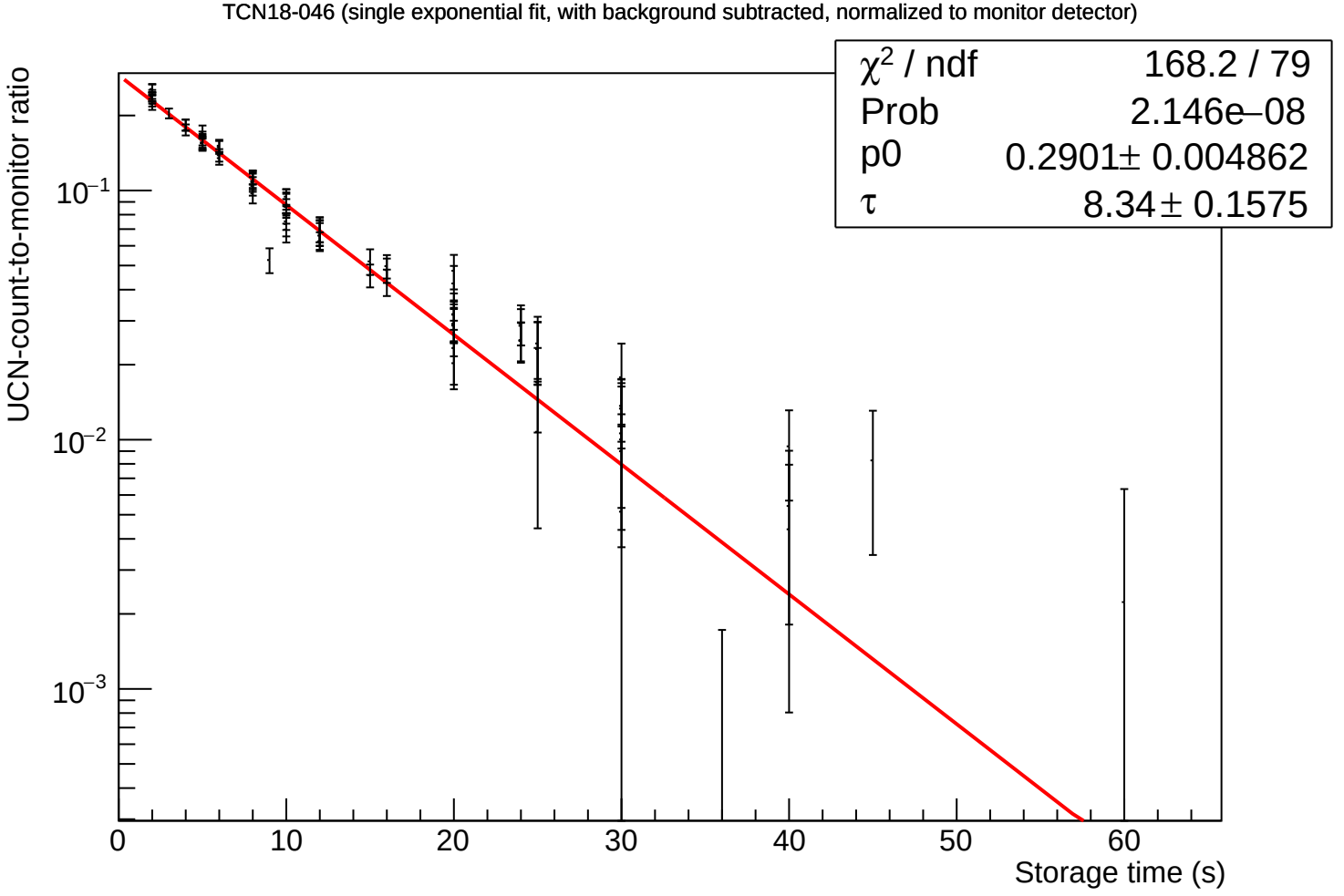
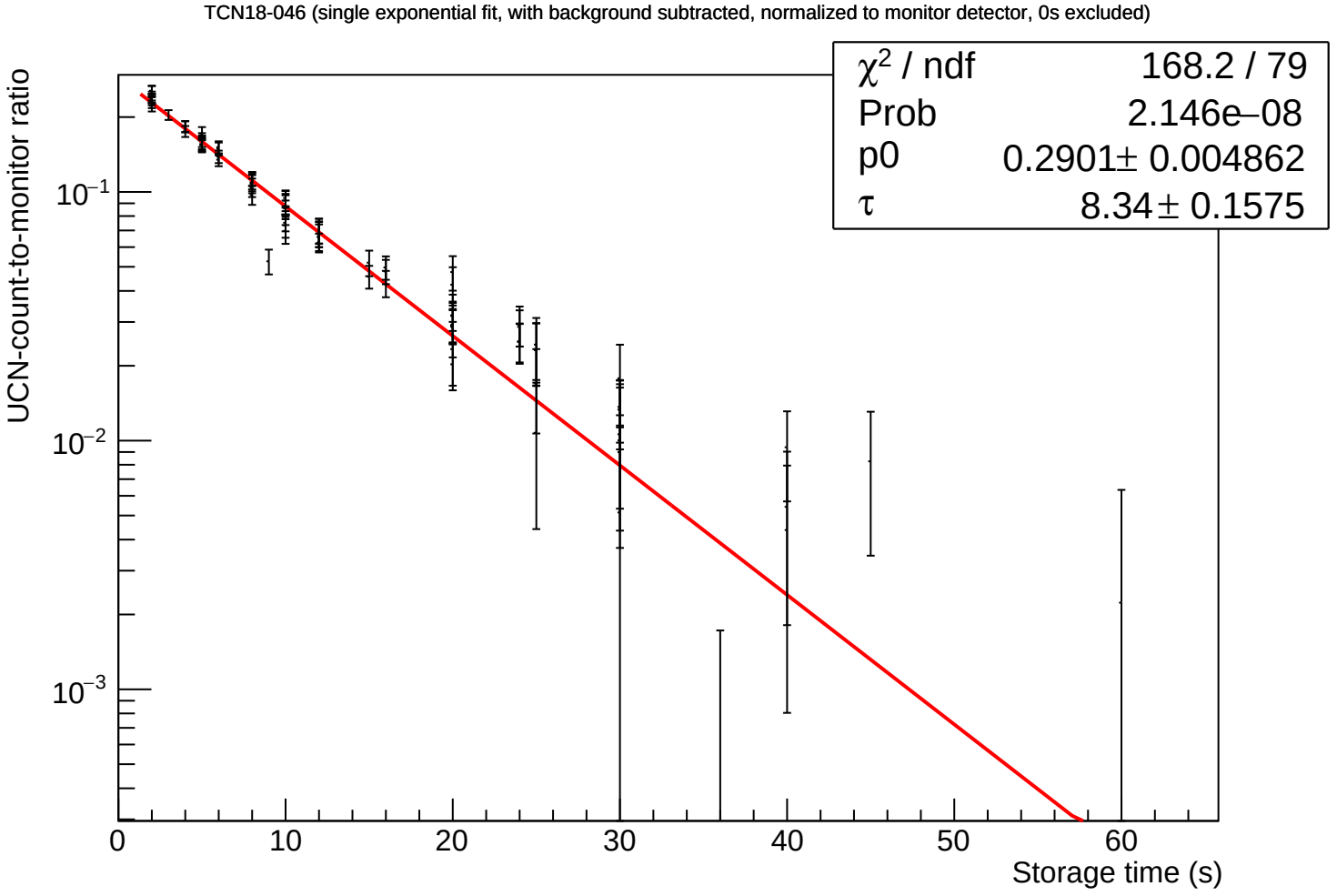
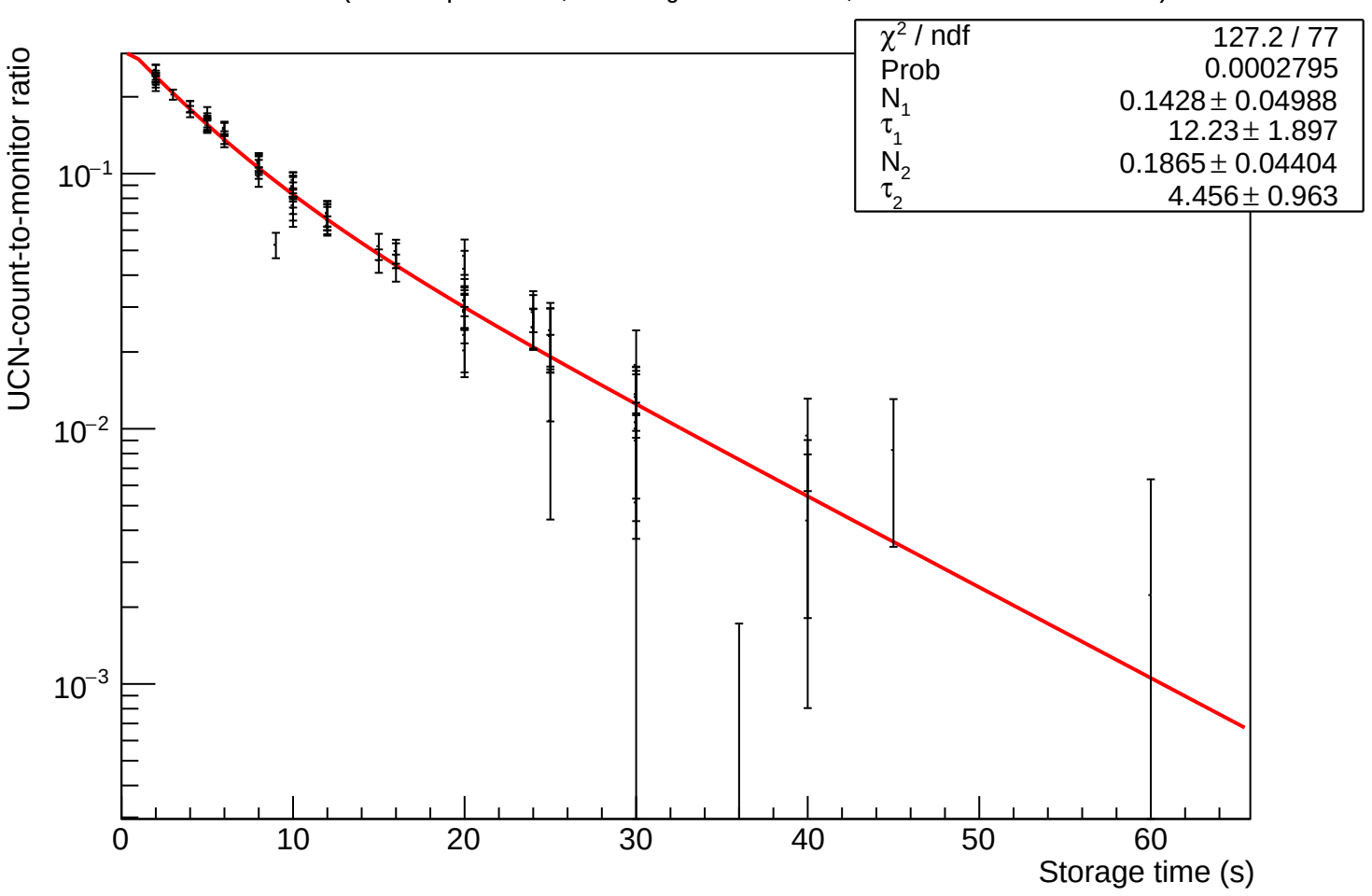
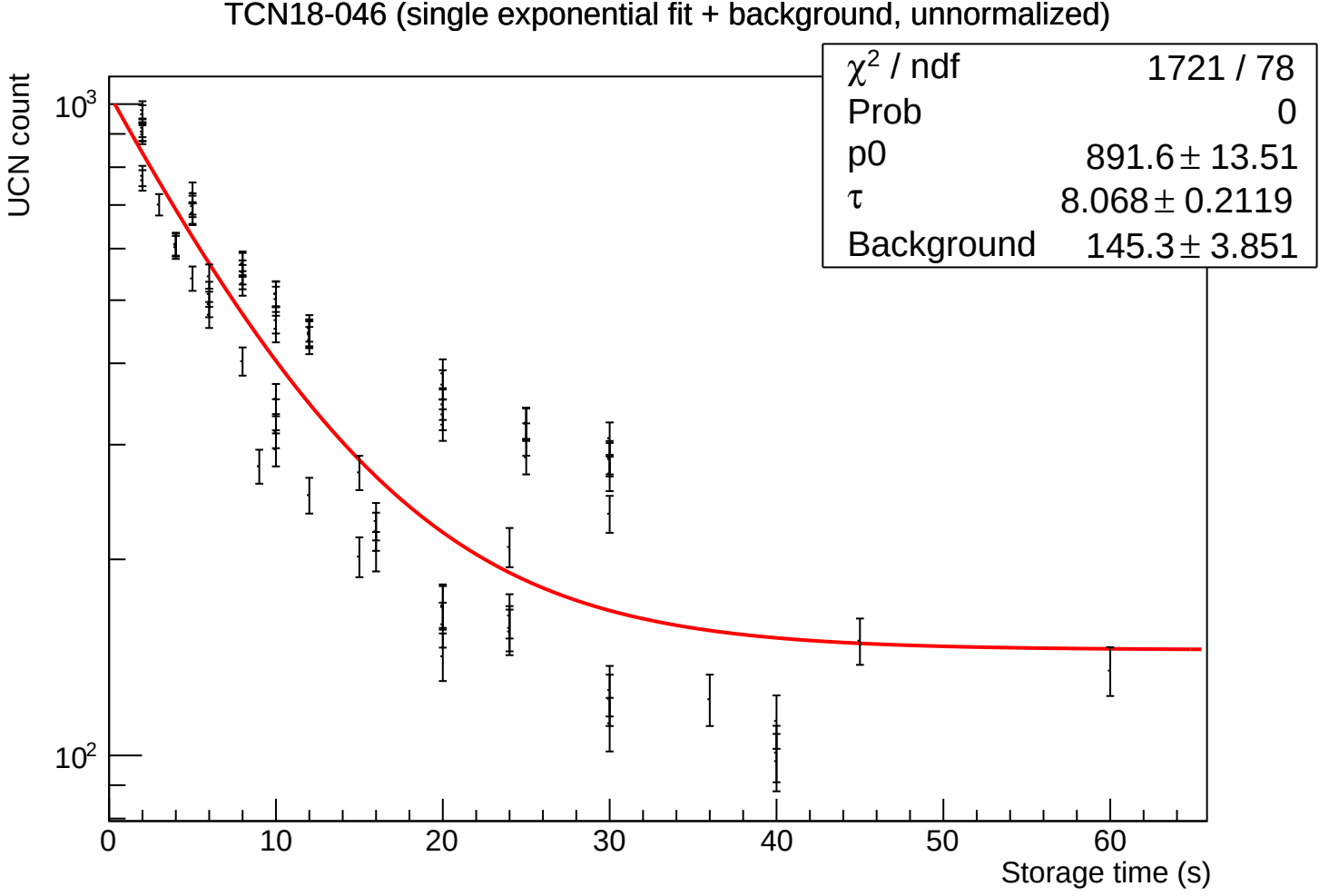
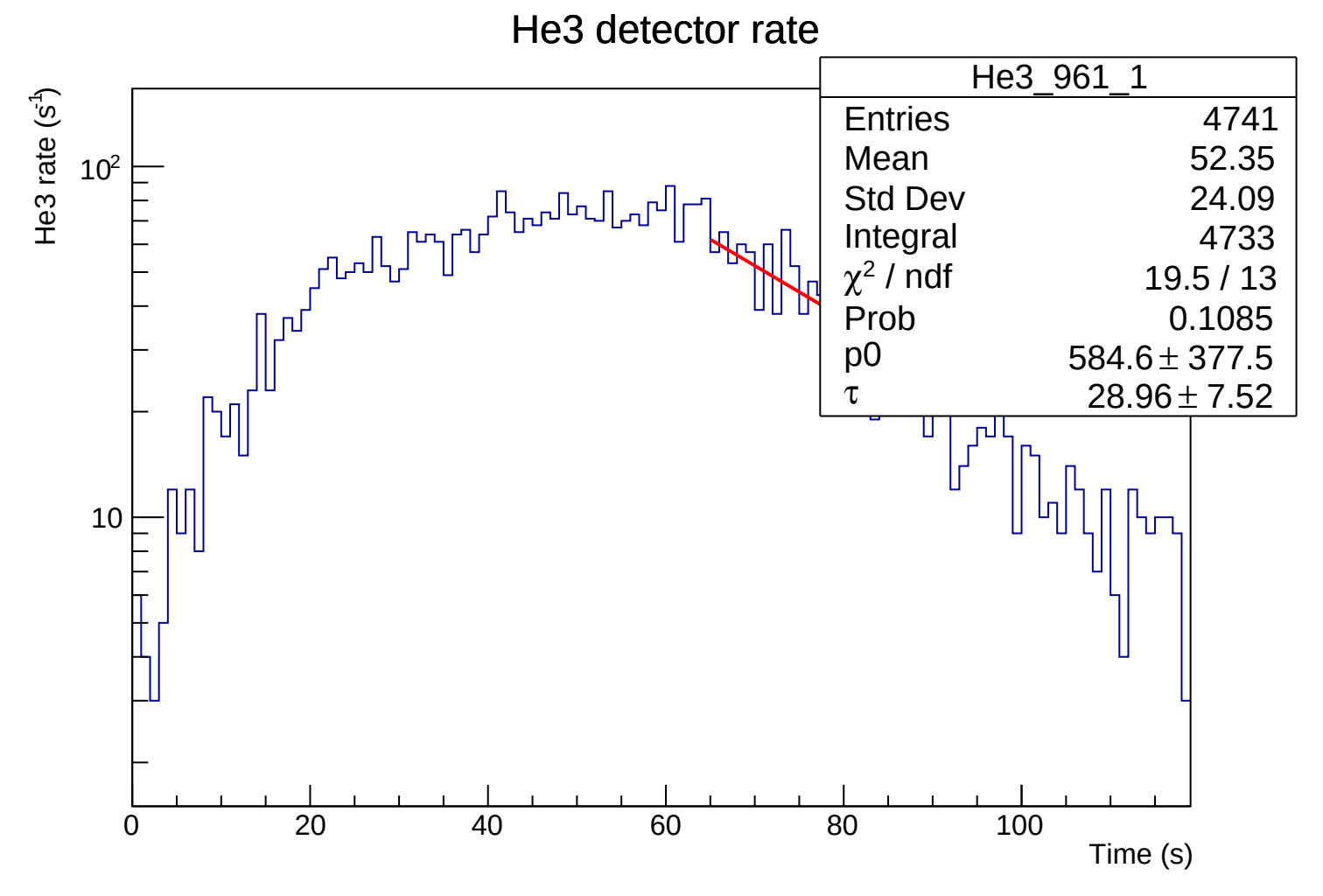
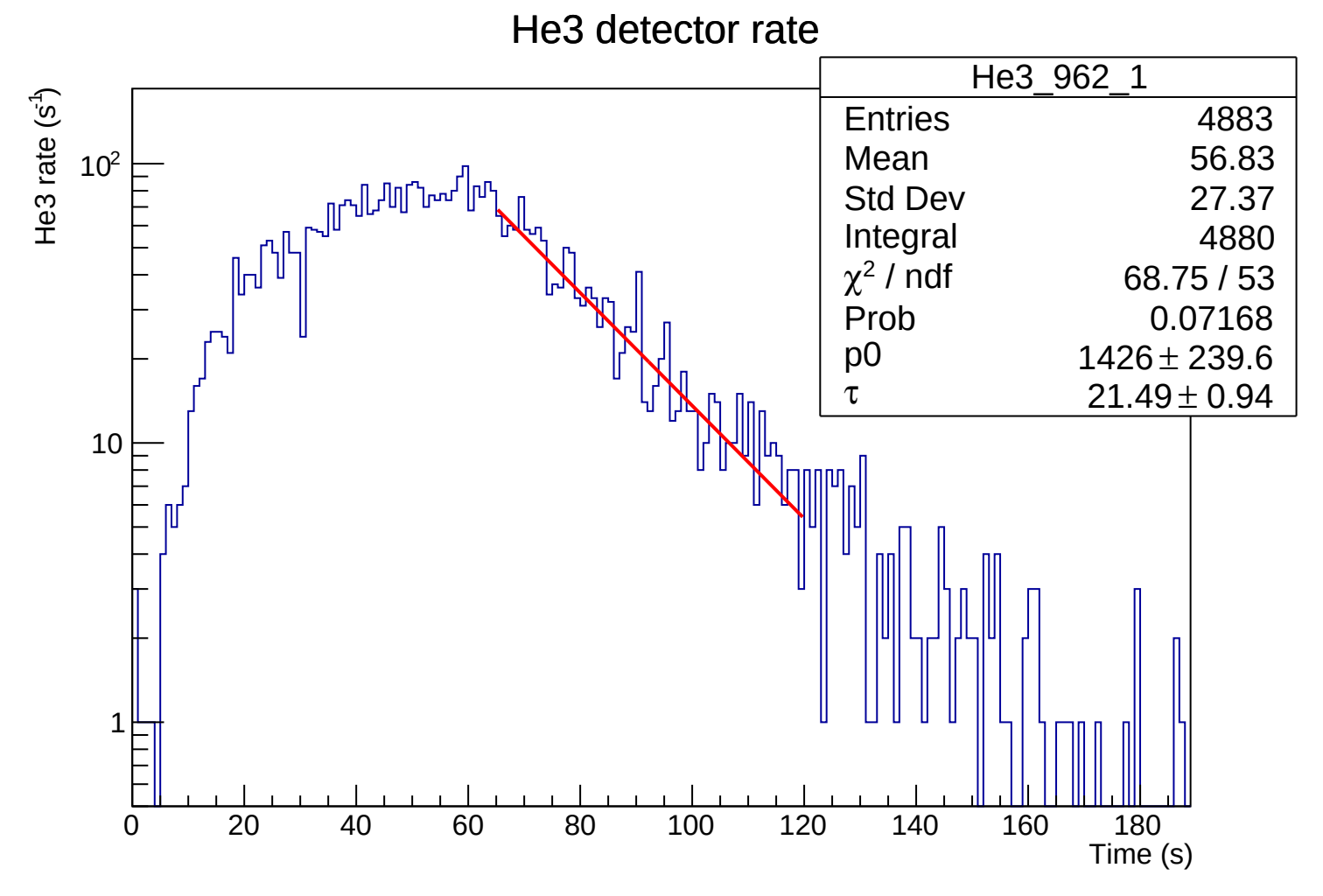

