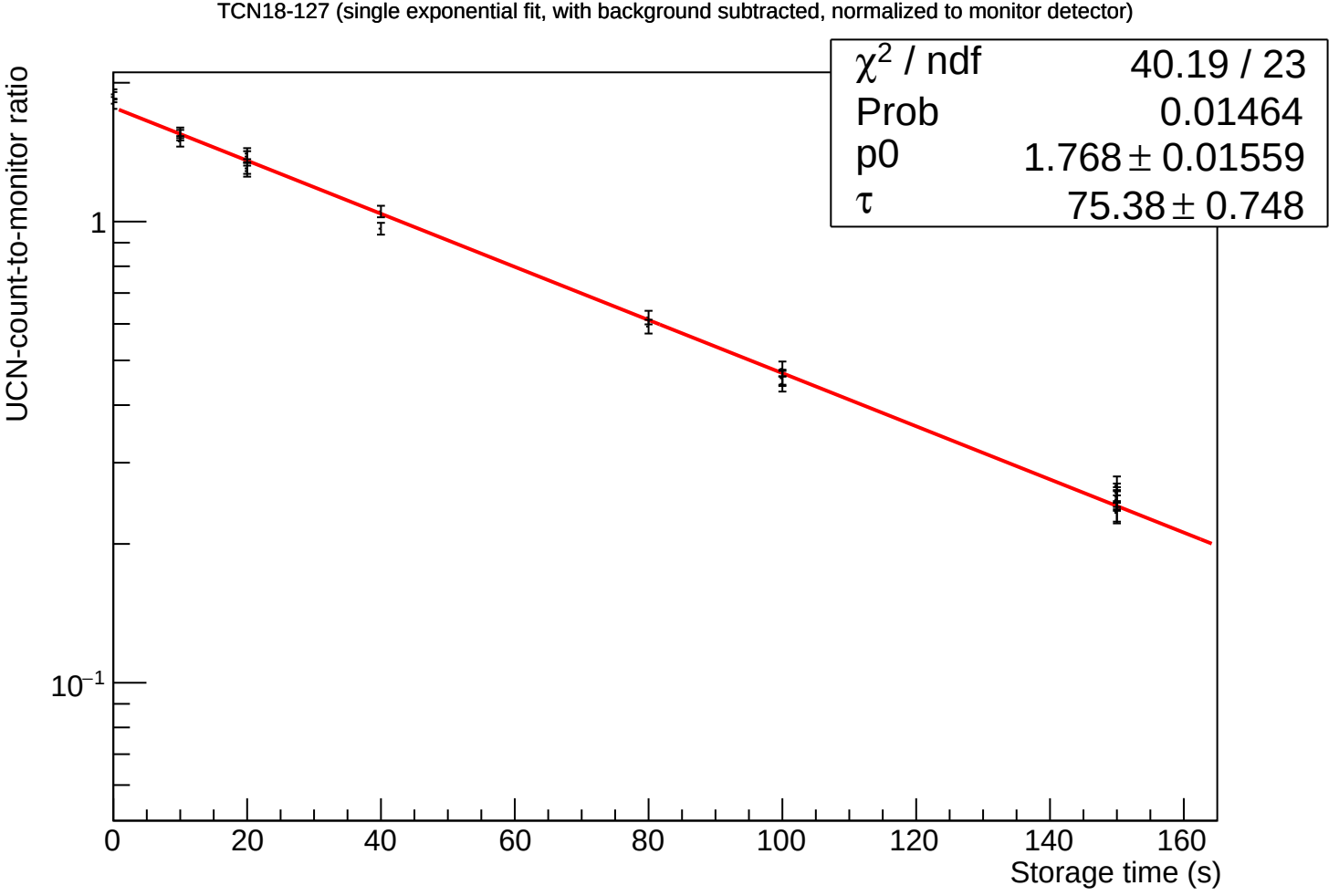
