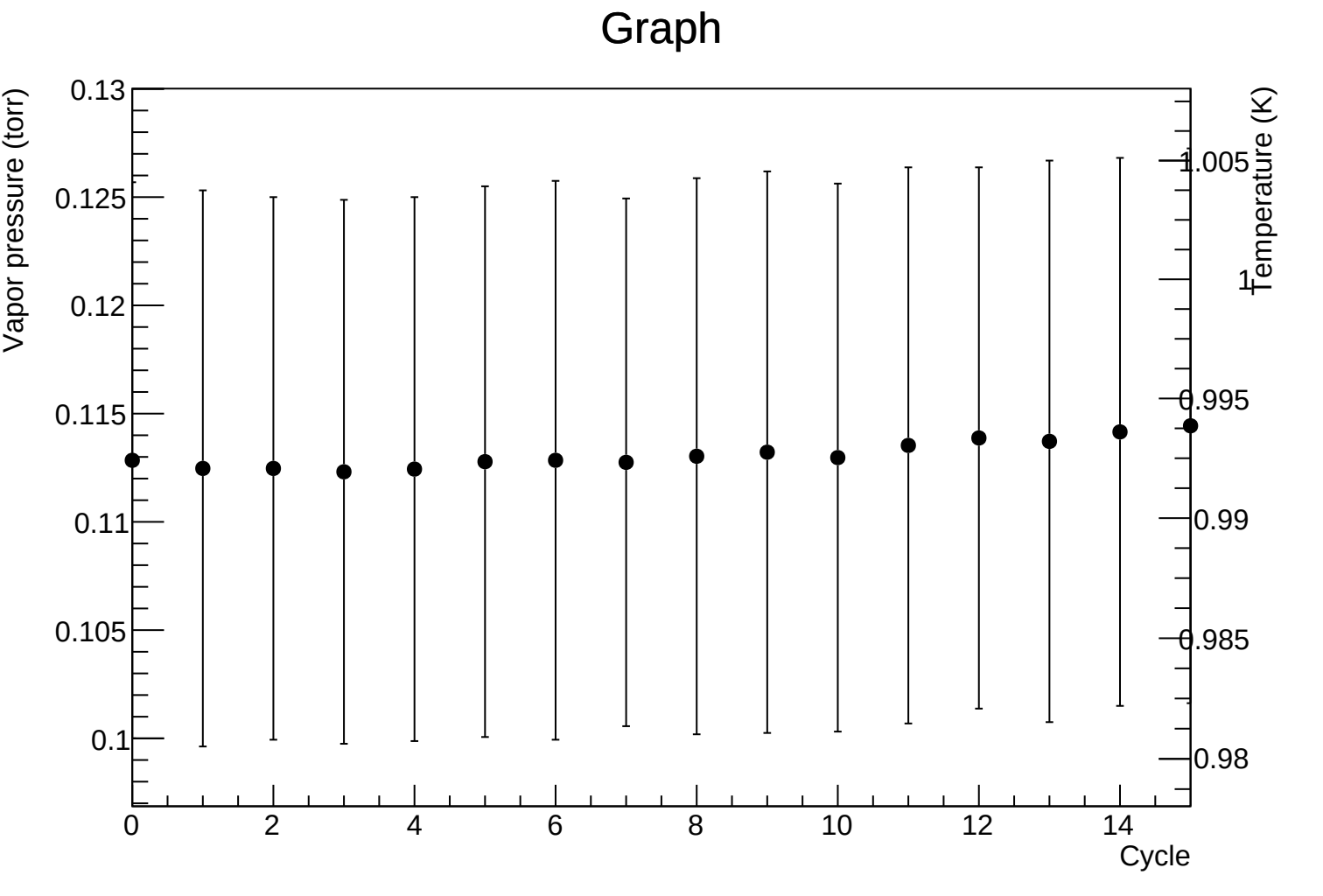
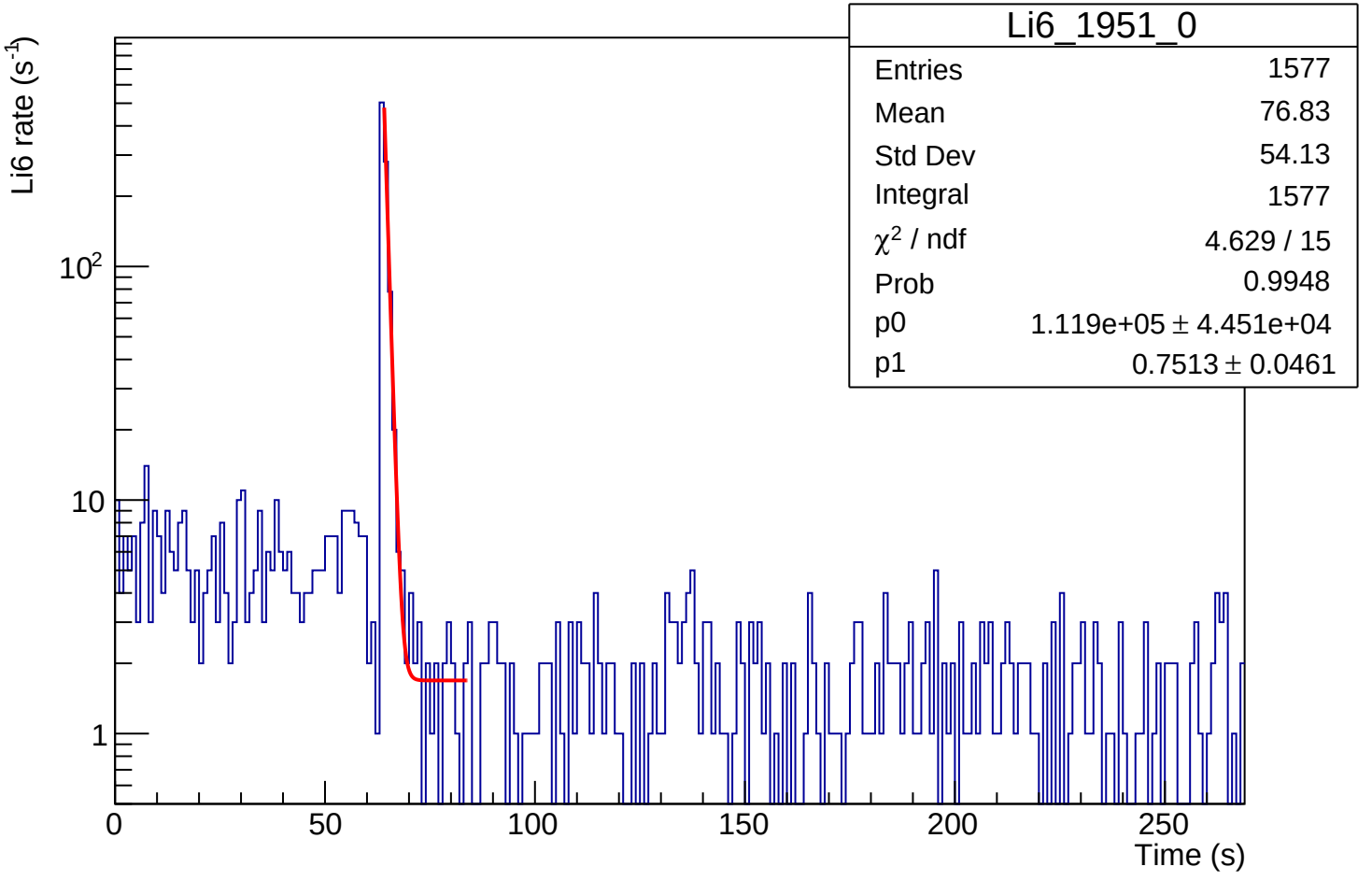

li6 background rate (1/s)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
2
4
6
8
10
12
14
16
Cycle
χ² / ndf 16.86 / 15
Prob 0.3273
p0 1.688 ± 0.0606

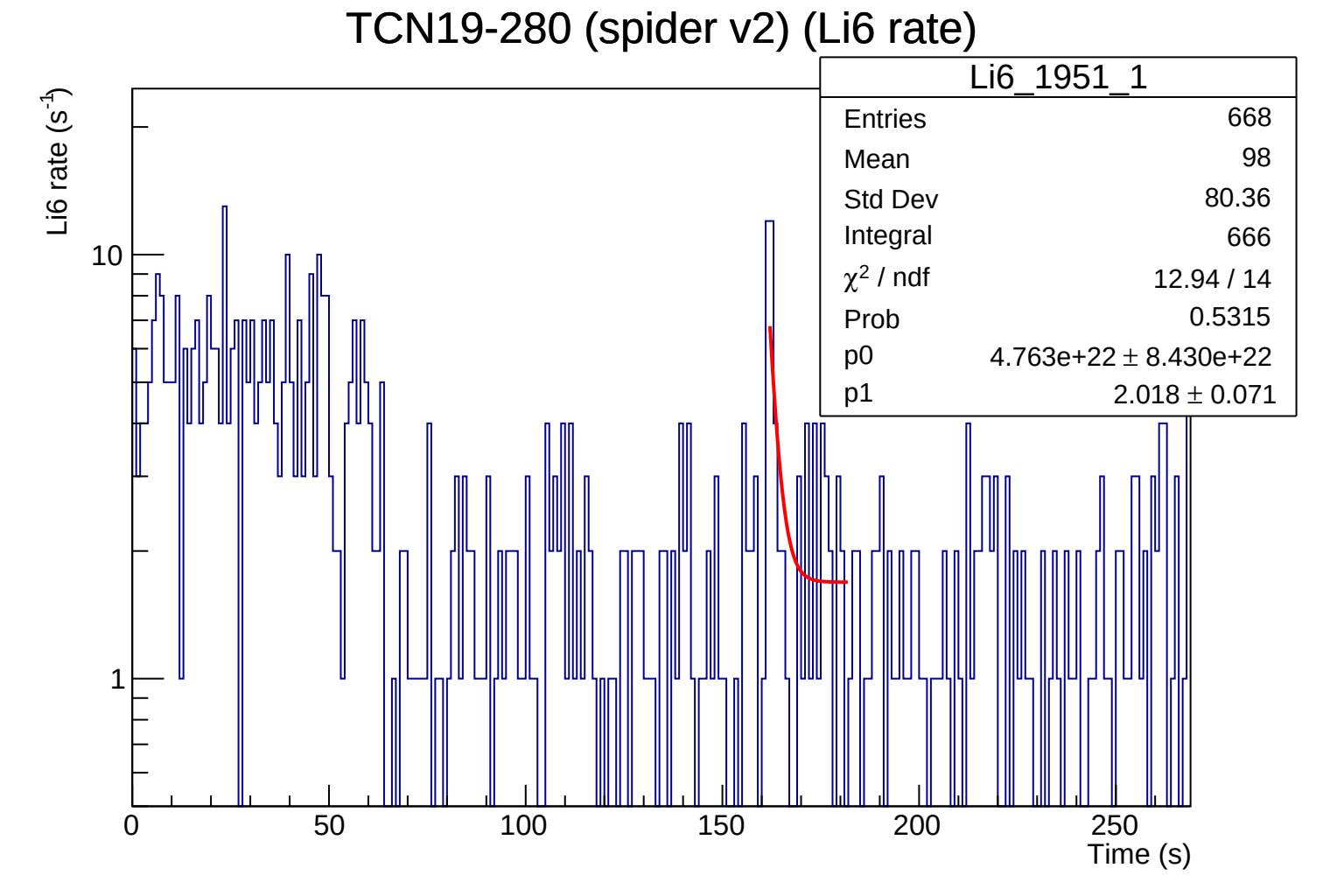

χ^2 / ndf 21.68 / 15
Prob 0.1164
p0 4.356 ± 0.07859
li6 background rate during irradiation (1/(s μA))
5.5
5
4.5
4
3.5
0
2
4
6
8
10
12
14
16
Cycle

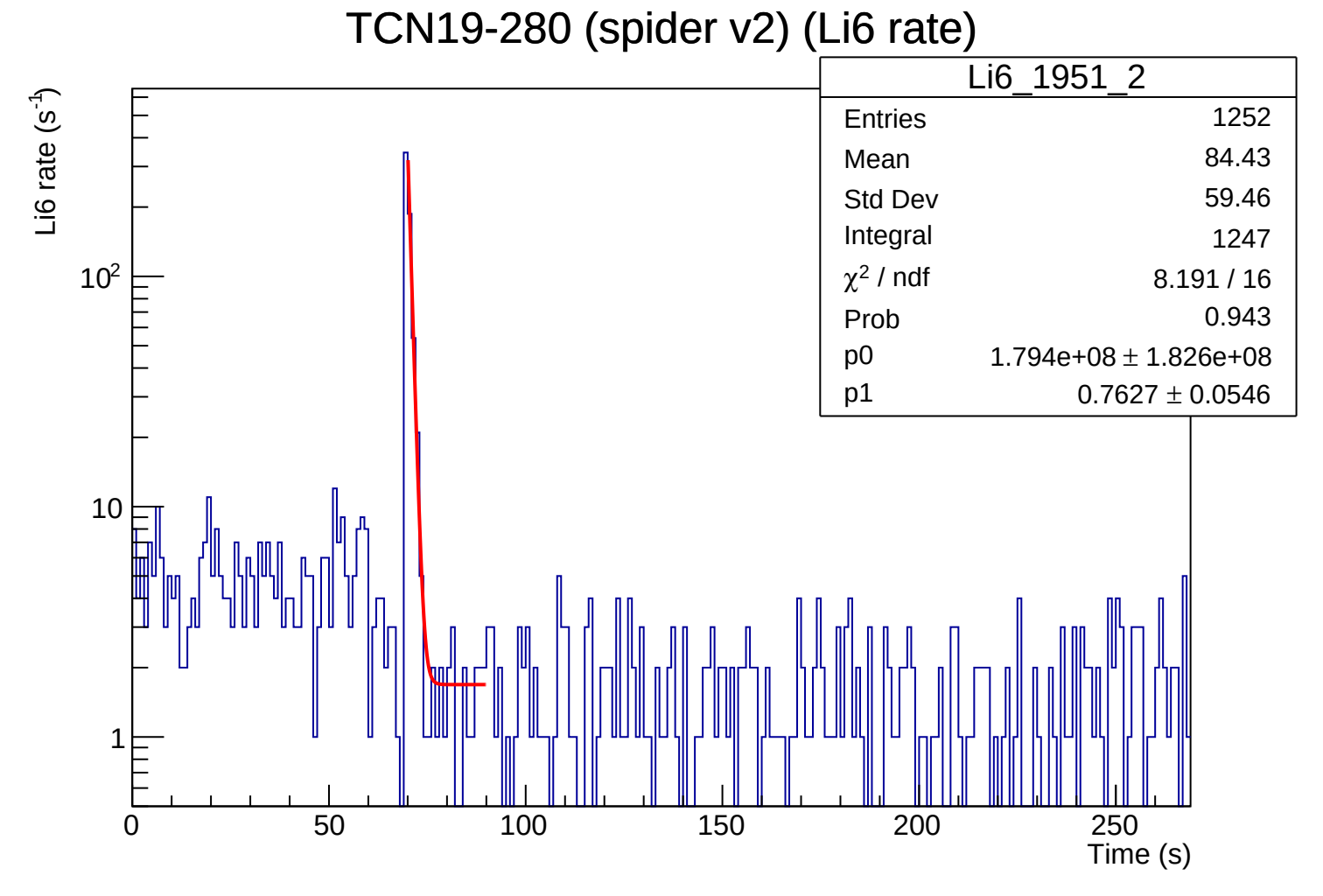

TCN19-280 (spider v2) (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 9.375 / 14
Prob 0.8063
p0 0.1531 ± 0.00328
τ 21.25 ± 0.7644
UCN-count-to-monitor ratio
10⁻¹
10⁻²
10⁻³
0
20
40
60
80
100
Storage time (s)

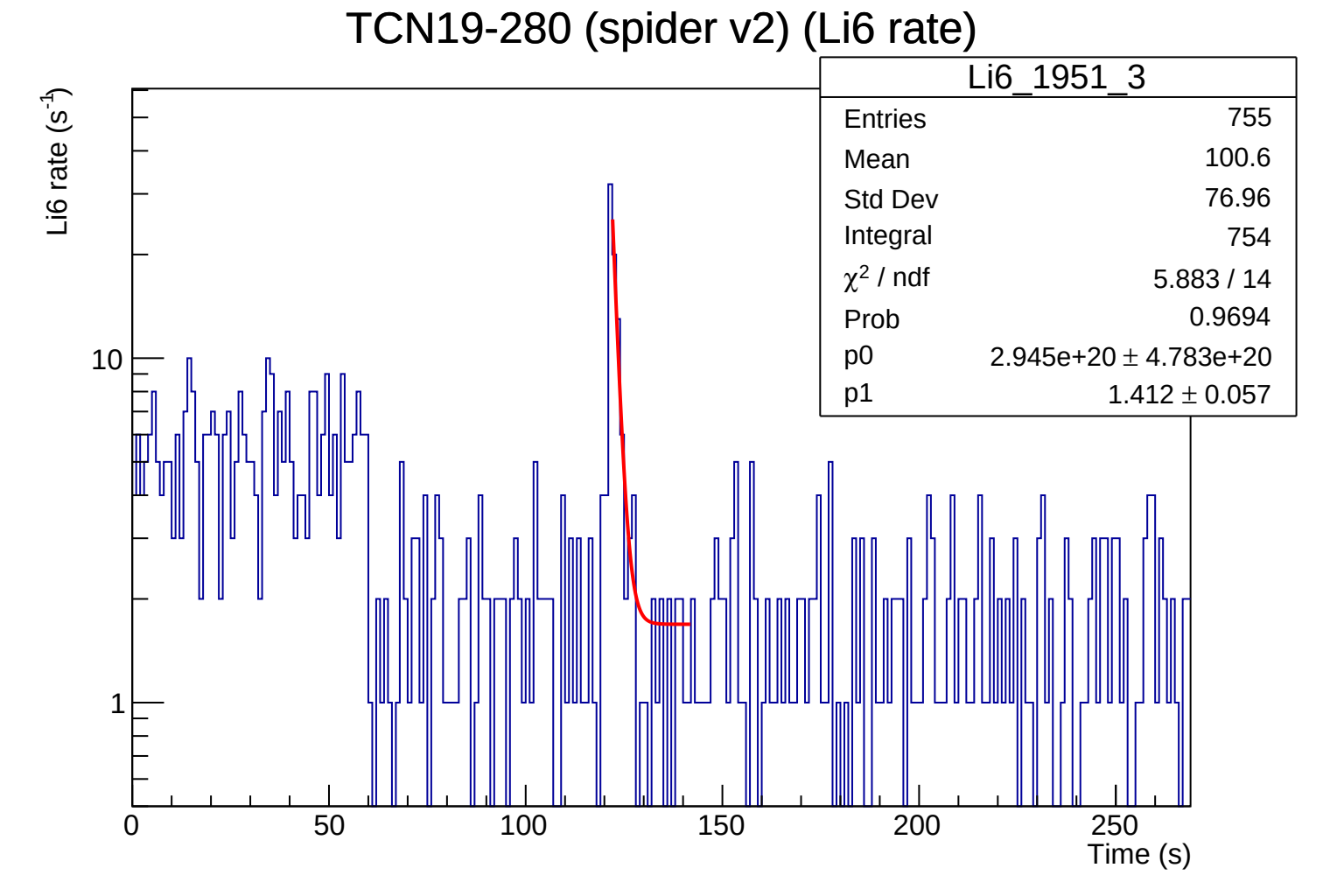

TCN19-280 (spider v2) (double exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 7.721 / 12
Prob 0.8065
N1 5.884 ± 98.92
τ1 0.2964 ± 0.3836
N2 0.1495 ± 0.00419
τ2 21.75 ± 0.8187
UCN-count-to-monitor ratio
10⁻¹
10⁻²
10⁻³
0
20
40
60
80
100
Storage time (s)