TCN18-046 (single exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 168.2 / 79
Prob 2.146e−08
p0 0.2901± 0.004862
τ 8.34± 0.1575
UCN-count-to-monitor ratio
10⁻¹
10⁻²
10⁻³
0
10
20
30
40
50
60
Storage time (s)

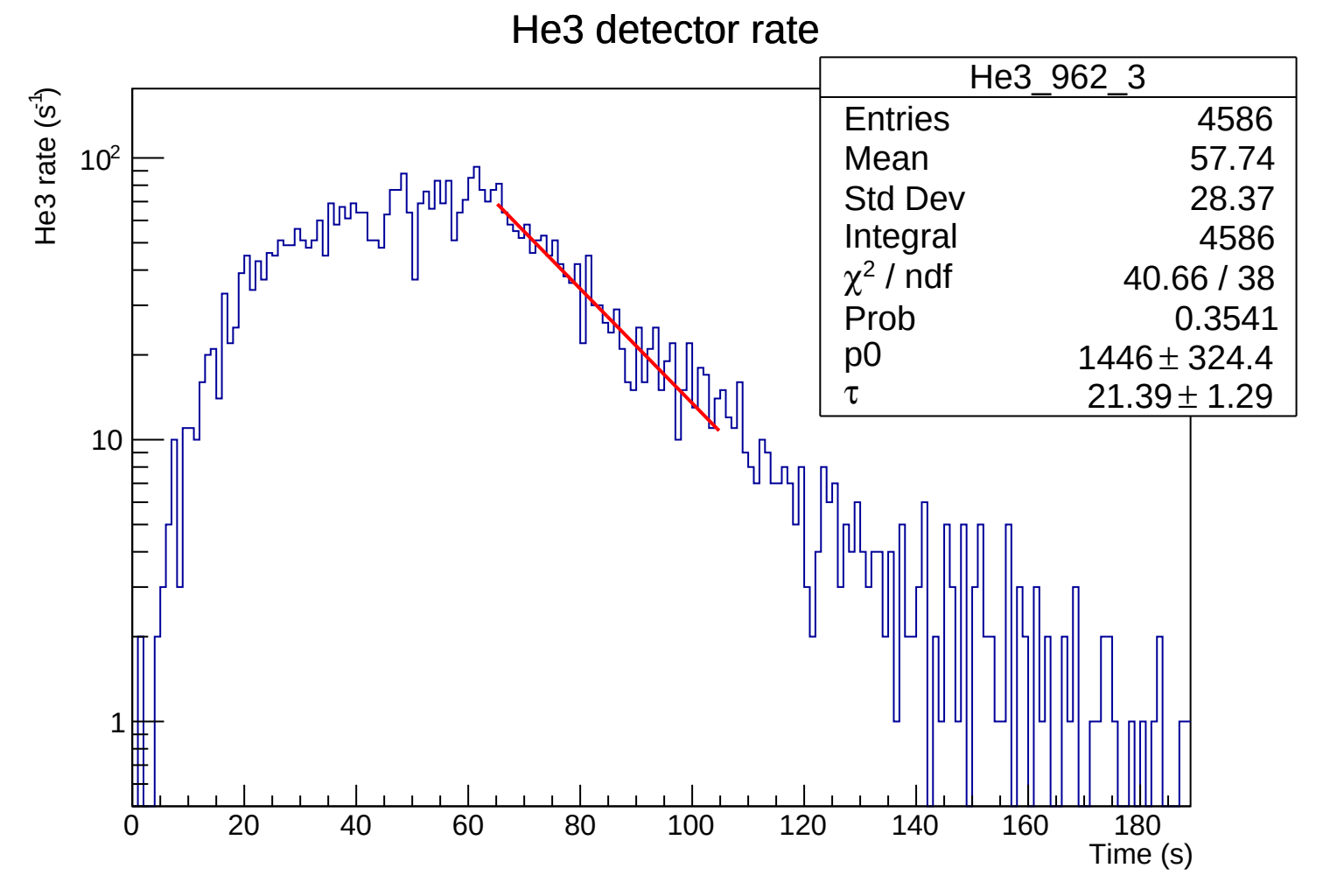

TCN18-046 (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 168.2 / 79
Prob 2.146e−08
p0 0.2901± 0.004862
τ 8.34± 0.1575
UCN-count-to-monitor ratio
10⁻¹
10⁻²
10⁻³
0
10
20
30
40
50
60
Storage time (s)

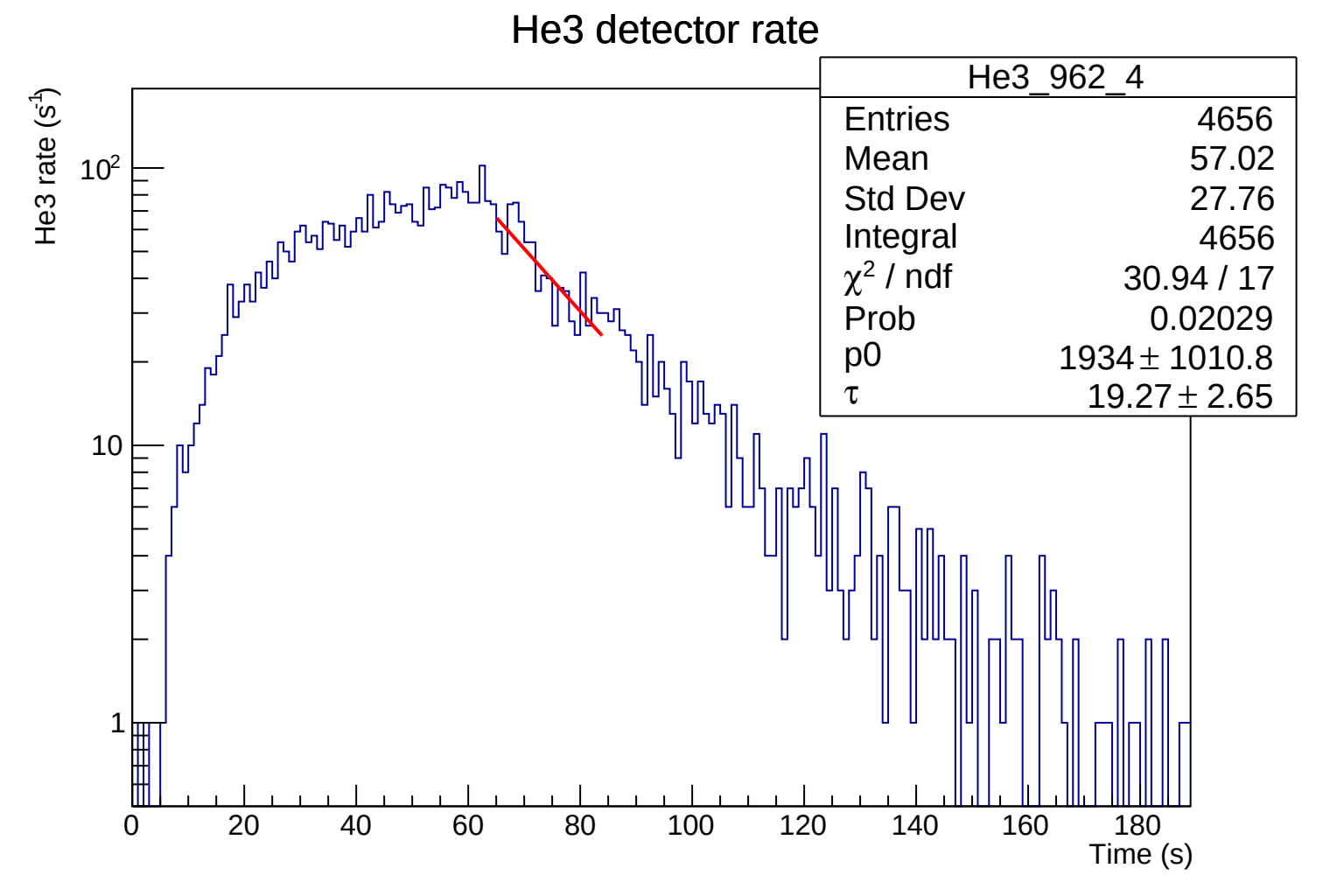

TCN18-046 (double exponential fit, with background subtracted, normalized to monitor detector)
χ^2 / ndf 127.2 / 77
Prob 0.0002795
N_1 0.1428 ± 0.04988
τ_1 12.23 ± 1.897
N_2 0.1865 ± 0.04404
τ_2 4.456 ± 0.963
UCN-count-to-monitor ratio
10^{-1}
10^{-2}
10^{-3}
0
10
20
30
40
50
60
Storage time (s)

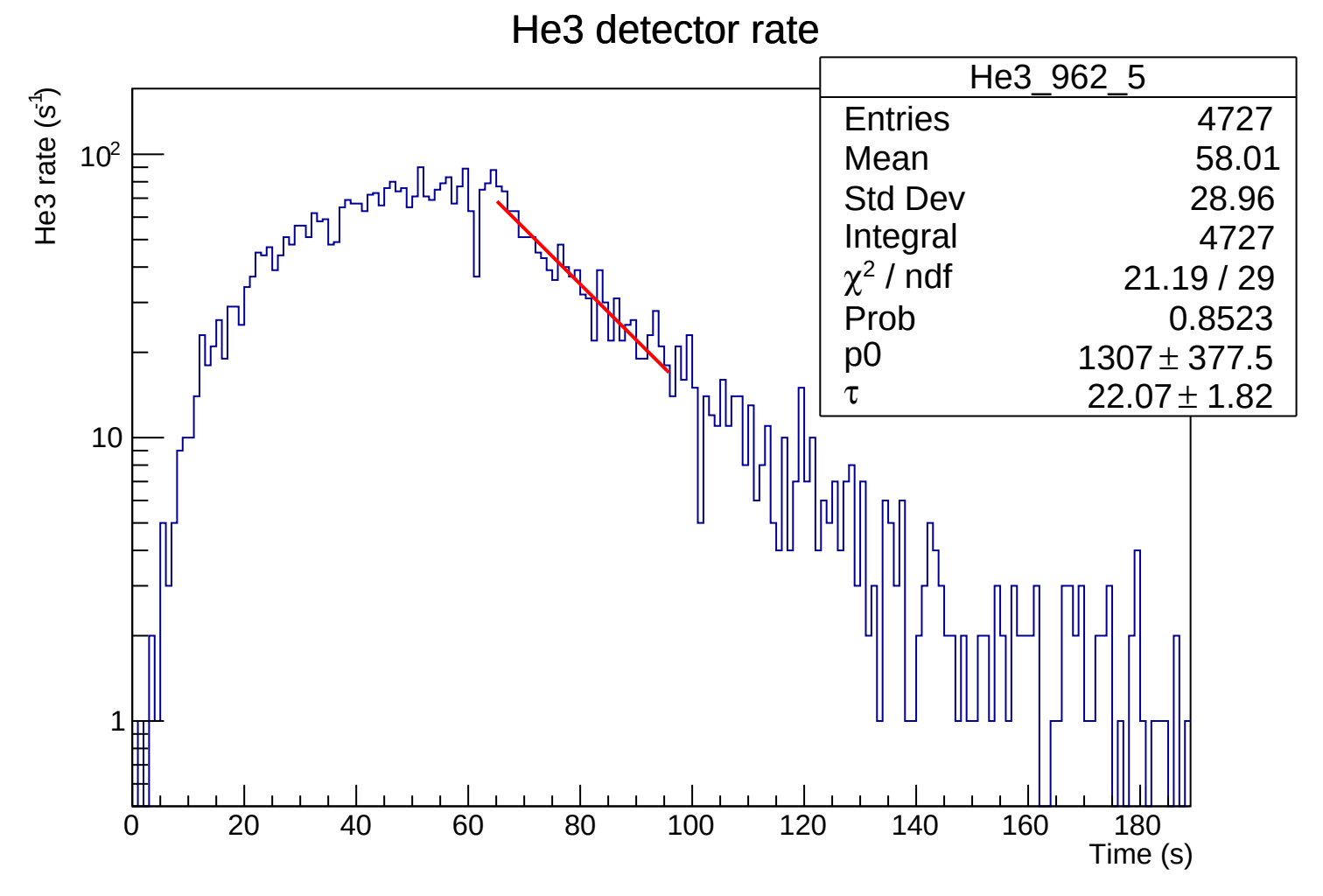

TCN18-046 (single exponential fit + background, unnormalized)
UCN count
10^3
10^2
0
10
20
30
40
50
60
Storage time (s)
χ^2 / ndf 1721 / 78
Prob 0
p0 891.6 ± 13.51
τ 8.068 ± 0.2119
Background 145.3 ± 3.851

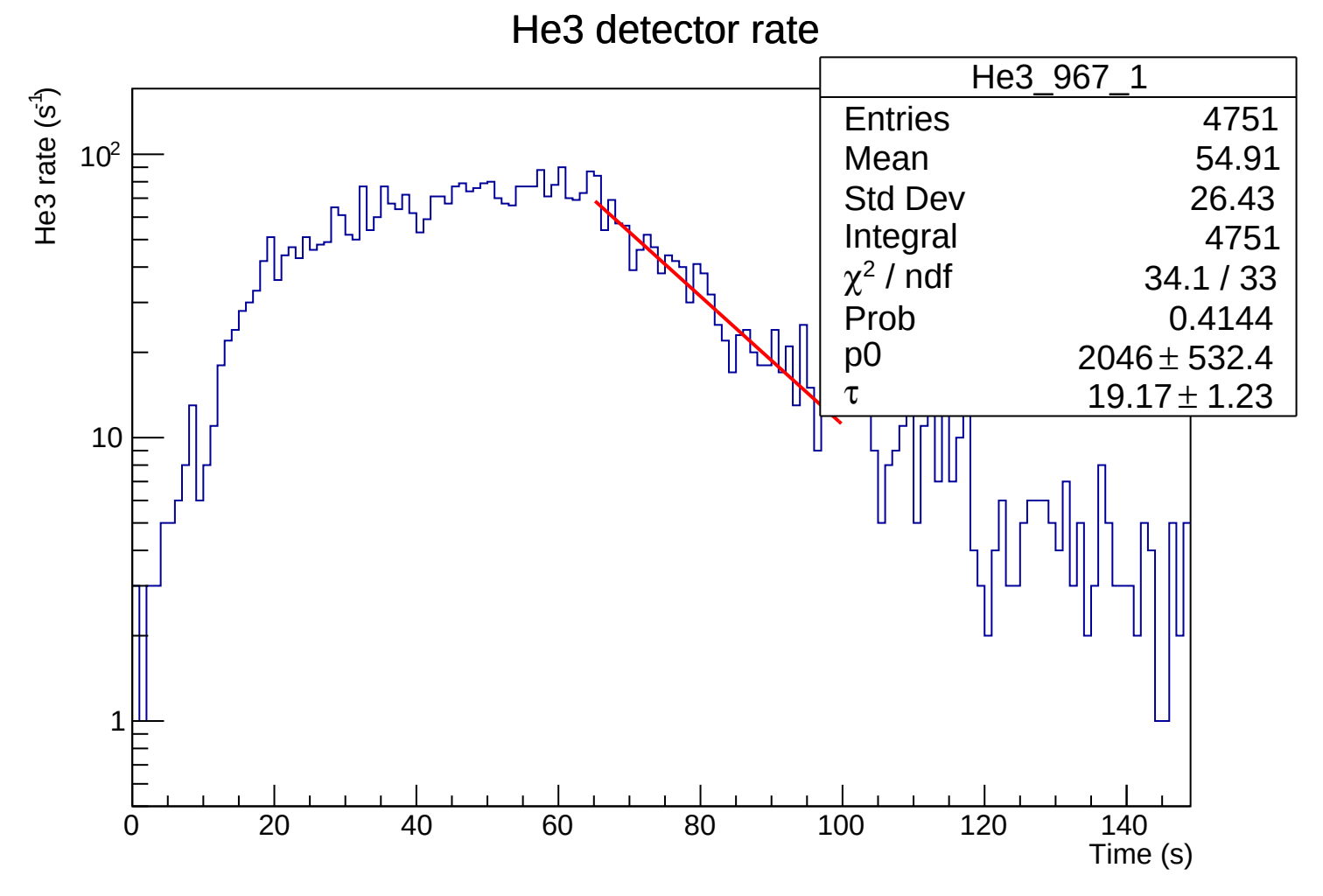

He3 detector rate
He3_961_1
Entries 4741
Mean 52.35
Std Dev 24.09
Integral 4733
χ² / ndf 19.5 / 13
Prob 0.1085
p0 584.6 ± 377.5
τ 28.96 ± 7.52
He3 rate (s⁻¹)
10²
10
0
20
40
60
80
100
Time (s)