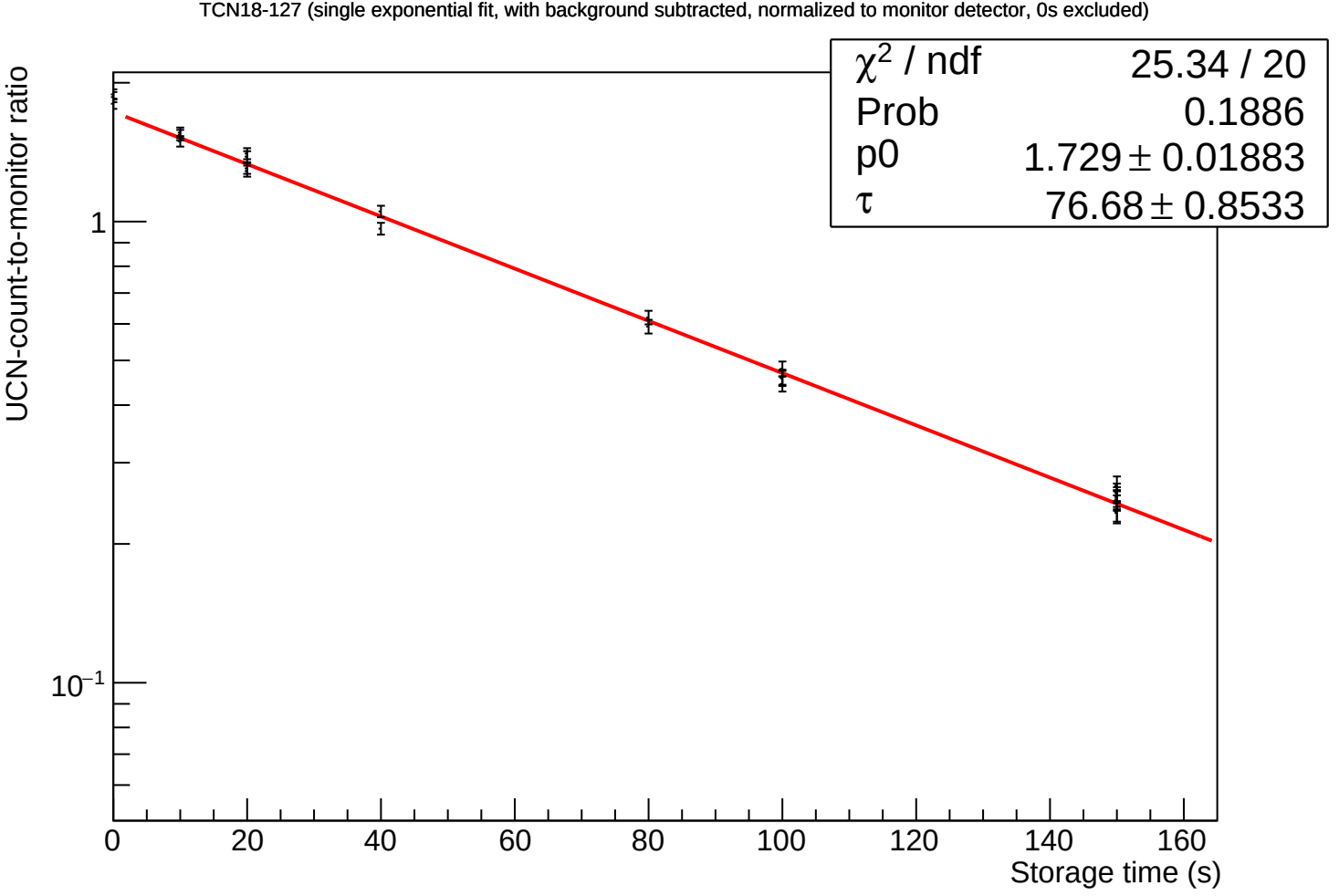
