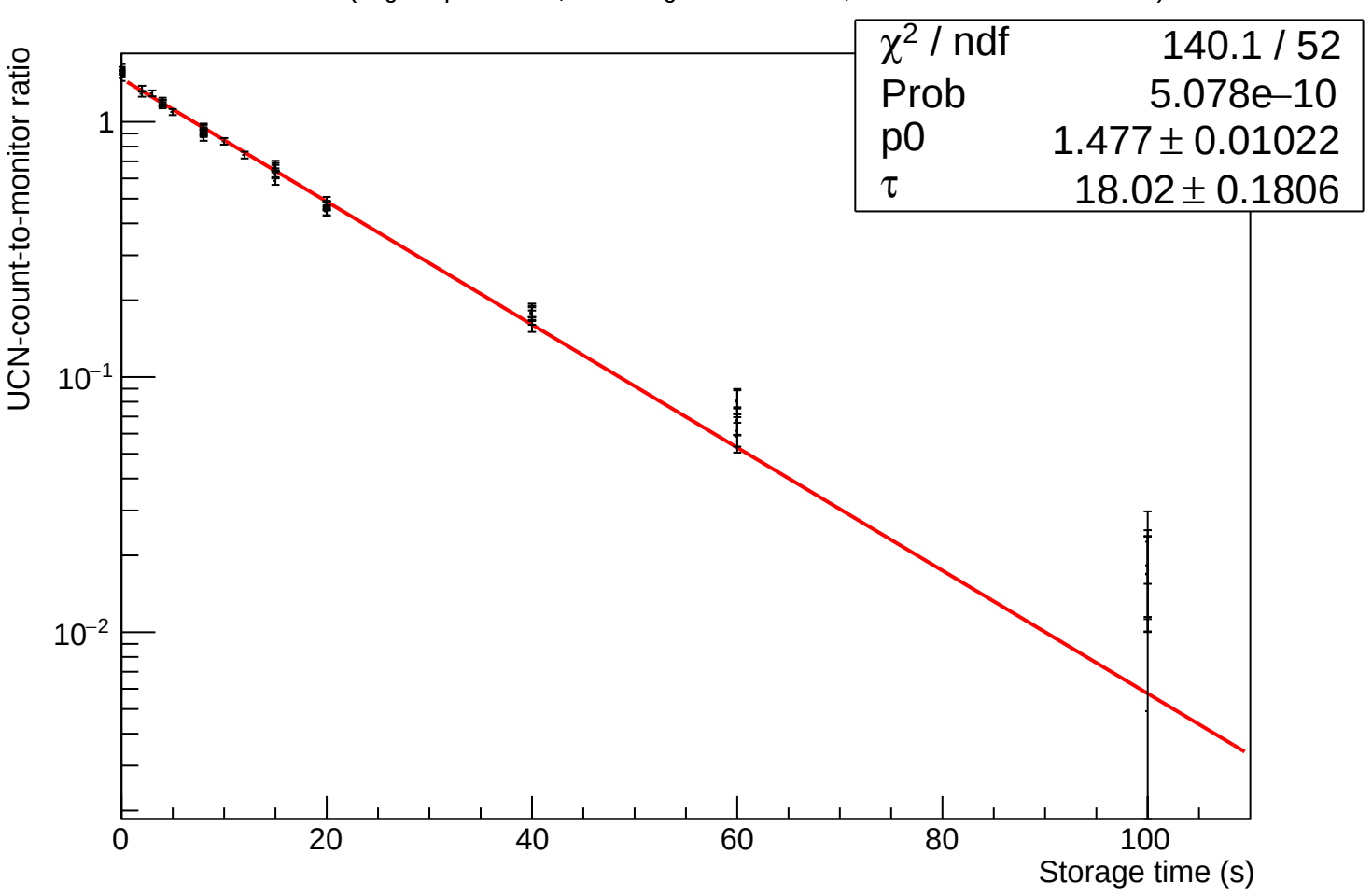
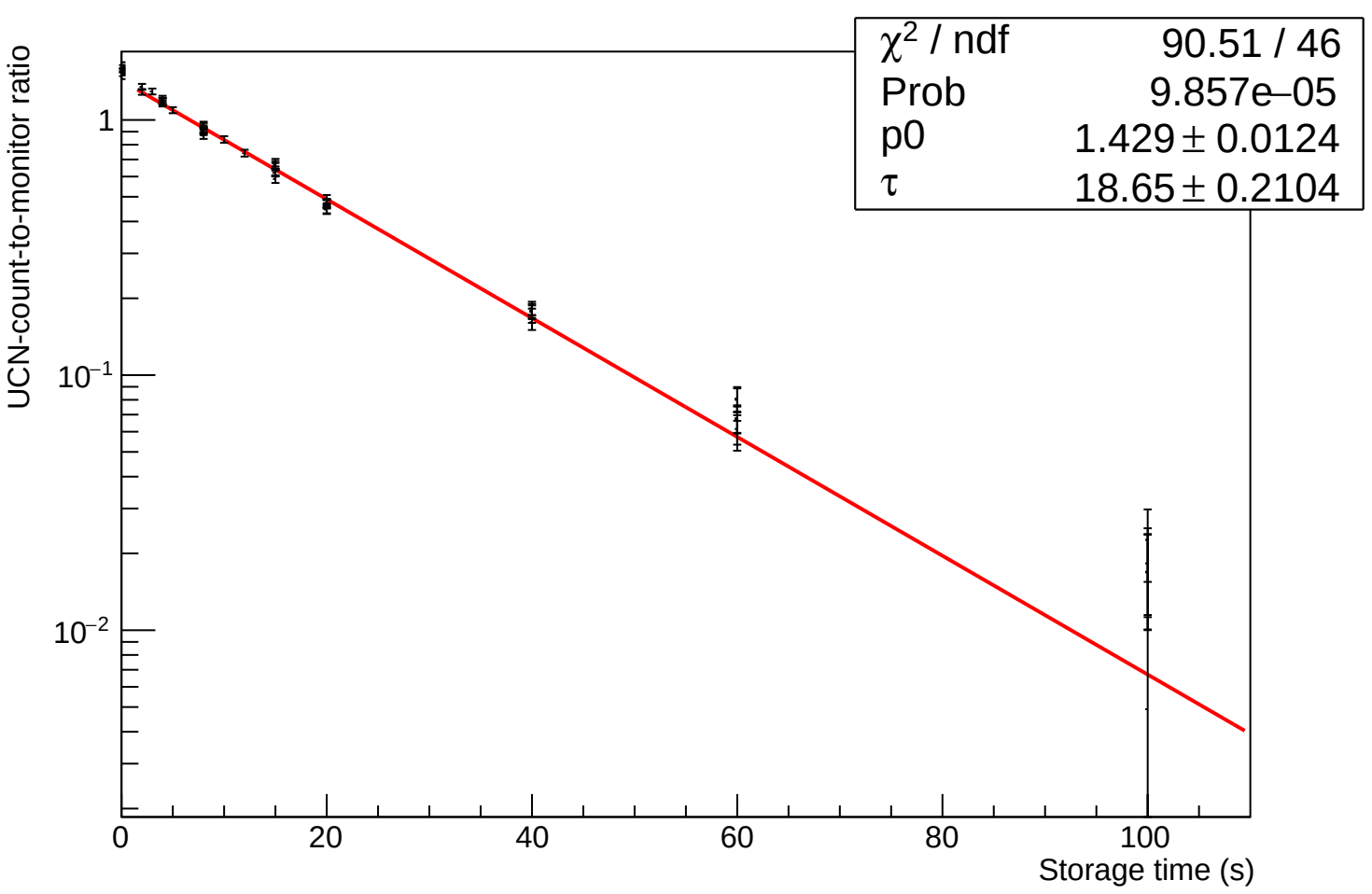
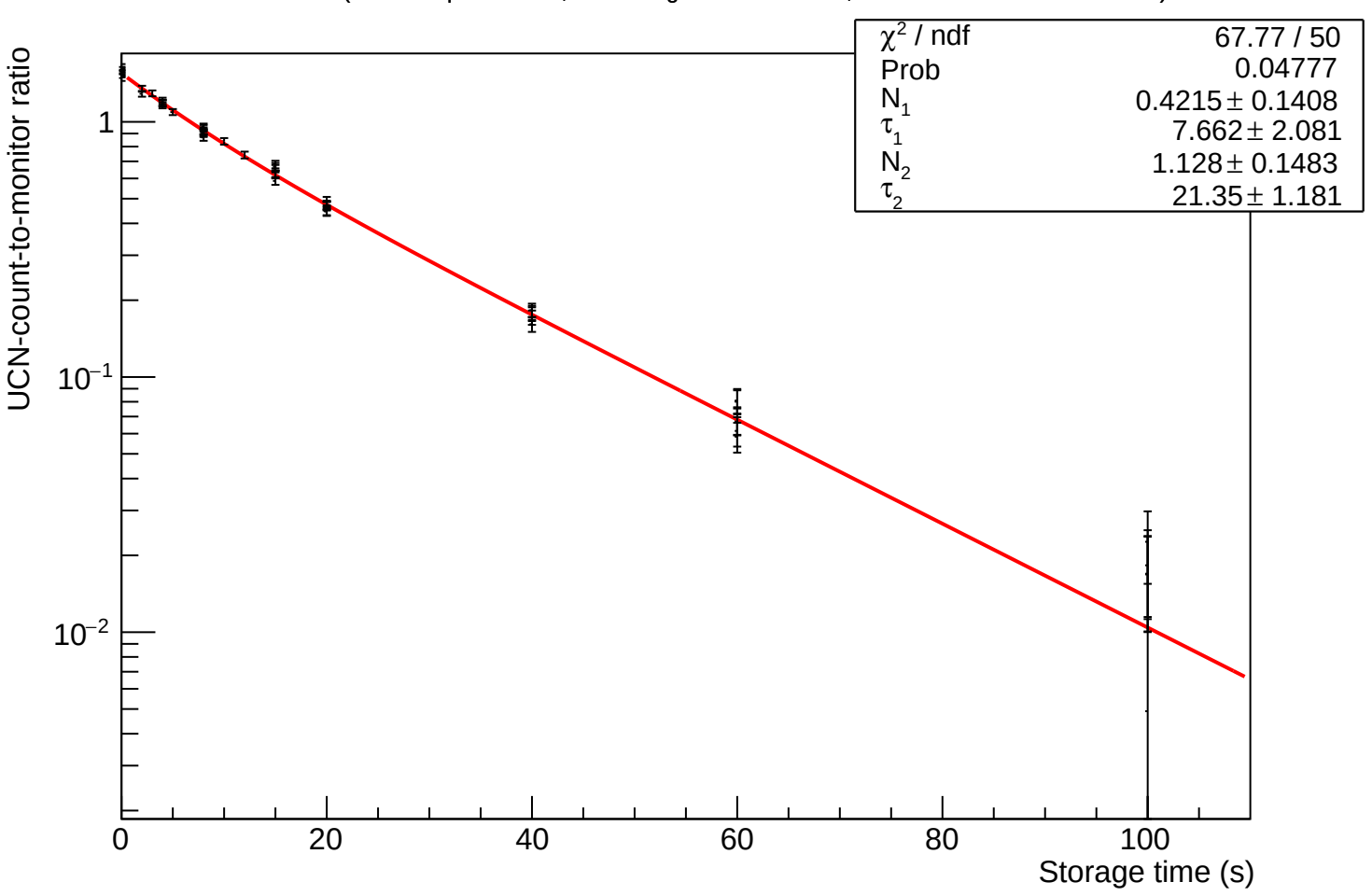
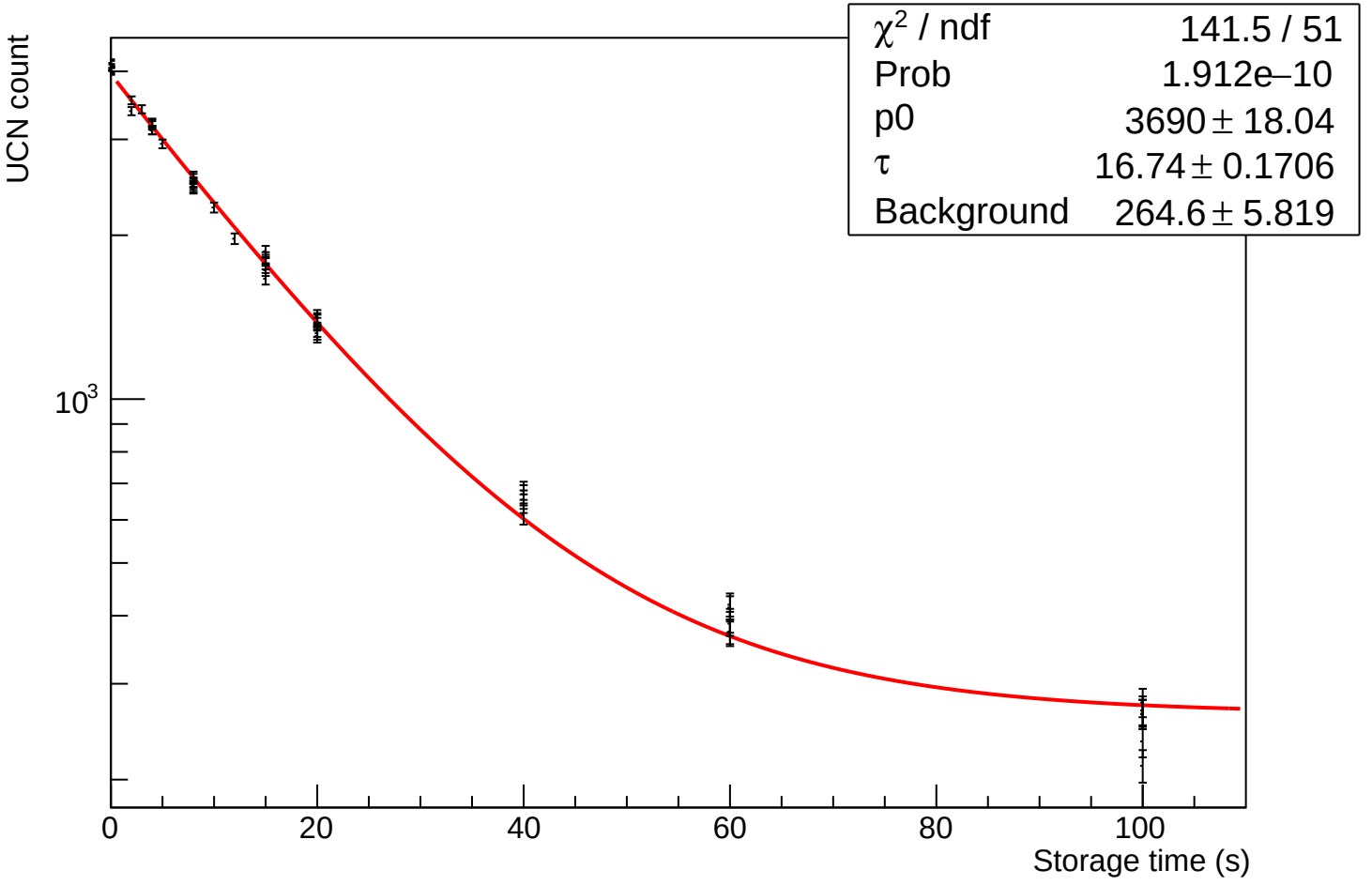
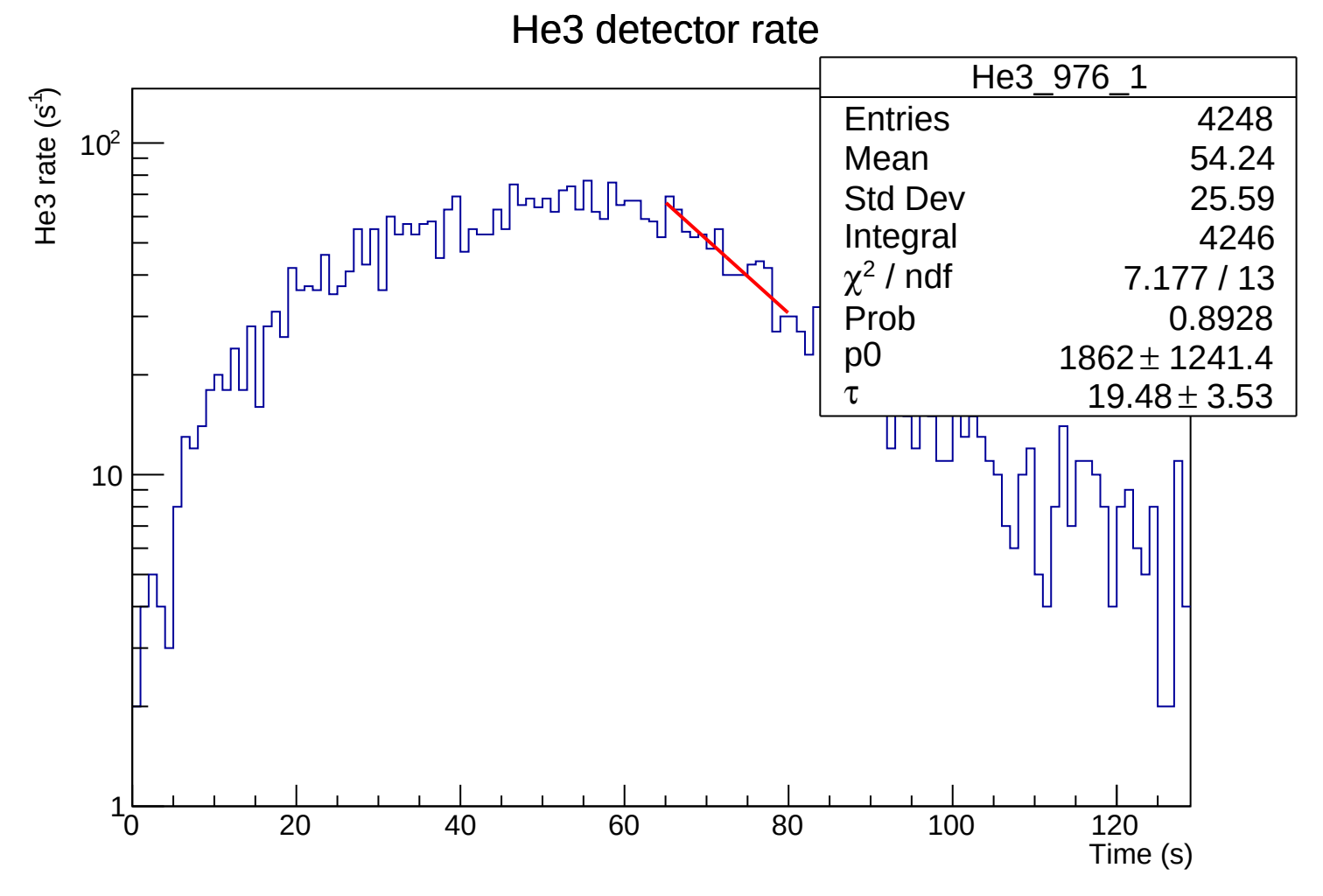
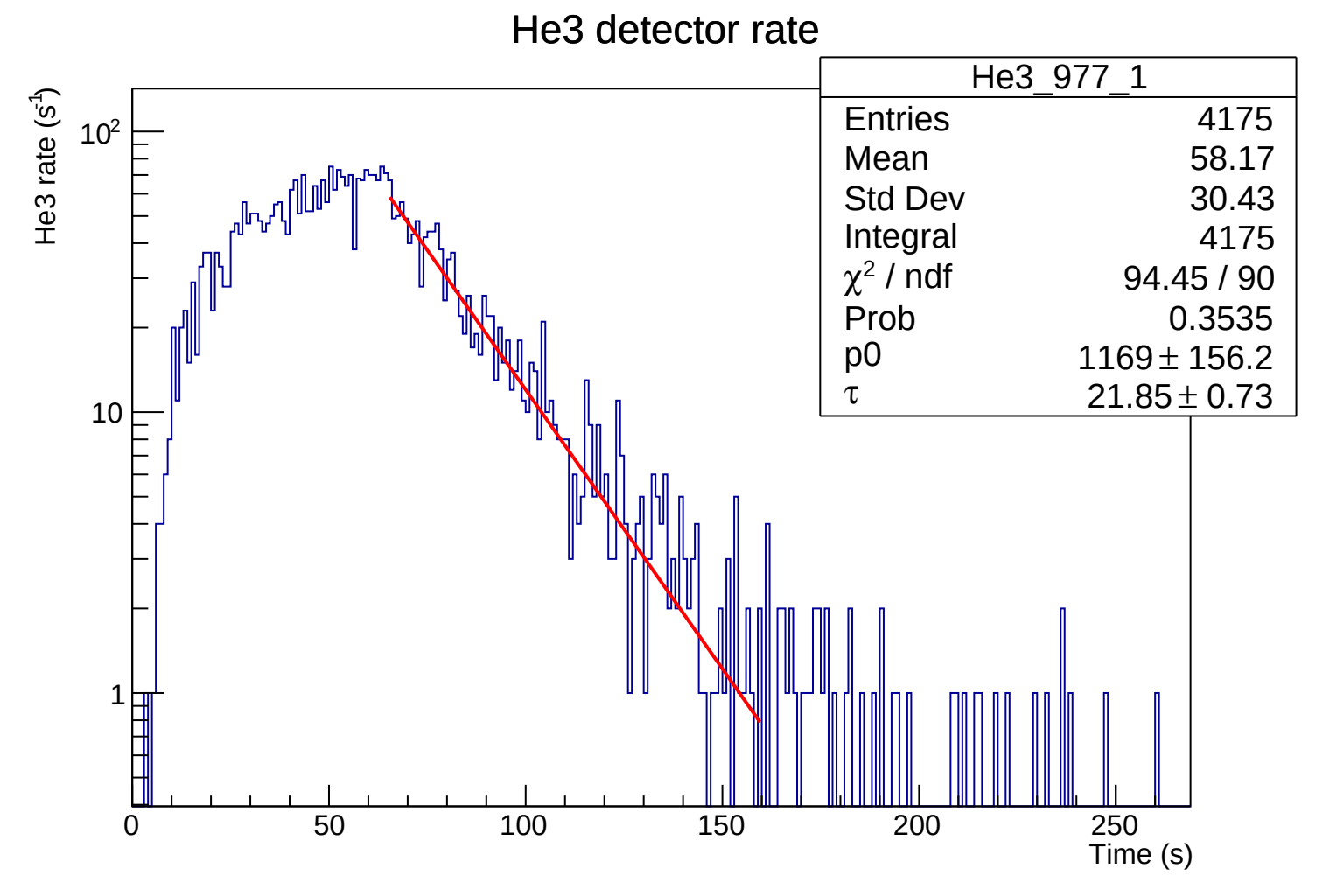