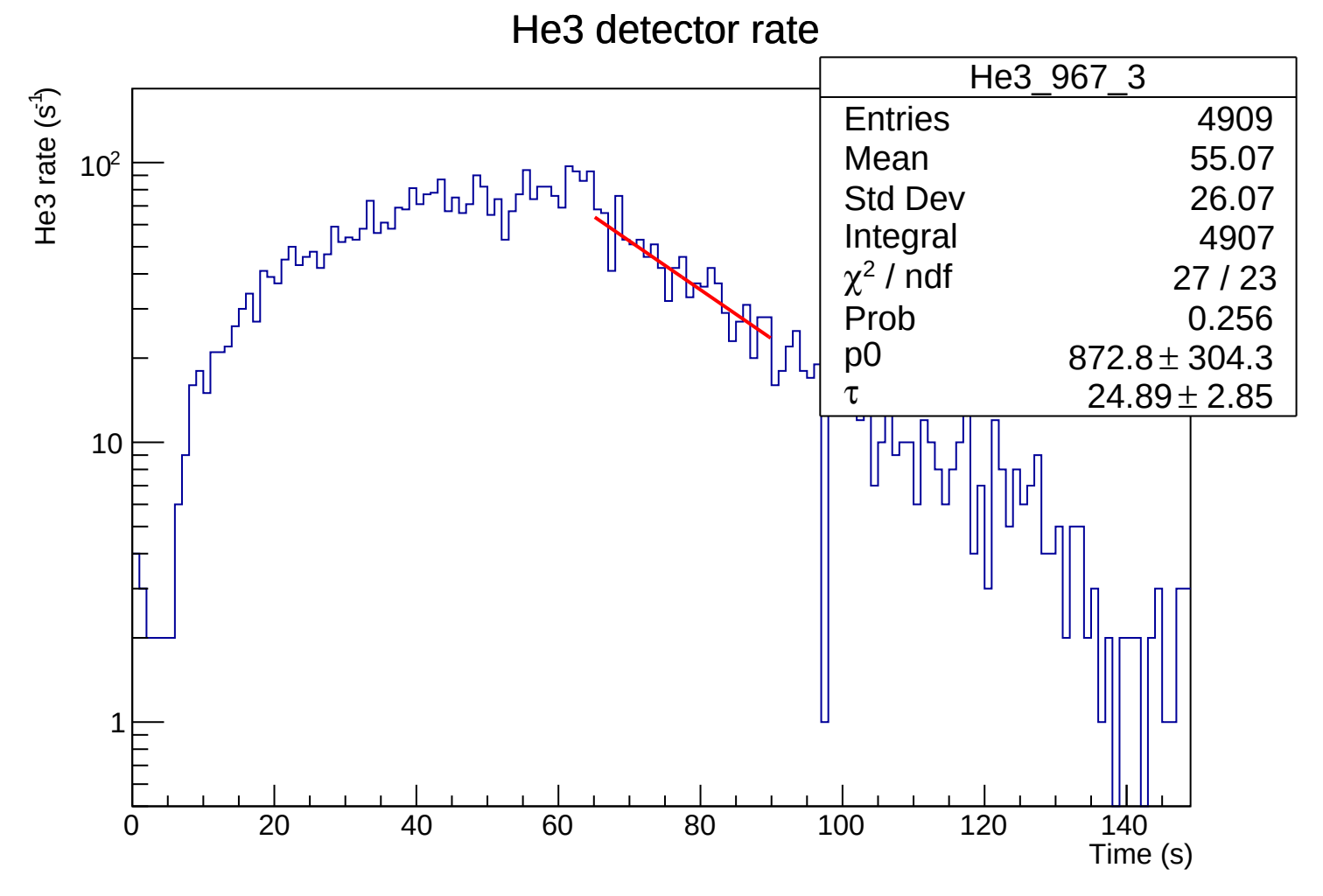

He3 detector rate
He3_962_1
Entries 4883
Mean 56.83
Std Dev 27.37
Integral 4880
χ² / ndf 68.75 / 53
Prob 0.07168
p0 1426 ± 239.6
τ 21.49 ± 0.94
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
Time (s)

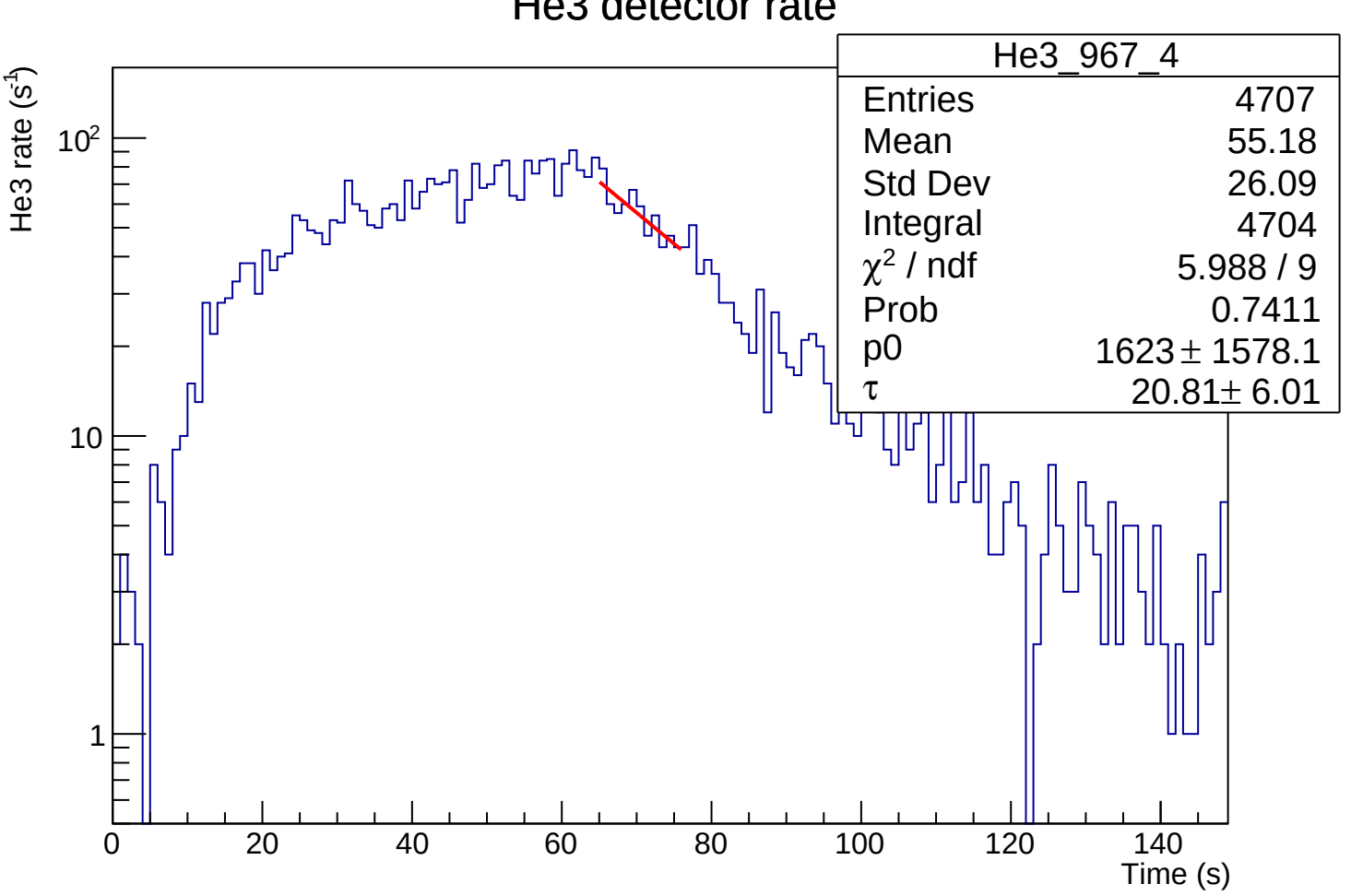

He3 detector rate
He3_962_3
Entries 4586
Mean 57.74
Std Dev 28.37
Integral 4586
χ² / ndf 40.66 / 38
Prob 0.3541
p0 1446 ± 324.4
τ 21.39 ± 1.29
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
Time (s)

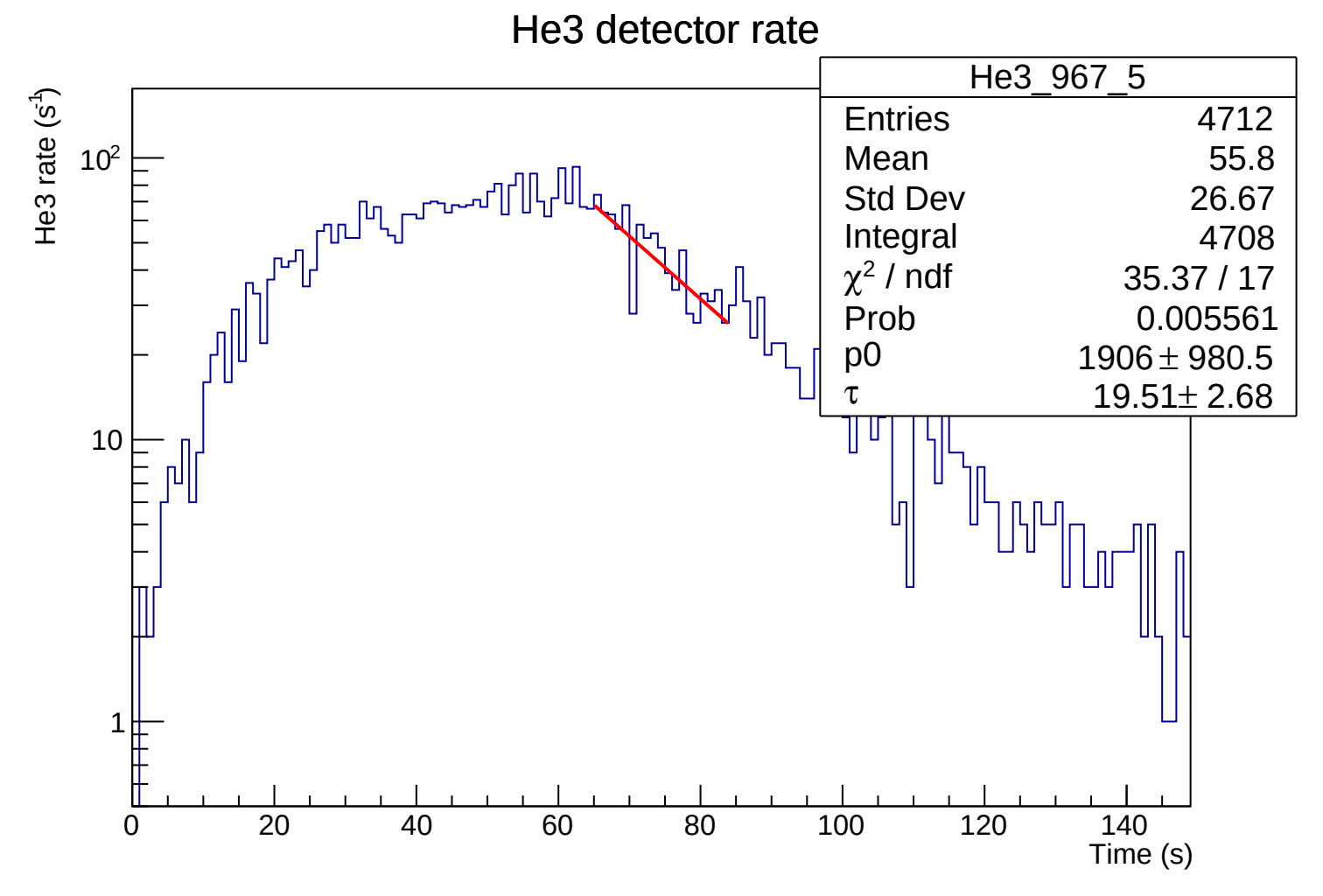

He3 detector rate
He3_962_4
Entries 4656
Mean 57.02
Std Dev 27.76
Integral 4656
χ² / ndf 30.94 / 17
Prob 0.02029
p0 1934 ± 1010.8
τ 19.27 ± 2.65
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
Time (s)

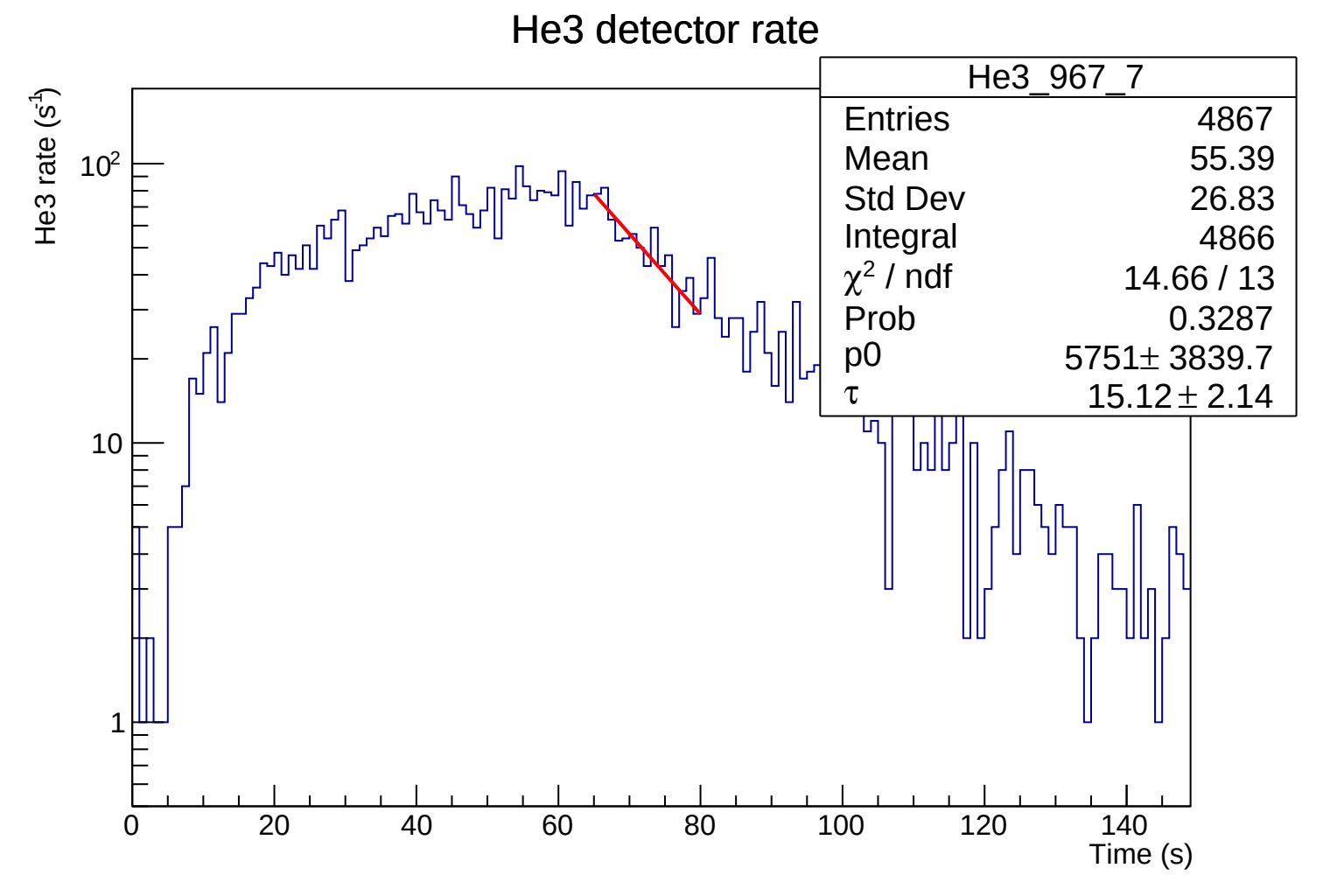

He3 detector rate
He3_962_5
Entries 4727
Mean 58.01
Std Dev 28.96
Integral 4727
χ² / ndf 21.19 / 29
Prob 0.8523
p0 1307 ± 377.5
τ 22.07 ± 1.82
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
Time (s)

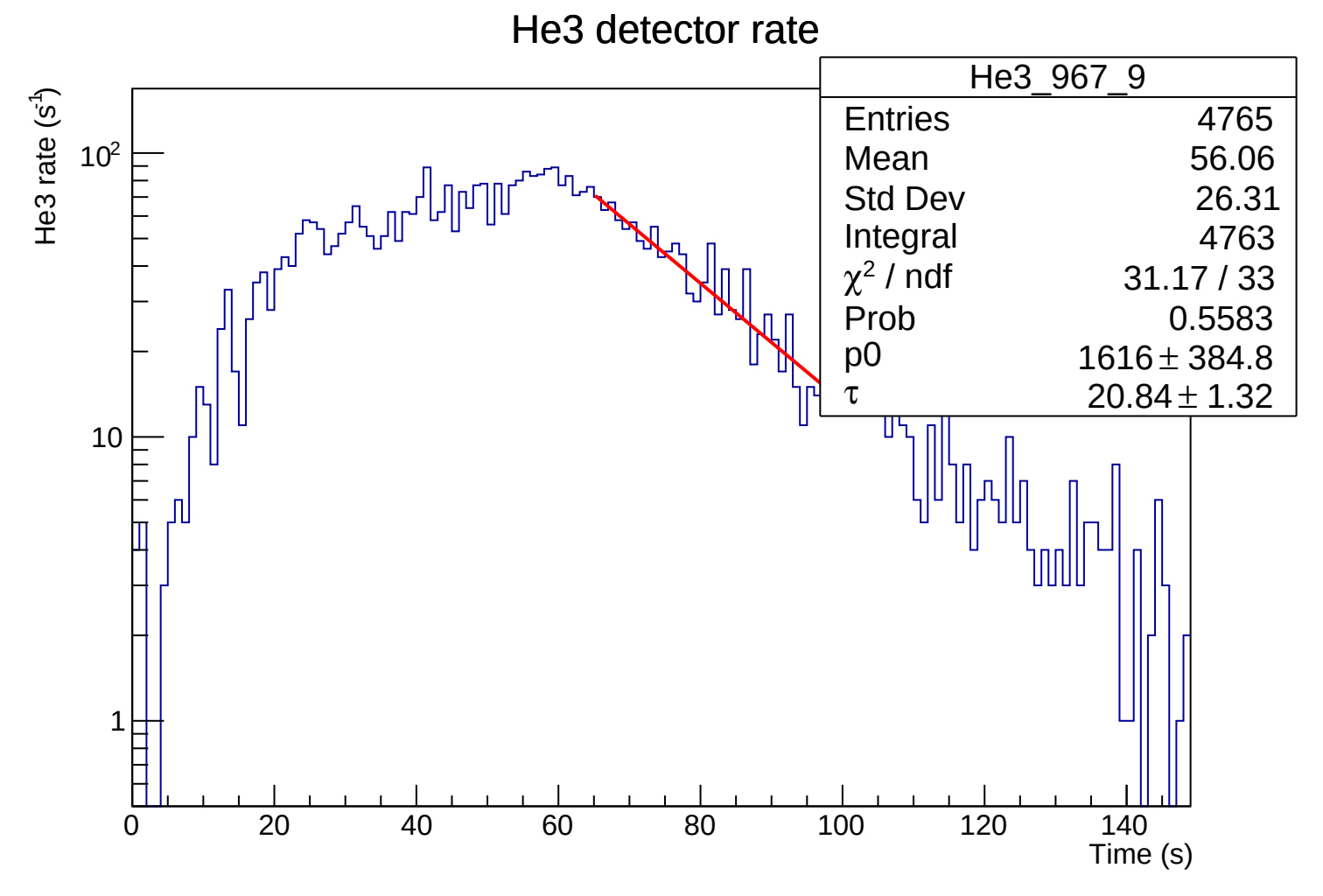

He3 detector rate
He3_967_1
Entries 4751
Mean 54.91
Std Dev 26.43
Integral 4751
χ² / ndf 34.1 / 33
Prob 0.4144
p0 2046 ± 532.4
τ 19.17 ± 1.23
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