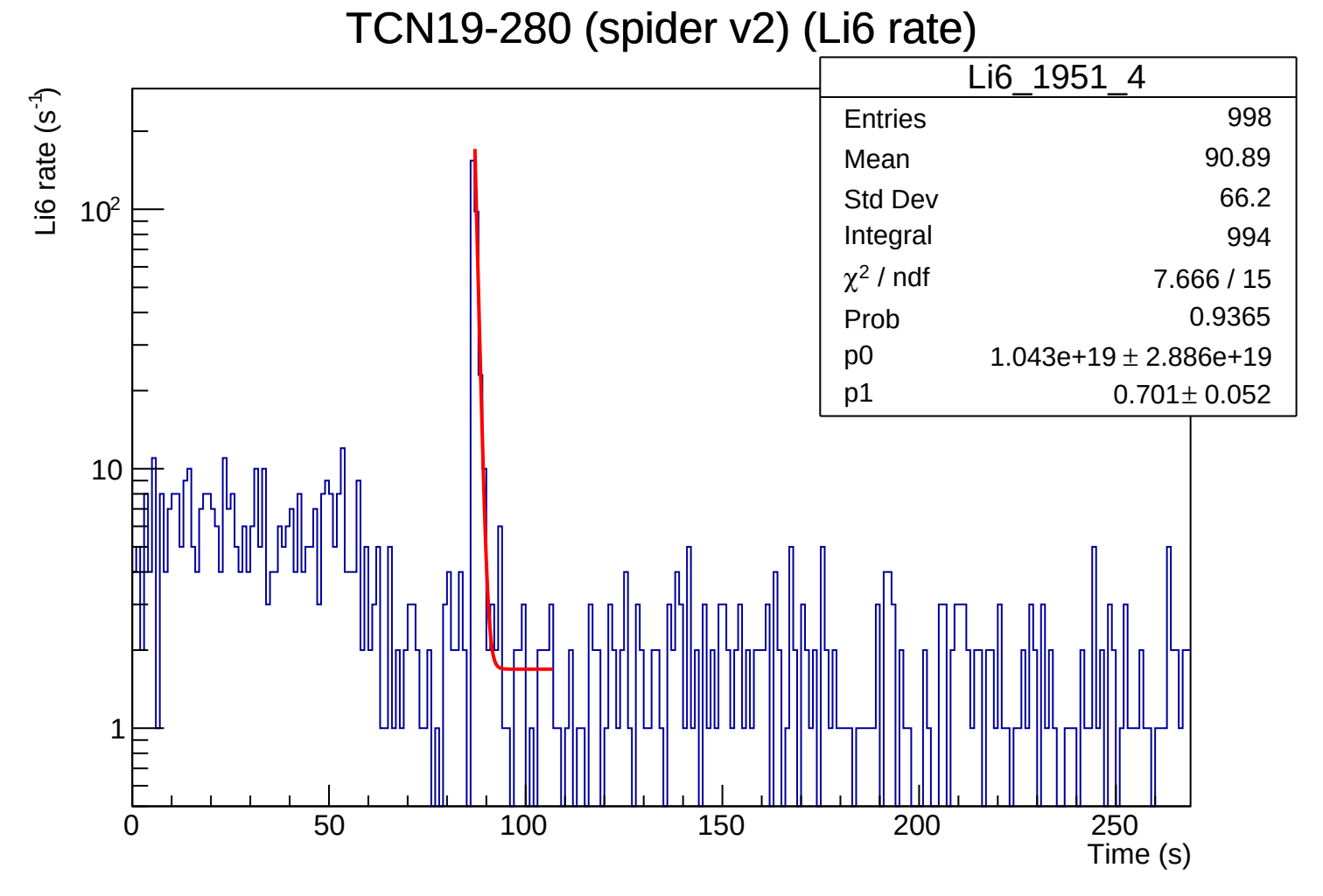

Graph
Vapor pressure (torr)
0.13
0.125
0.12
0.115
0.11
0.105
0.1
Temperature (K)
1.005
1
0.995
0.99
0.985
0.98
0
2
4
6
8
10
12
14
Cycle

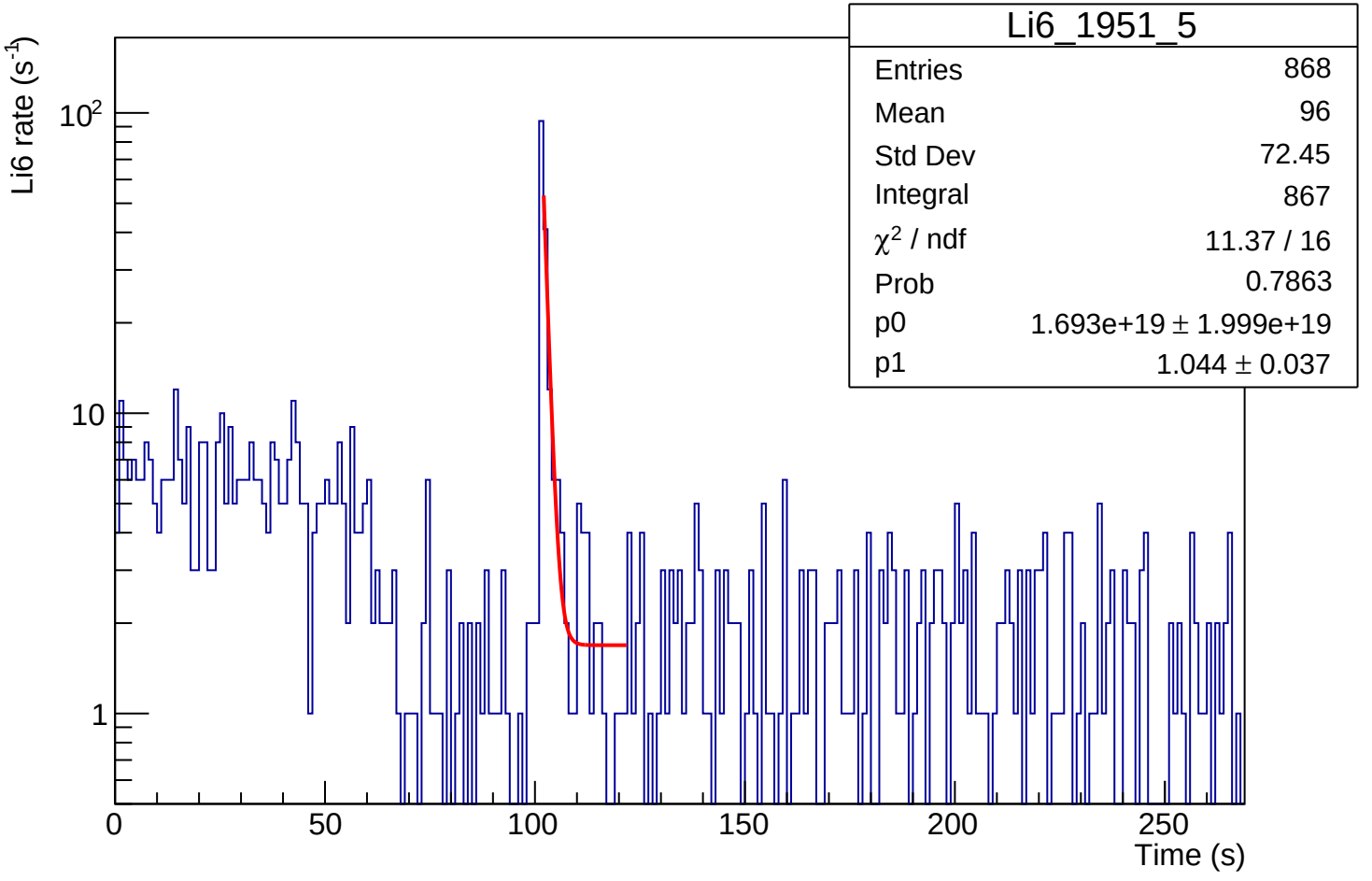

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_0
Entries 1577
Mean 76.83
Std Dev 54.13
Integral 1577
χ2 / ndf 4.629 / 15
Prob 0.9948
p0 1.119e+05 ± 4.451e+04
p1 0.7513 ± 0.0461
Li6 rate (s-1)
10^2
10
1
0
50
100
150
200
250
Time (s)

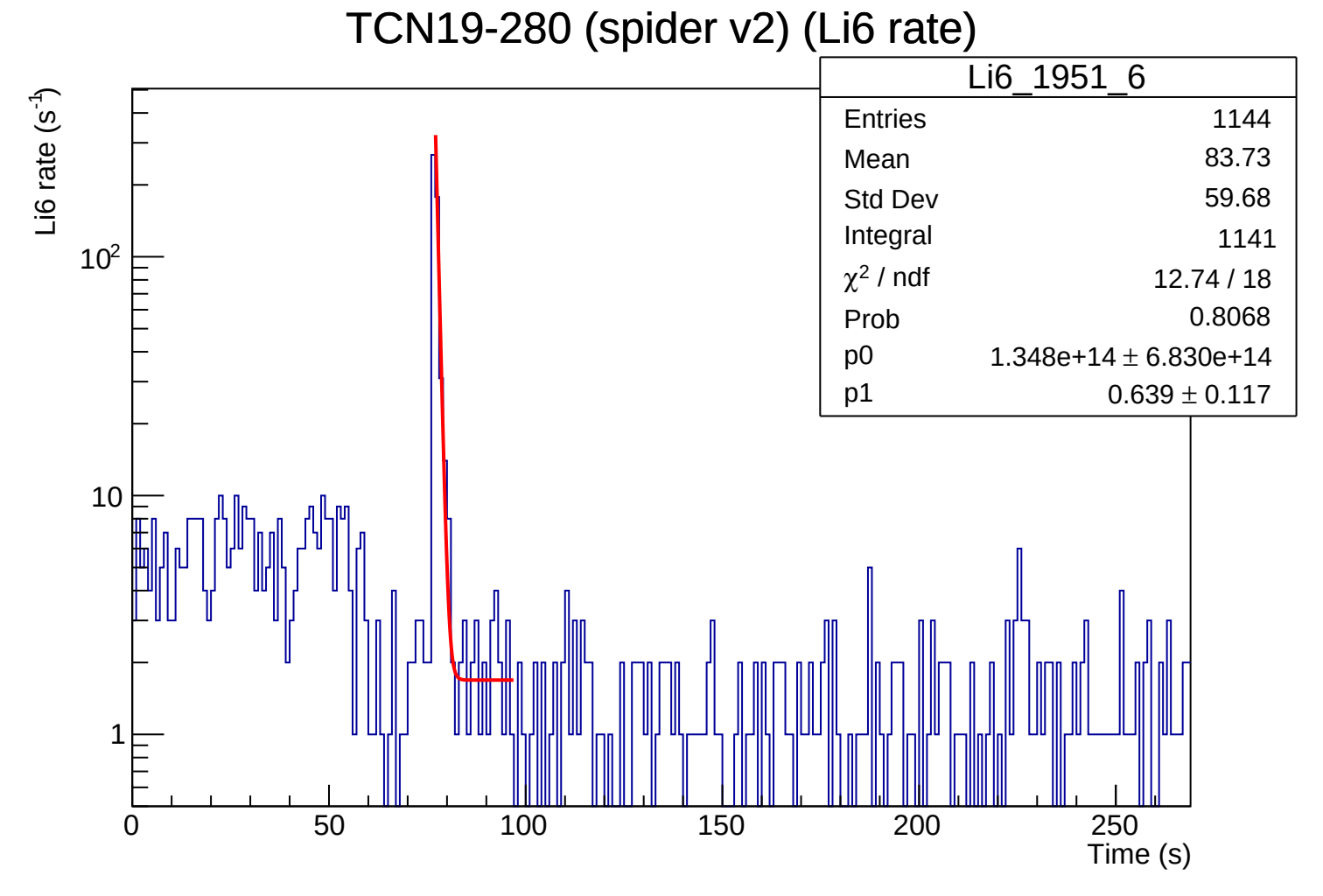

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_1
Entries 668
Mean 98
Std Dev 80.36
Integral 666
χ2 / ndf 12.94 / 14
Prob 0.5315
p0 4.763e+22 ± 8.430e+22
p1 2.018 ± 0.071
Li6 rate (s-1)
10
1
0
50
100
150
200
250
Time (s)

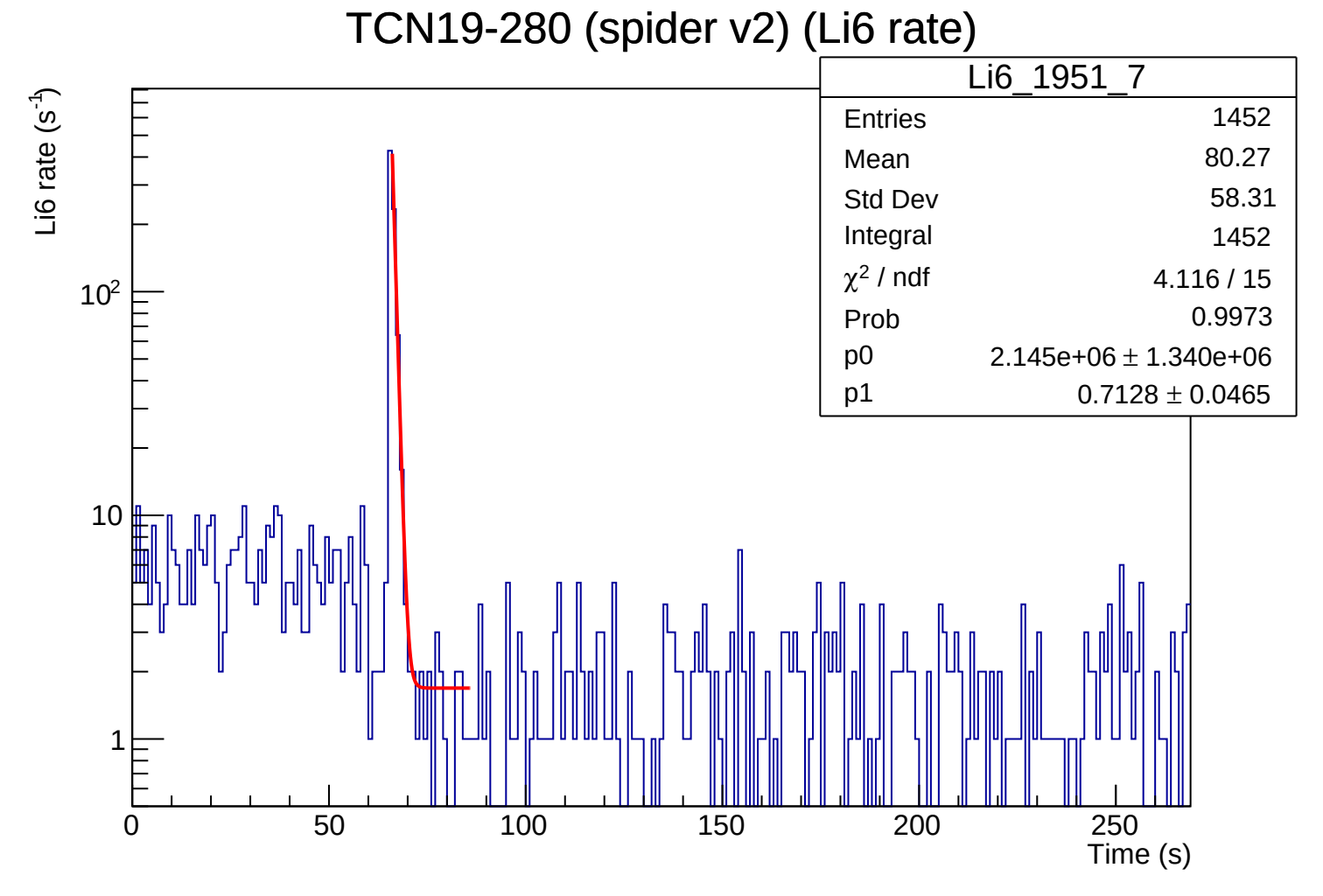

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_2
Entries 1252
Mean 84.43
Std Dev 59.46
Integral 1247
χ2 / ndf 8.191 / 16
Prob 0.943
p0 1.794e+08 ± 1.826e+08
p1 0.7627 ± 0.0546
Li6 rate (s-1)
10^2
10
1
0
50
100
150
200
250
Time (s)