TCN18-081 (single exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 140.1 / 52
Prob 5.078e−10
p0 1.477 ± 0.01022
τ 18.02 ± 0.1806
UCN-count-to-monitor ratio
1
10⁻¹
10⁻²
0
20
40
60
80
100
Storage time (s)

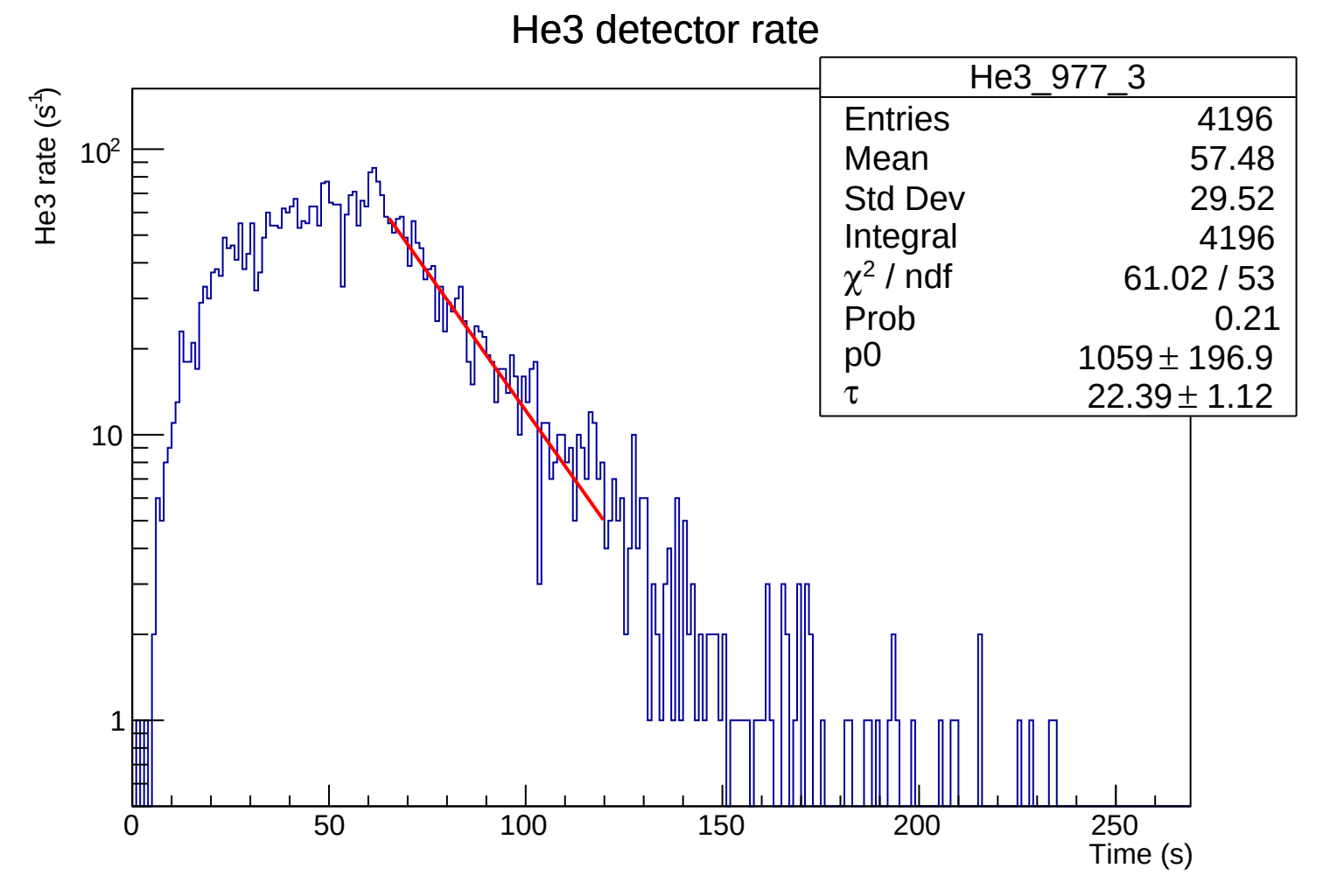

TCN18-081 (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 90.51 / 46
Prob 9.857e–05
p0 1.429 ± 0.0124
τ 18.65 ± 0.2104
UCN-count-to-monitor ratio
1
10⁻¹
10⁻²
0
20
40
60
80
100
Storage time (s)