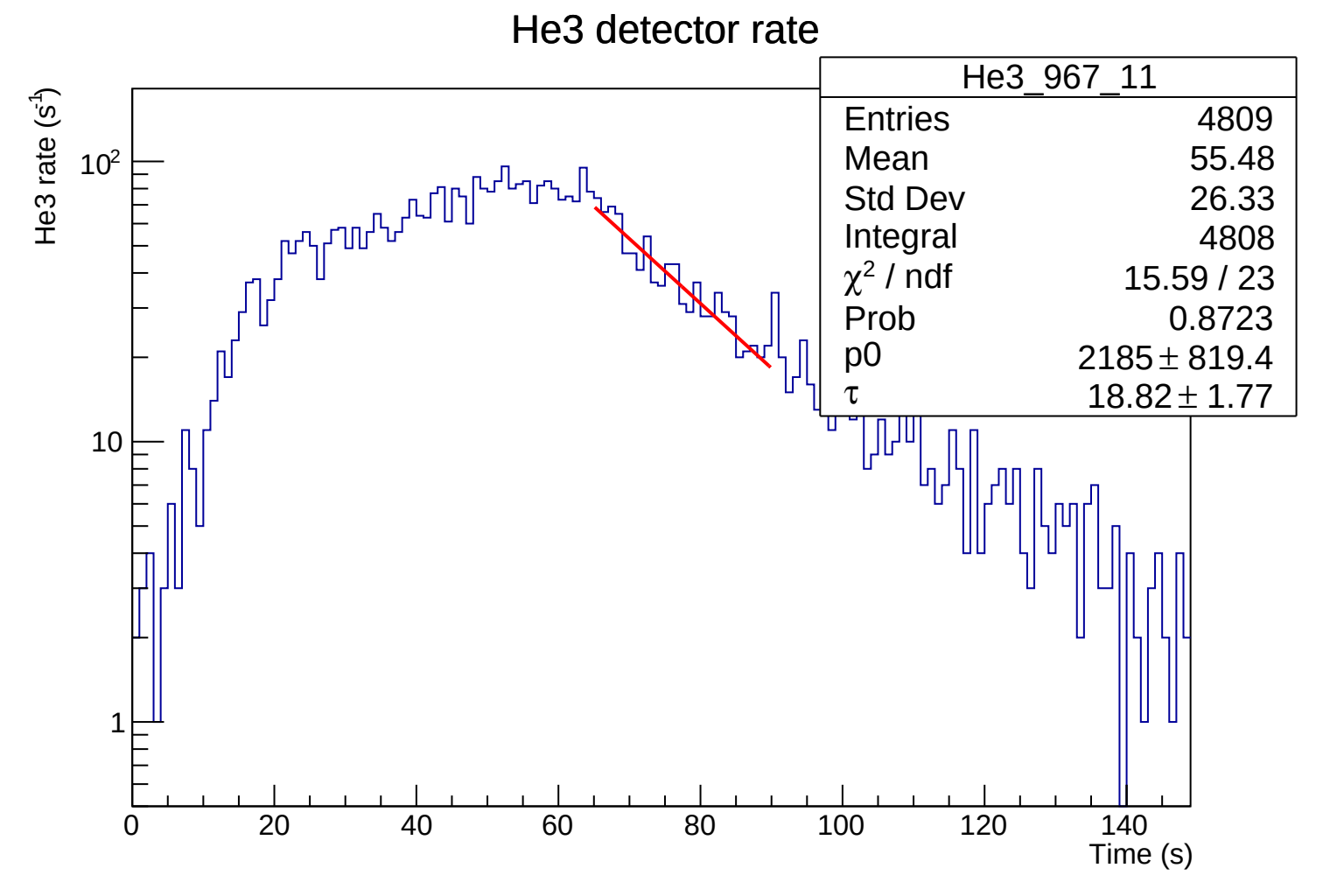

He3 detector rate
He3_967_3
Entries 4909
Mean 55.07
Std Dev 26.07
Integral 4907
χ² / ndf 27 / 23
Prob 0.256
p0 872.8 ± 304.3
τ 24.89 ± 2.85
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

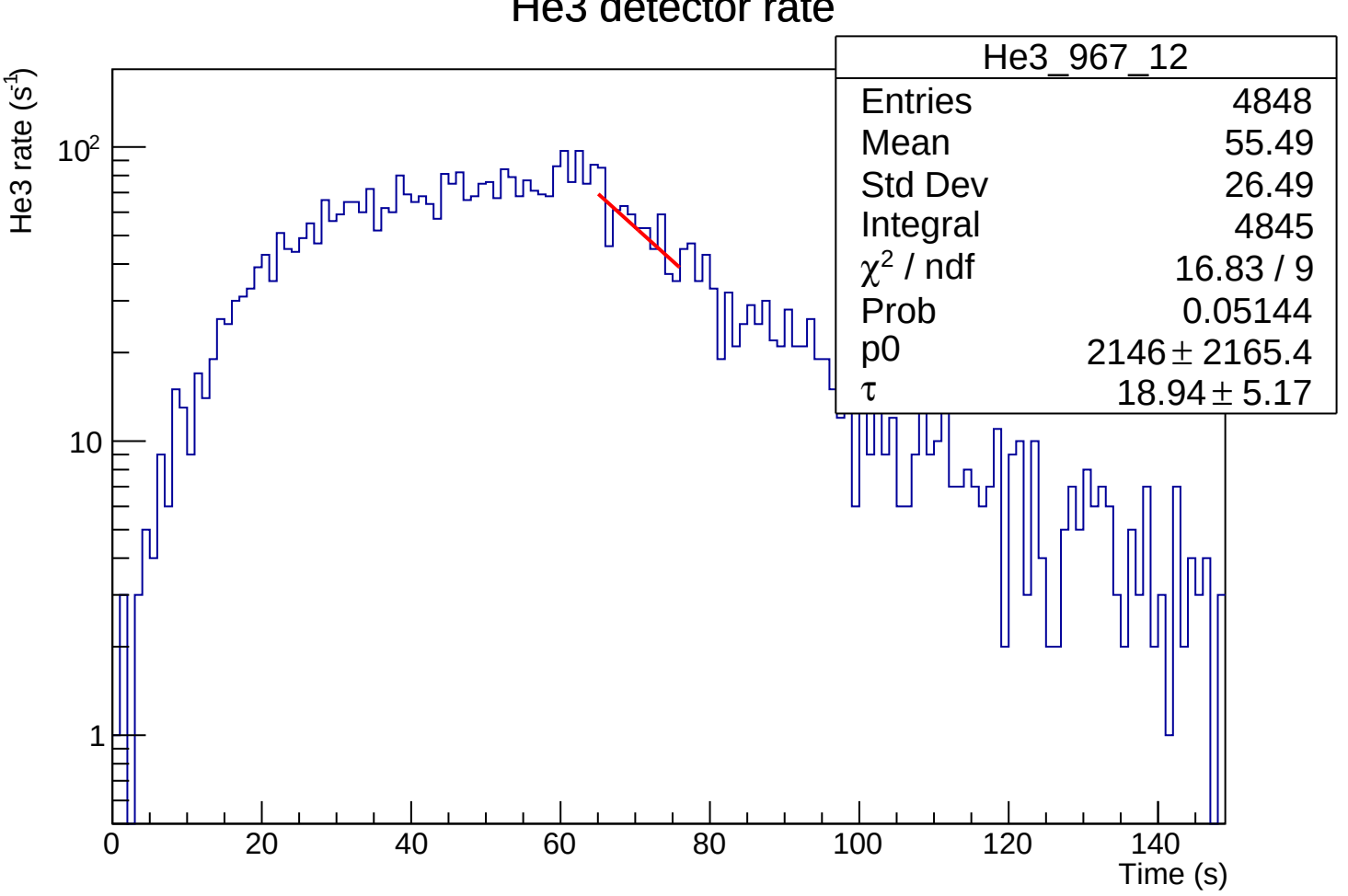

He3 detector rate
He3_967_4
Entries 4707
Mean 55.18
Std Dev 26.09
Integral 4704
χ² / ndf 5.988 / 9
Prob 0.7411
p0 1623 ± 1578.1
τ 20.81 ± 6.01
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

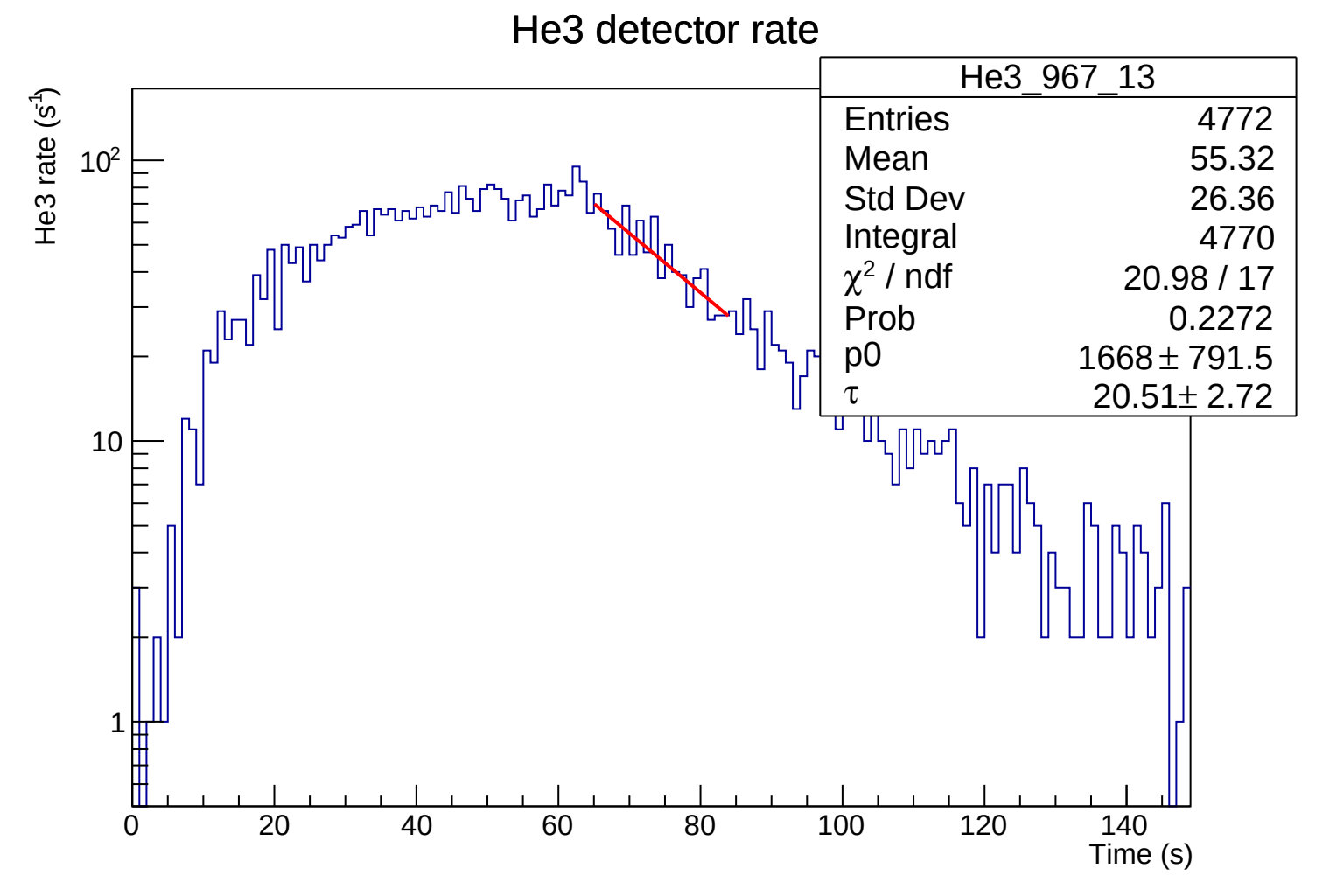

He3 detector rate
He3_967_5
Entries 4712
Mean 55.8
Std Dev 26.67
Integral 4708
χ² / ndf 35.37 / 17
Prob 0.005561
p0 1906 ± 980.5
τ 19.51 ± 2.68
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

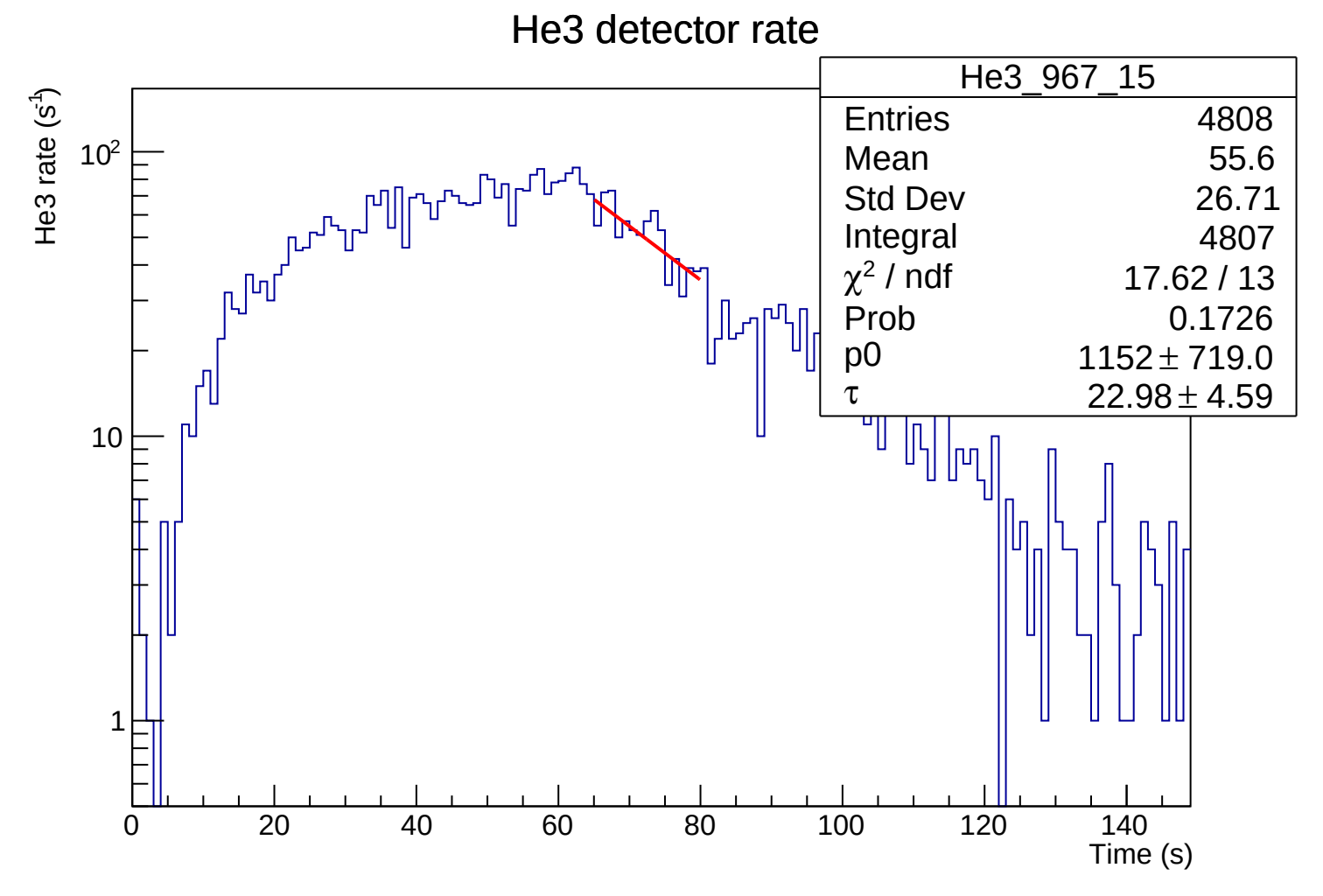

He3 detector rate
He3_967_7
Entries 4867
Mean 55.39
Std Dev 26.83
Integral 4866
χ² / ndf 14.66 / 13
Prob 0.3287
p0 5751± 3839.7
τ 15.12 ± 2.14
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

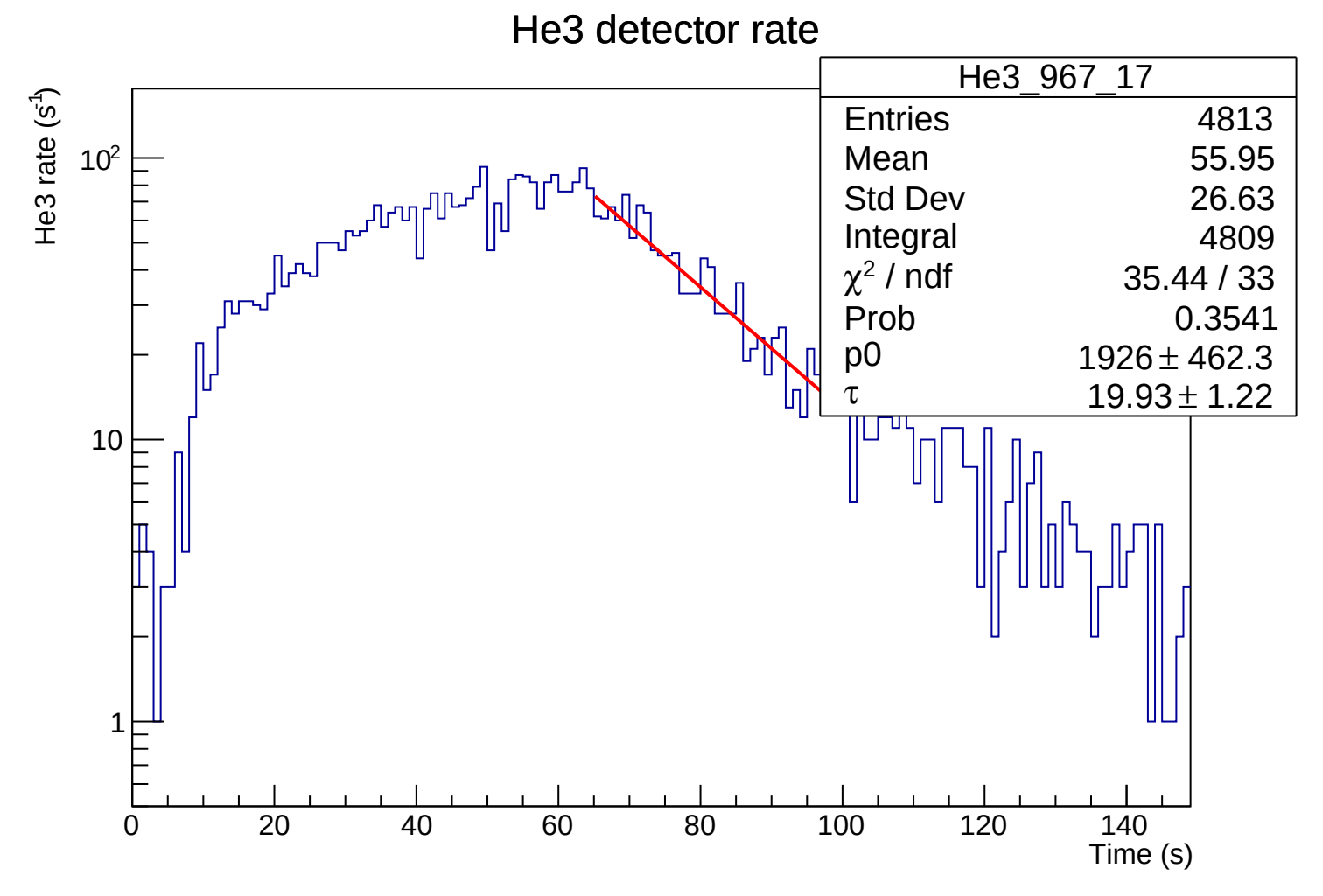

He3 detector rate
He3_967_9
Entries 4765
Mean 56.06
Std Dev 26.31
Integral 4763
χ² / ndf 31.17 / 33
Prob 0.5583
p0 1616 ± 384.8
τ 20.84 ± 1.32
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