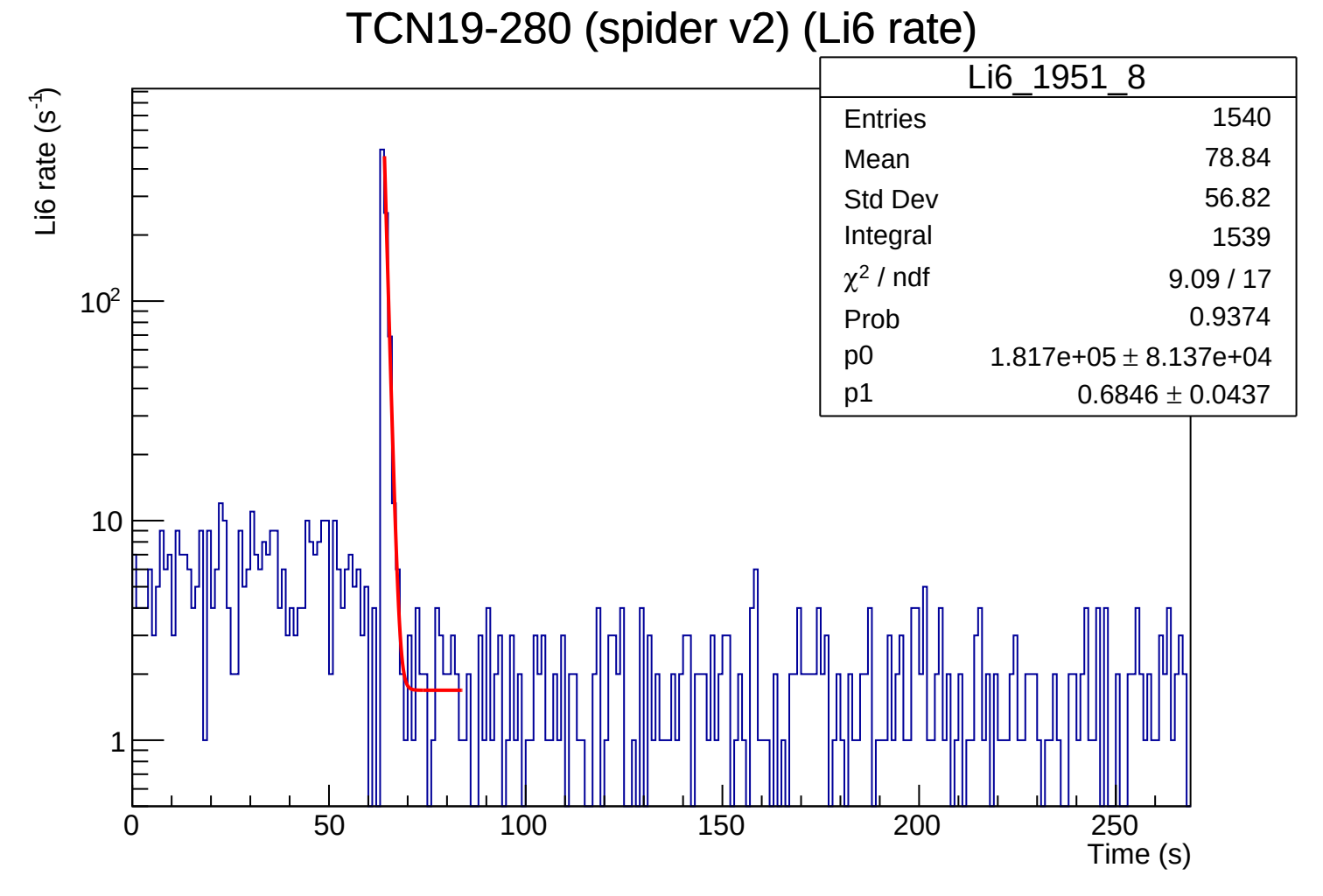

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_3
Entries 755
Mean 100.6
Std Dev 76.96
Integral 754
χ2 / ndf 5.883 / 14
Prob 0.9694
p0 2.945e+20 ± 4.783e+20
p1 1.412 ± 0.057
Li6 rate (s-1)
10
1
0
50
100
150
200
250
Time (s)

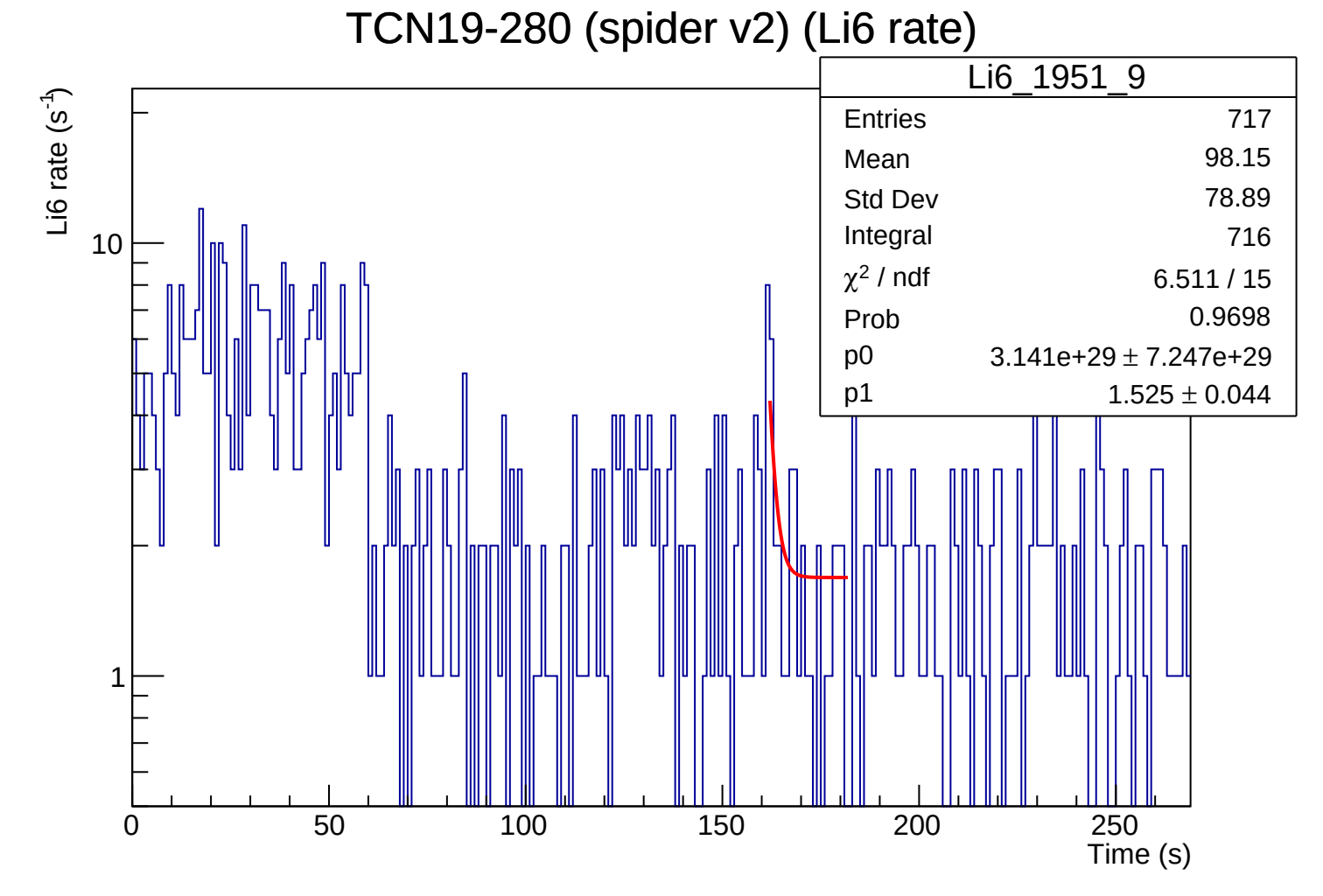

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_4
Entries 998
Mean 90.89
Std Dev 66.2
Integral 994
χ² / ndf 7.666 / 15
Prob 0.9365
p0 1.043e+19 ± 2.886e+19
p1 0.701± 0.052
Li6 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

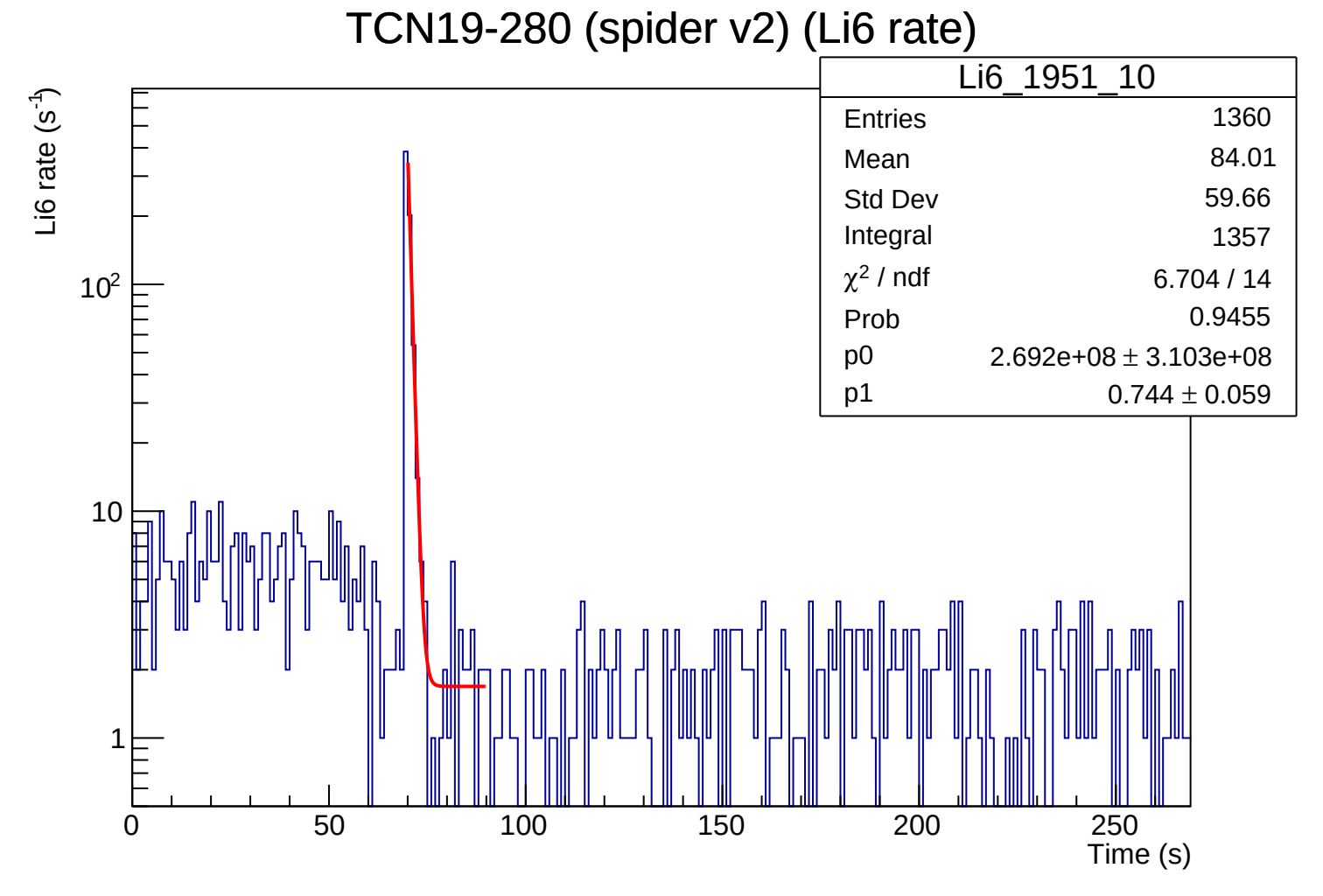

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_5
Entries 868
Mean 96
Std Dev 72.45
Integral 867
χ2 / ndf 11.37 / 16
Prob 0.7863
p0 1.693e+19 ± 1.999e+19
p1 1.044 ± 0.037
Li6 rate (s-1)
10^2
10
1
0
50
100
150
200
250
Time (s)

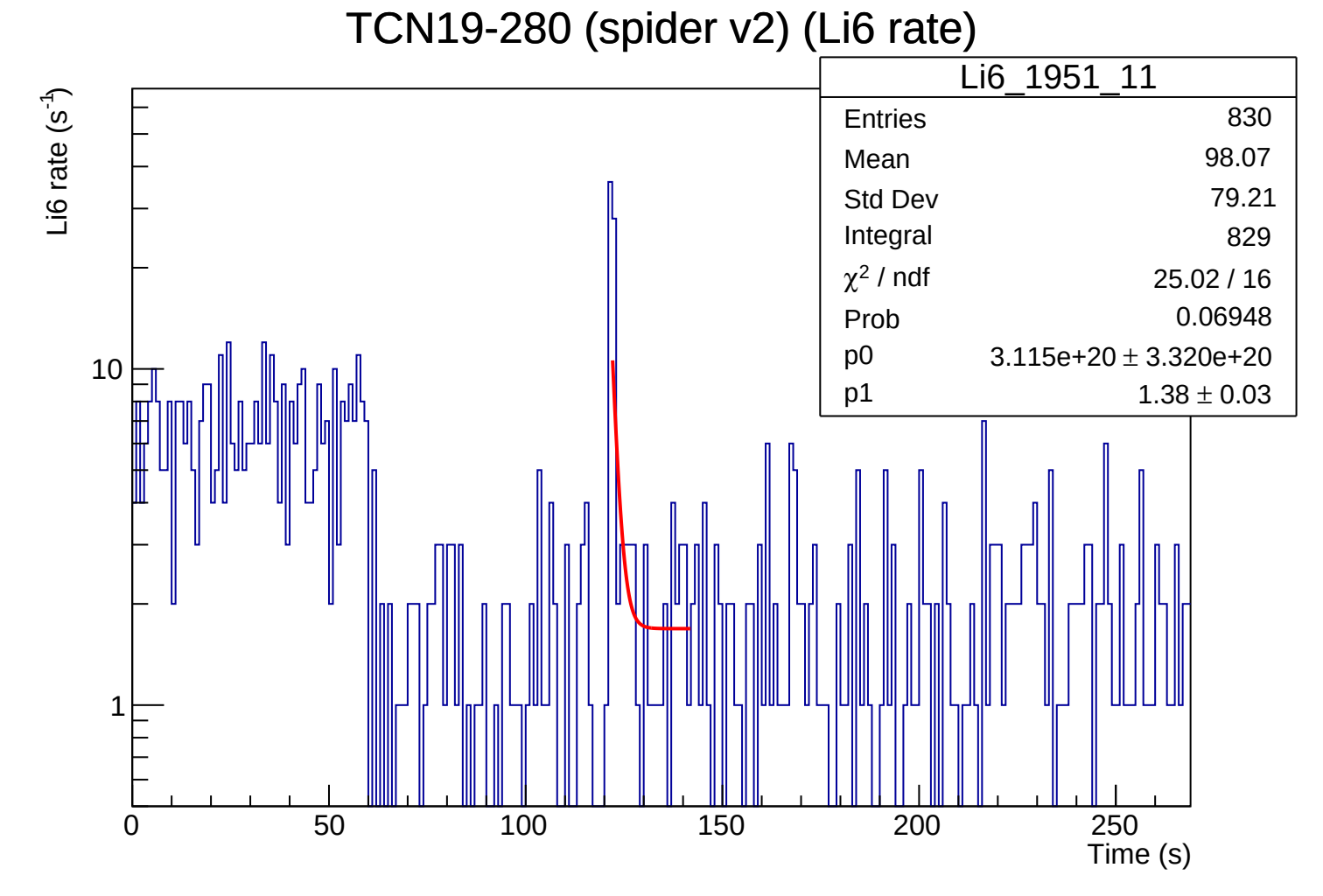

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_6
Entries 1144
Mean 83.73
Std Dev 59.68
Integral 1141
χ² / ndf 12.74 / 18
Prob 0.8068
p0 1.348e+14 ± 6.830e+14
p1 0.639 ± 0.117
Li6 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

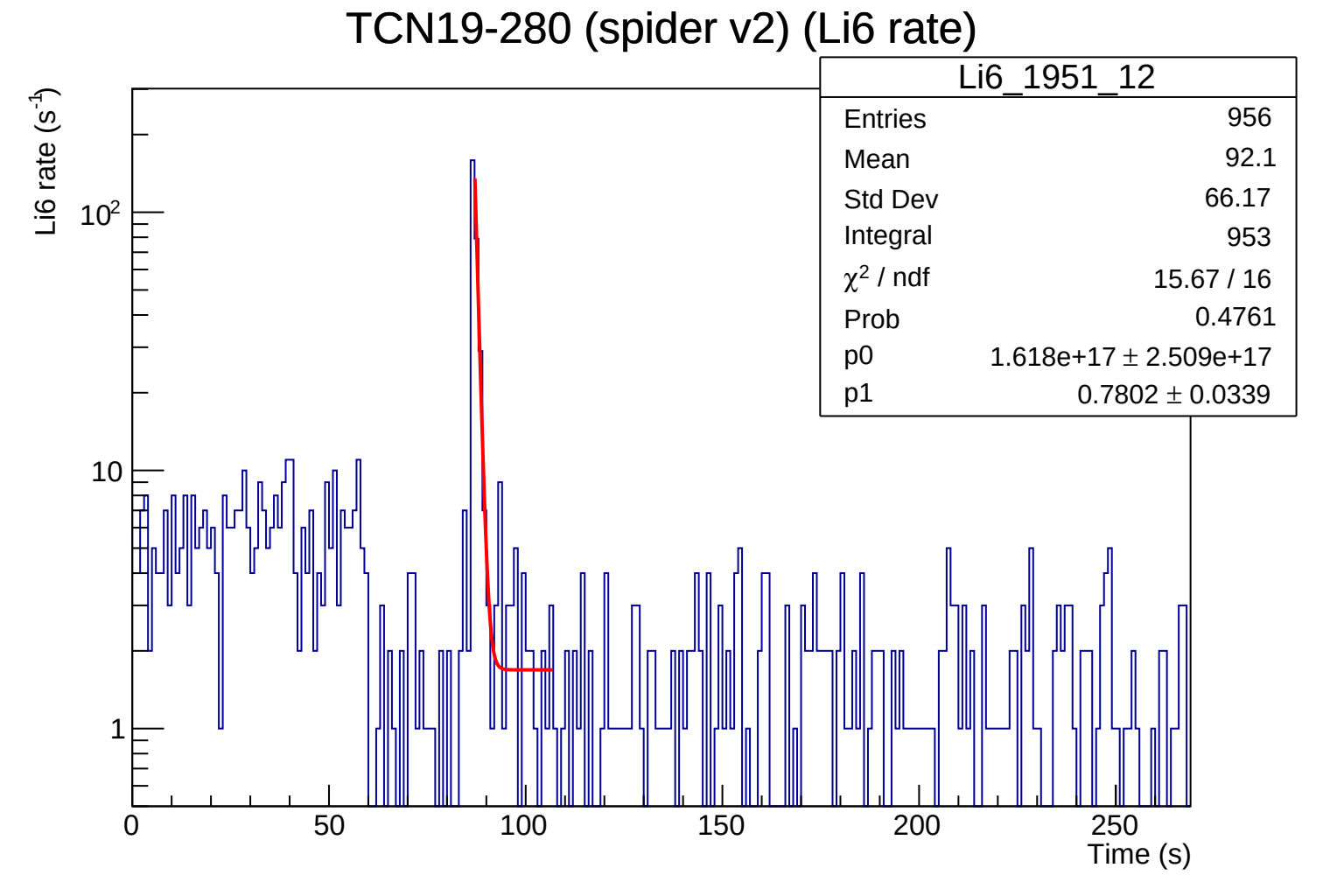

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_7
Entries 1452
Mean 80.27
Std Dev 58.31
Integral 1452
χ² / ndf 4.116 / 15
Prob 0.9973
p0 2.145e+06 ± 1.340e+06
p1 0.7128 ± 0.0465
Li6 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