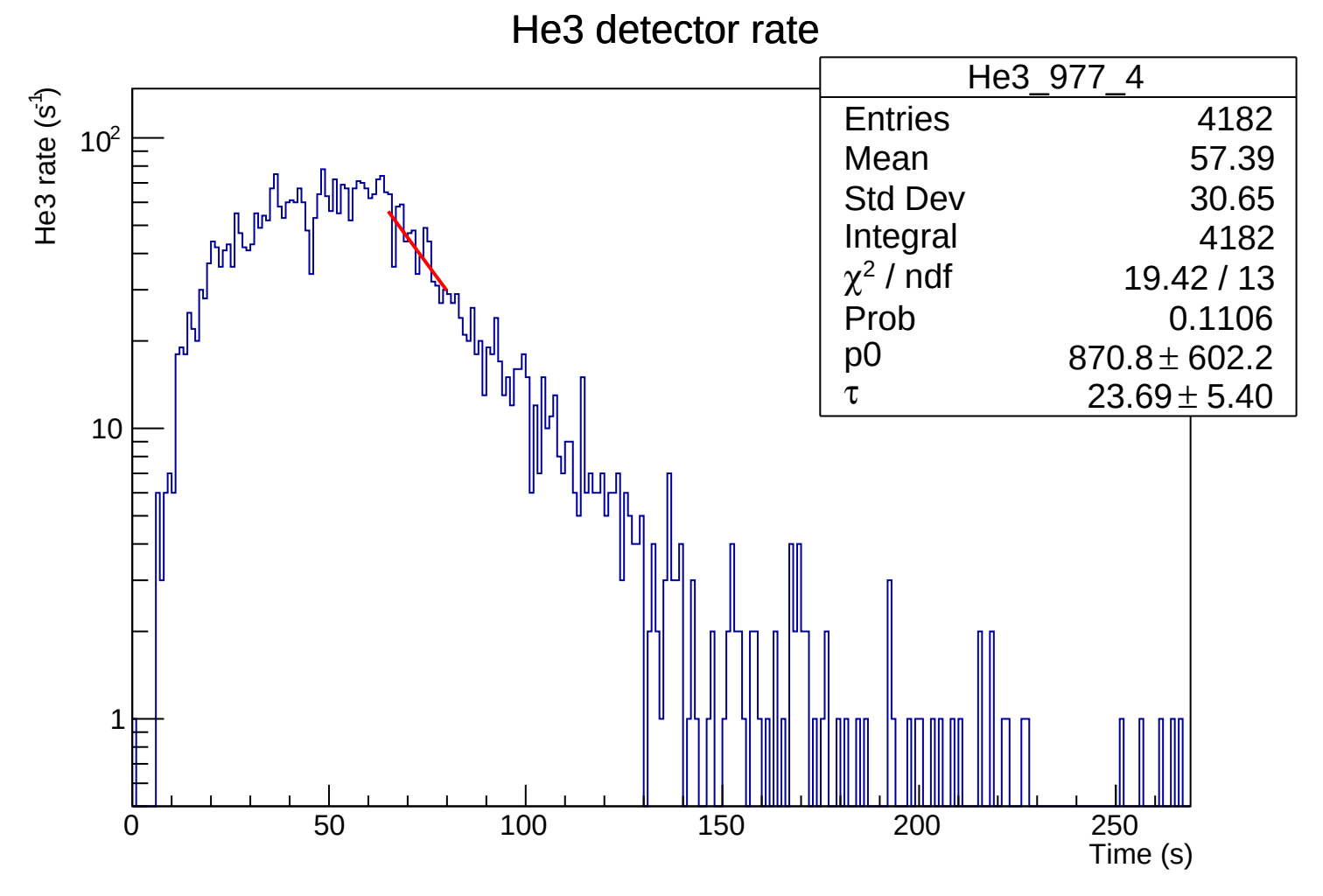

TCN18-081 (double exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 67.77 / 50
Prob 0.04777
N1 0.4215 ± 0.1408
τ1 7.662 ± 2.081
N2 1.128 ± 0.1483
τ2 21.35 ± 1.181
UCN-count-to-monitor ratio
1
10⁻¹
10⁻²
0
20
40
60
80
100
Storage time (s)

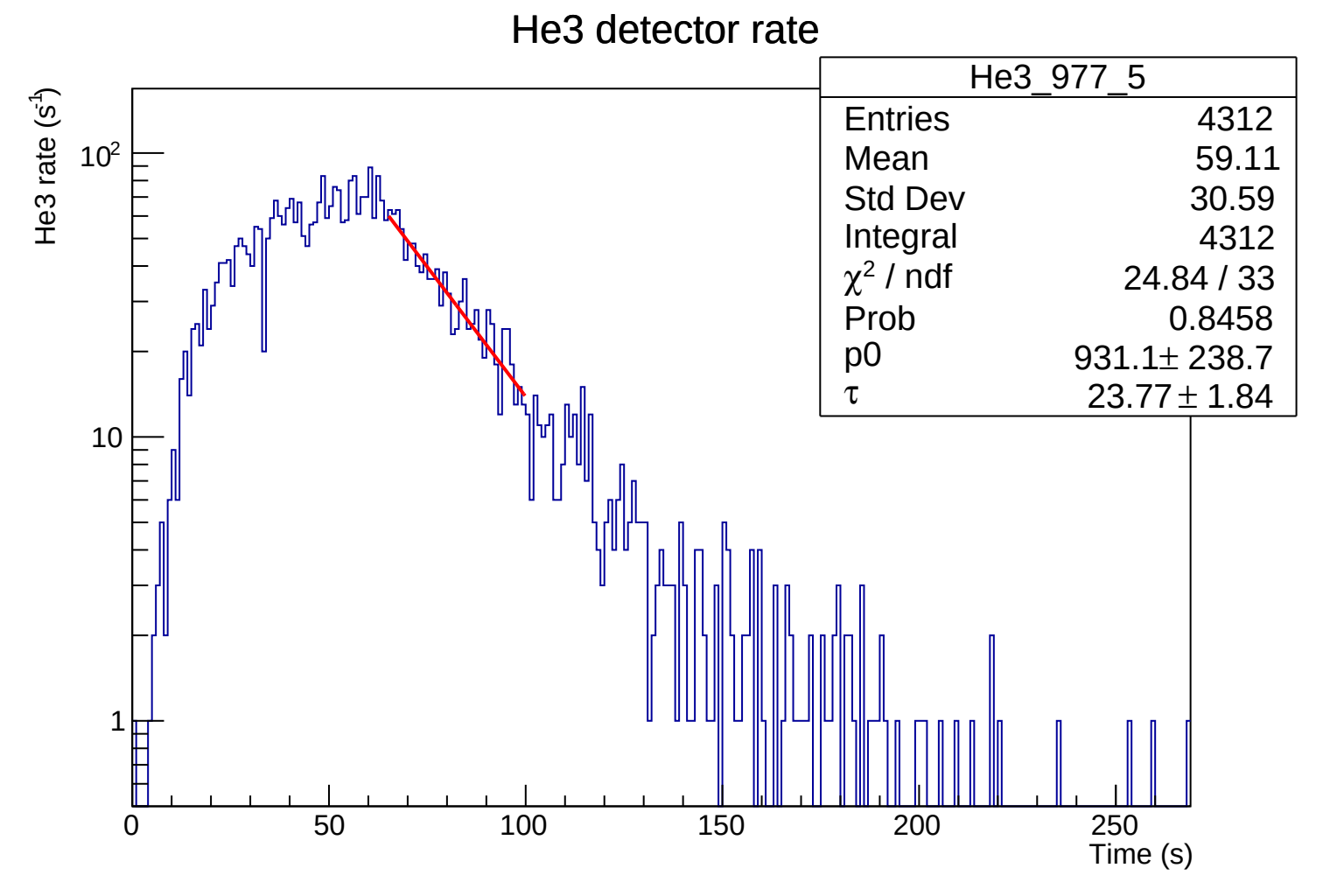

TCN18-081 (single exponential fit + background, unnormalized)
χ² / ndf 141.5 / 51
Prob 1.912e–10
p0 3690 ± 18.04
τ 16.74 ± 0.1706
Background 264.6 ± 5.819
UCN count
10³
0
20
40
60
80
100
Storage time (s)

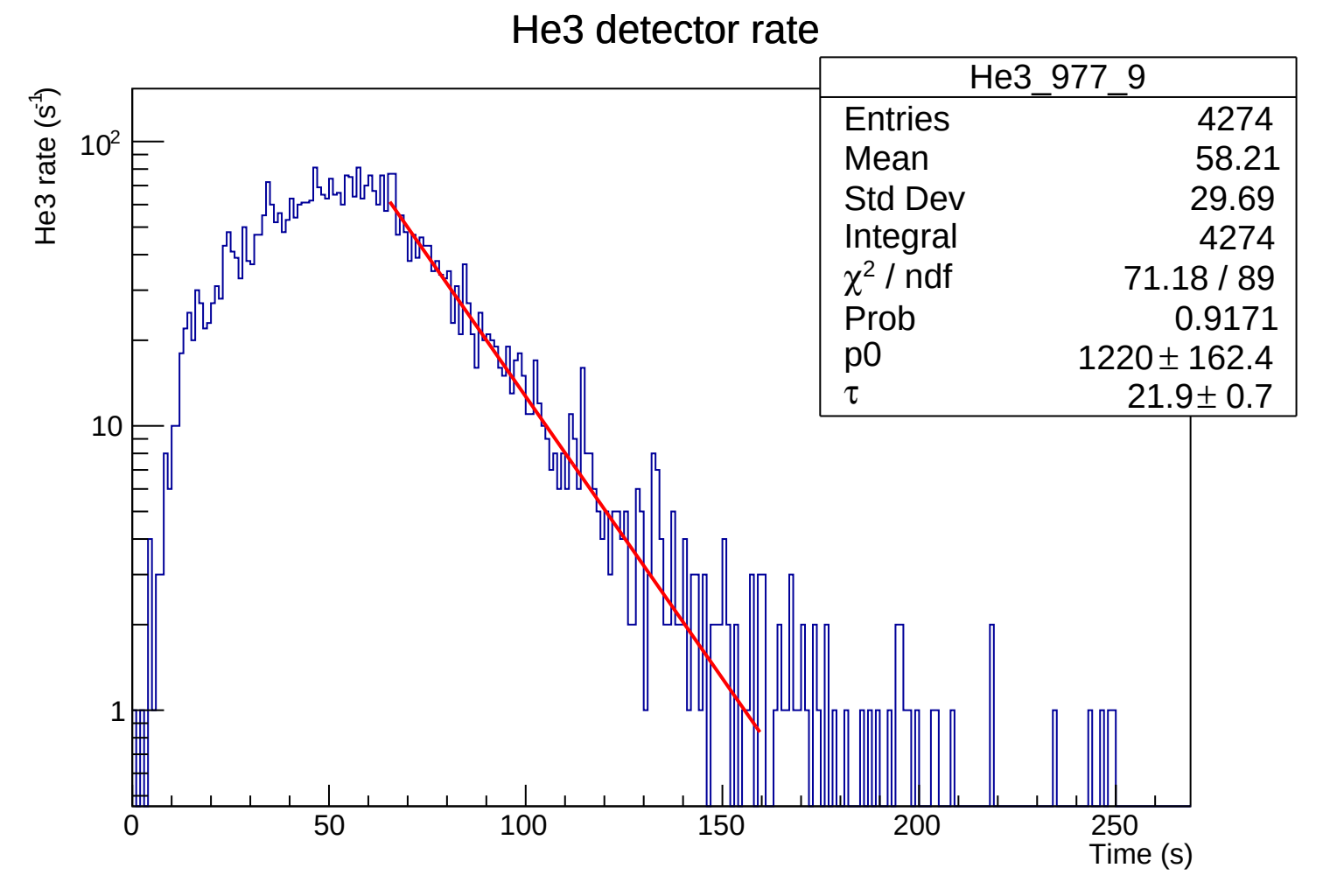

He3 detector rate
He3_976_1
Entries 4248
Mean 54.24
Std Dev 25.59
Integral 4246
χ² / ndf 7.177 / 13
Prob 0.8928
p0 1862 ± 1241.4
τ 19.48 ± 3.53
He3 rate (s⁻¹)
10²
10
1
0
20
40
60
80
100
120
Time (s)

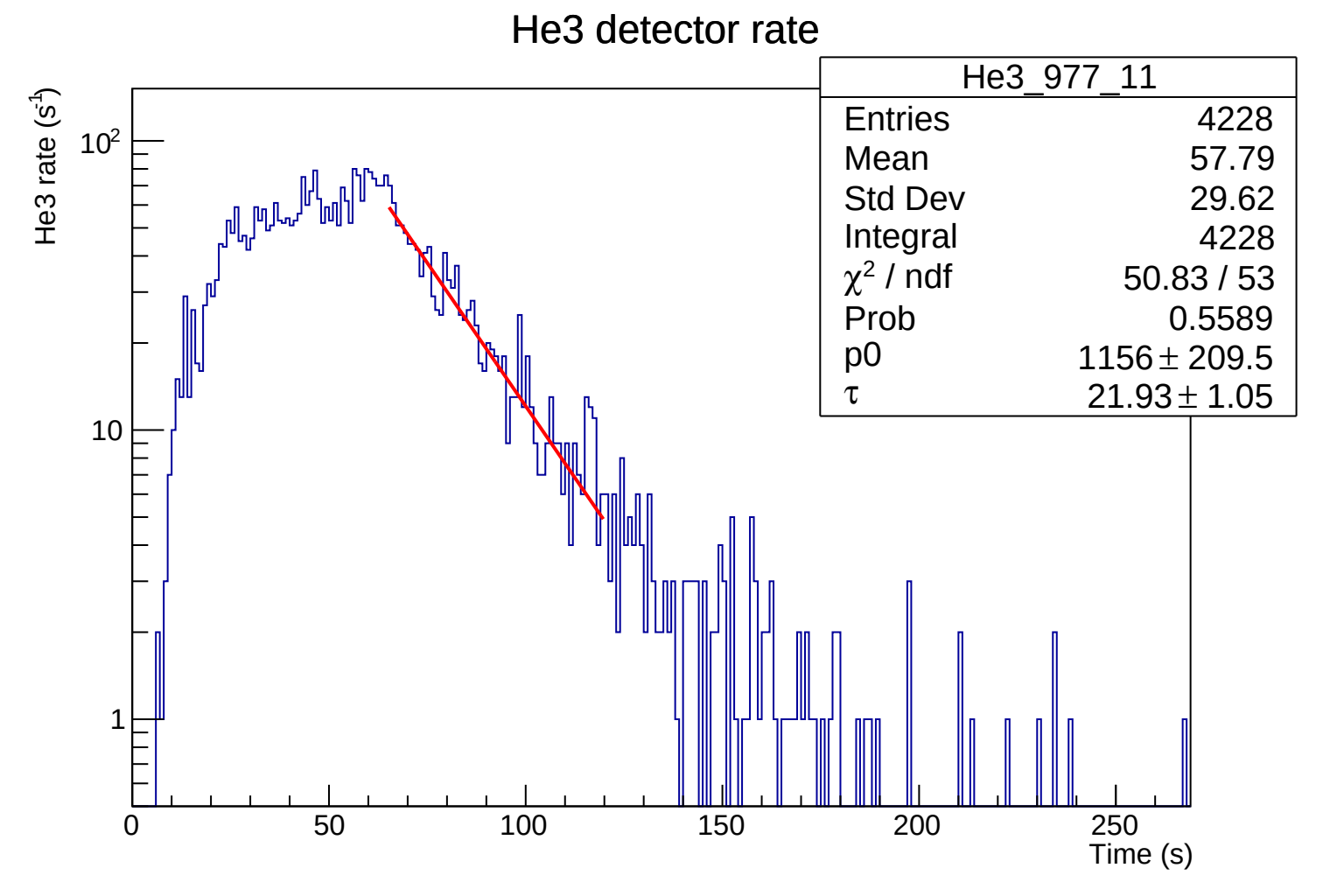

He3 detector rate
He3_977_1
Entries 4175
Mean 58.17
Std Dev 30.43
Integral 4175
χ² / ndf 94.45 / 90
Prob 0.3535
p0 1169 ± 156.2
τ 21.85 ± 0.73
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