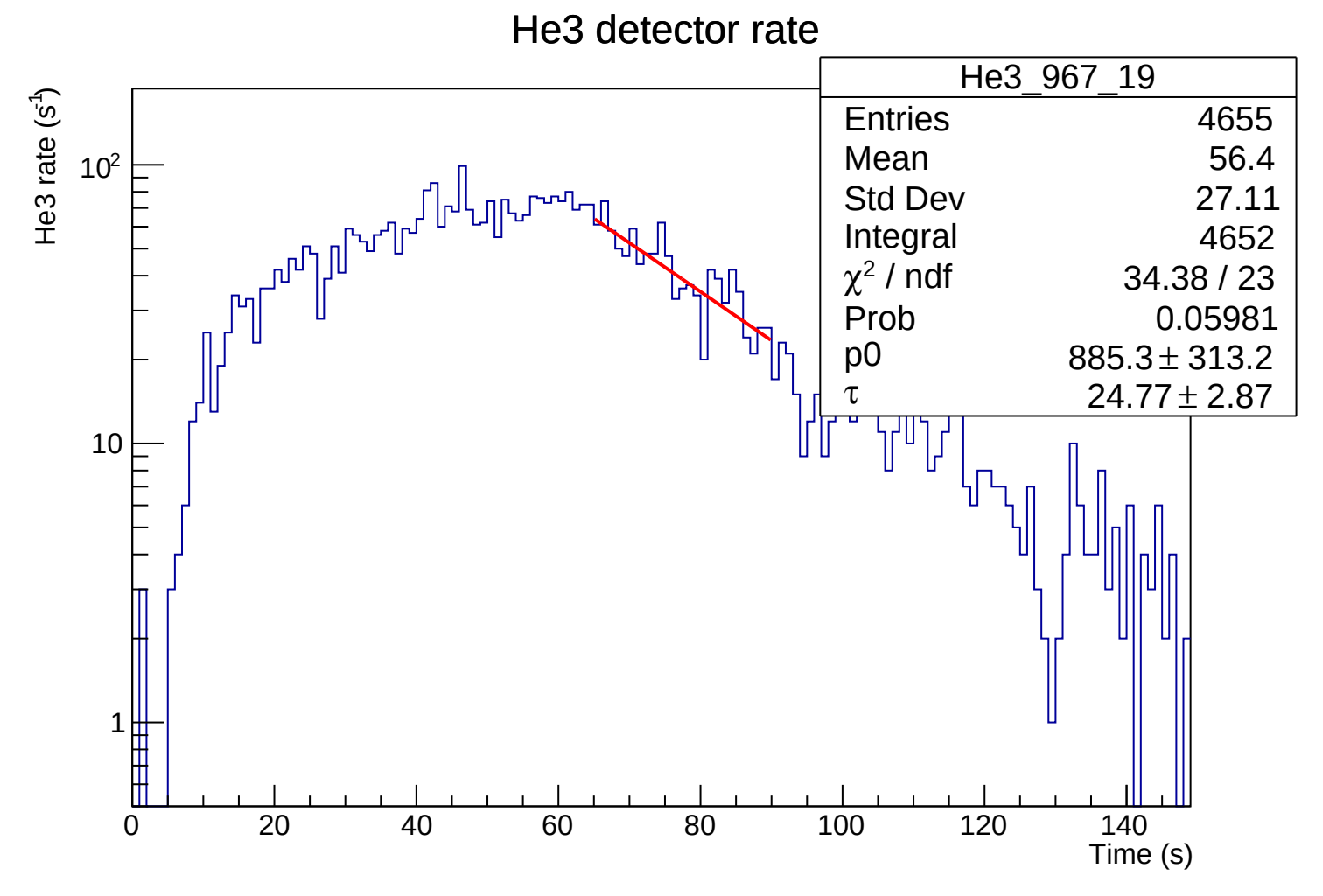

He3 detector rate
He3_967_11
Entries 4809
Mean 55.48
Std Dev 26.33
Integral 4808
χ² / ndf 15.59 / 23
Prob 0.8723
p0 2185 ± 819.4
τ 18.82 ± 1.77
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

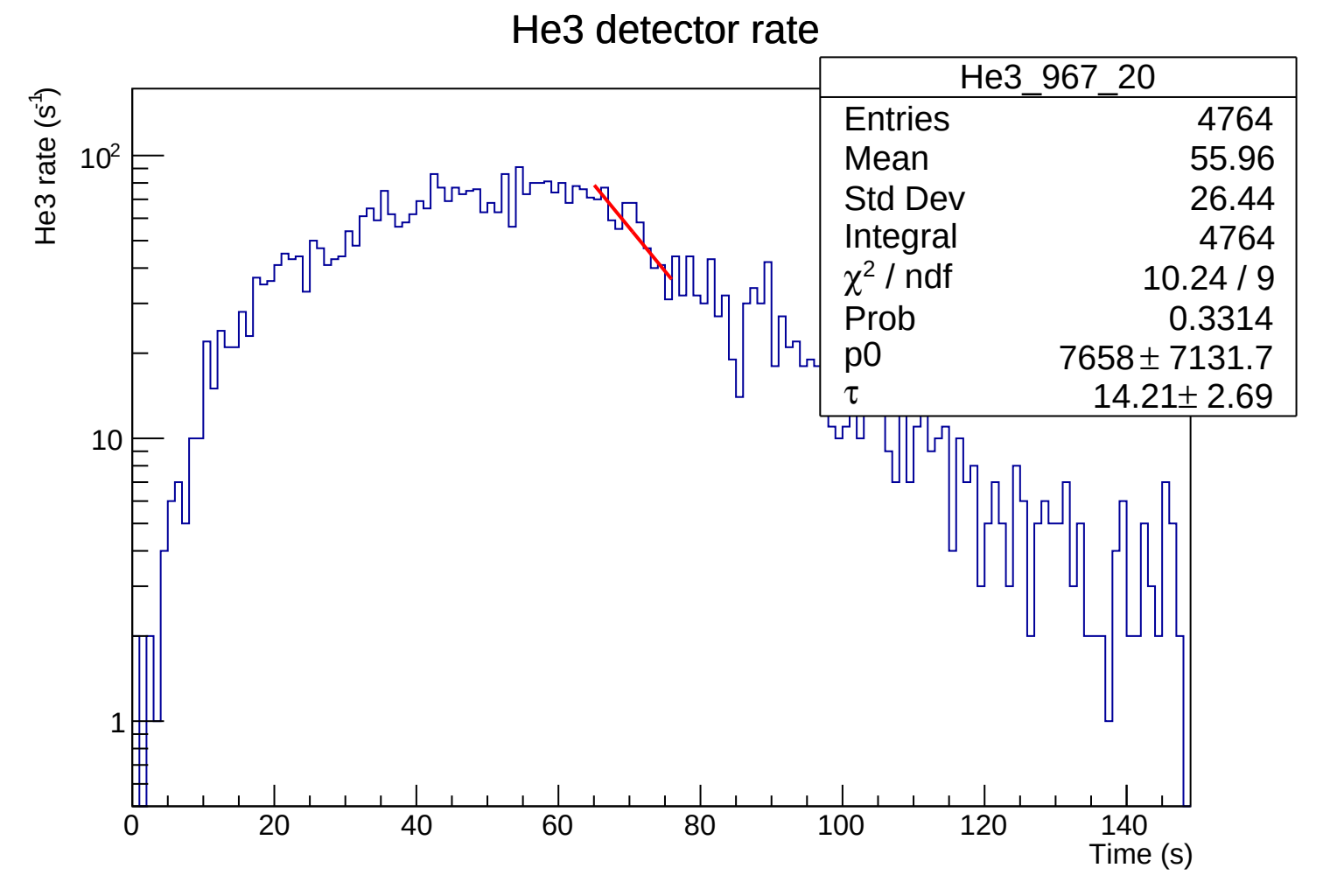

He3 detector rate
He3_967_12
Entries 4848
Mean 55.49
Std Dev 26.49
Integral 4845
χ² / ndf 16.83 / 9
Prob 0.05144
p0 2146 ± 2165.4
τ 18.94 ± 5.17
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

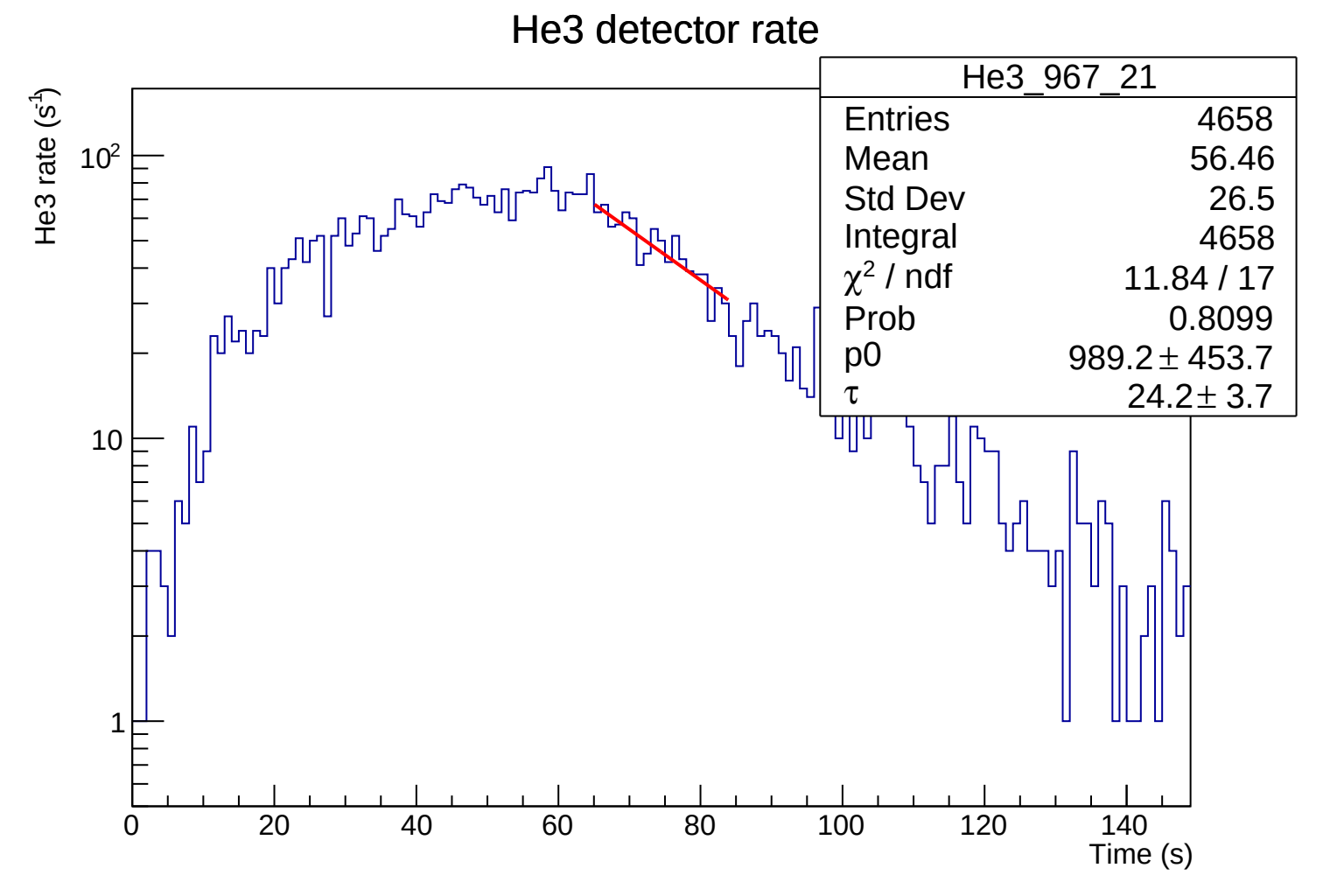

He3 detector rate
He3_967_13
Entries 4772
Mean 55.32
Std Dev 26.36
Integral 4770
χ² / ndf 20.98 / 17
Prob 0.2272
p0 1668 ± 791.5
τ 20.51 ± 2.72
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

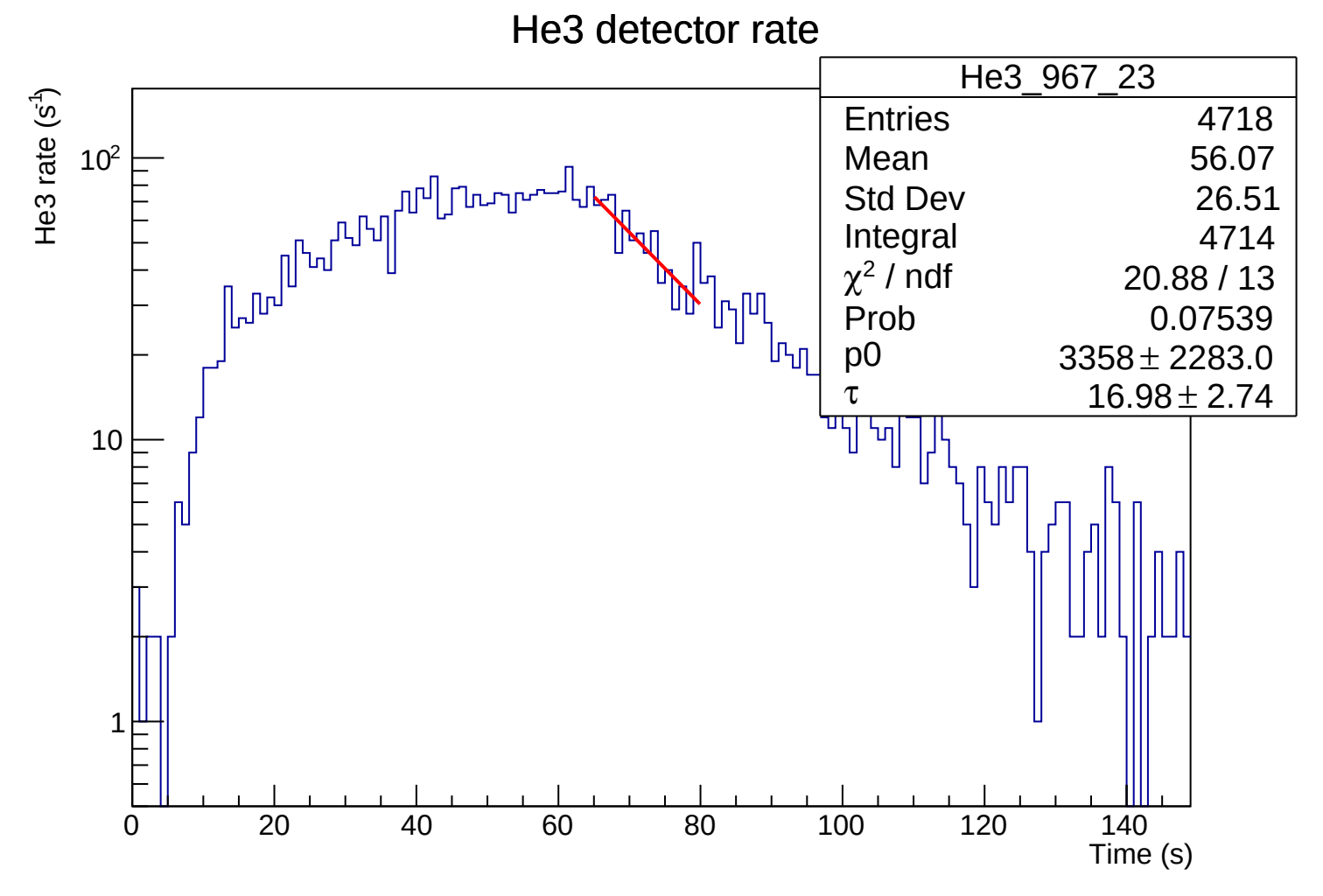

He3 detector rate
He3_967_15
Entries 4808
Mean 55.6
Std Dev 26.71
Integral 4807
χ² / ndf 17.62 / 13
Prob 0.1726
p0 1152 ± 719.0
τ 22.98 ± 4.59
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

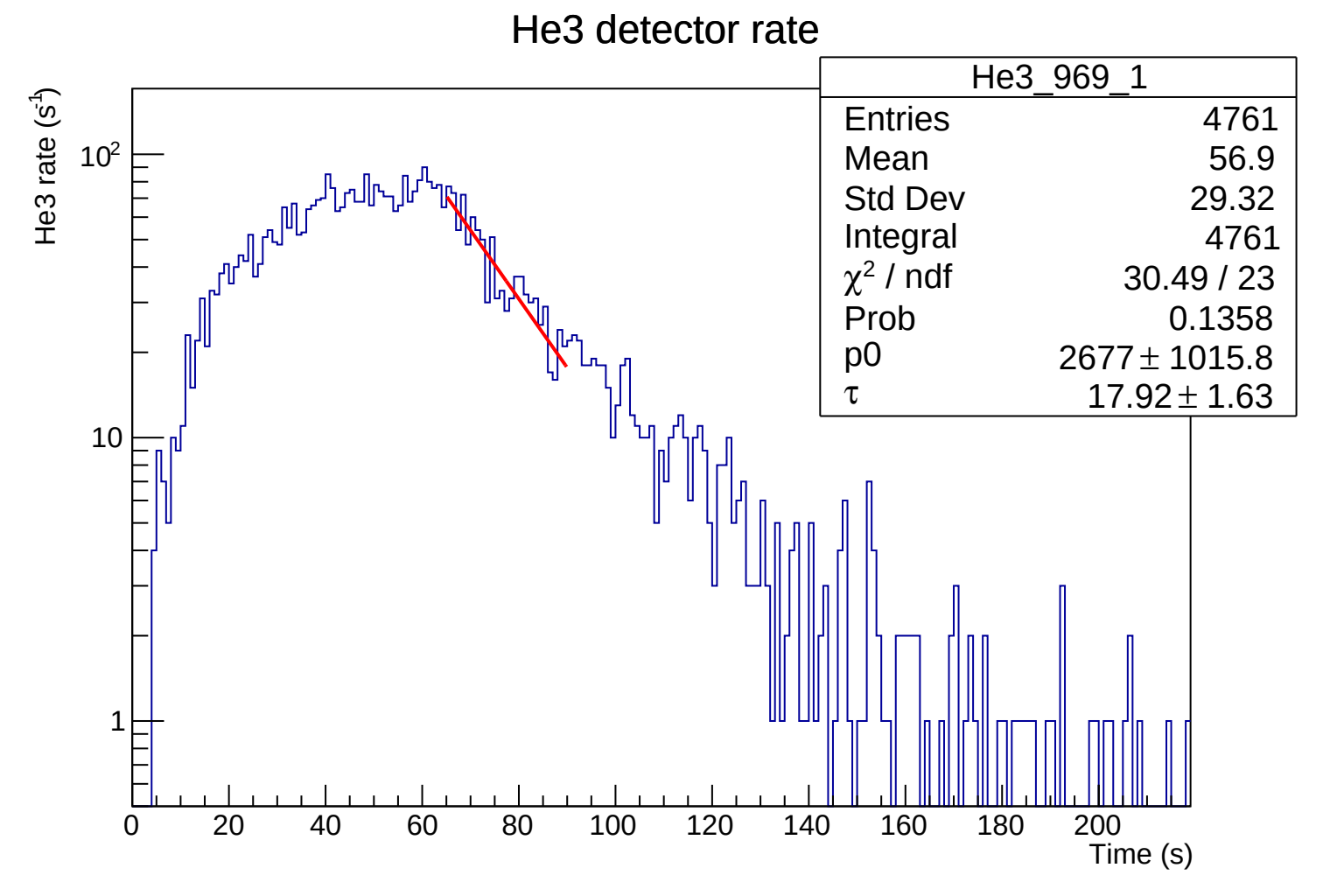

He3 detector rate
He3_967_17
Entries 4813
Mean 55.95
Std Dev 26.63
Integral 4809
χ² / ndf 35.44 / 33
Prob 0.3541
p0 1926 ± 462.3
τ 19.93 ± 1.22
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