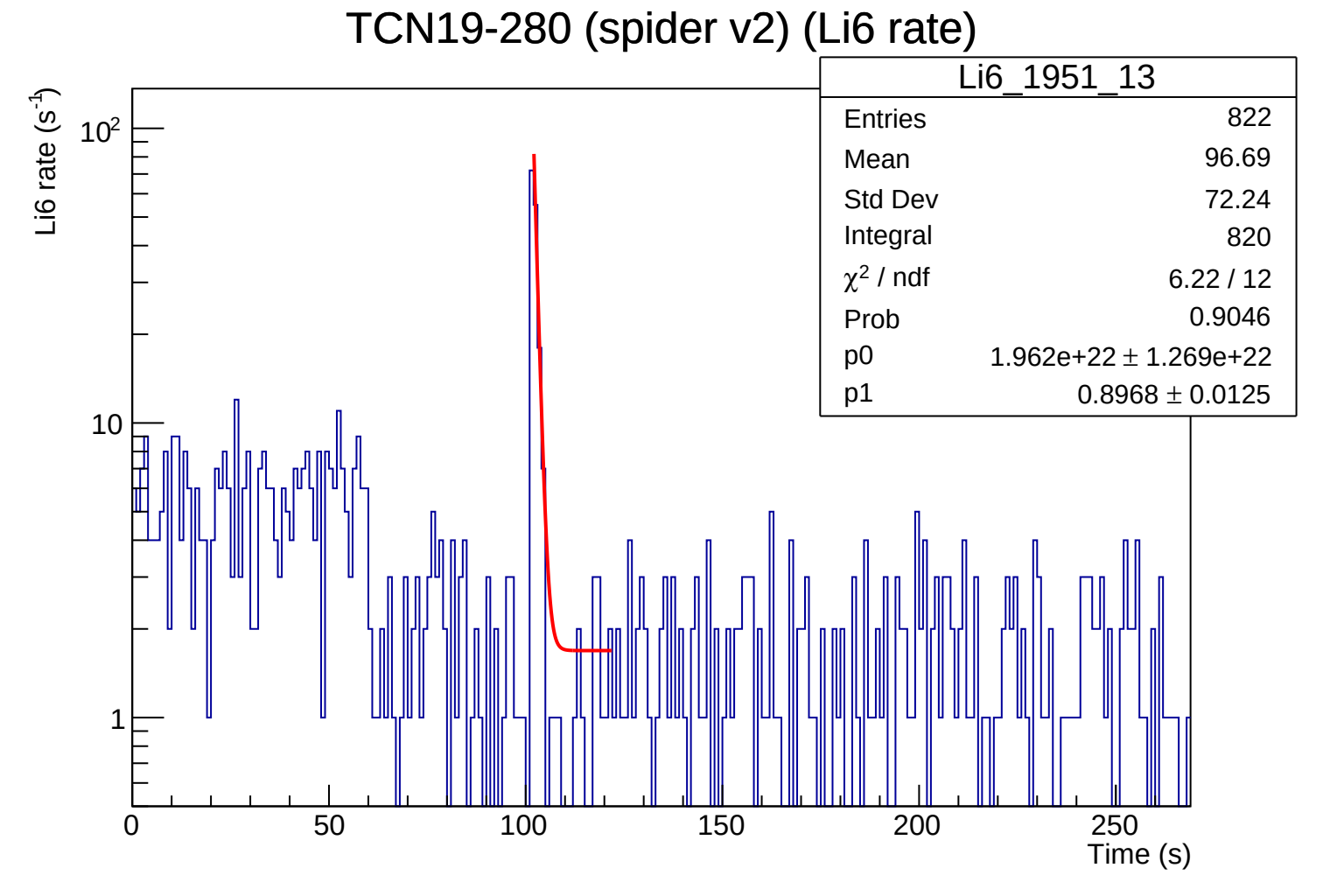

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_8
Entries 1540
Mean 78.84
Std Dev 56.82
Integral 1539
χ² / ndf 9.09 / 17
Prob 0.9374
p0 1.817e+05 ± 8.137e+04
p1 0.6846 ± 0.0437
Li6 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

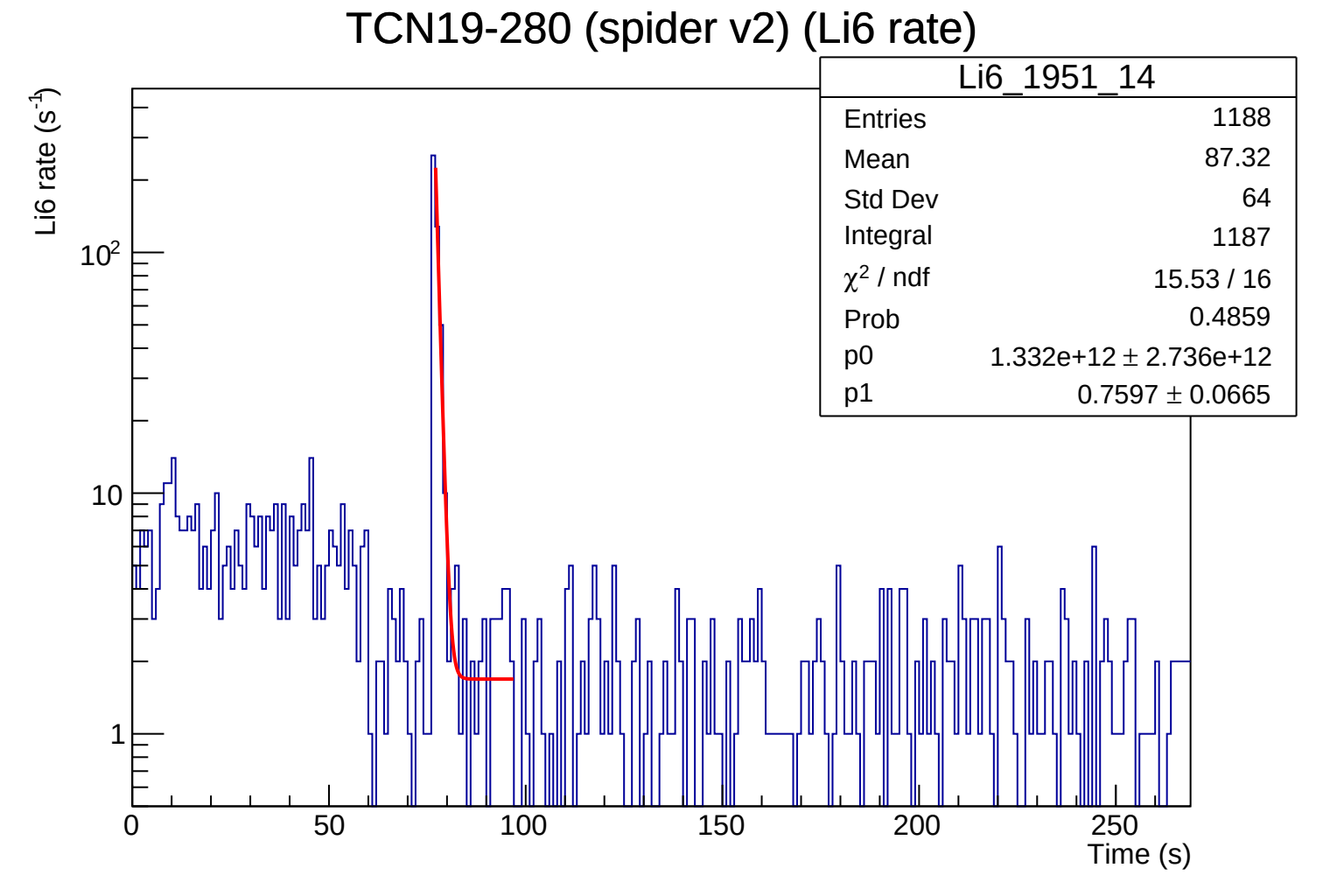

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_9
Entries 717
Mean 98.15
Std Dev 78.89
Integral 716
χ2 / ndf 6.511 / 15
Prob 0.9698
p0 3.141e+29 ± 7.247e+29
p1 1.525 ± 0.044
Li6 rate (s-1)
10
1
0
50
100
150
200
250
Time (s)

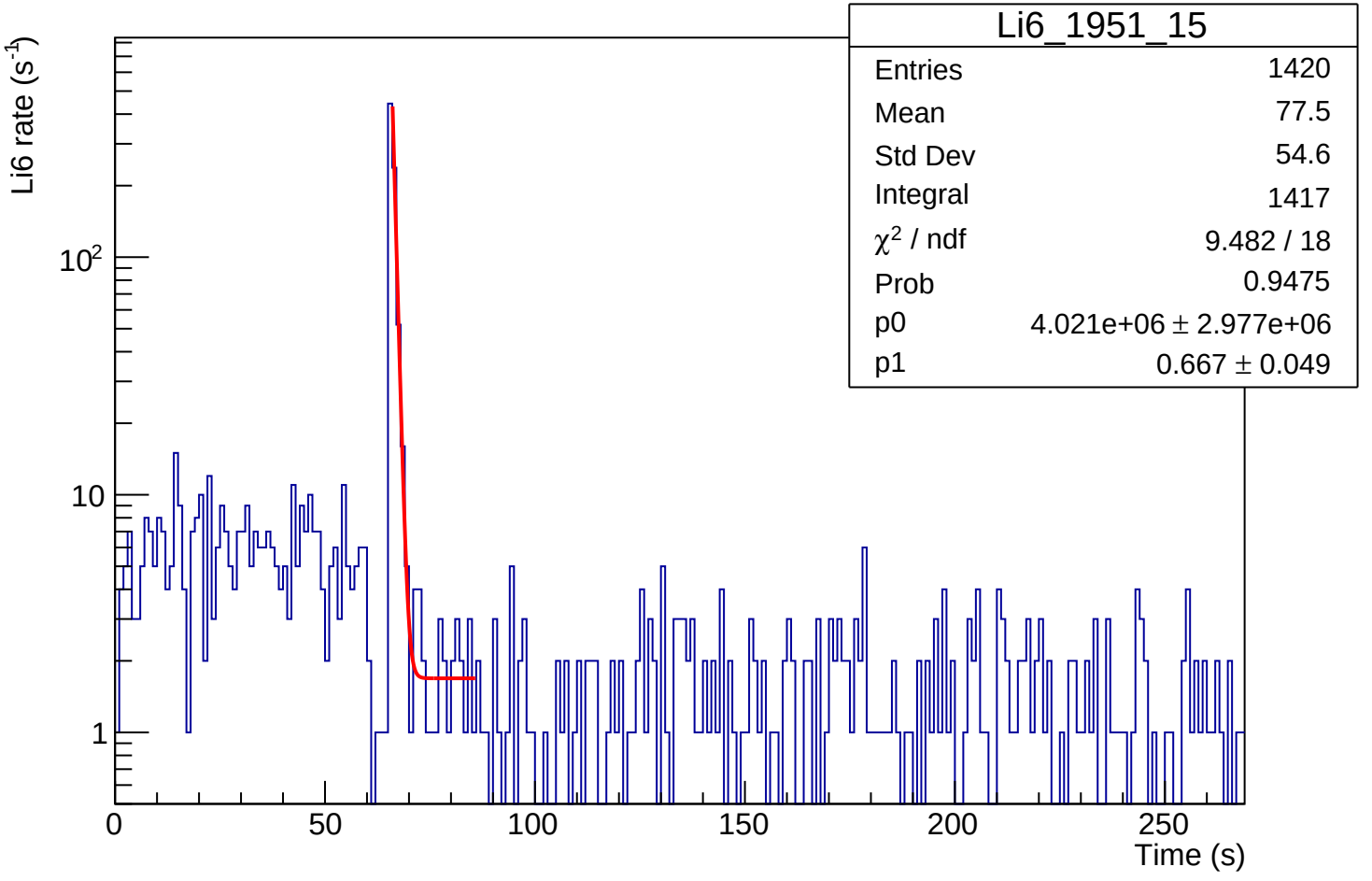

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_10
Entries 1360
Mean 84.01
Std Dev 59.66
Integral 1357
χ2 / ndf 6.704 / 14
Prob 0.9455
p0 2.692e+08 ± 3.103e+08
p1 0.744 ± 0.059
Li6 rate (s-1)
10^2
10
1
0
50
100
150
200
250
Time (s)

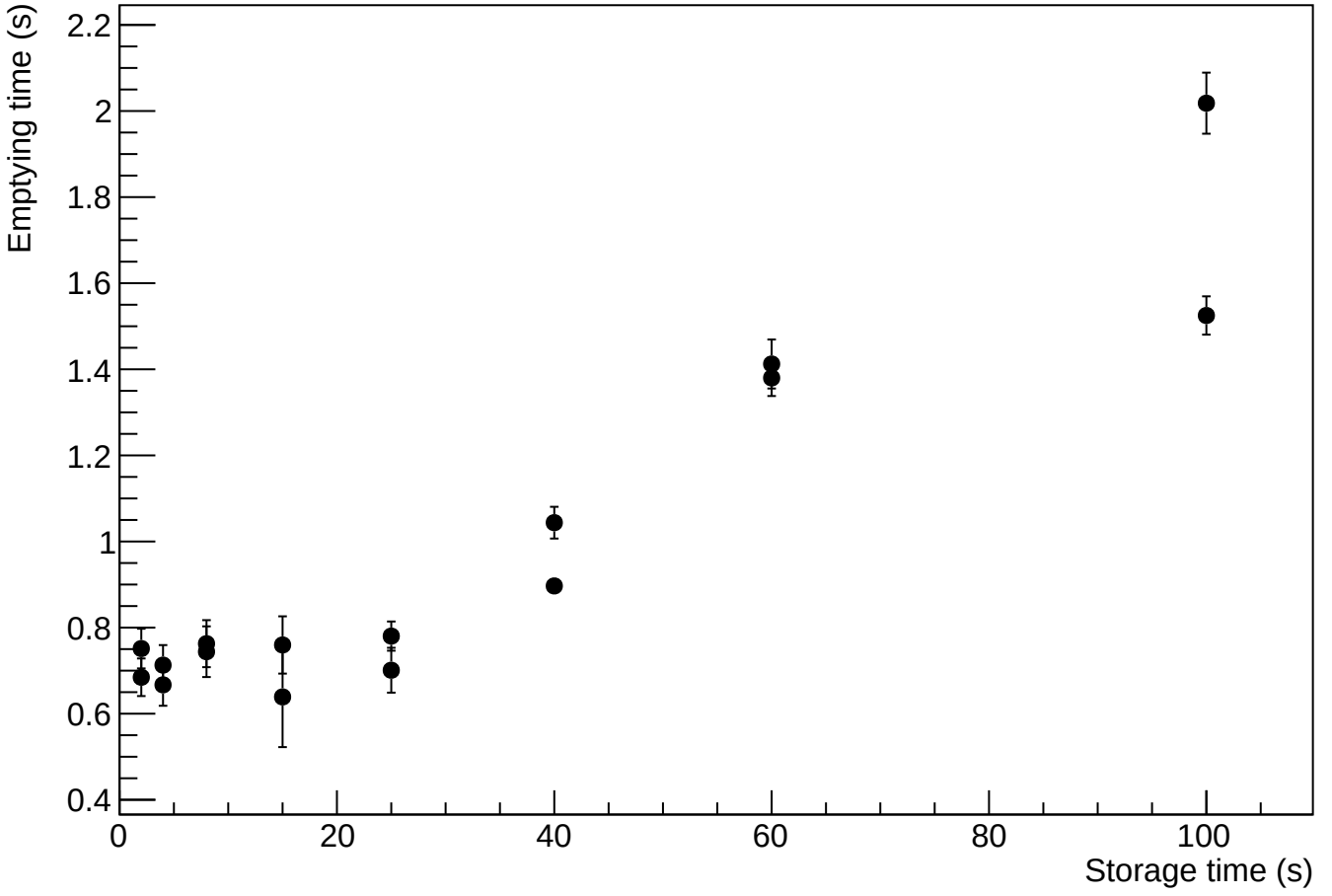

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_11
Entries 830
Mean 98.07
Std Dev 79.21
Integral 829
χ2 / ndf 25.02 / 16
Prob 0.06948
p0 3.115e+20 ± 3.320e+20
p1 1.38 ± 0.03
Li6 rate (s-1)
10
1
0
50
100
150
200
250
Time (s)