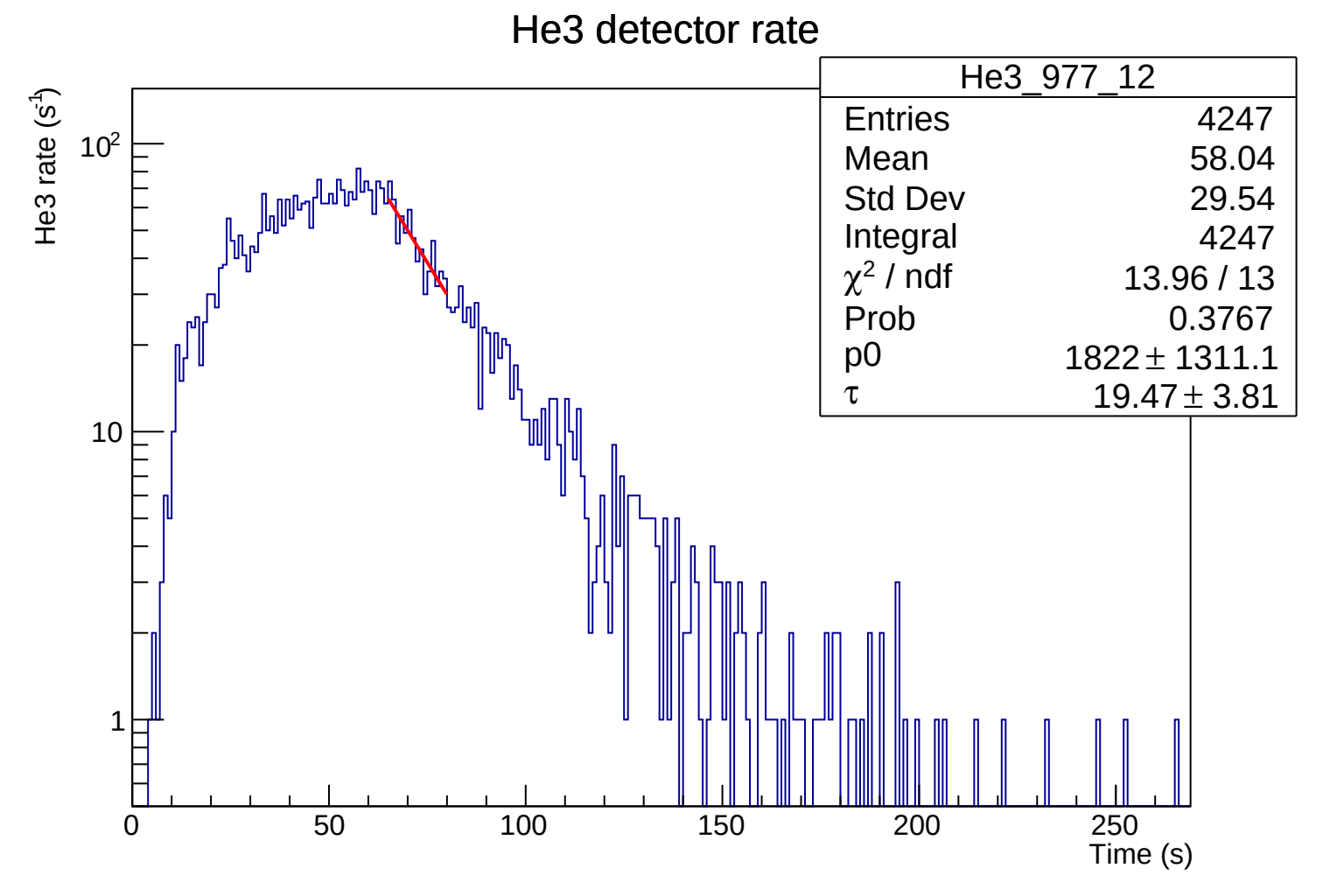

He3 detector rate
He3_977_3
Entries 4196
Mean 57.48
Std Dev 29.52
Integral 4196
χ² / ndf 61.02 / 53
Prob 0.21
p0 1059 ± 196.9
τ 22.39 ± 1.12
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

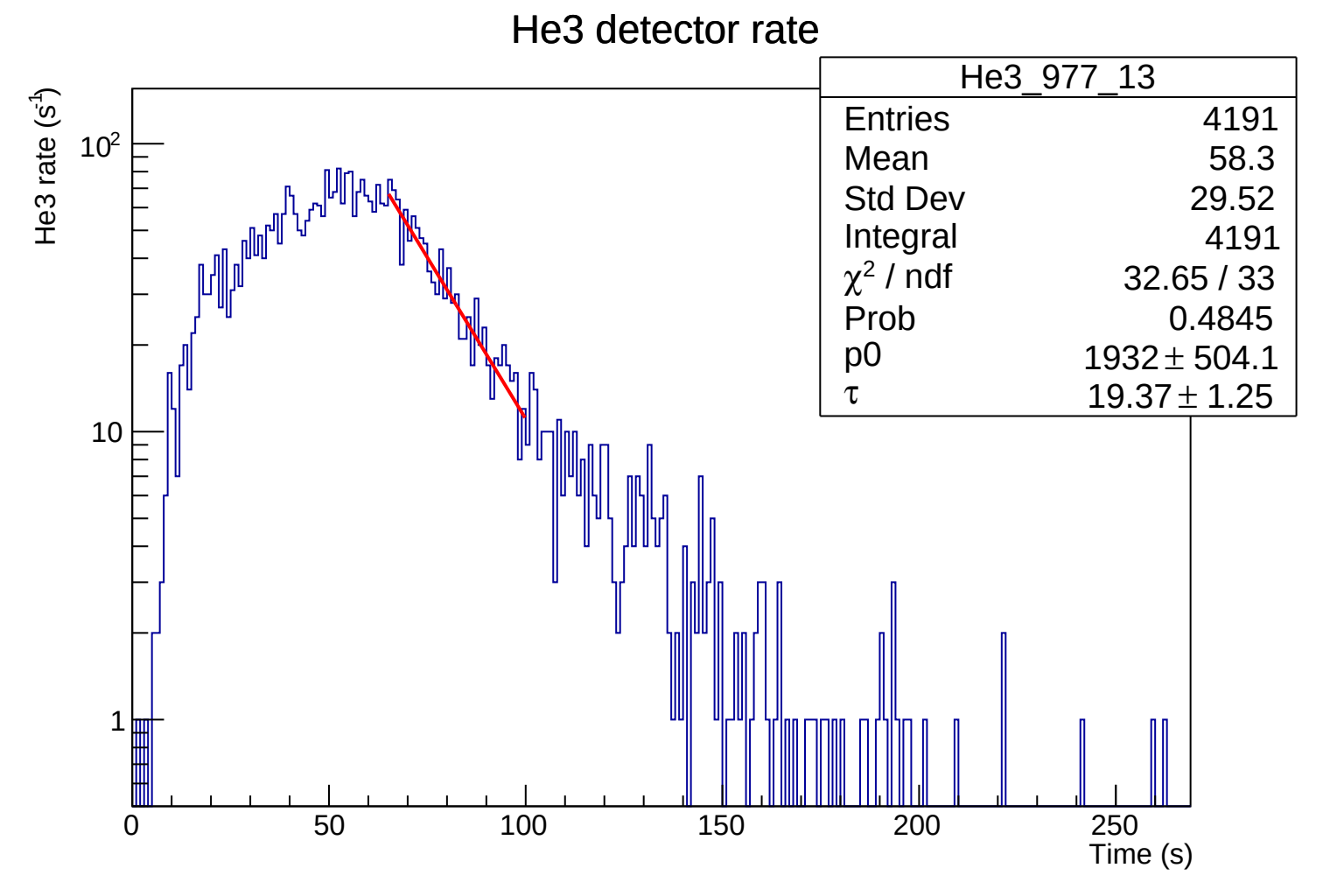

He3 detector rate
He3_977_4
Entries 4182
Mean 57.39
Std Dev 30.65
Integral 4182
χ² / ndf 19.42 / 13
Prob 0.1106
p0 870.8 ± 602.2
τ 23.69 ± 5.40
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

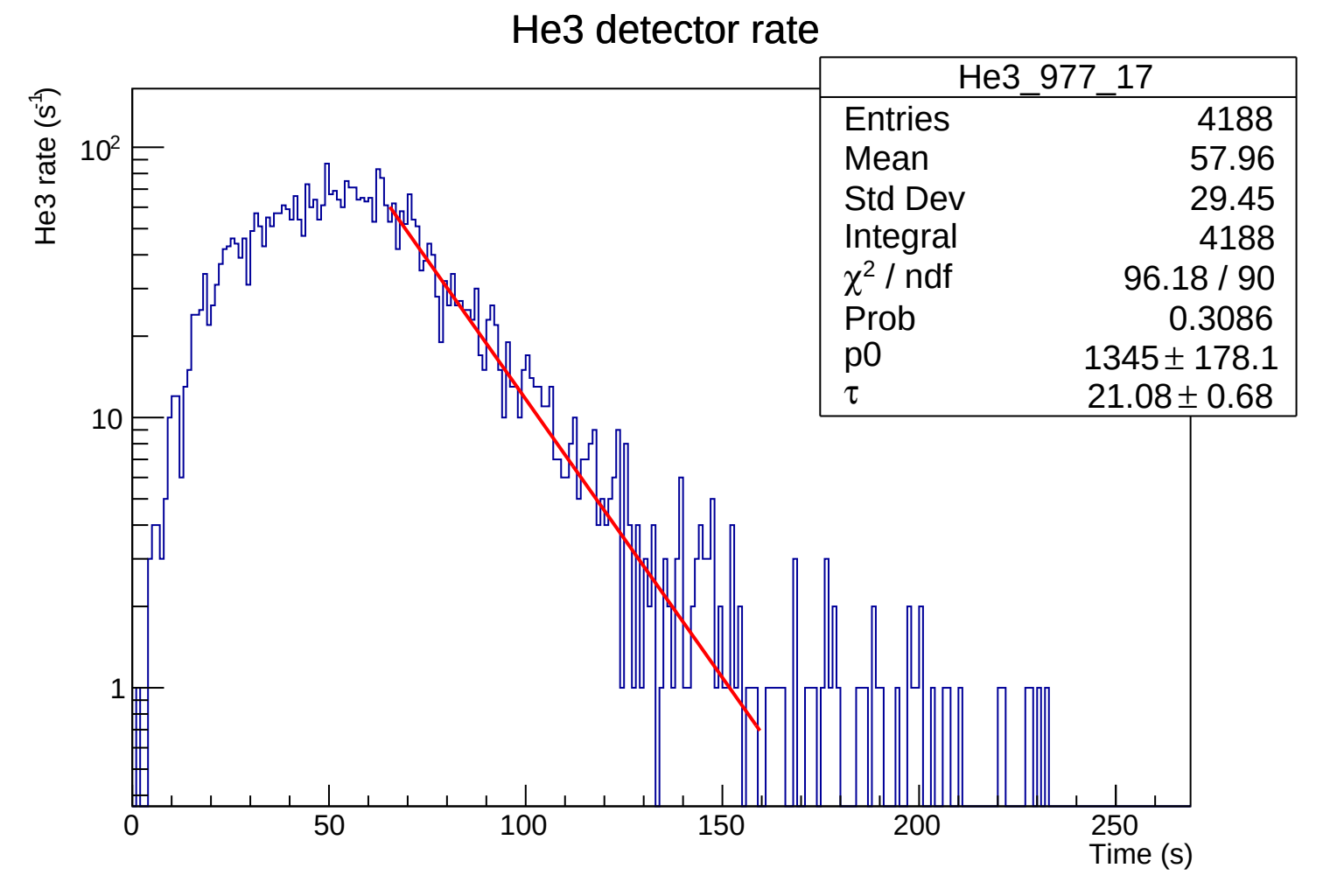

He3 detector rate
He3_977_5
Entries 4312
Mean 59.11
Std Dev 30.59
Integral 4312
χ² / ndf 24.84 / 33
Prob 0.8458
p0 931.1± 238.7
τ 23.77 ± 1.84
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