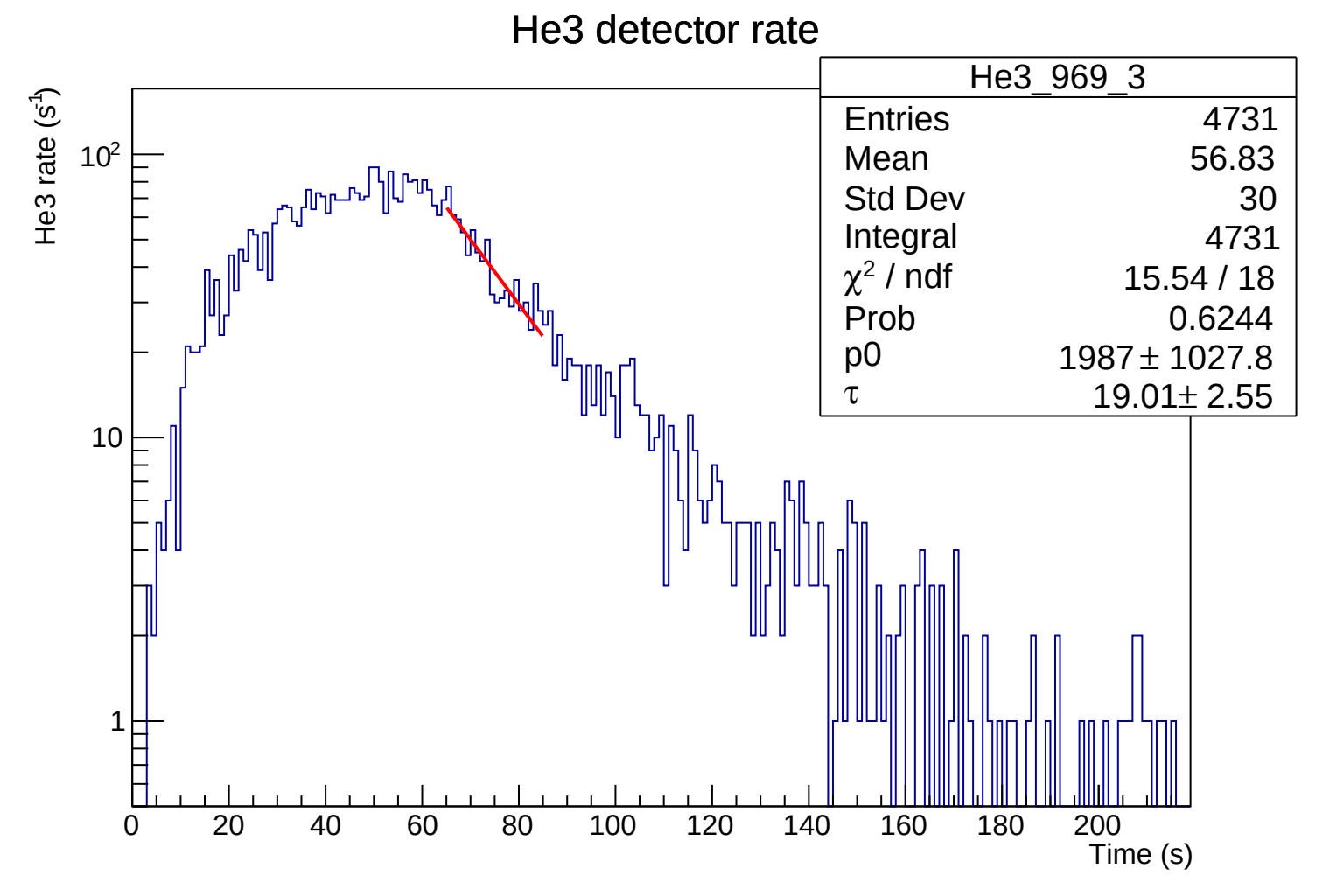

He3 detector rate
He3_967_19
Entries 4655
Mean 56.4
Std Dev 27.11
Integral 4652
χ² / ndf 34.38 / 23
Prob 0.05981
p0 885.3 ± 313.2
τ 24.77 ± 2.87
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

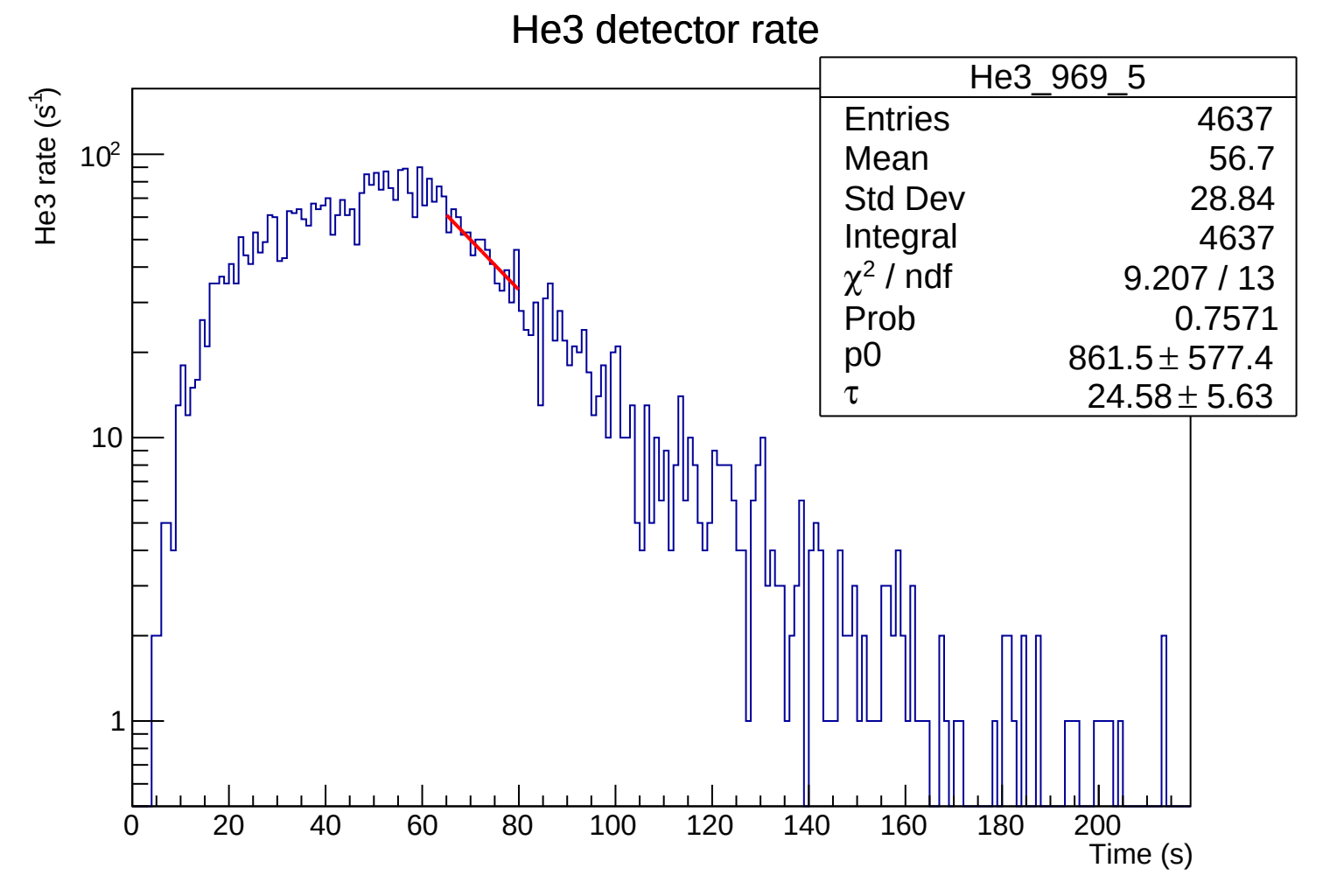

He3 detector rate
He3_967_20
Entries 4764
Mean 55.96
Std Dev 26.44
Integral 4764
χ² / ndf 10.24 / 9
Prob 0.3314
p0 7658 ± 7131.7
τ 14.21 ± 2.69
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

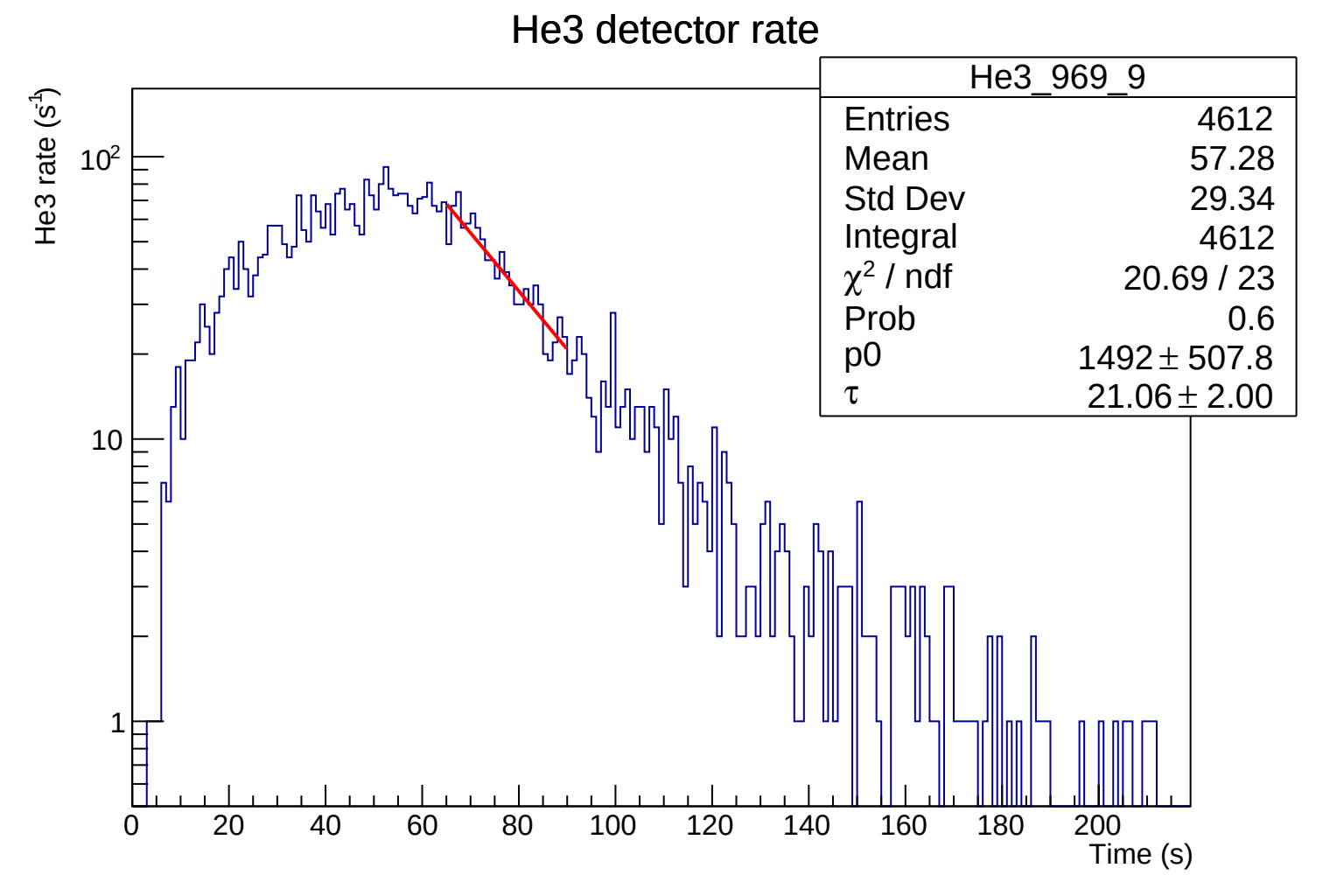

He3 detector rate
He3_967_21
Entries 4658
Mean 56.46
Std Dev 26.5
Integral 4658
χ² / ndf 11.84 / 17
Prob 0.8099
p0 989.2 ± 453.7
τ 24.2 ± 3.7
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

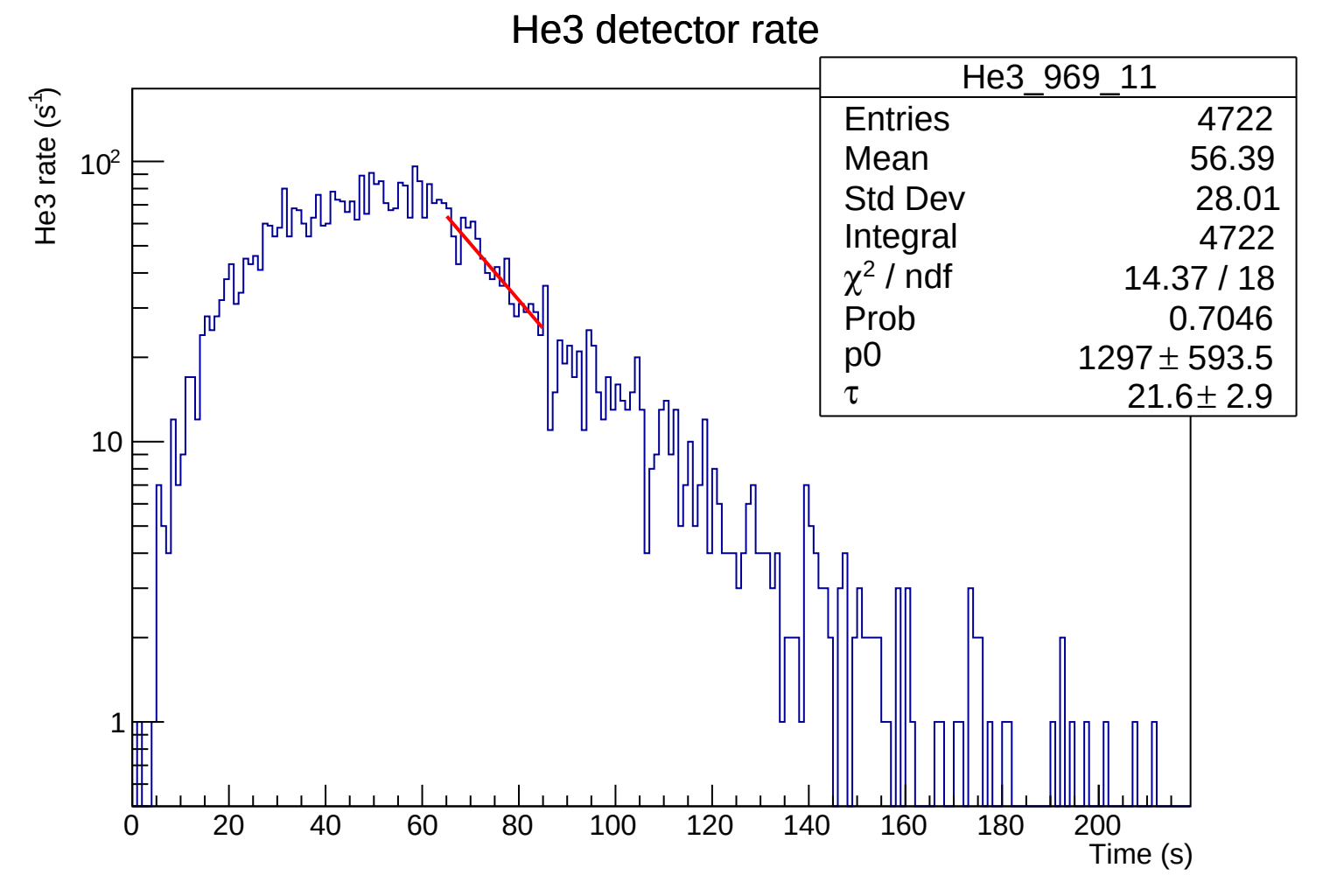

He3 detector rate
He3_967_23
Entries 4718
Mean 56.07
Std Dev 26.51
Integral 4714
χ² / ndf 20.88 / 13
Prob 0.07539
p0 3358 ± 2283.0
τ 16.98 ± 2.74
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
Time (s)

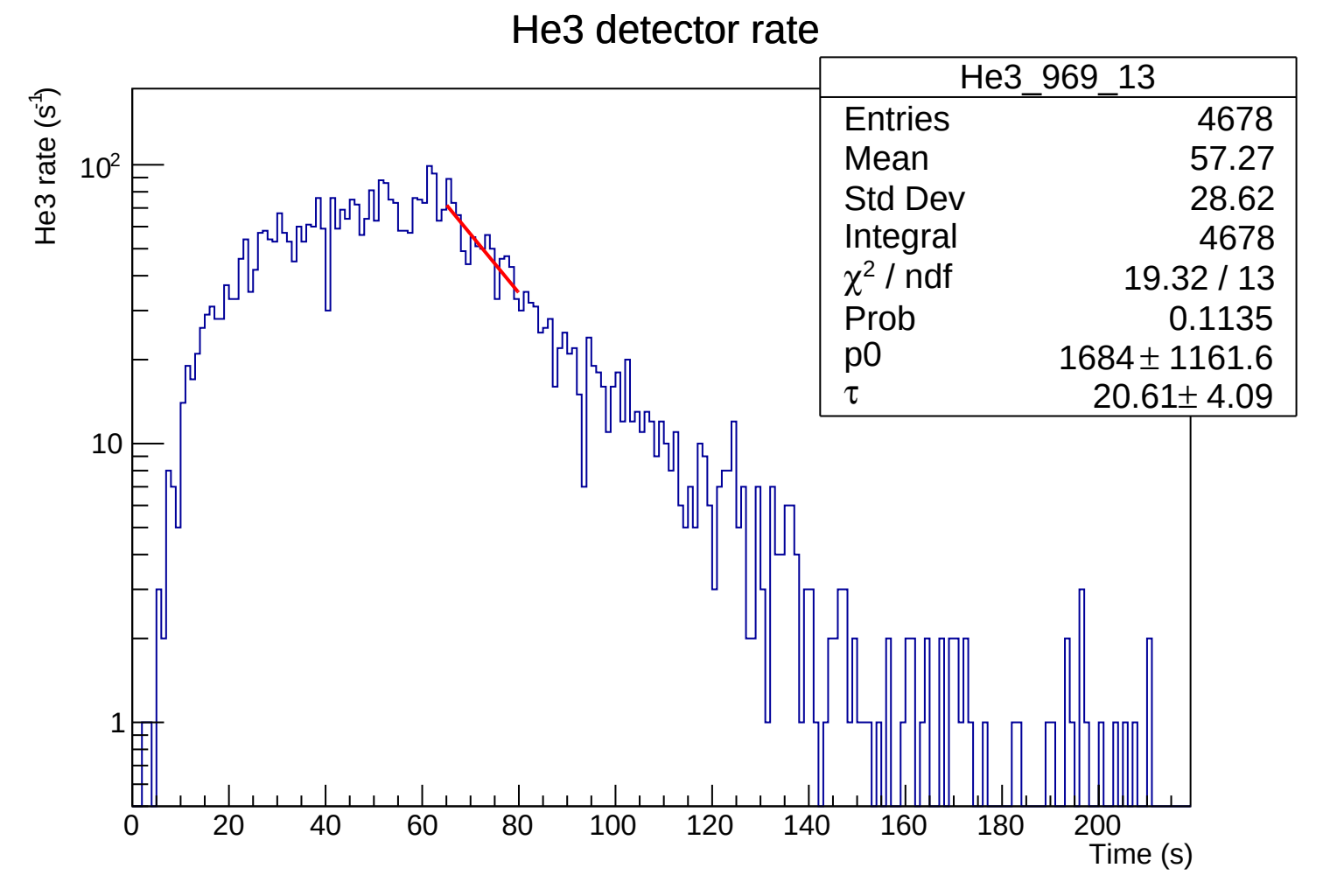

He3 detector rate
He3_969_1
Entries 4761
Mean 56.9
Std Dev 29.32
Integral 4761
χ² / ndf 30.49 / 23
Prob 0.1358
p0 2677 ± 1015.8
τ 17.92 ± 1.63
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)