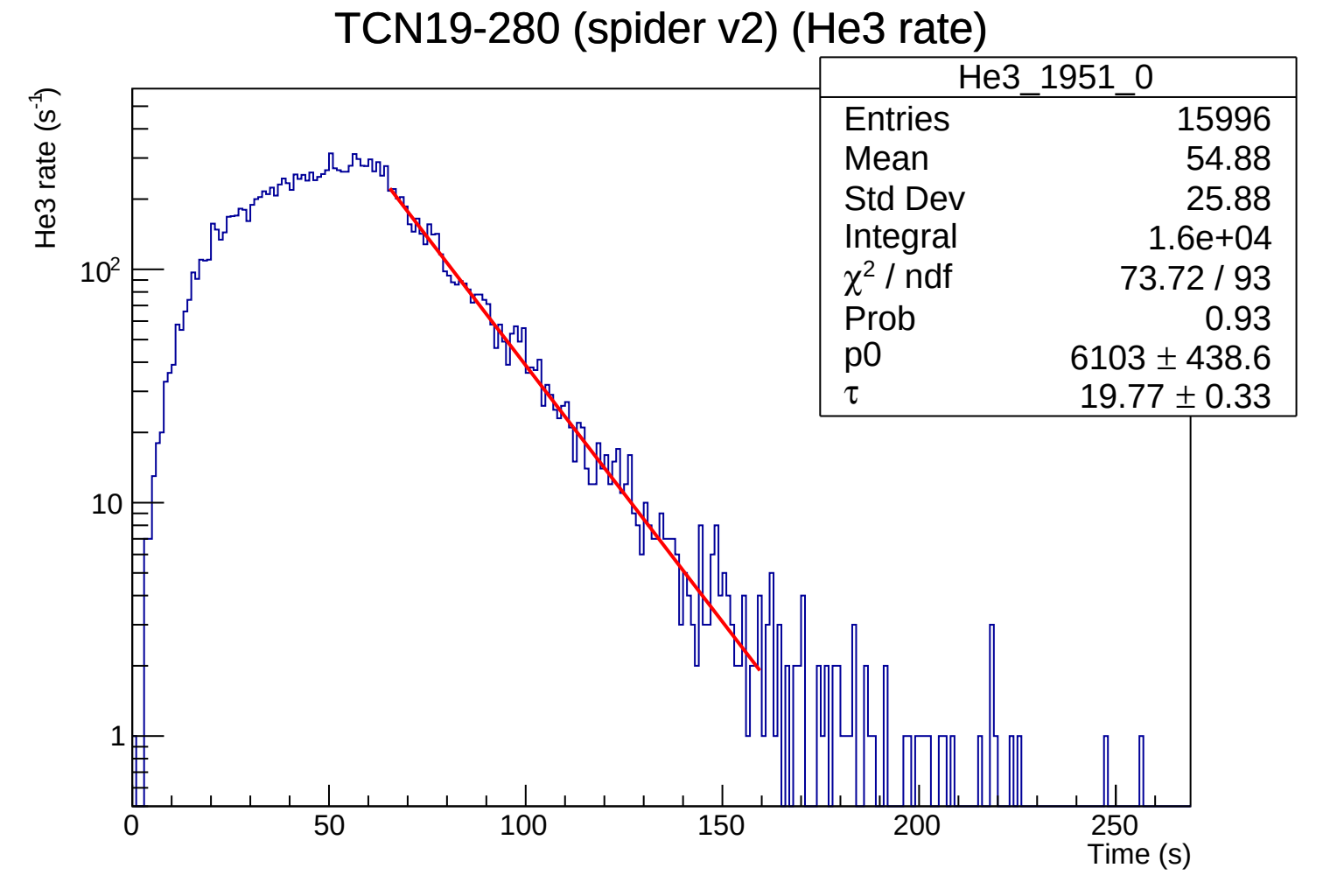

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_12
Entries 956
Mean 92.1
Std Dev 66.17
Integral 953
χ2 / ndf 15.67 / 16
Prob 0.4761
p0 1.618e+17 ± 2.509e+17
p1 0.7802 ± 0.0339
Li6 rate (s-1)
10^2
10
1
0
50
100
150
200
250
Time (s)

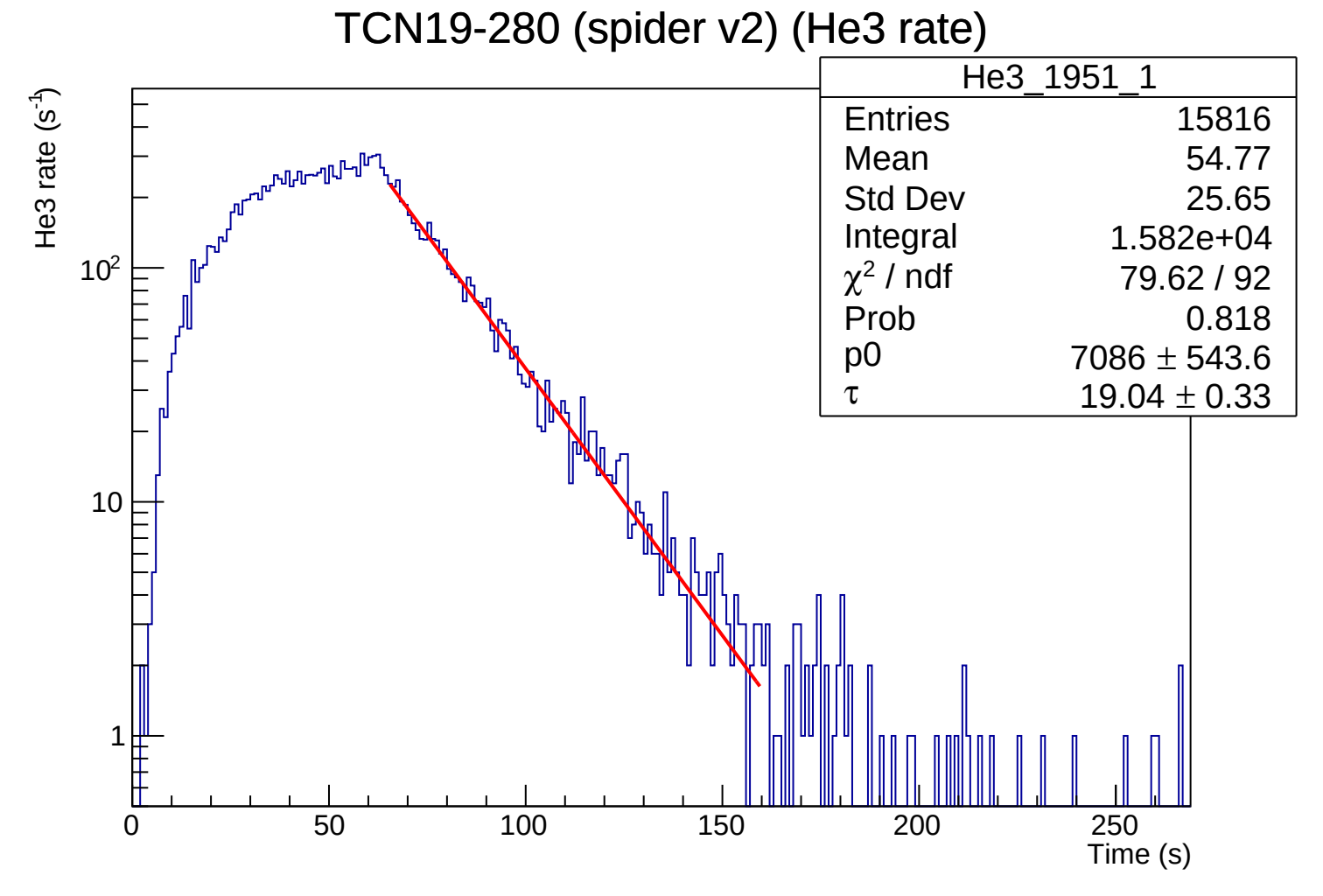

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_13
Entries 822
Mean 96.69
Std Dev 72.24
Integral 820
χ2 / ndf 6.22 / 12
Prob 0.9046
p0 1.962e+22 ± 1.269e+22
p1 0.8968 ± 0.0125
Li6 rate (s-1)
10^2
10
1
0
50
100
150
200
250
Time (s)

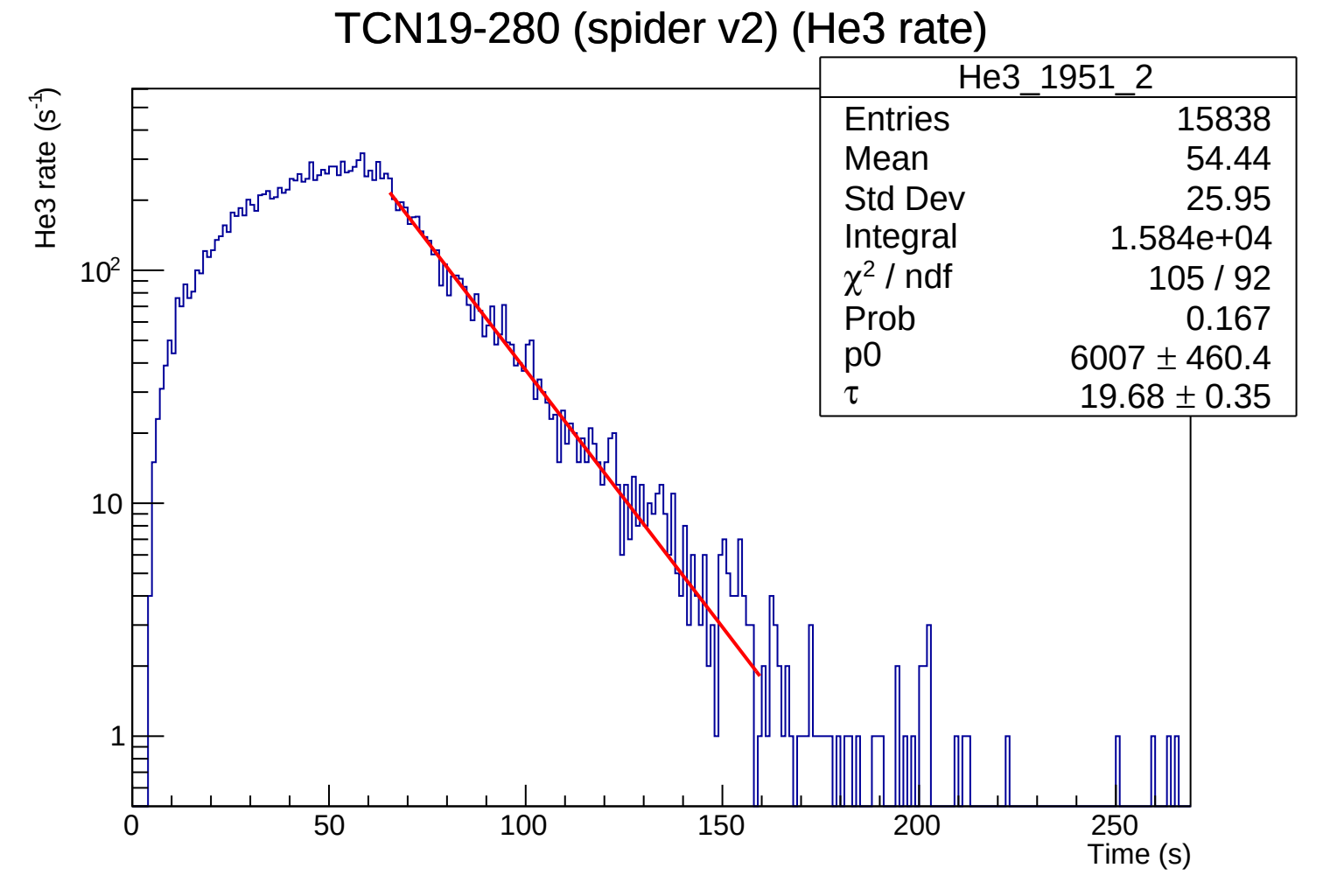

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_14
Entries 1188
Mean 87.32
Std Dev 64
Integral 1187
χ2 / ndf 15.53 / 16
Prob 0.4859
p0 1.332e+12 ± 2.736e+12
p1 0.7597 ± 0.0665
Li6 rate (s-1)
10^2
10
1
0
50
100
150
200
250
Time (s)

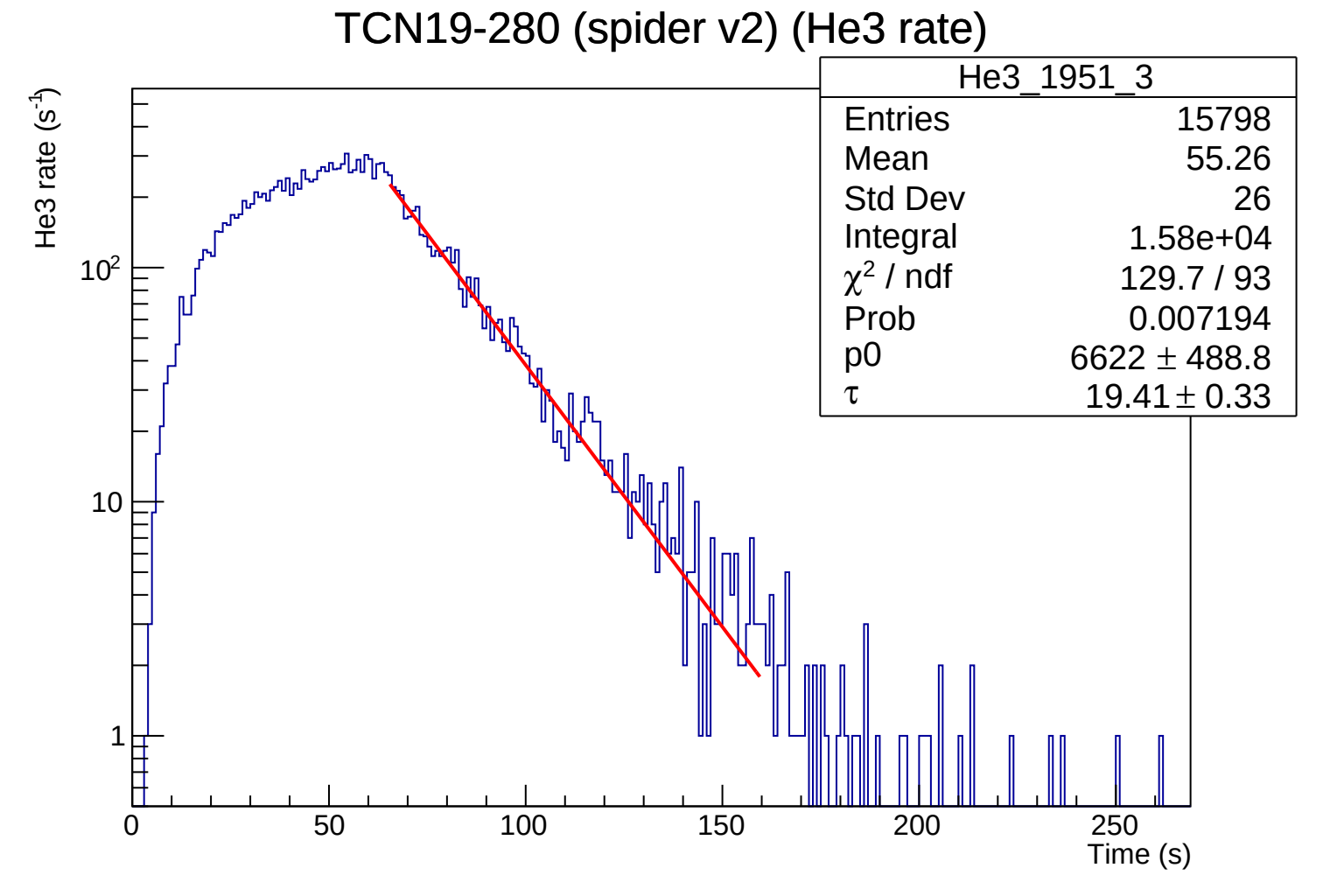

TCN19-280 (spider v2) (Li6 rate)
Li6_1951_15
Entries 1420
Mean 77.5
Std Dev 54.6
Integral 1417
χ² / ndf 9.482 / 18
Prob 0.9475
p0 4.021e+06 ± 2.977e+06
p1 0.667 ± 0.049
Li6 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

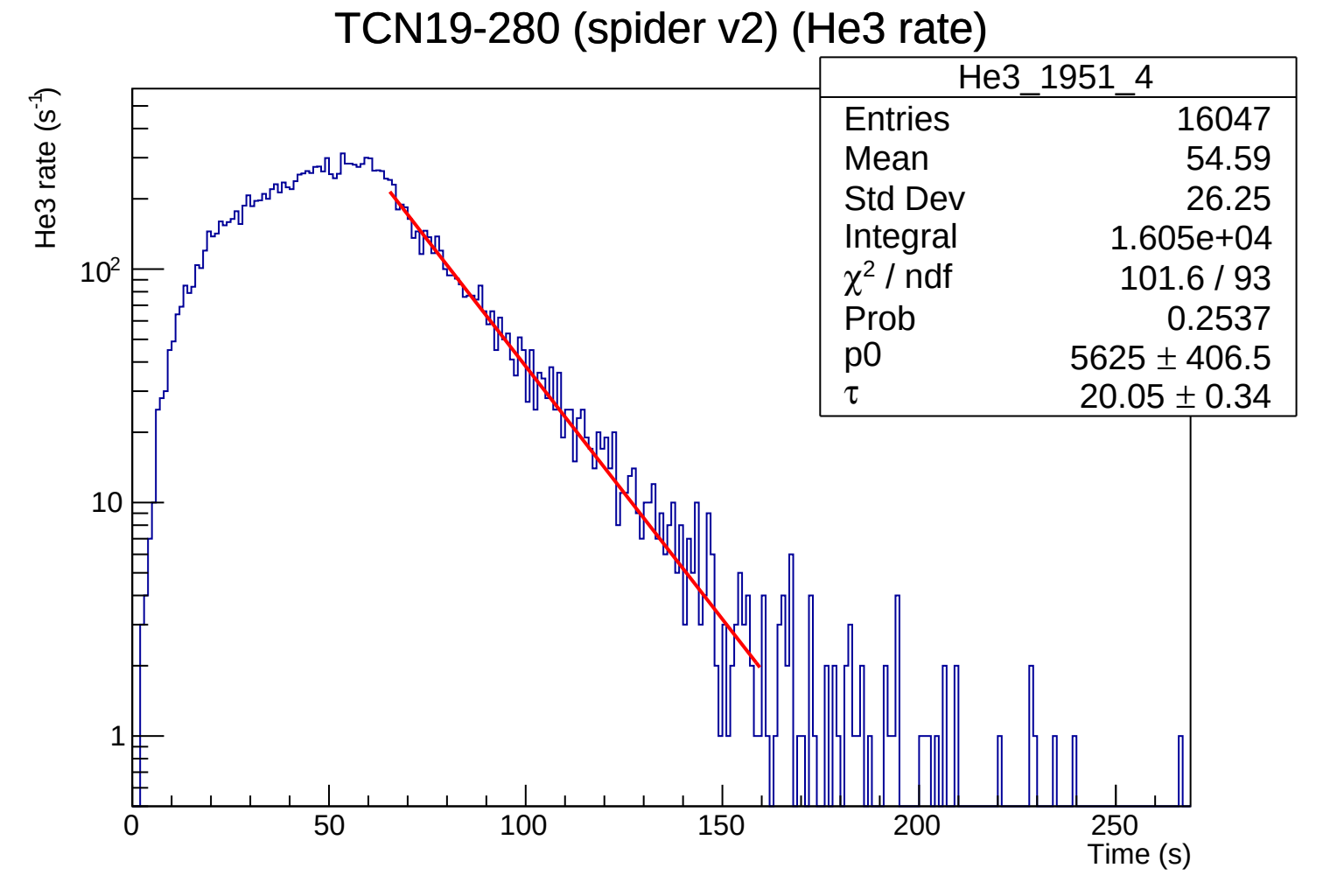

Emptying time (s)
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0
20
40
60
80
100
Storage time (s)