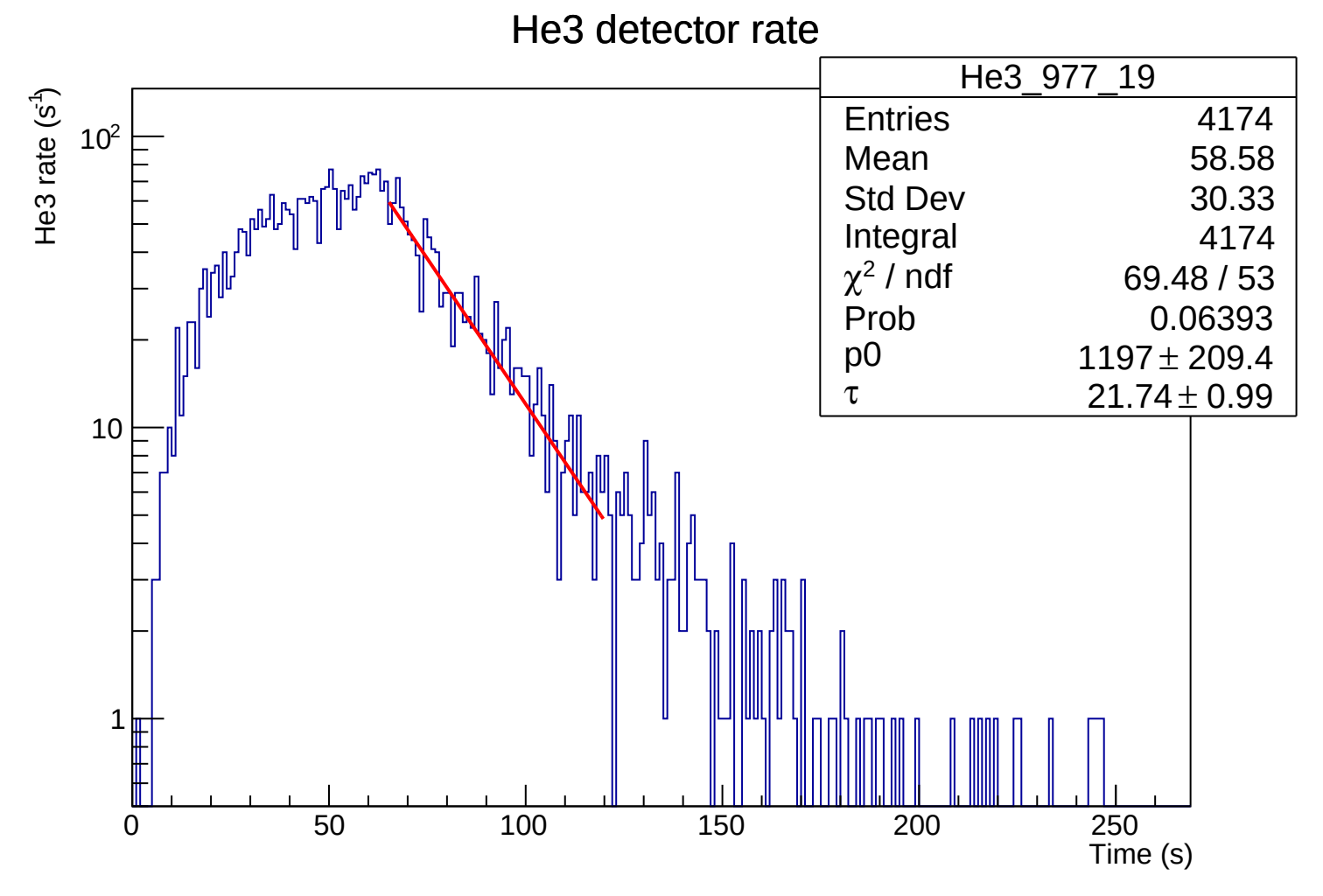

He3 detector rate
He3_977_9
Entries 4274
Mean 58.21
Std Dev 29.69
Integral 4274
χ² / ndf 71.18 / 89
Prob 0.9171
p0 1220 ± 162.4
τ 21.9 ± 0.7
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

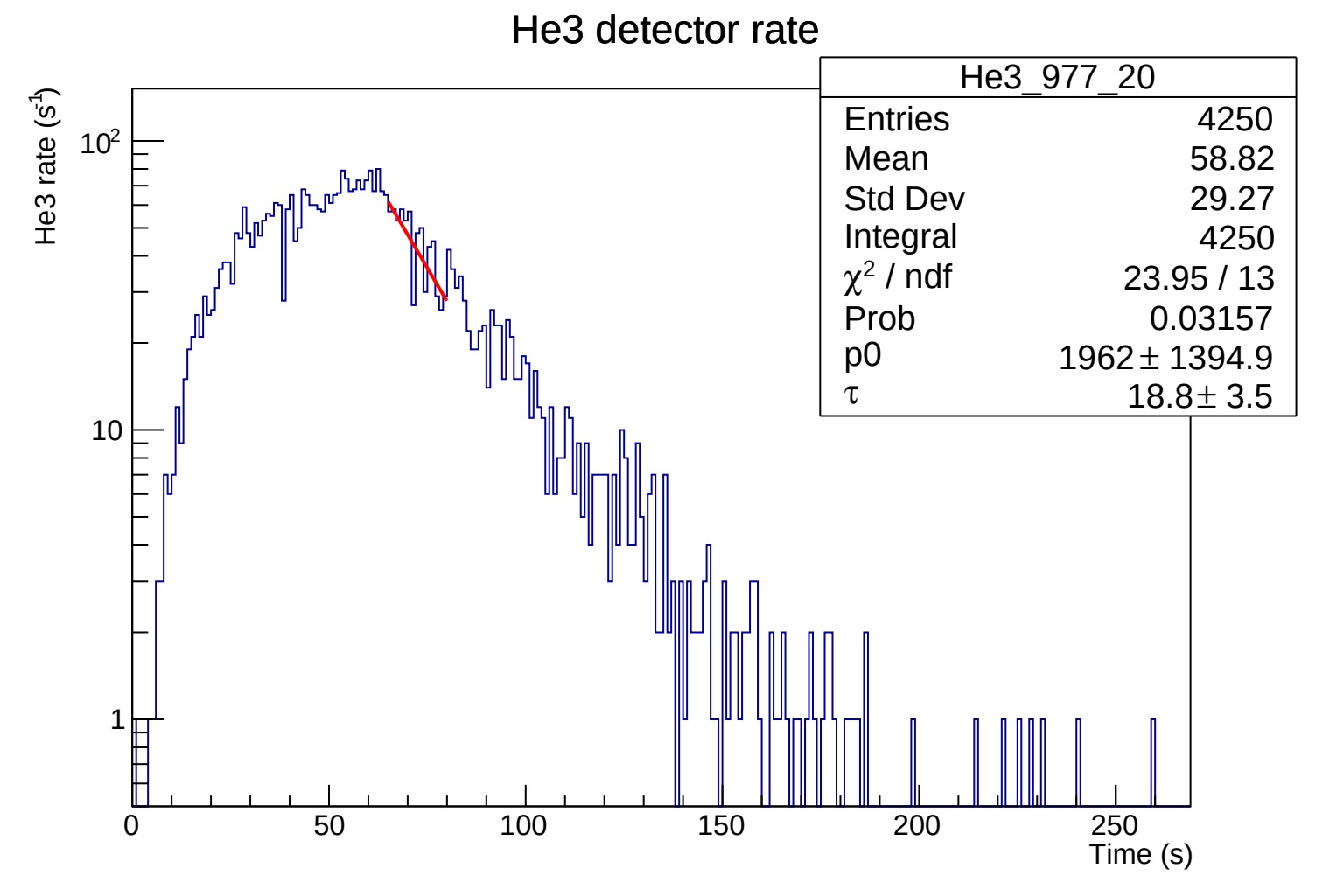

He3 detector rate
He3_977_11
Entries 4228
Mean 57.79
Std Dev 29.62
Integral 4228
χ² / ndf 50.83 / 53
Prob 0.5589
p0 1156 ± 209.5
τ 21.93 ± 1.05
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

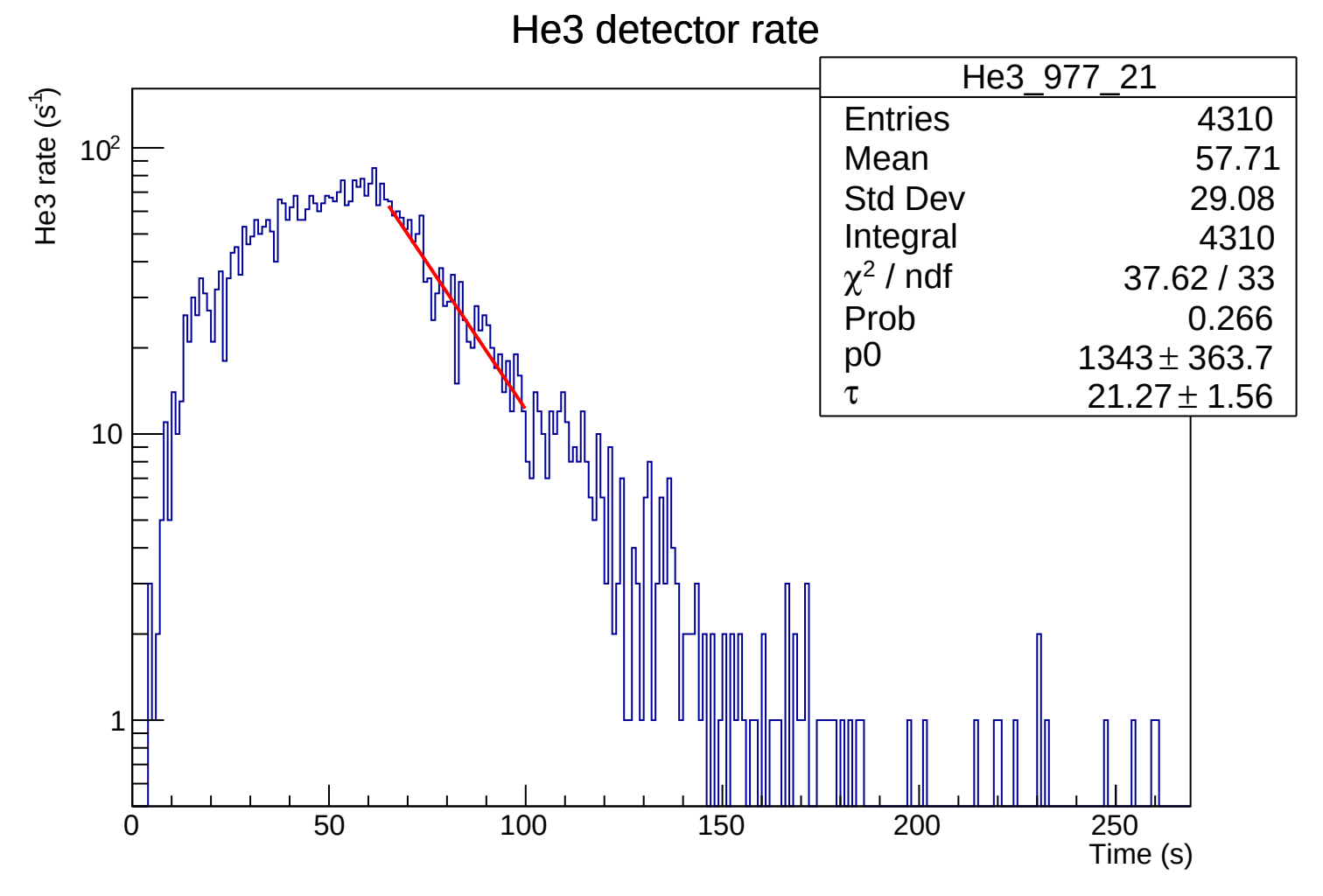

He3 detector rate
He3_977_12
Entries 4247
Mean 58.04
Std Dev 29.54
Integral 4247
χ² / ndf 13.96 / 13
Prob 0.3767
p0 1822 ± 1311.1
τ 19.47 ± 3.81
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

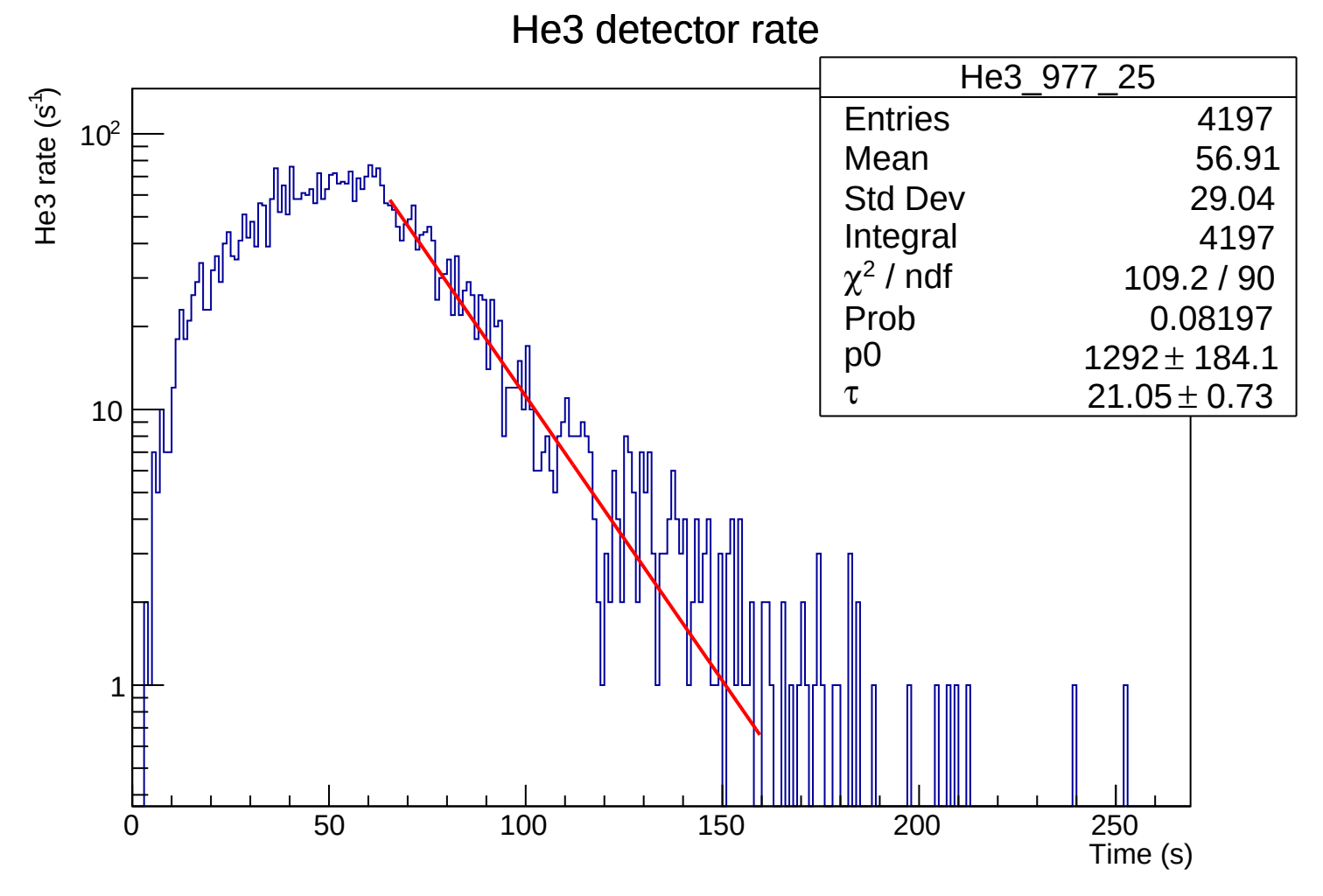

He3 detector rate
He3_977_13
Entries 4191
Mean 58.3
Std Dev 29.52
Integral 4191
χ² / ndf 32.65 / 33
Prob 0.4845
p0 1932 ± 504.1
τ 19.37 ± 1.25
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