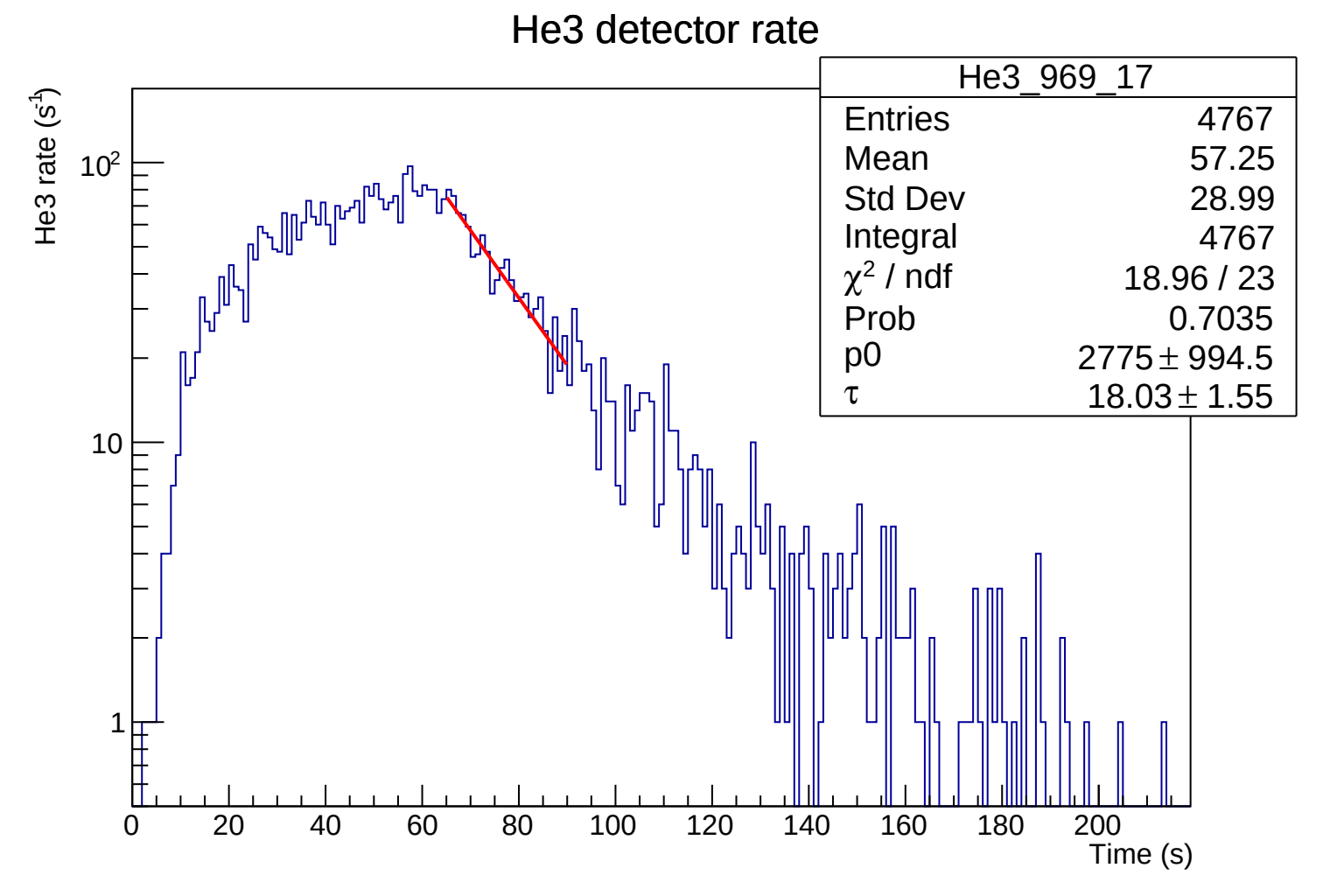

He3 detector rate
He3_969_3
Entries 4731
Mean 56.83
Std Dev 30
Integral 4731
χ² / ndf 15.54 / 18
Prob 0.6244
p0 1987 ± 1027.8
τ 19.01 ± 2.55
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)

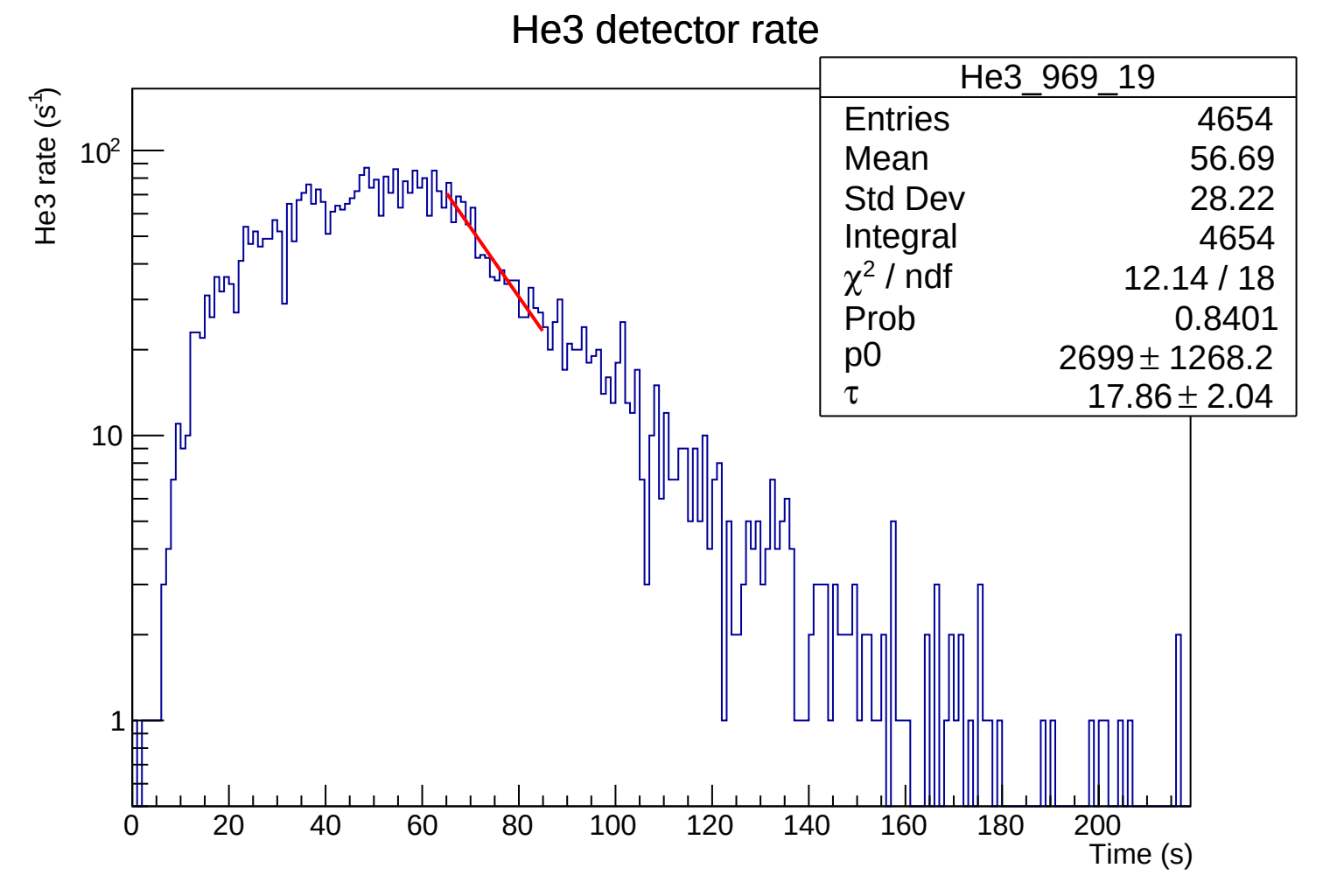

He3 detector rate
He3_969_5
Entries 4637
Mean 56.7
Std Dev 28.84
Integral 4637
χ² / ndf 9.207 / 13
Prob 0.7571
p0 861.5 ± 577.4
τ 24.58 ± 5.63
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)

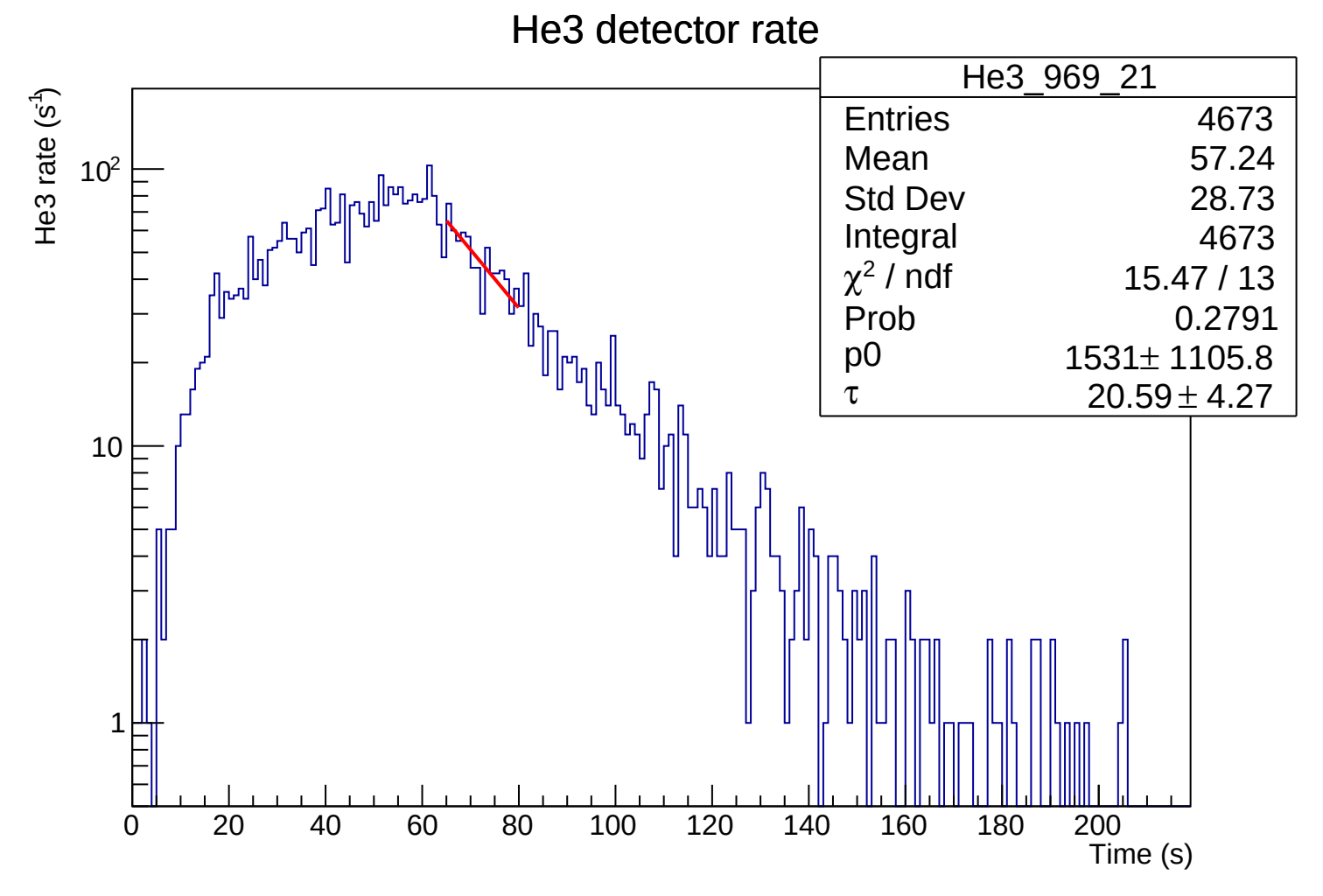

He3 detector rate
He3_969_9
Entries 4612
Mean 57.28
Std Dev 29.34
Integral 4612
χ² / ndf 20.69 / 23
Prob 0.6
p0 1492 ± 507.8
τ 21.06 ± 2.00
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)

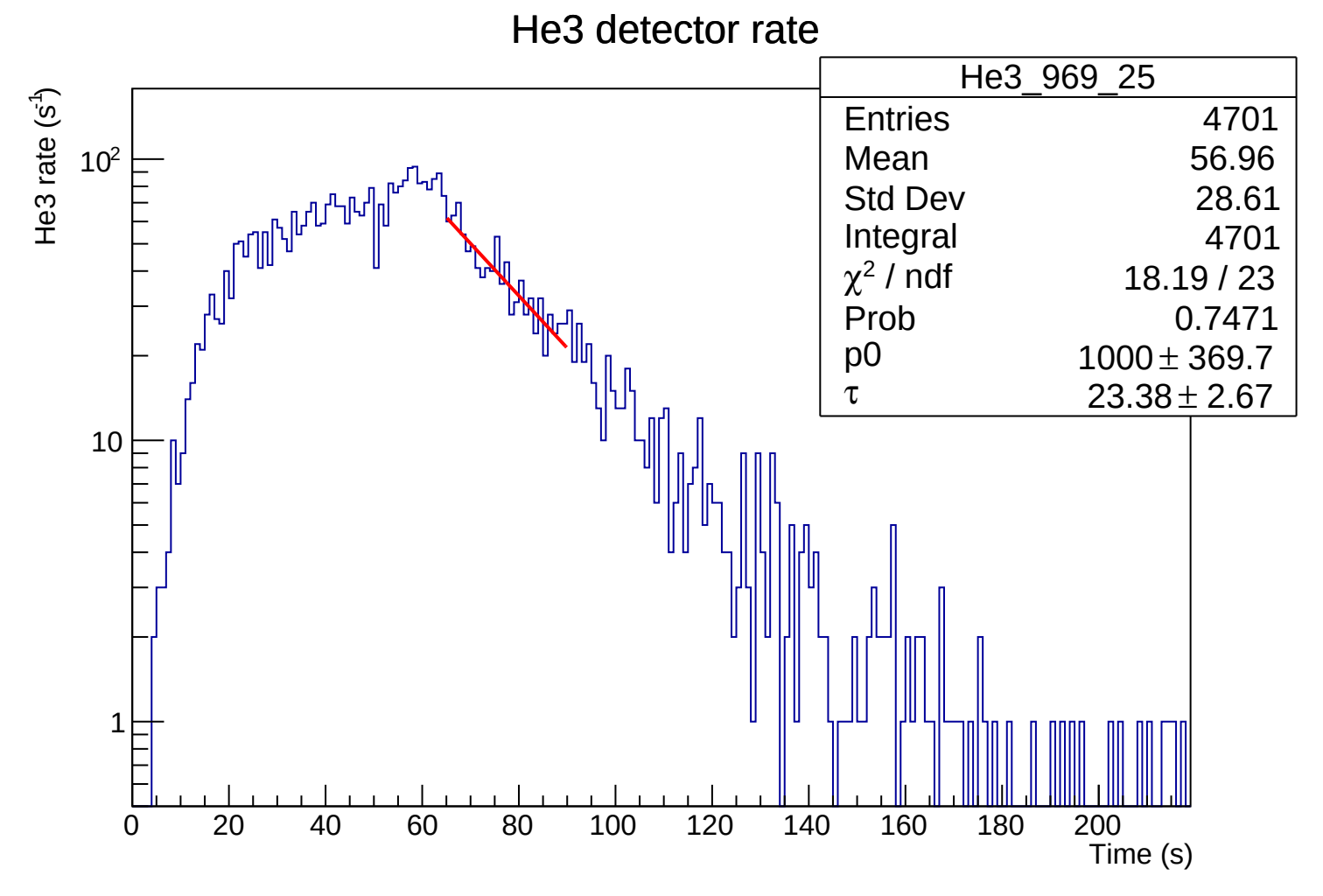

He3 detector rate
He3_969_11
Entries 4722
Mean 56.39
Std Dev 28.01
Integral 4722
χ² / ndf 14.37 / 18
Prob 0.7046
p0 1297 ± 593.5
τ 21.6 ± 2.9
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)