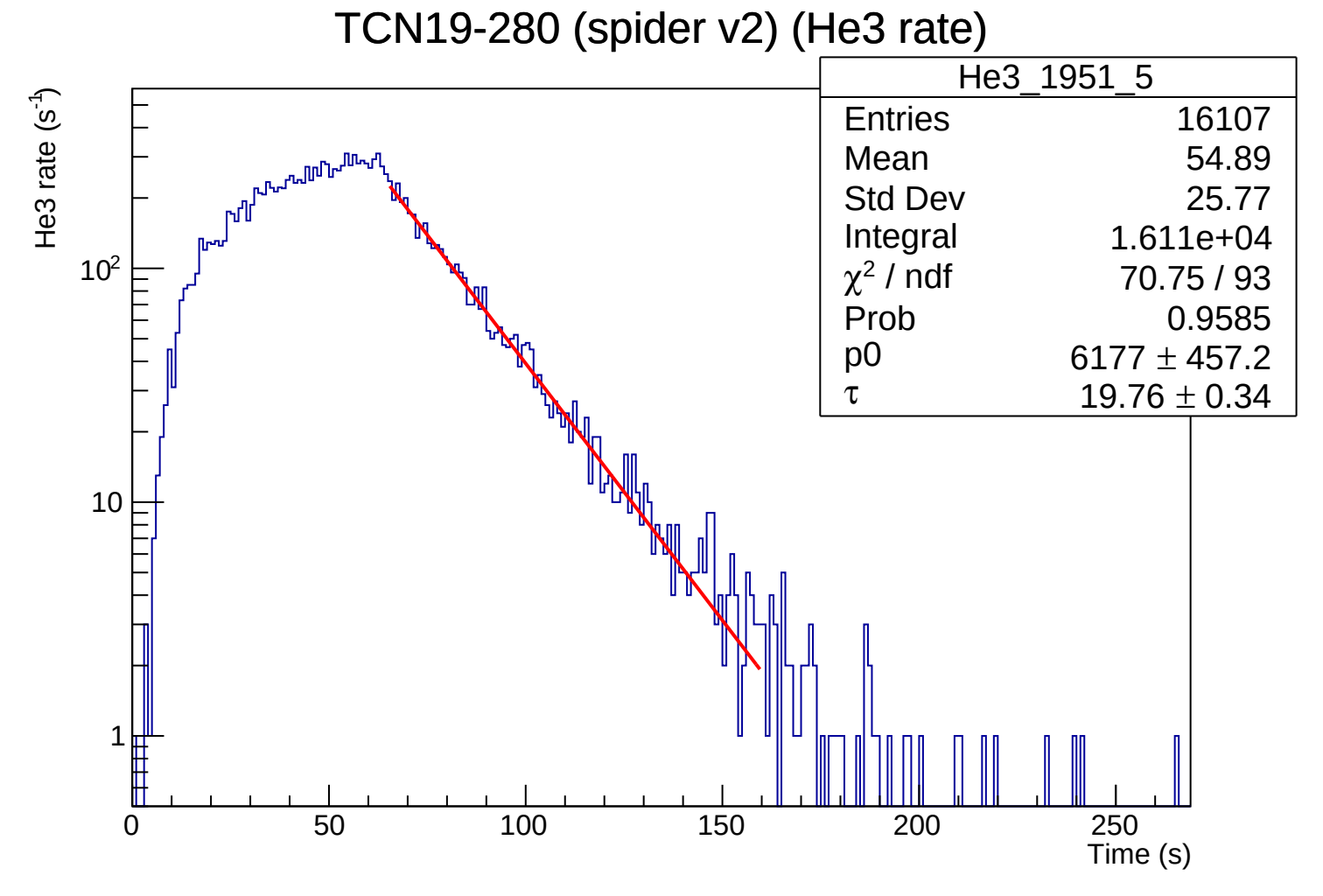

TCN19-280 (spider v2) (He3 rate)
He3_1951_0
Entries 15996
Mean 54.88
Std Dev 25.88
Integral 1.6e+04
χ² / ndf 73.72 / 93
Prob 0.93
p0 6103 ± 438.6
τ 19.77 ± 0.33
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

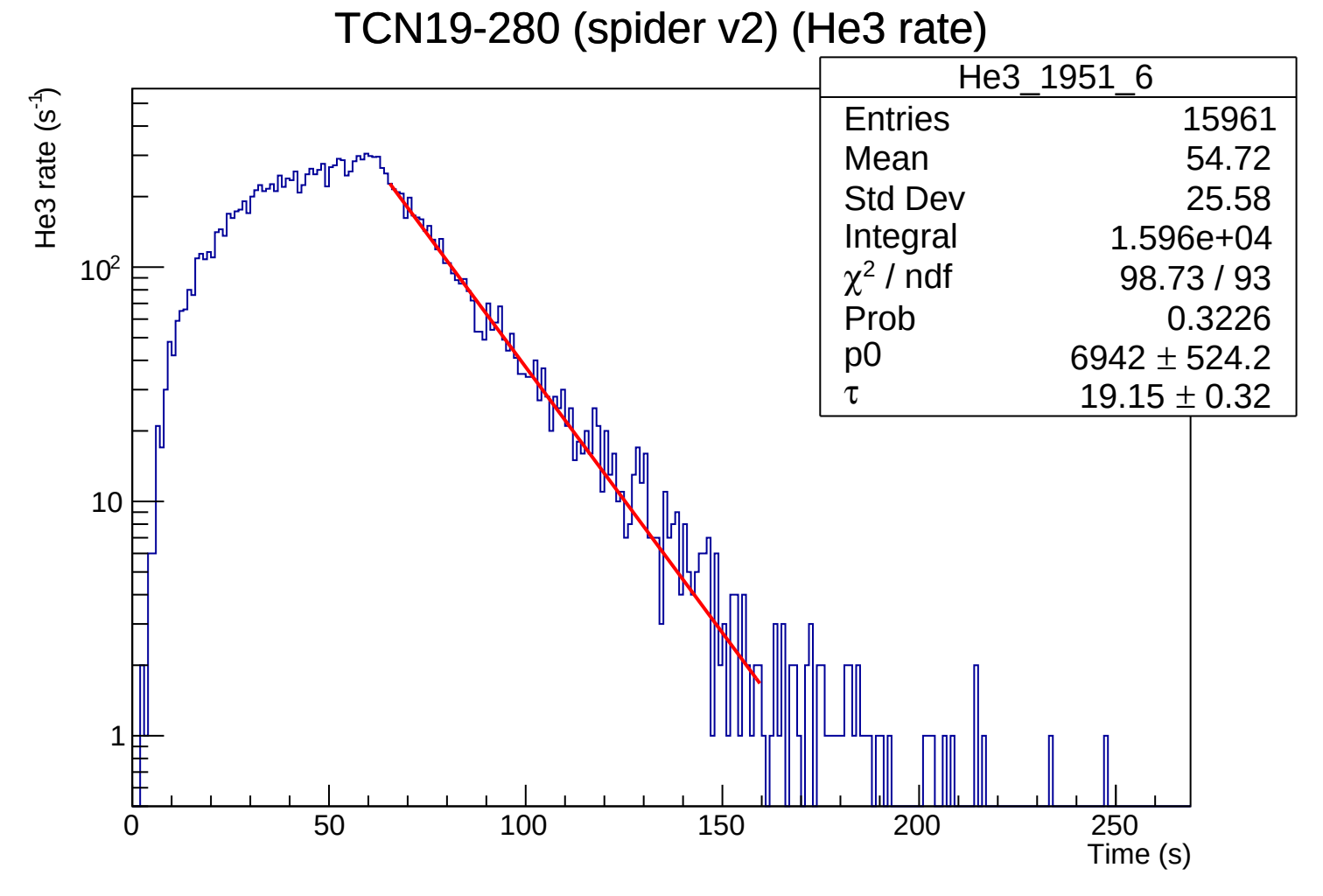

TCN19-280 (spider v2) (He3 rate)
He3_1951_1
Entries 15816
Mean 54.77
Std Dev 25.65
Integral 1.582e+04
χ² / ndf 79.62 / 92
Prob 0.818
p0 7086 ± 543.6
τ 19.04 ± 0.33
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

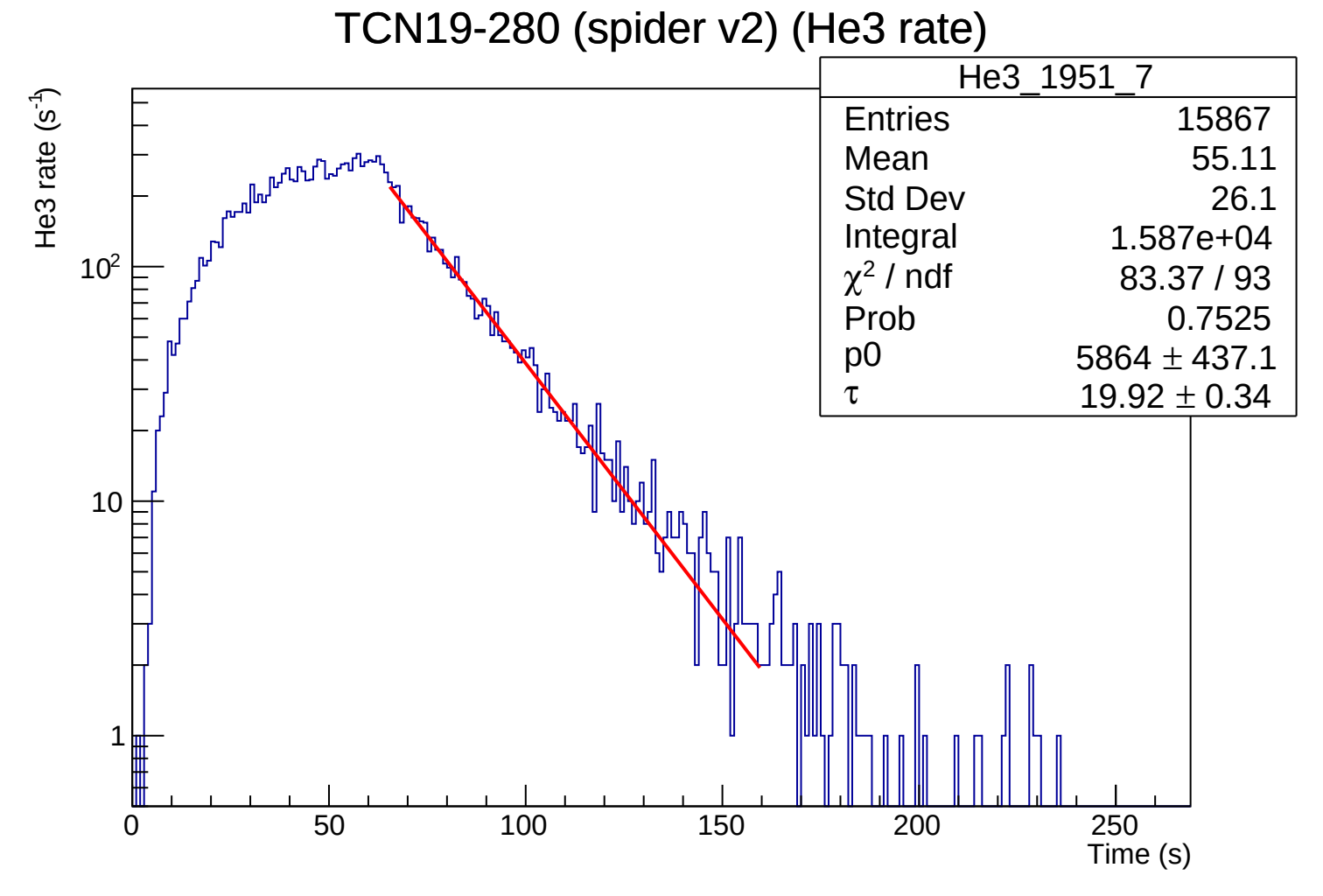

TCN19-280 (spider v2) (He3 rate)
He3_1951_2
Entries 15838
Mean 54.44
Std Dev 25.95
Integral 1.584e+04
χ² / ndf 105 / 92
Prob 0.167
p0 6007 ± 460.4
τ 19.68 ± 0.35
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

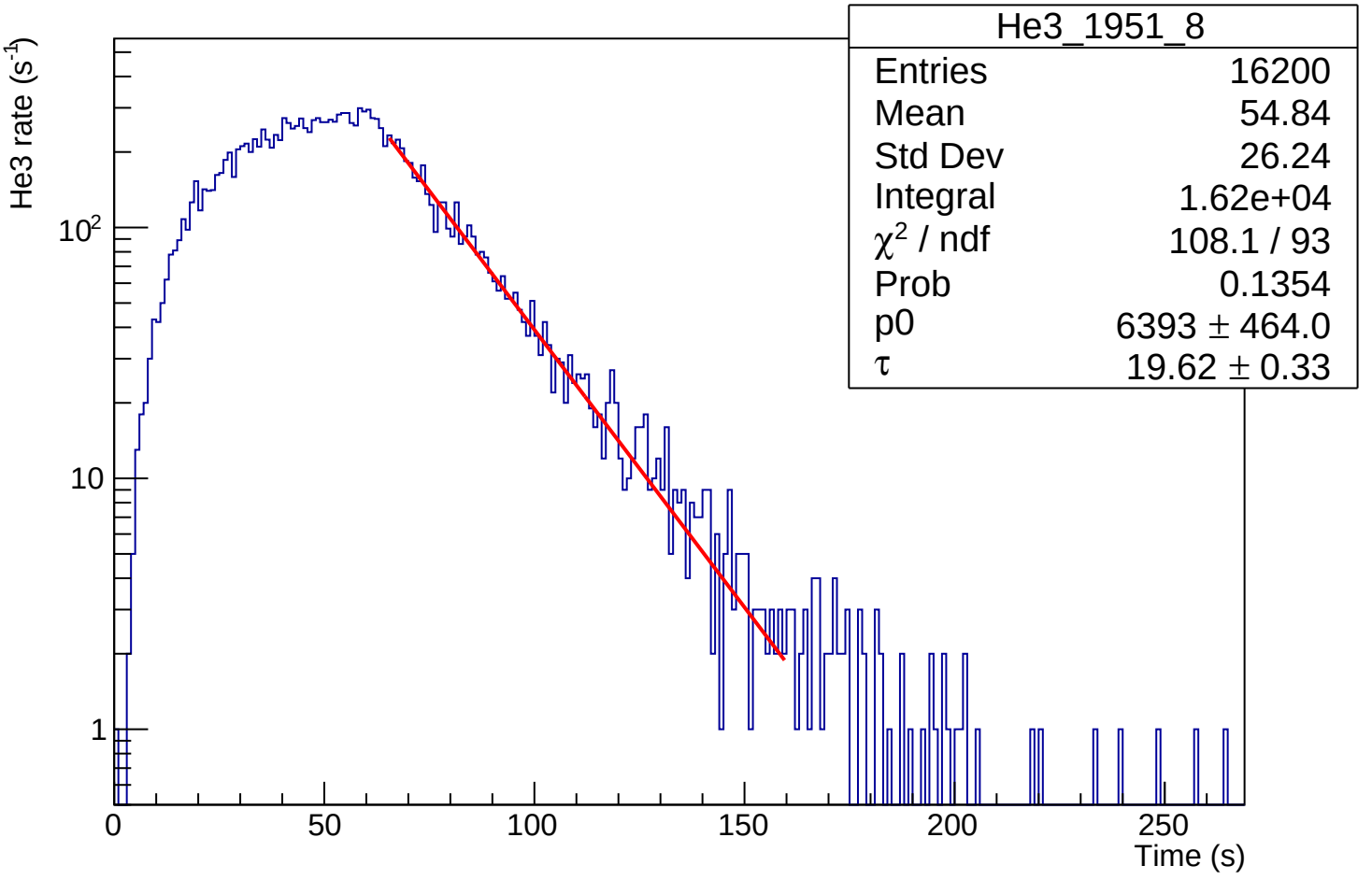

TCN19-280 (spider v2) (He3 rate)
He3_1951_3
Entries 15798
Mean 55.26
Std Dev 26
Integral 1.58e+04
χ² / ndf 129.7 / 93
Prob 0.007194
p0 6622 ± 488.8
τ 19.41 ± 0.33
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