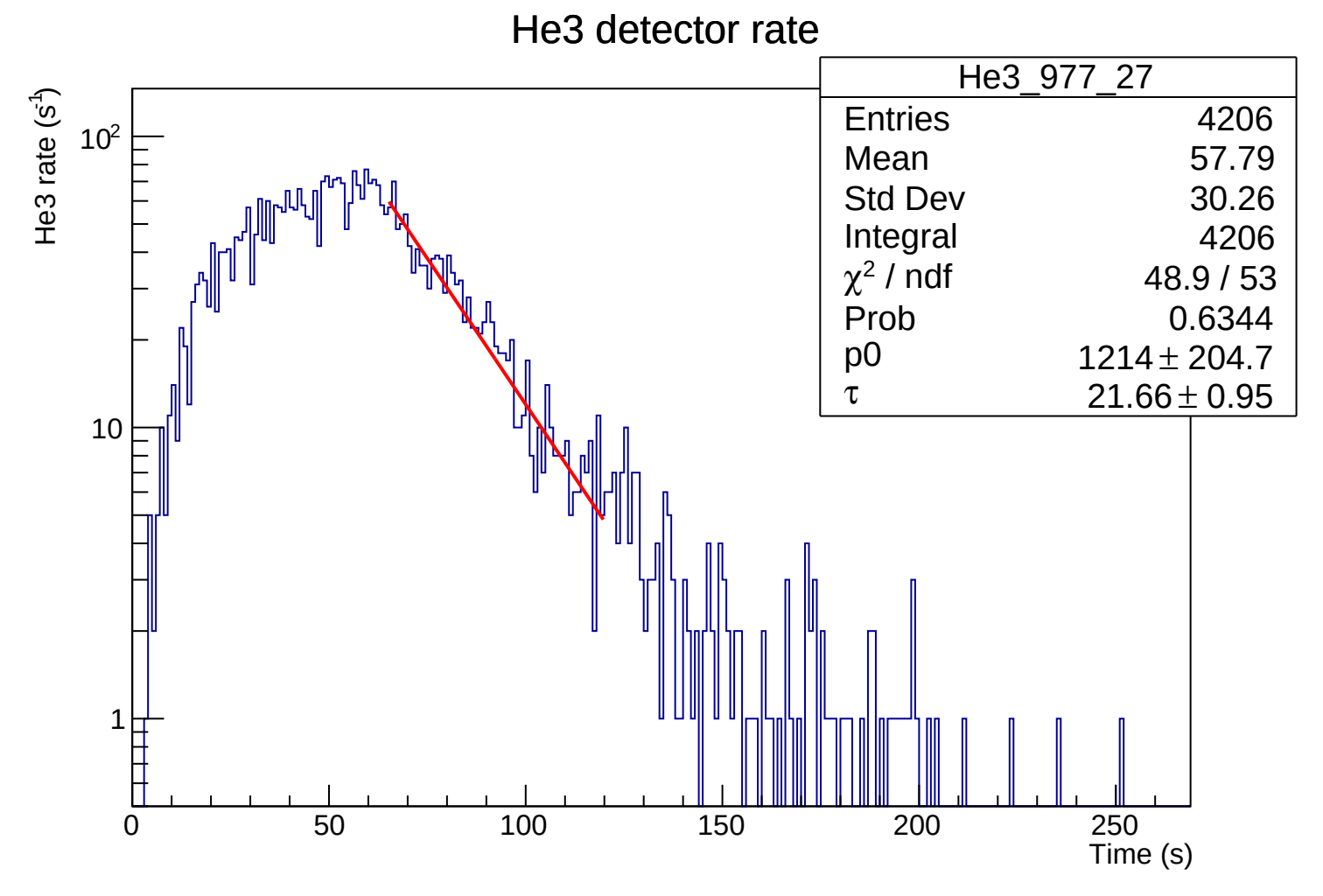

He3 detector rate
He3_977_17
Entries 4188
Mean 57.96
Std Dev 29.45
Integral 4188
χ² / ndf 96.18 / 90
Prob 0.3086
p0 1345 ± 178.1
τ 21.08 ± 0.68
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

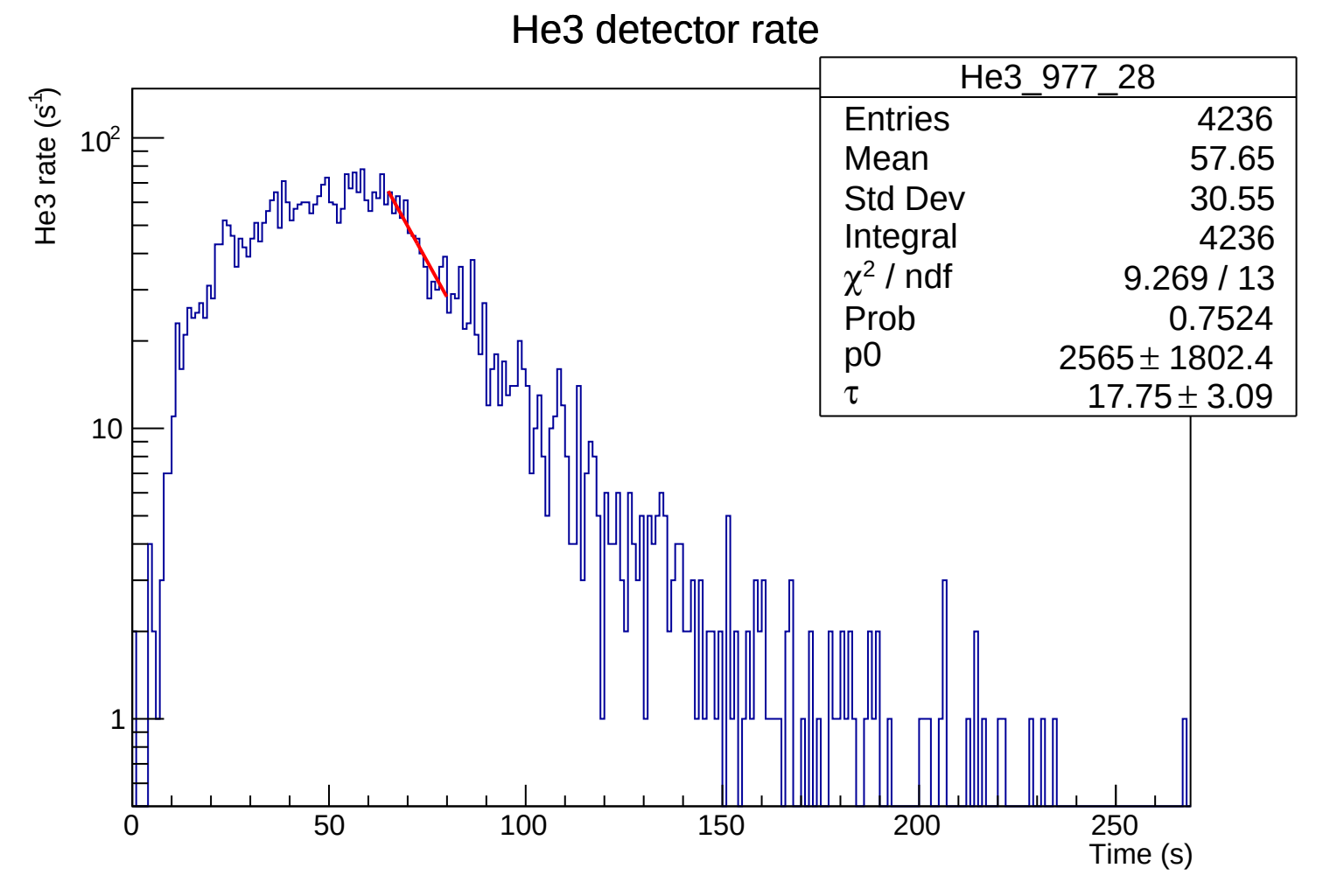

He3 detector rate
He3_977_19
Entries 4174
Mean 58.58
Std Dev 30.33
Integral 4174
χ² / ndf 69.48 / 53
Prob 0.06393
p0 1197 ± 209.4
τ 21.74 ± 0.99
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

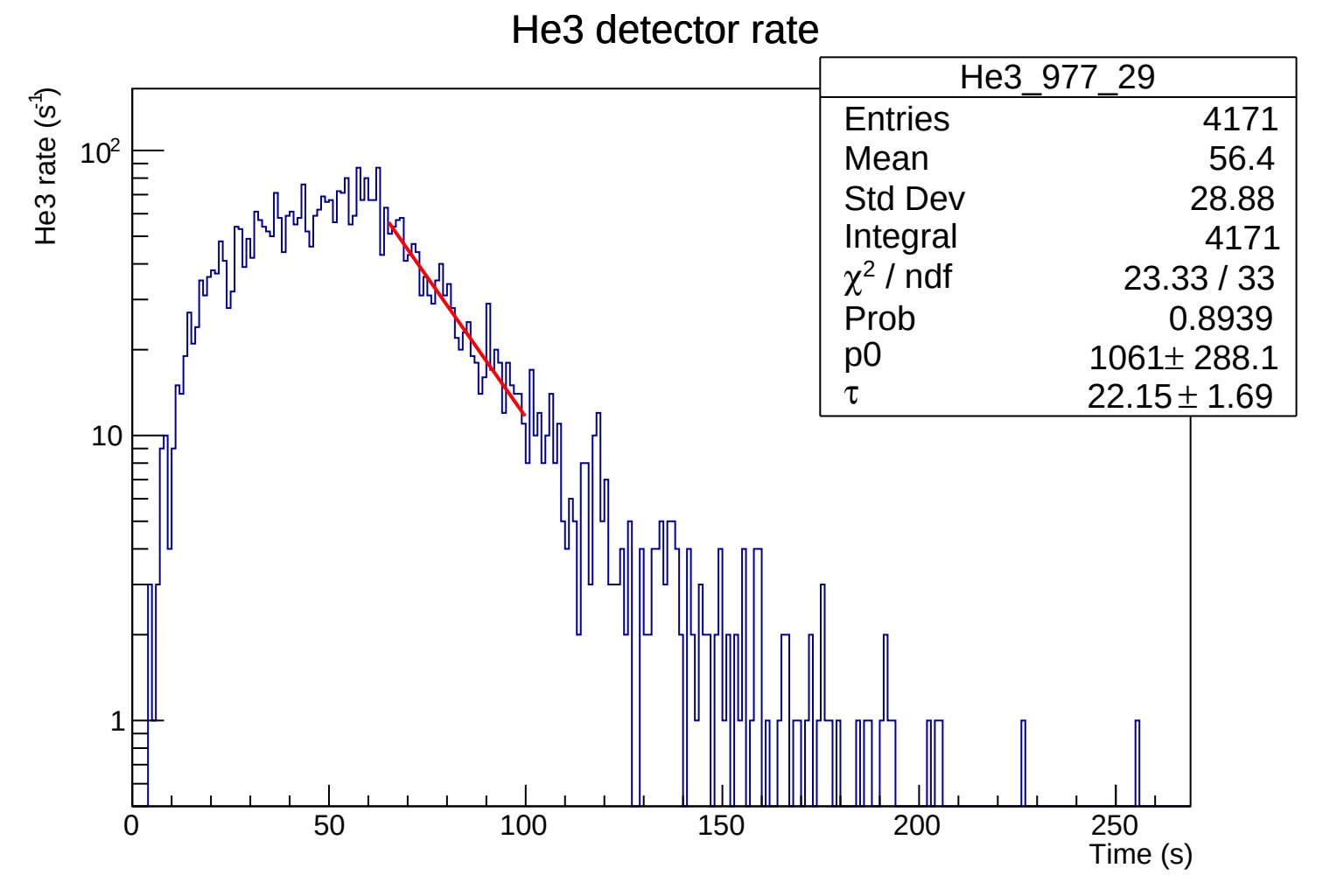

He3 detector rate
He3_977_20
Entries 4250
Mean 58.82
Std Dev 29.27
Integral 4250
χ² / ndf 23.95 / 13
Prob 0.03157
p0 1962 ± 1394.9
τ 18.8 ± 3.5
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