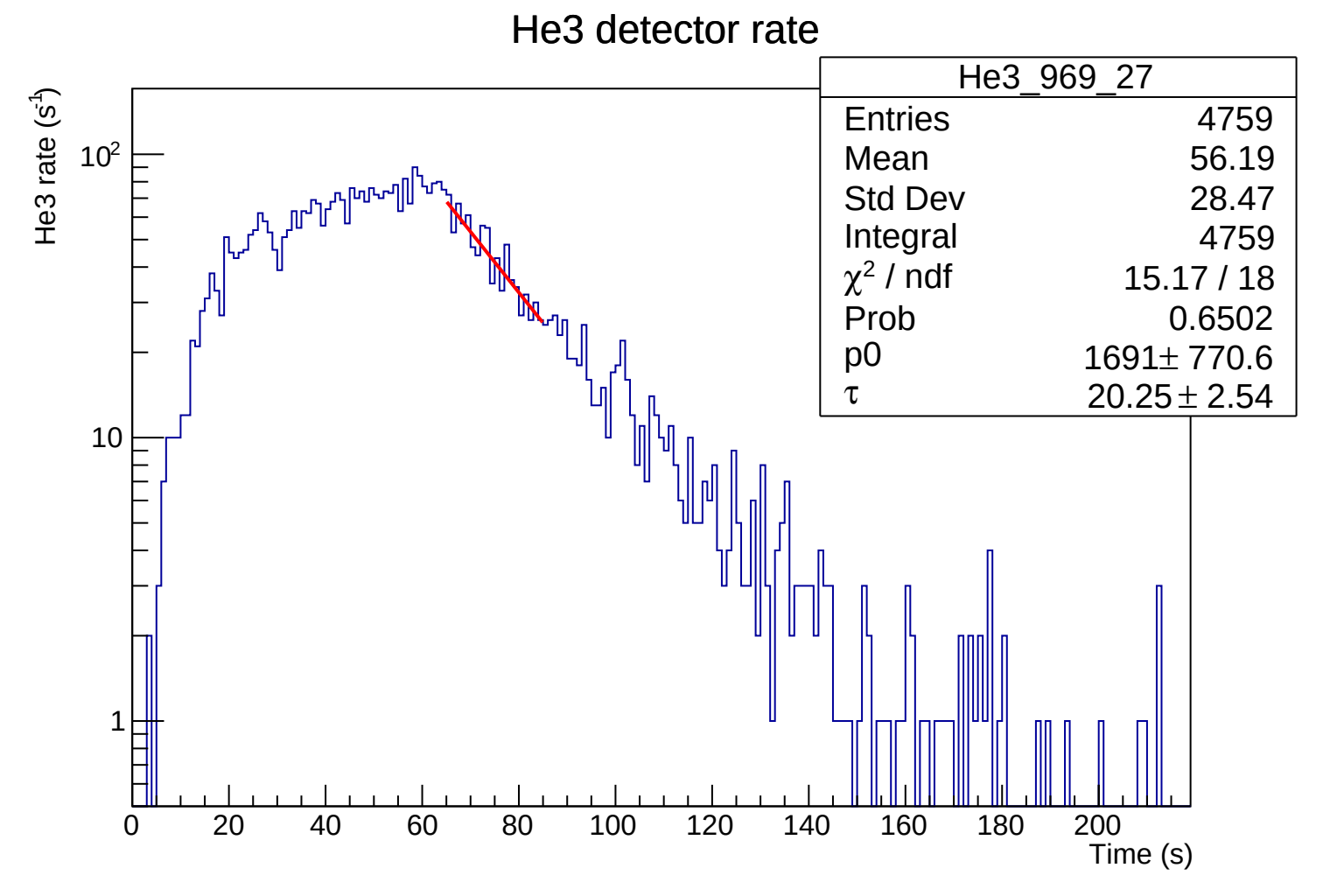

He3 detector rate
He3_969_13
Entries 4678
Mean 57.27
Std Dev 28.62
Integral 4678
χ² / ndf 19.32 / 13
Prob 0.1135
p0 1684 ± 1161.6
τ 20.61 ± 4.09
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)

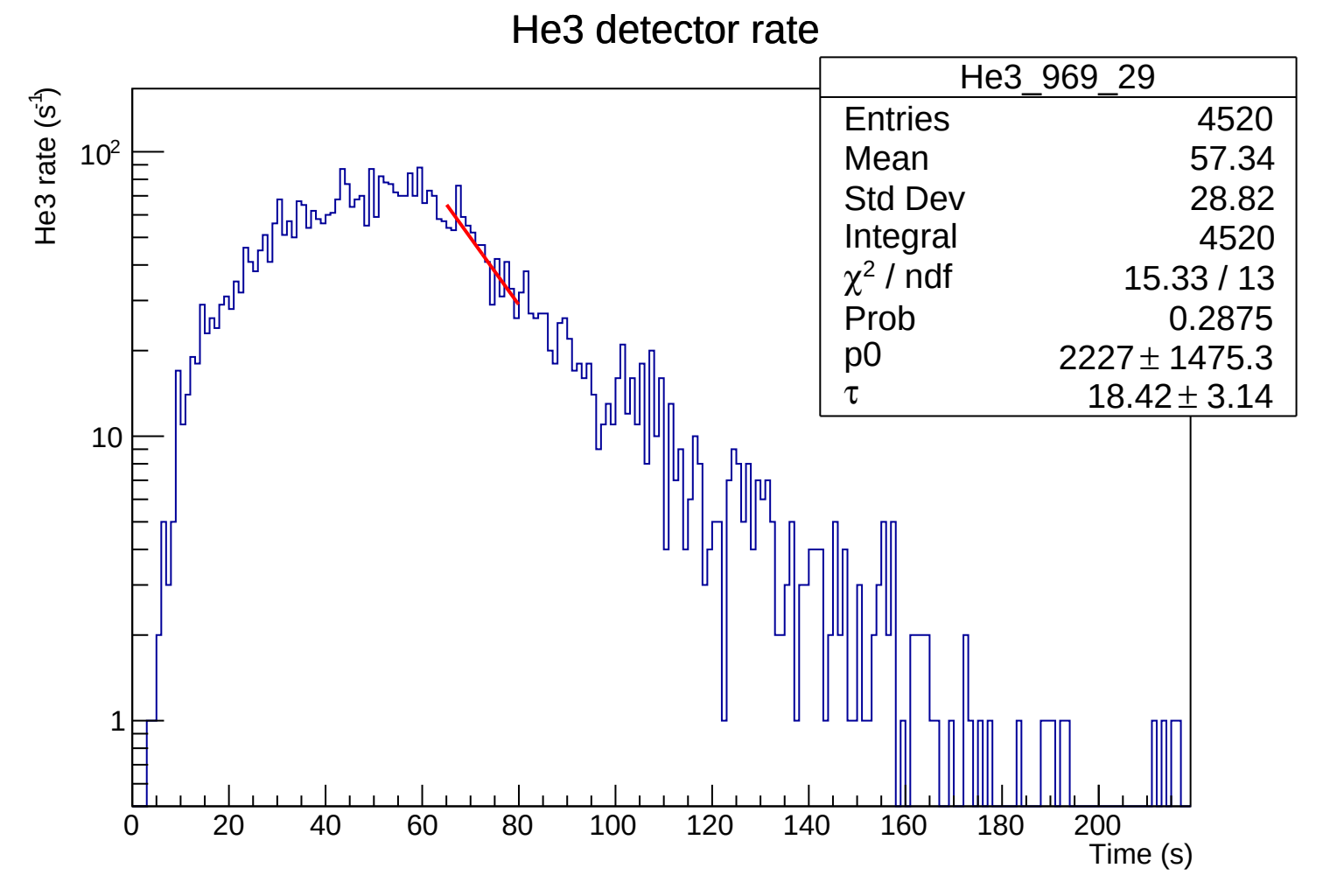

He3 detector rate
He3_969_17
Entries 4767
Mean 57.25
Std Dev 28.99
Integral 4767
χ² / ndf 18.96 / 23
Prob 0.7035
p0 2775 ± 994.5
τ 18.03 ± 1.55
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)

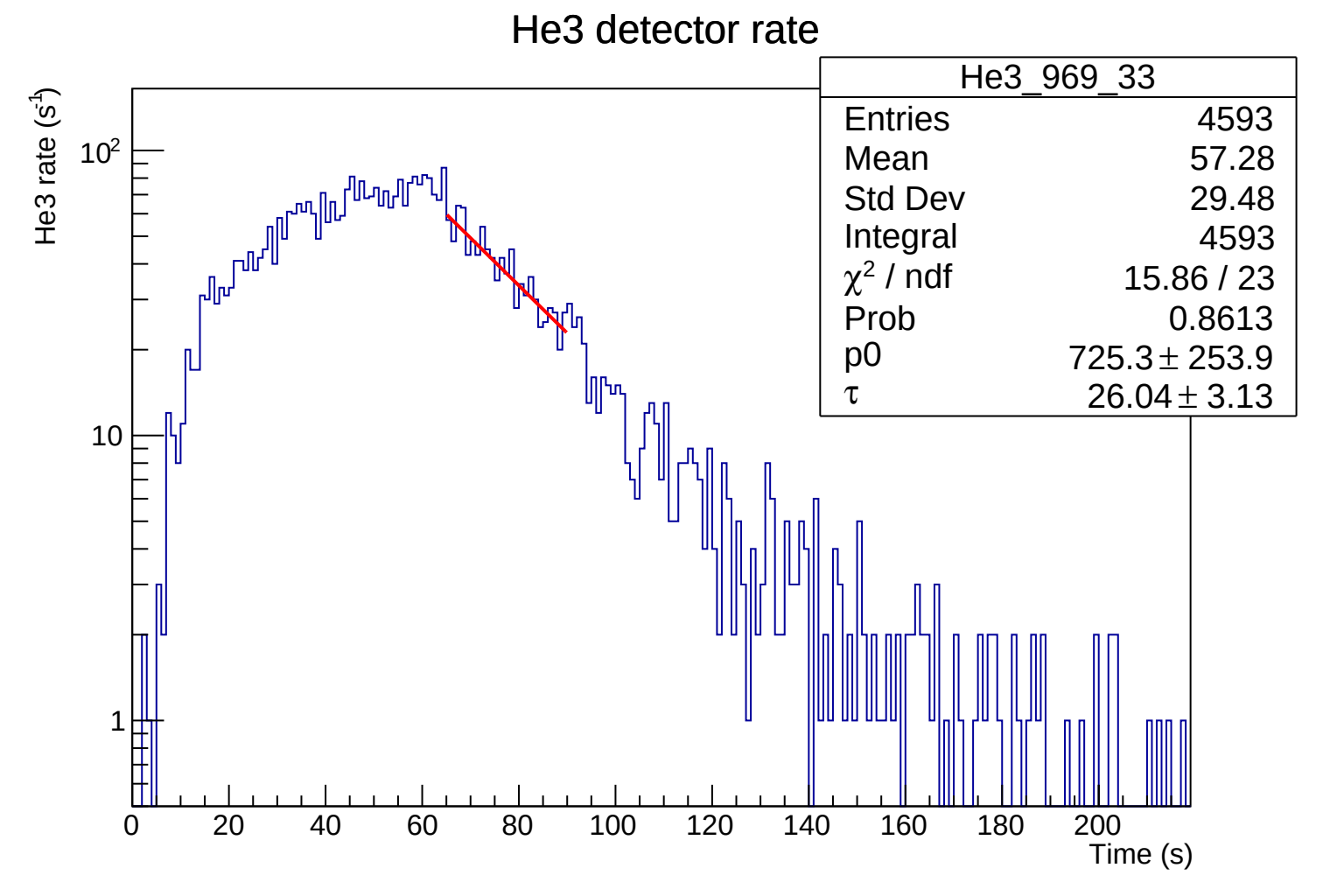

He3 detector rate
He3_969_19
Entries 4654
Mean 56.69
Std Dev 28.22
Integral 4654
χ² / ndf 12.14 / 18
Prob 0.8401
p0 2699 ± 1268.2
τ 17.86 ± 2.04
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)

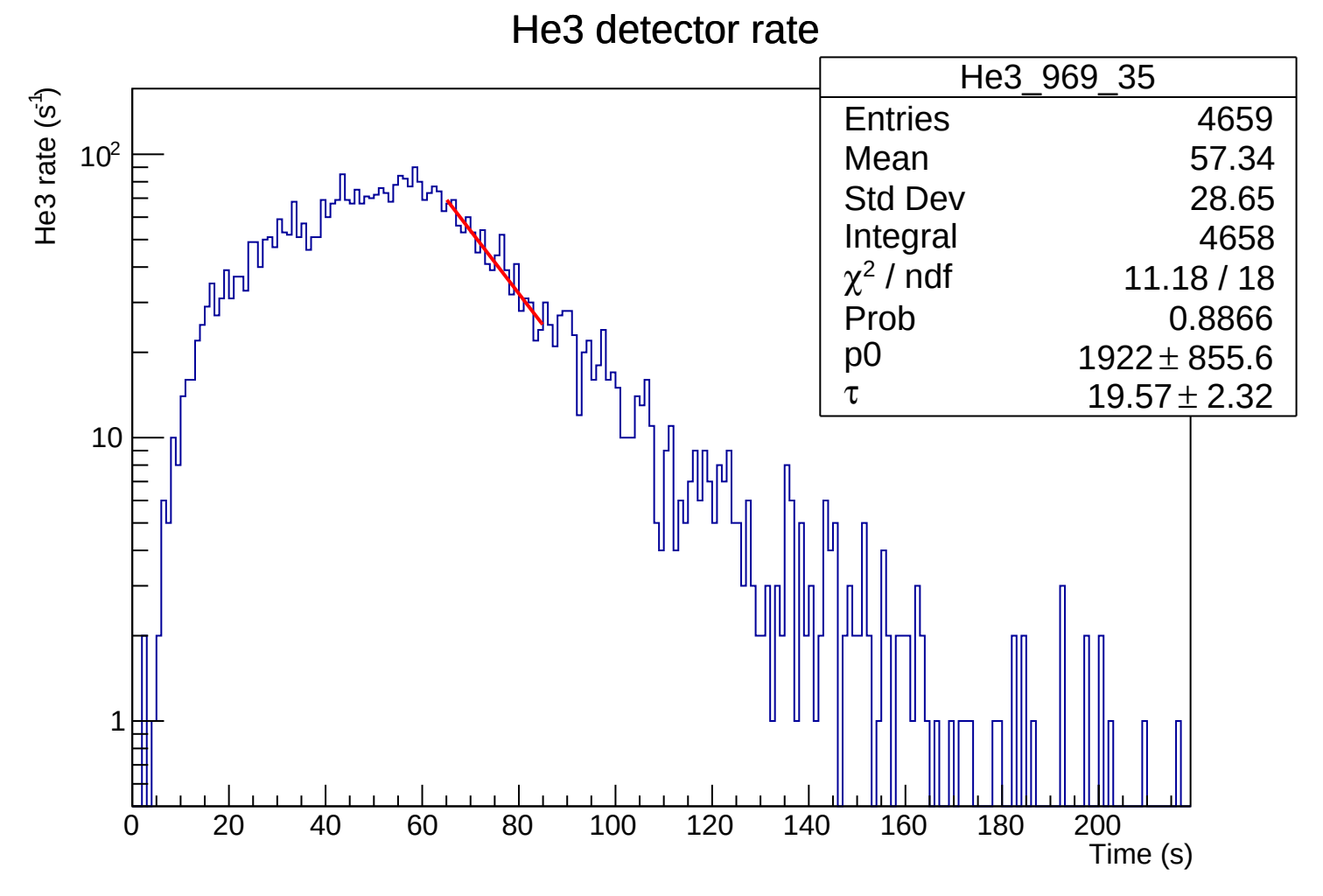

He3 detector rate
He3_969_21
Entries 4673
Mean 57.24
Std Dev 28.73
Integral 4673
χ² / ndf 15.47 / 13
Prob 0.2791
p0 1531± 1105.8
τ 20.59 ± 4.27
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)

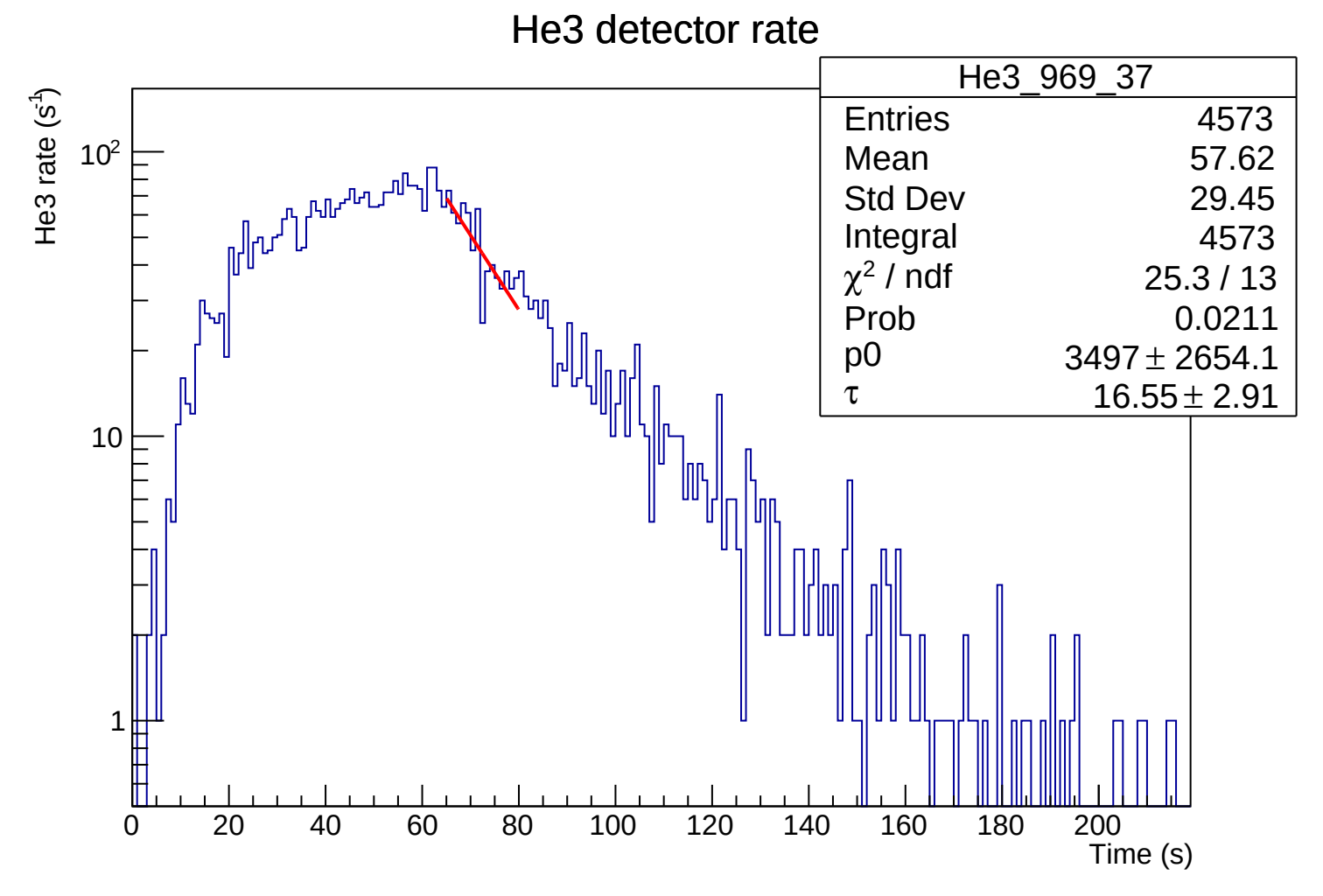

He3 detector rate
He3_969_25
Entries 4701
Mean 56.96
Std Dev 28.61
Integral 4701
χ² / ndf 18.19 / 23
Prob 0.7471
p0 1000 ± 369.7
τ 23.38 ± 2.67
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)


He3 detector rate
He3_969_27
Entries 4759
Mean 56.19
Std Dev 28.47
Integral 4759
χ² / ndf 15.17 / 18
Prob 0.6502
p0 1691± 770.6
τ 20.25 ± 2.54
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)


He3 detector rate
He3_969_29
Entries 4520
Mean 57.34
Std Dev 28.82
Integral 4520
χ² / ndf 15.33 / 13
Prob 0.2875
p0 2227 ± 1475.3
τ 18.42 ± 3.14
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)


He3 detector rate
He3_969_33
Entries 4593
Mean 57.28
Std Dev 29.48
Integral 4593
χ² / ndf 15.86 / 23
Prob 0.8613
p0 725.3 ± 253.9
τ 26.04 ± 3.13
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)


He3 detector rate
He3_969_35
Entries 4659
Mean 57.34
Std Dev 28.65
Integral 4658
χ² / ndf 11.18 / 18
Prob 0.8866
p0 1922 ± 855.6
τ 19.57 ± 2.32
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)


He3 detector rate
He3_969_37
Entries 4573
Mean 57.62
Std Dev 29.45
Integral 4573
χ² / ndf 25.3 / 13
Prob 0.0211
p0 3497 ± 2654.1
τ 16.55 ± 2.91
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
140
160
180
200
Time (s)

Average lifetime from He3 data:

τ = 20.1183362033 +/- 0.0150720482394 s