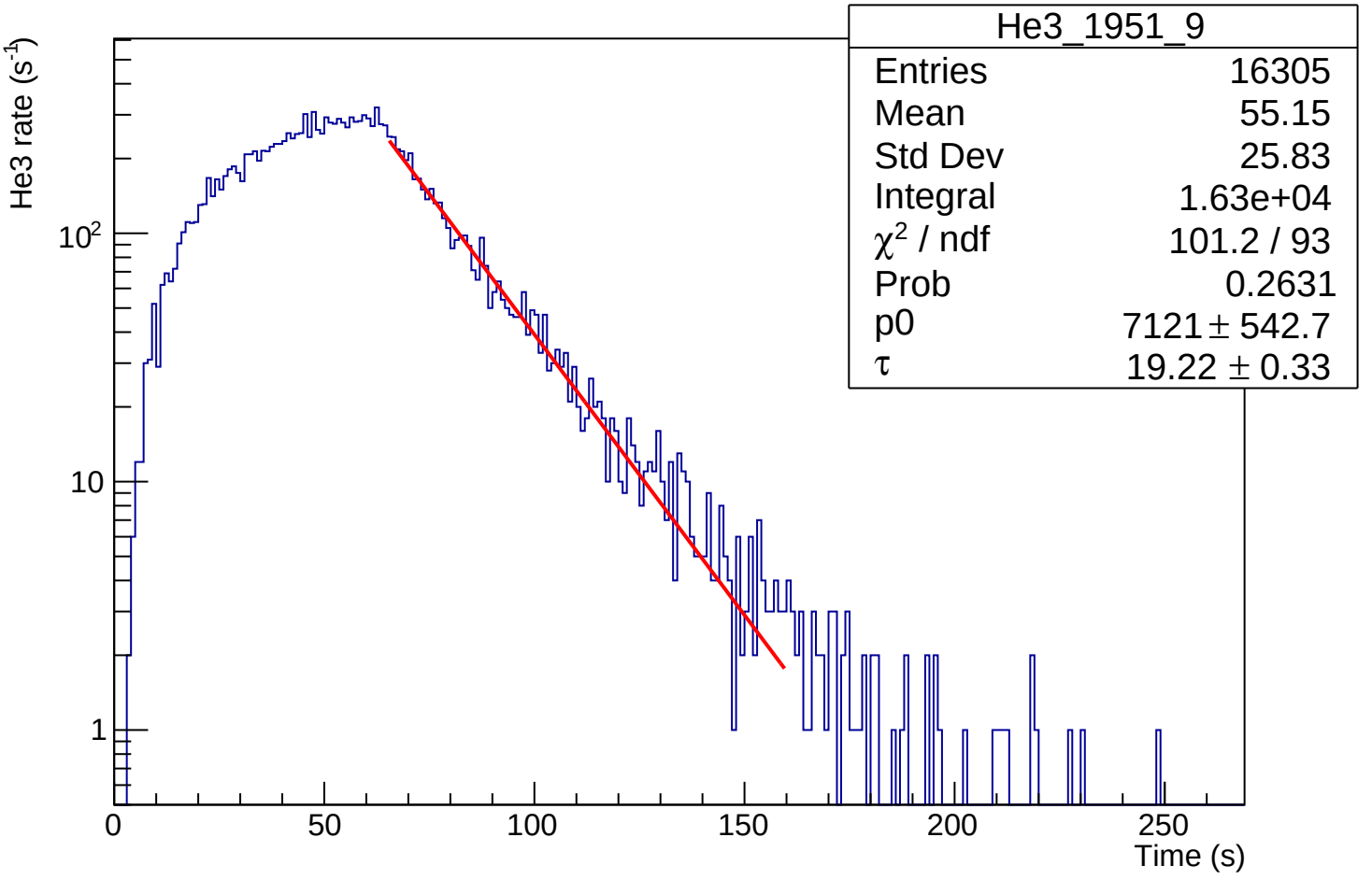

TCN19-280 (spider v2) (He3 rate)
He3_1951_4
Entries 16047
Mean 54.59
Std Dev 26.25
Integral 1.605e+04
χ² / ndf 101.6 / 93
Prob 0.2537
p0 5625 ± 406.5
τ 20.05 ± 0.34
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

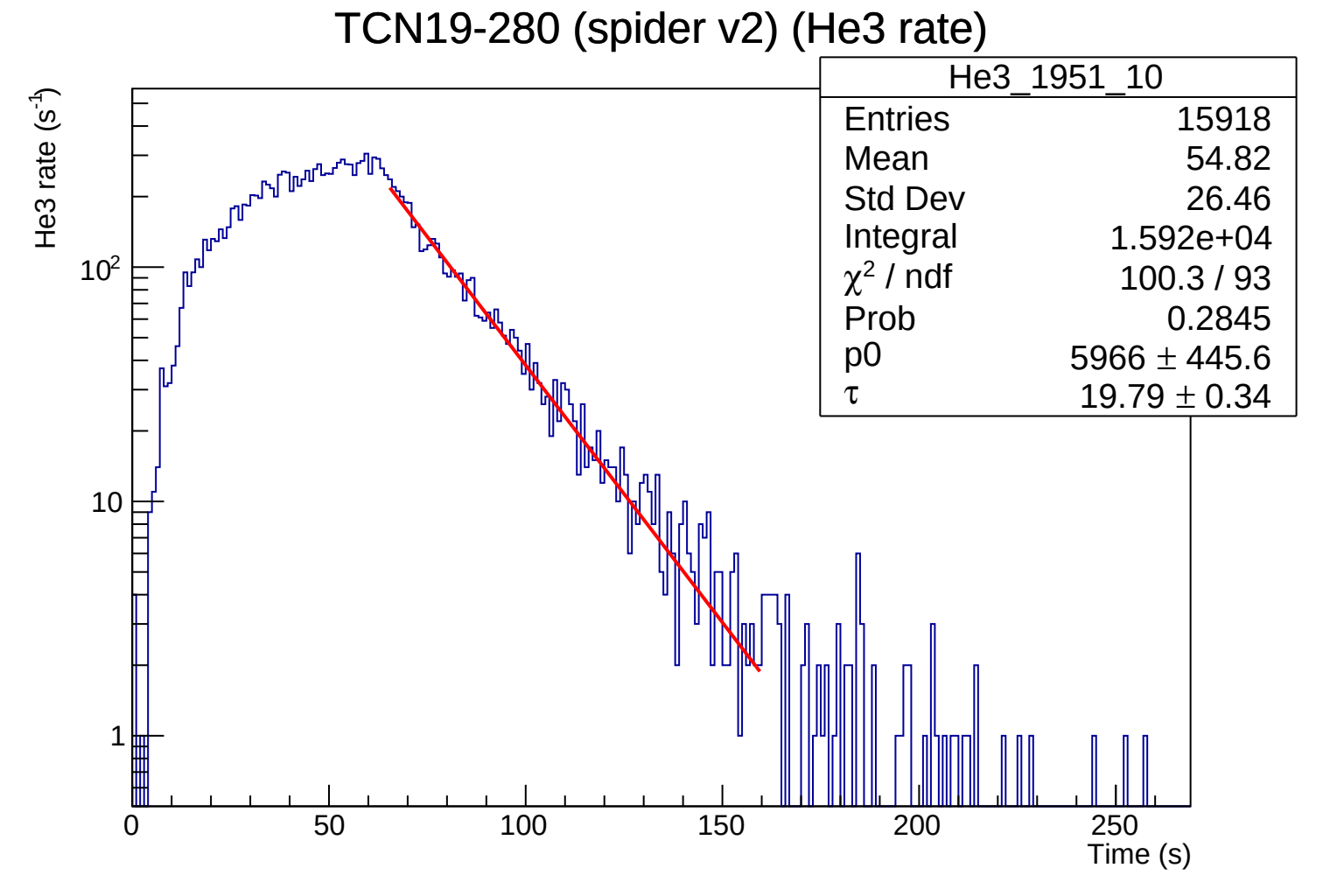

TCN19-280 (spider v2) (He3 rate)
He3_1951_5
Entries 16107
Mean 54.89
Std Dev 25.77
Integral 1.611e+04
χ² / ndf 70.75 / 93
Prob 0.9585
p0 6177 ± 457.2
τ 19.76 ± 0.34
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

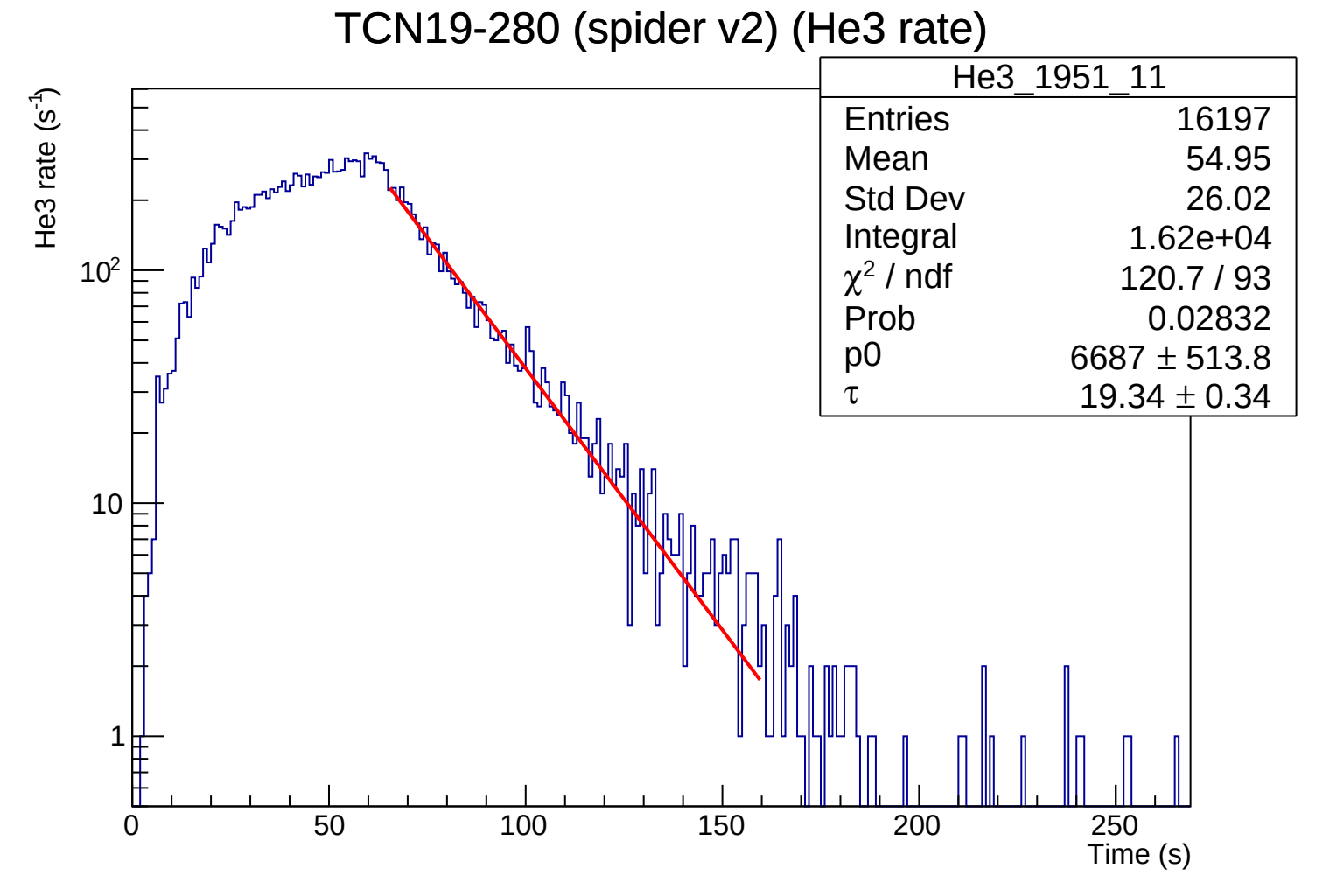

TCN19-280 (spider v2) (He3 rate)
He3_1951_6
Entries 15961
Mean 54.72
Std Dev 25.58
Integral 1.596e+04
χ² / ndf 98.73 / 93
Prob 0.3226
p0 6942 ± 524.2
τ 19.15 ± 0.32
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

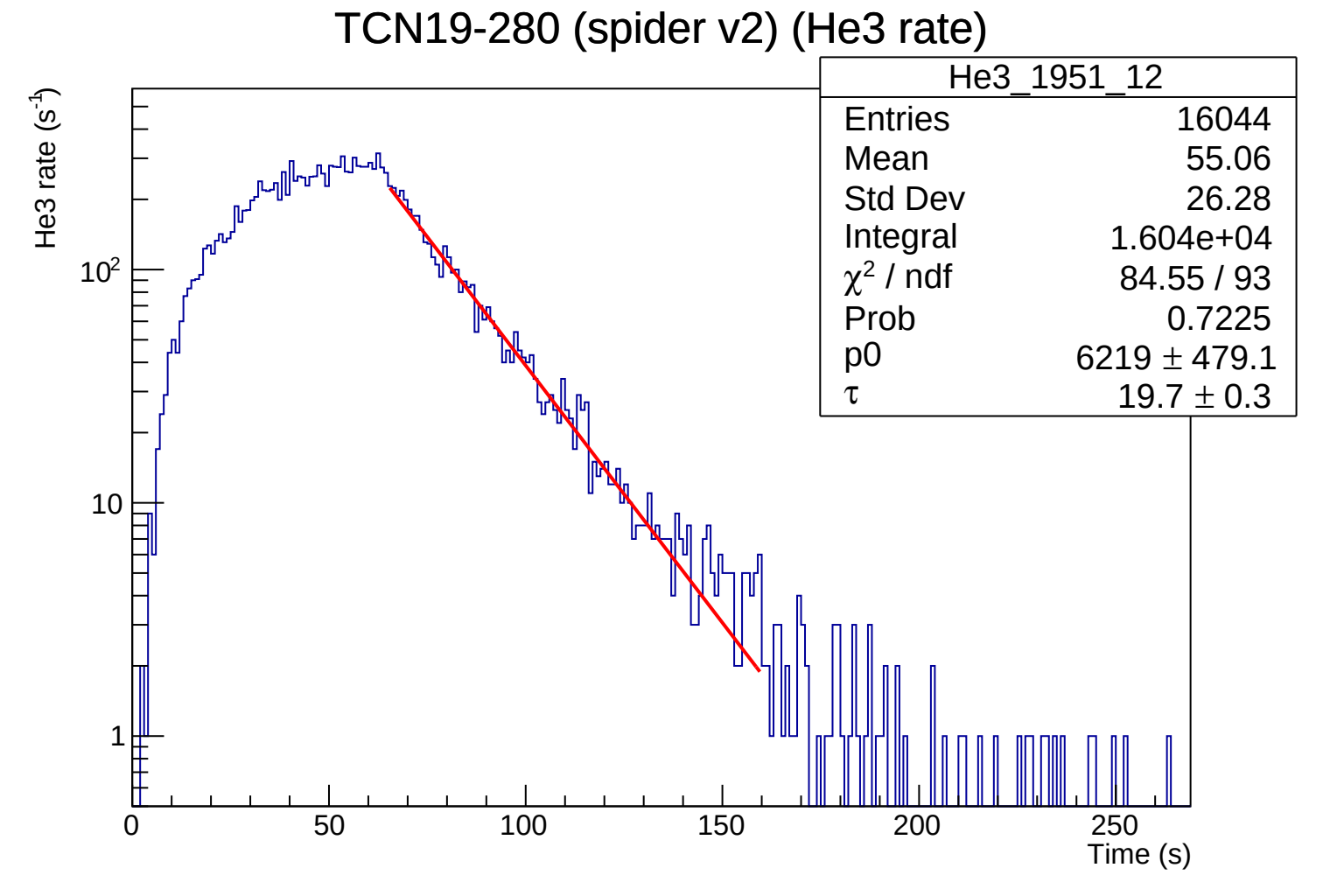

TCN19-280 (spider v2) (He3 rate)
He3_1951_7
Entries 15867
Mean 55.11
Std Dev 26.1
Integral 1.587e+04
χ² / ndf 83.37 / 93
Prob 0.7525
p0 5864 ± 437.1
τ 19.92 ± 0.34
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

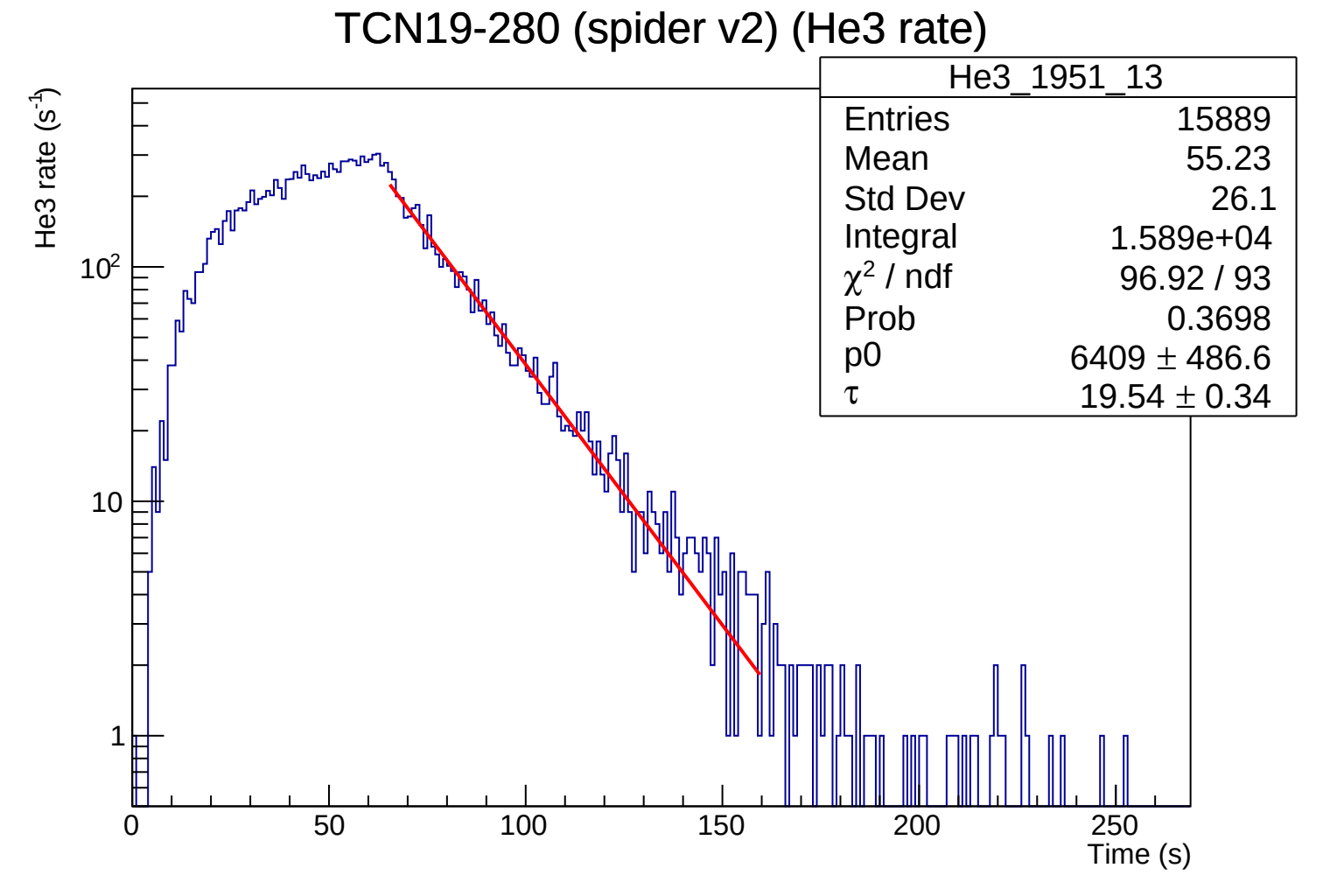

TCN19-280 (spider v2) (He3 rate)
He3_1951_8
Entries 16200
Mean 54.84
Std Dev 26.24
Integral 1.62e+04
χ² / ndf 108.1 / 93
Prob 0.1354
p0 6393 ± 464.0
τ 19.62 ± 0.33
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