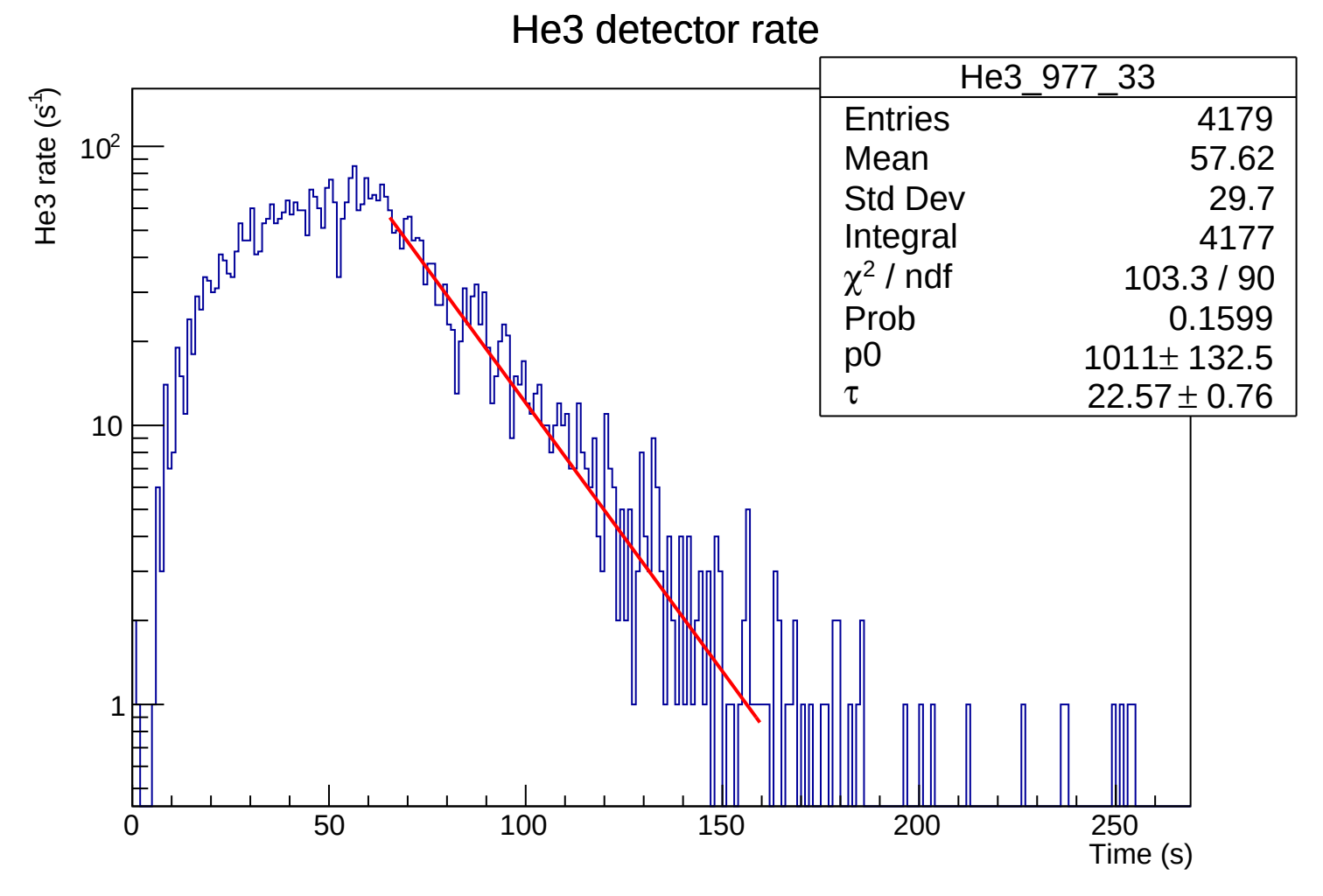

He3 detector rate
He3_977_21
Entries 4310
Mean 57.71
Std Dev 29.08
Integral 4310
χ² / ndf 37.62 / 33
Prob 0.266
p0 1343 ± 363.7
τ 21.27 ± 1.56
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

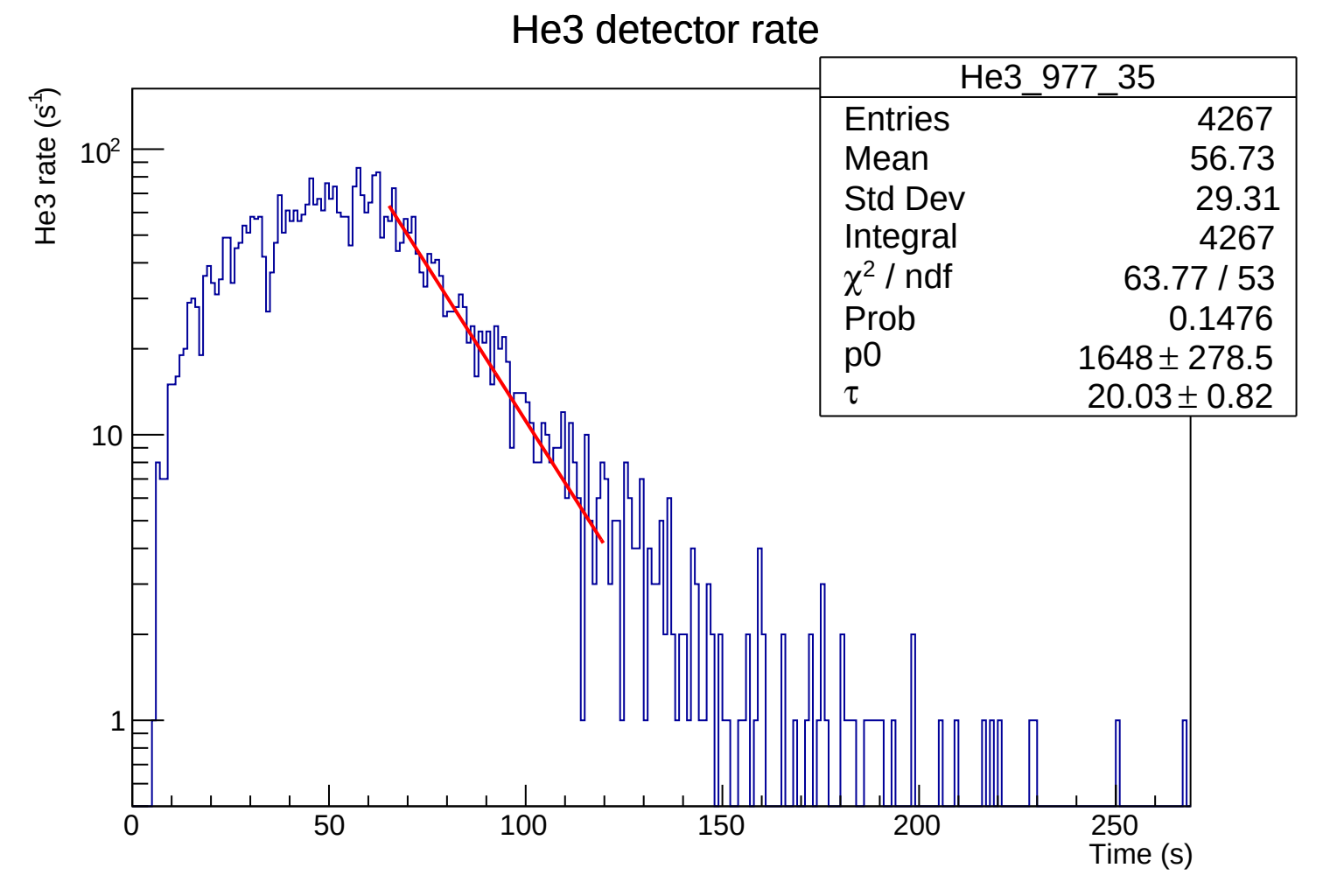

He3 detector rate
He3_977_25
Entries 4197
Mean 56.91
Std Dev 29.04
Integral 4197
χ² / ndf 109.2 / 90
Prob 0.08197
p0 1292 ± 184.1
τ 21.05 ± 0.73
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

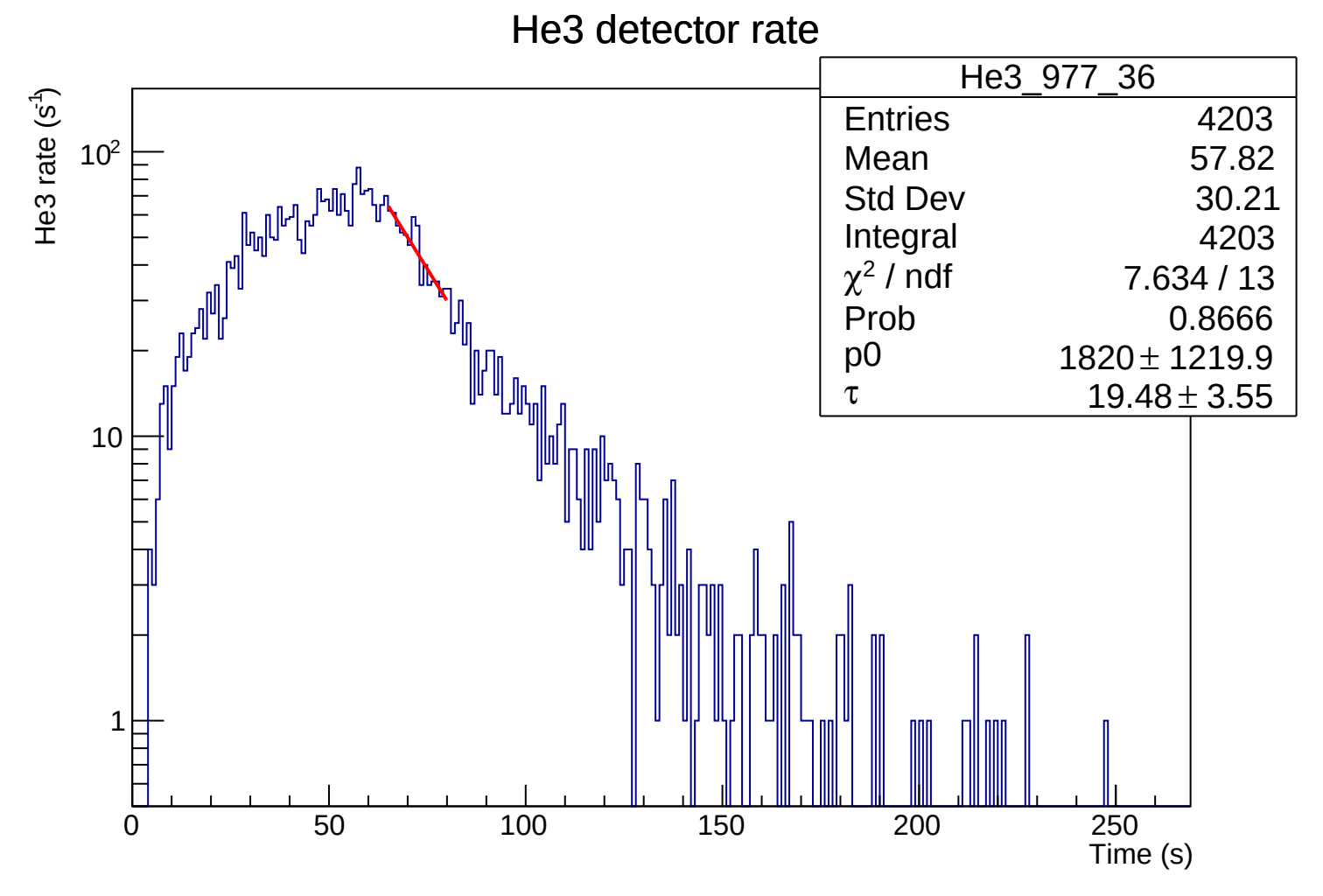

He3 detector rate
He3_977_27
Entries 4206
Mean 57.79
Std Dev 30.26
Integral 4206
χ² / ndf 48.9 / 53
Prob 0.6344
p0 1214 ± 204.7
τ 21.66 ± 0.95
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

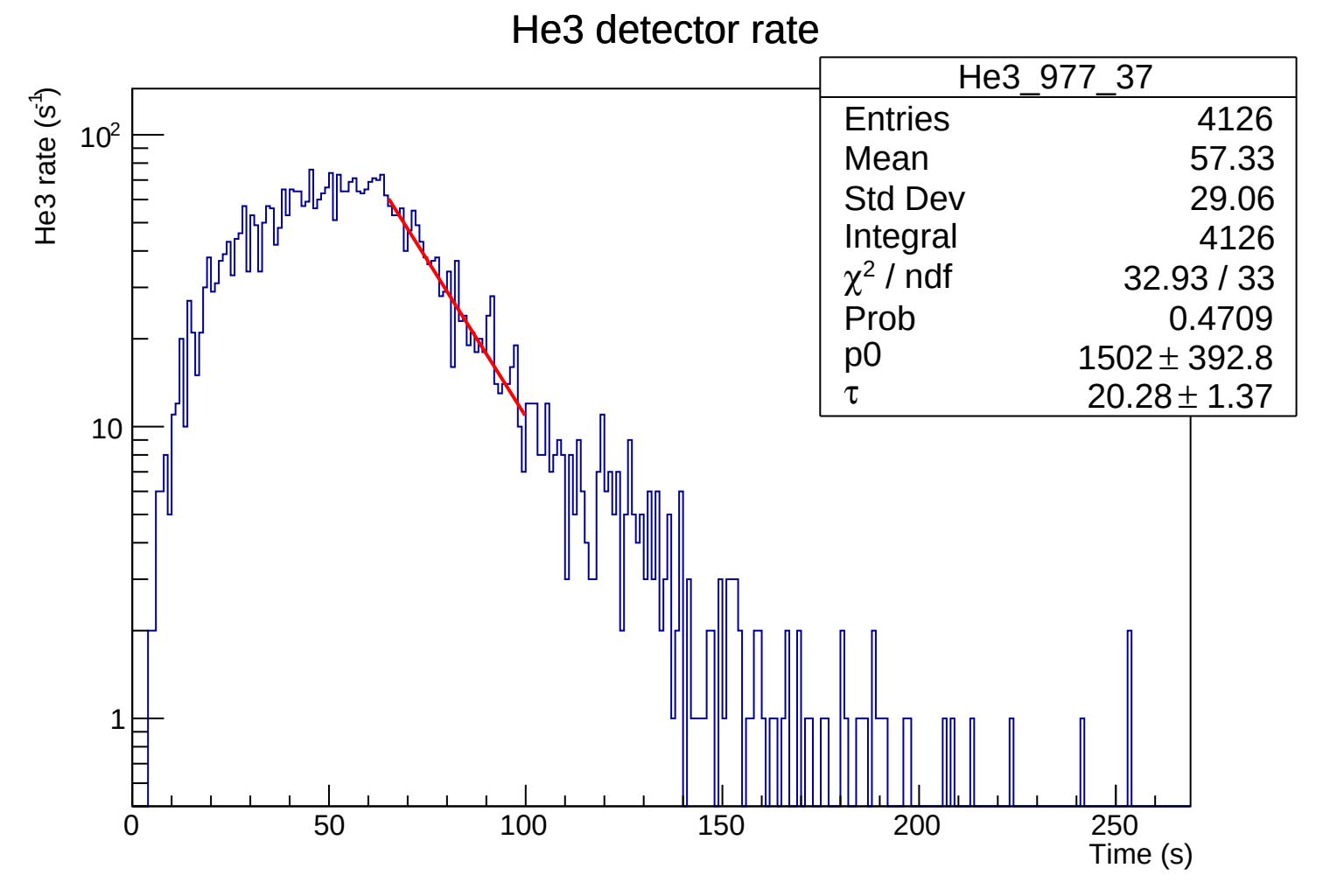

He3 detector rate
He3_977_28
Entries 4236
Mean 57.65
Std Dev 30.55
Integral 4236
χ² / ndf 9.269 / 13
Prob 0.7524
p0 2565 ± 1802.4
τ 17.75 ± 3.09
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