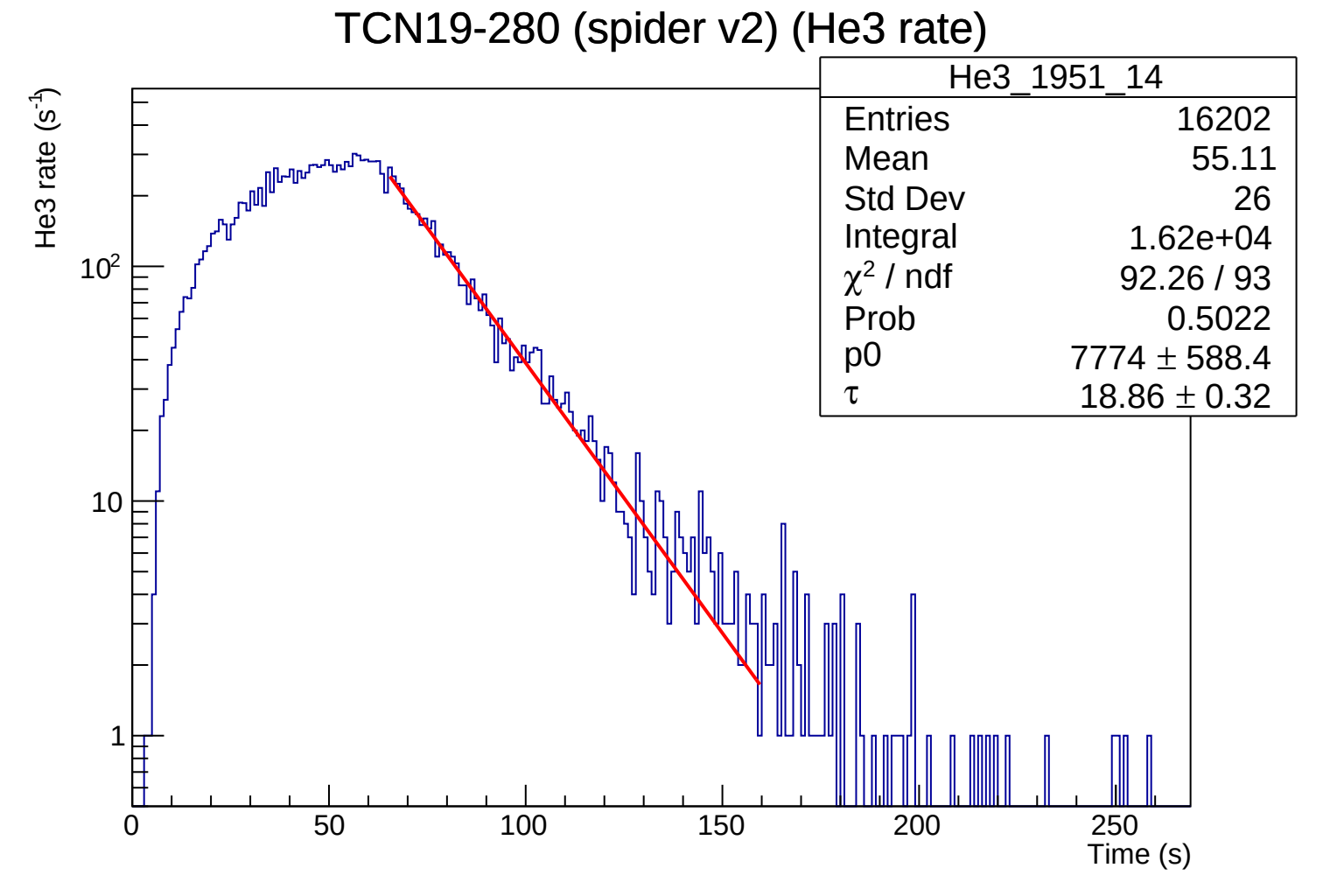

TCN19-280 (spider v2) (He3 rate)
He3_1951_9
Entries 16305
Mean 55.15
Std Dev 25.83
Integral 1.63e+04
χ² / ndf 101.2 / 93
Prob 0.2631
p0 7121 ± 542.7
τ 19.22 ± 0.33
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

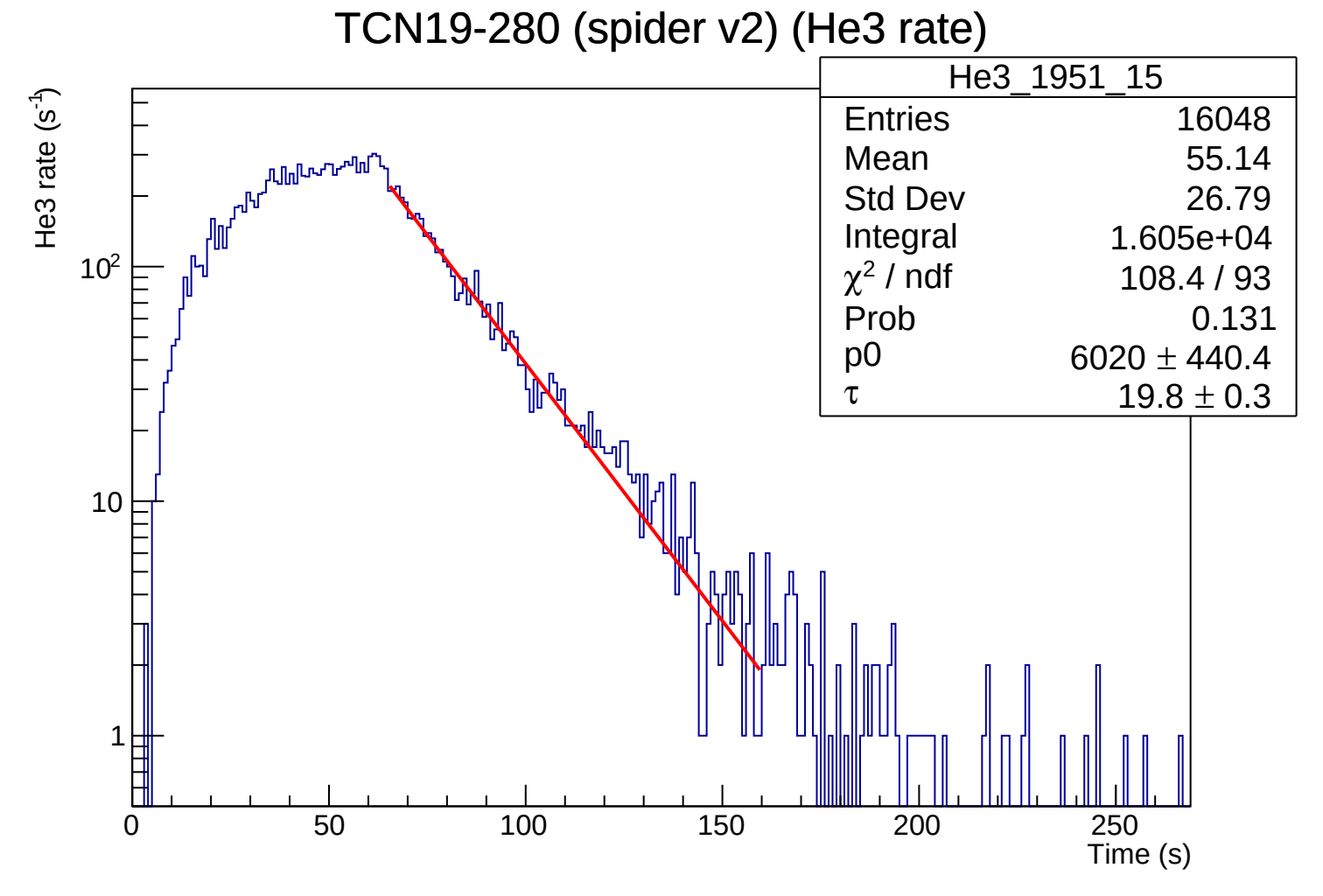

TCN19-280 (spider v2) (He3 rate)
He3_1951_10
Entries 15918
Mean 54.82
Std Dev 26.46
Integral 1.592e+04
χ² / ndf 100.3 / 93
Prob 0.2845
p0 5966 ± 445.6
τ 19.79 ± 0.34
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

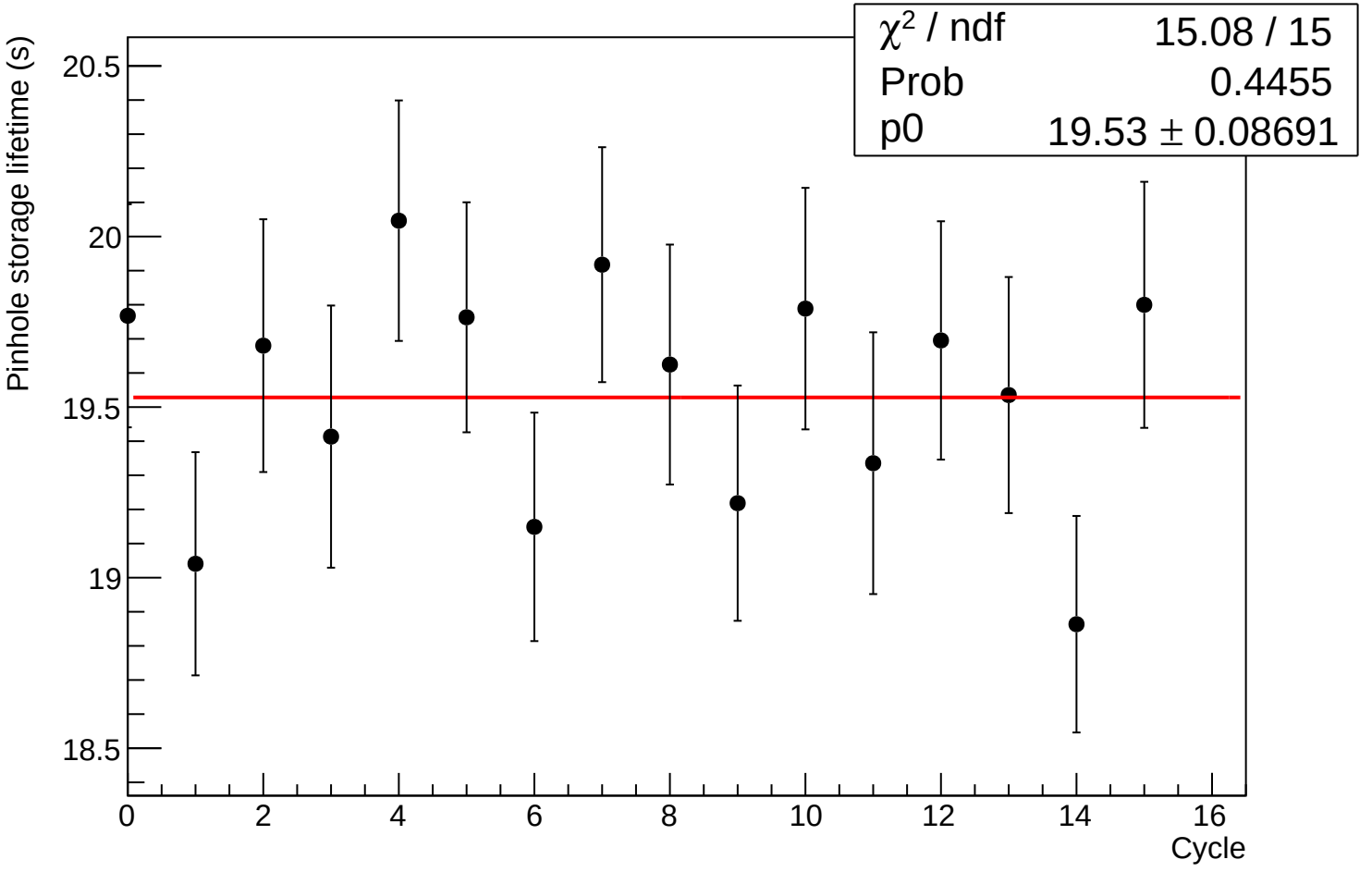

TCN19-280 (spider v2) (He3 rate)
He3_1951_11
Entries 16197
Mean 54.95
Std Dev 26.02
Integral 1.62e+04
χ² / ndf 120.7 / 93
Prob 0.02832
p0 6687 ± 513.8
τ 19.34 ± 0.34
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

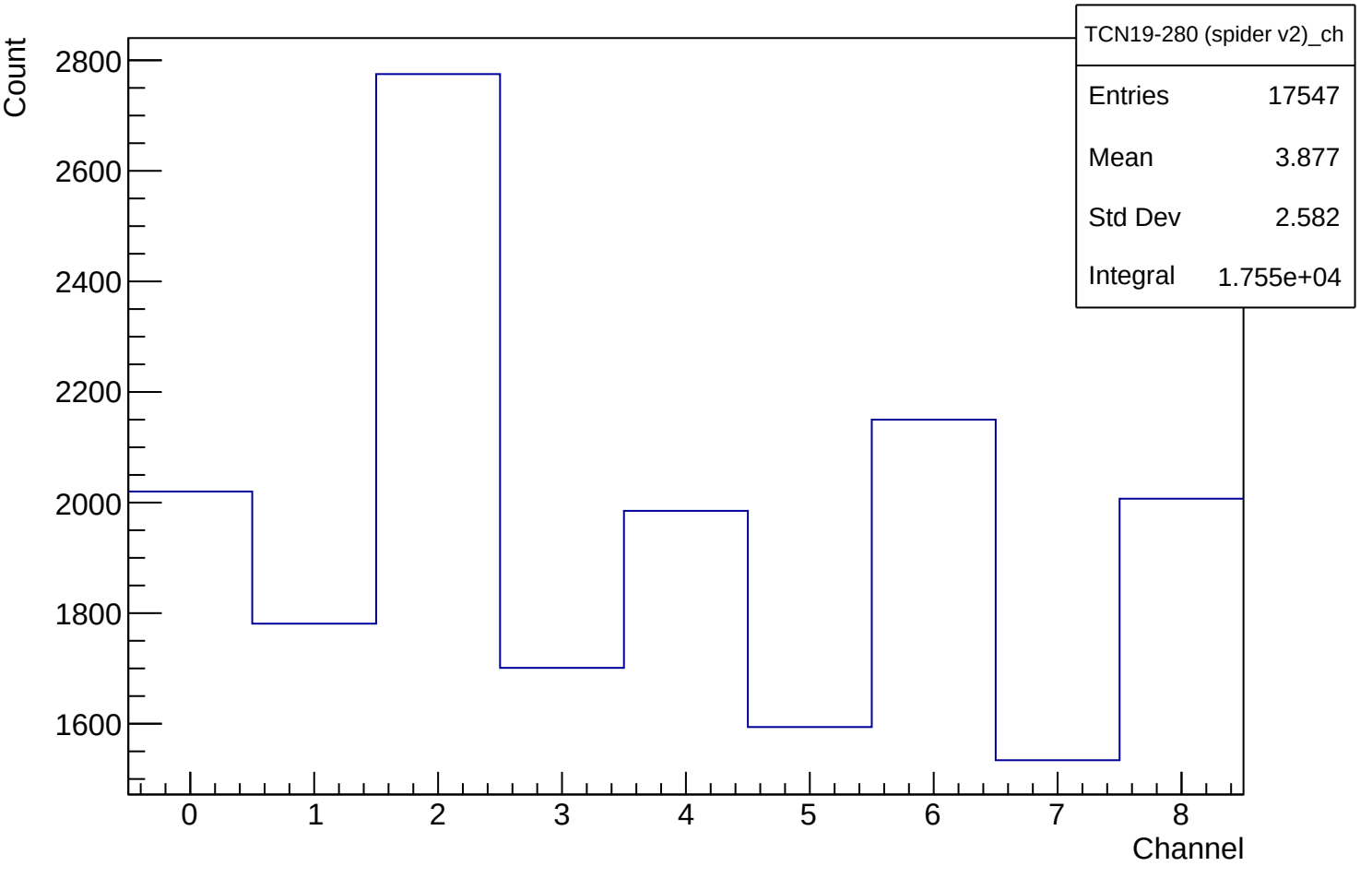

TCN19-280 (spider v2) (He3 rate)
He3_1951_12
Entries 16044
Mean 55.06
Std Dev 26.28
Integral 1.604e+04
χ² / ndf 84.55 / 93
Prob 0.7225
p0 6219 ± 479.1
τ 19.7 ± 0.3
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


TCN19-280 (spider v2) (He3 rate)
He3_1951_13
Entries 15889
Mean 55.23
Std Dev 26.1
Integral 1.589e+04
χ² / ndf 96.92 / 93
Prob 0.3698
p0 6409 ± 486.6
τ 19.54 ± 0.34
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


TCN19-280 (spider v2) (He3 rate)
He3_1951_14
Entries 16202
Mean 55.11
Std Dev 26
Integral 1.62e+04
χ² / ndf 92.26 / 93
Prob 0.5022
p0 7774 ± 588.4
τ 18.86 ± 0.32
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


TCN19-280 (spider v2) (He3 rate)
He3_1951_15
Entries 16048
Mean 55.14
Std Dev 26.79
Integral 1.605e+04
χ² / ndf 108.4 / 93
Prob 0.131
p0 6020 ± 440.4
τ 19.8 ± 0.3
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


χ^2 / ndf 15.08 / 15
Prob 0.4455
p0 19.53 ± 0.08691
Pinhole storage lifetime (s)
20.5
20
19.5
19
18.5
0
2
4
6
8
10
12
14
16
Cycle


TCN19-280 (spider v2)
TCN19-280 (spider v2)_ch
Entries 17547
Mean 3.877
Std Dev 2.582
Integral 1.755e+04
Count
2800
2600
2400
2200
2000
1800
1600
0
1
2
3
4
5
6
7
8
Channel