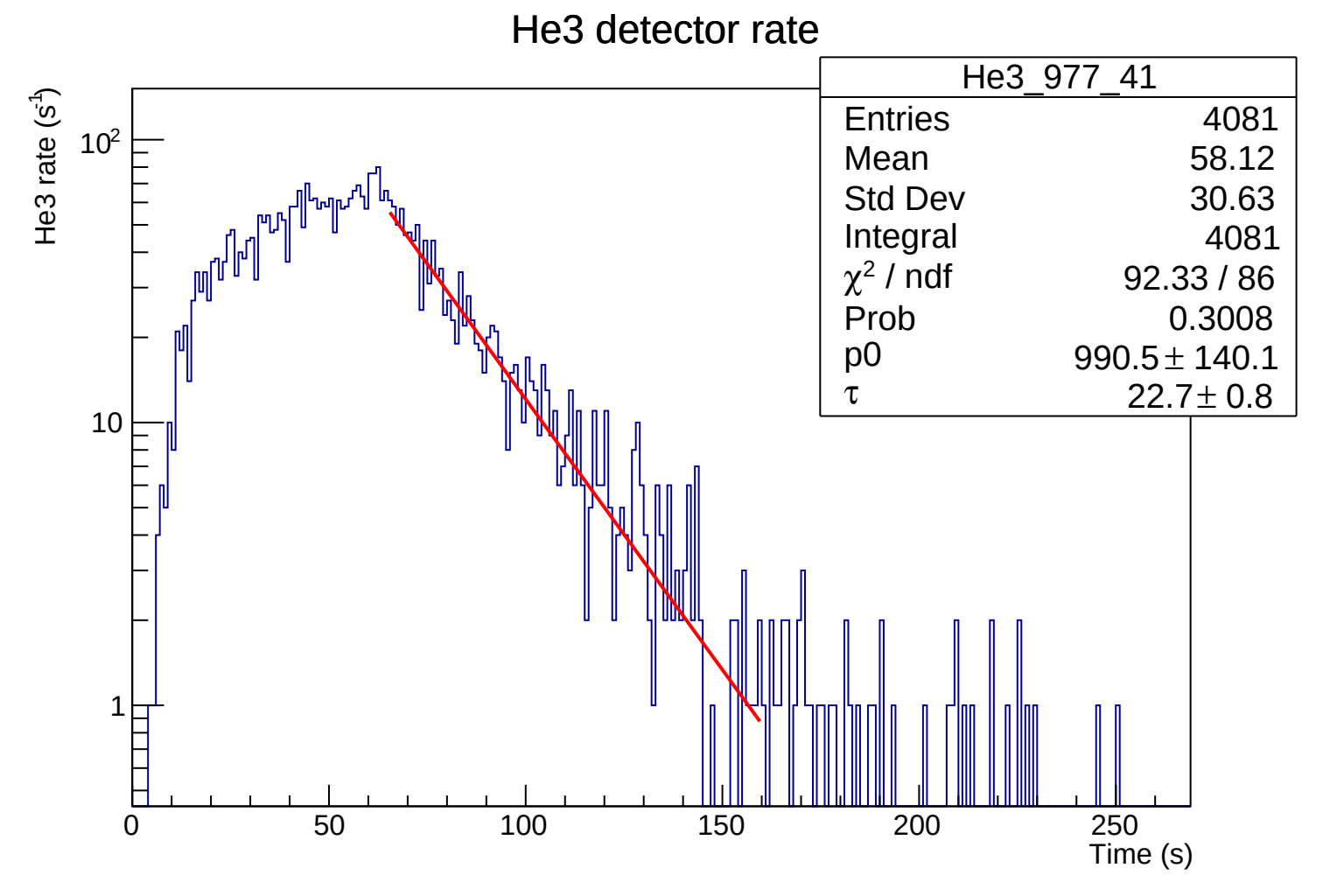

He3 detector rate
He3_977_29
Entries 4171
Mean 56.4
Std Dev 28.88
Integral 4171
χ² / ndf 23.33 / 33
Prob 0.8939
p0 1061± 288.1
τ 22.15 ± 1.69
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

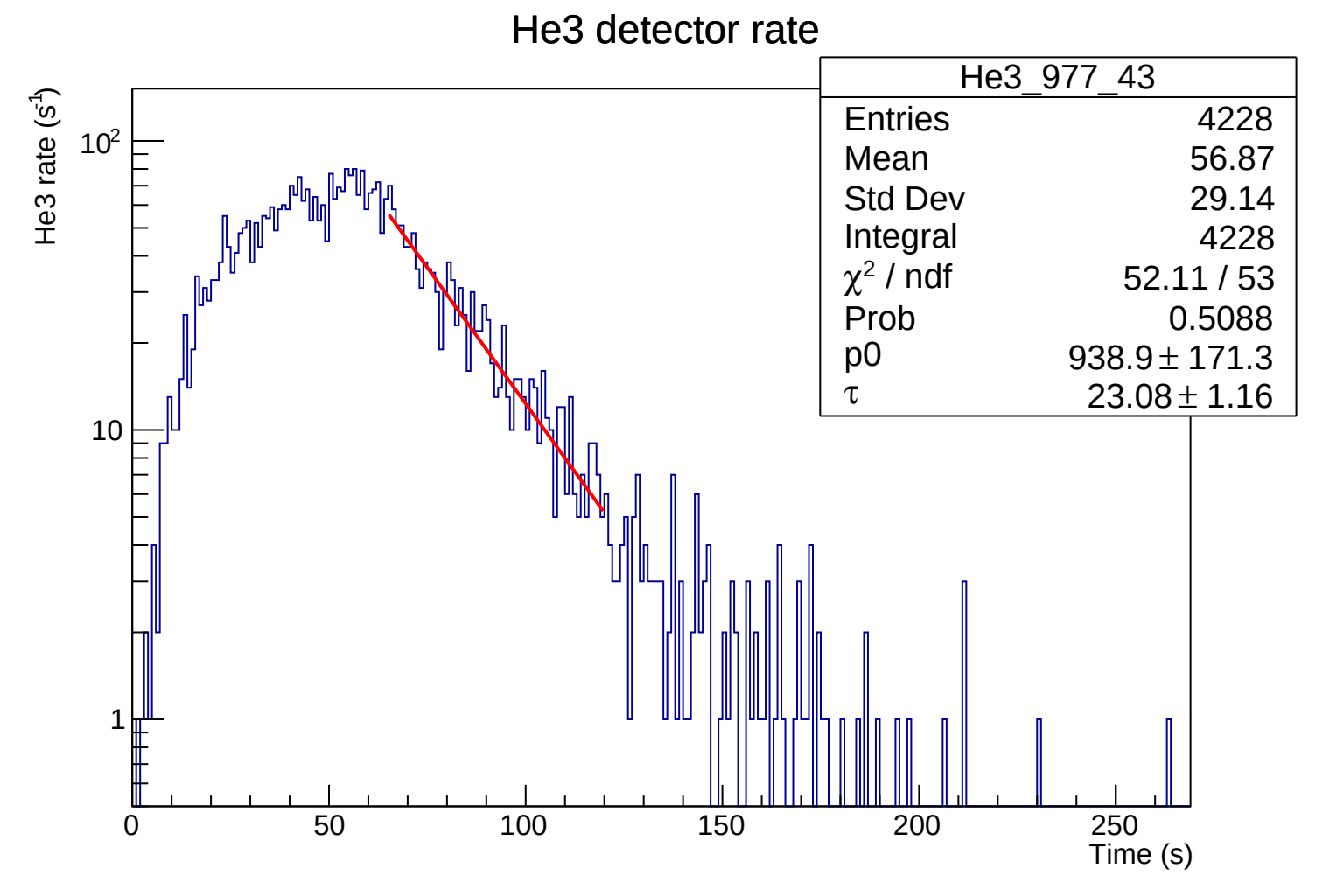

He3 detector rate
He3_977_33
Entries 4179
Mean 57.62
Std Dev 29.7
Integral 4177
χ² / ndf 103.3 / 90
Prob 0.1599
p0 1011 ± 132.5
τ 22.57 ± 0.76
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

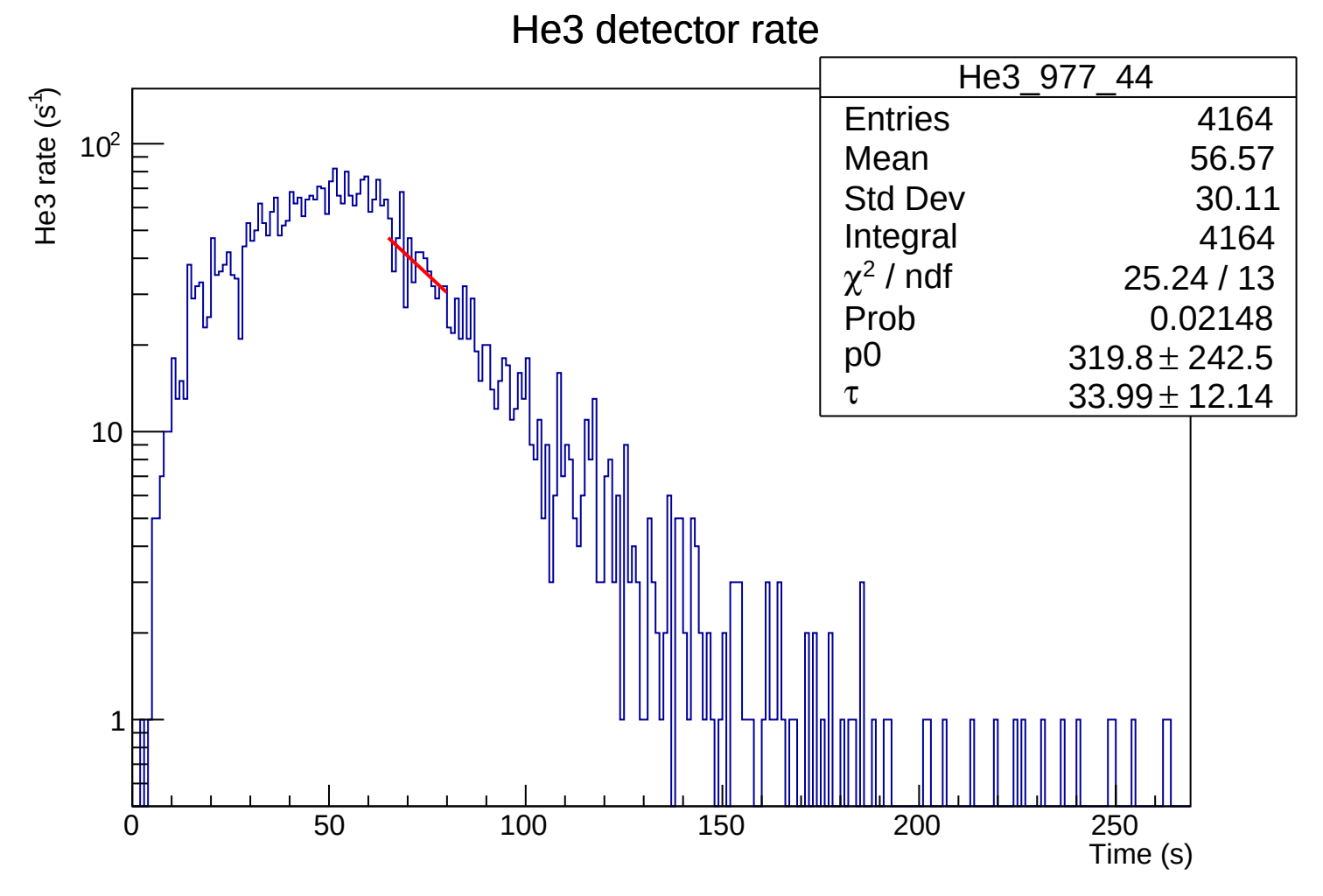

He3 detector rate
He3_977_35
Entries 4267
Mean 56.73
Std Dev 29.31
Integral 4267
χ² / ndf 63.77 / 53
Prob 0.1476
p0 1648 ± 278.5
τ 20.03 ± 0.82
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_977_36
Entries 4203
Mean 57.82
Std Dev 30.21
Integral 4203
χ² / ndf 7.634 / 13
Prob 0.8666
p0 1820 ± 1219.9
τ 19.48 ± 3.55
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_977_37
Entries 4126
Mean 57.33
Std Dev 29.06
Integral 4126
χ² / ndf 32.93 / 33
Prob 0.4709
p0 1502 ± 392.8
τ 20.28 ± 1.37
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_977_41
Entries 4081
Mean 58.12
Std Dev 30.63
Integral 4081
χ² / ndf 92.33 / 86
Prob 0.3008
p0 990.5 ± 140.1
τ 22.7 ± 0.8
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_977_43
Entries 4228
Mean 56.87
Std Dev 29.14
Integral 4228
χ² / ndf 52.11 / 53
Prob 0.5088
p0 938.9 ± 171.3
τ 23.08 ± 1.16
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_977_44
Entries 4164
Mean 56.57
Std Dev 30.11
Integral 4164
χ² / ndf 25.24 / 13
Prob 0.02148
p0 319.8 ± 242.5
τ 33.99 ± 12.14
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

Average lifetime from He3 data:

τ = 21.5827153384 +/- 0.00257363423376 s