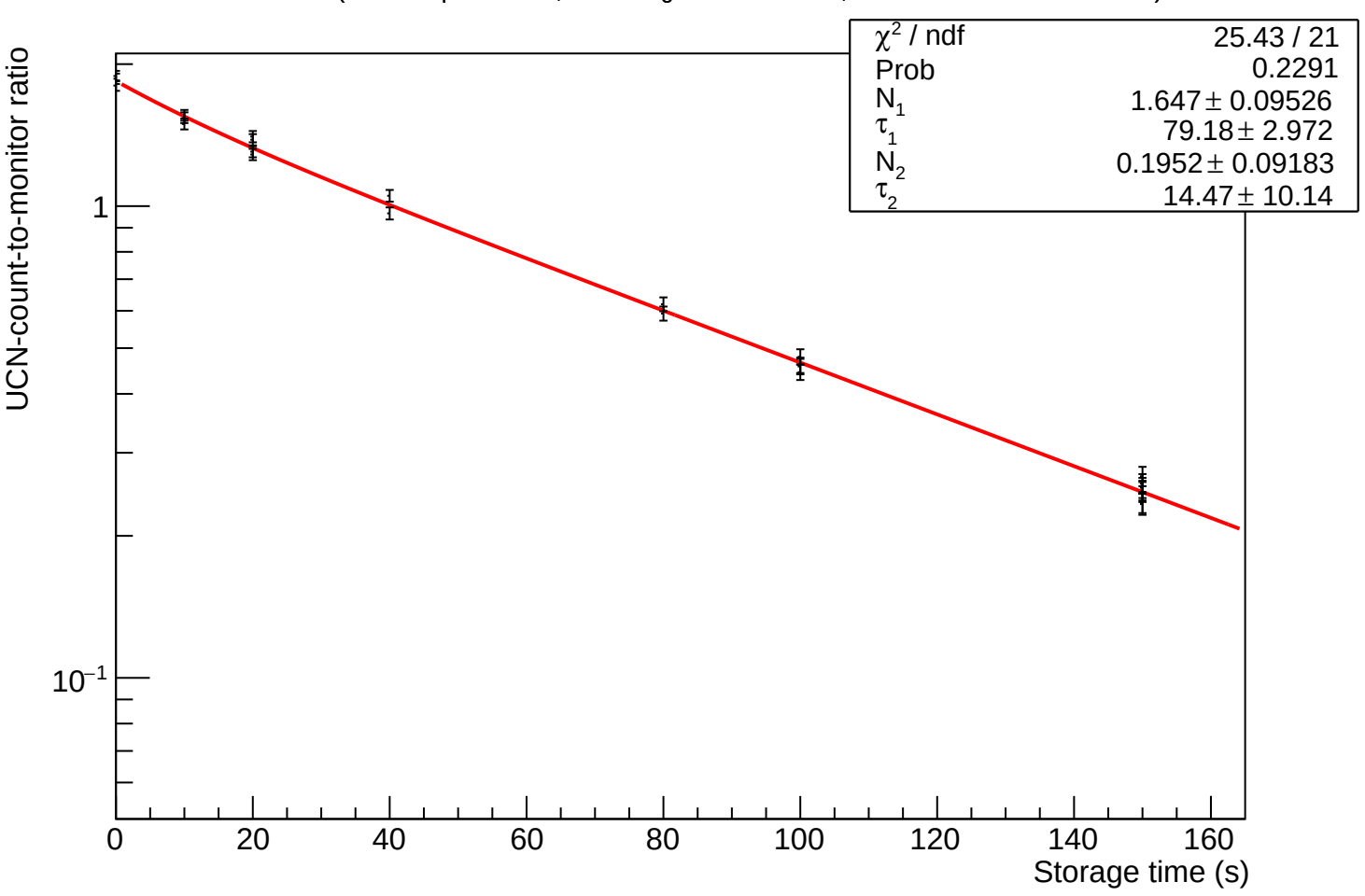
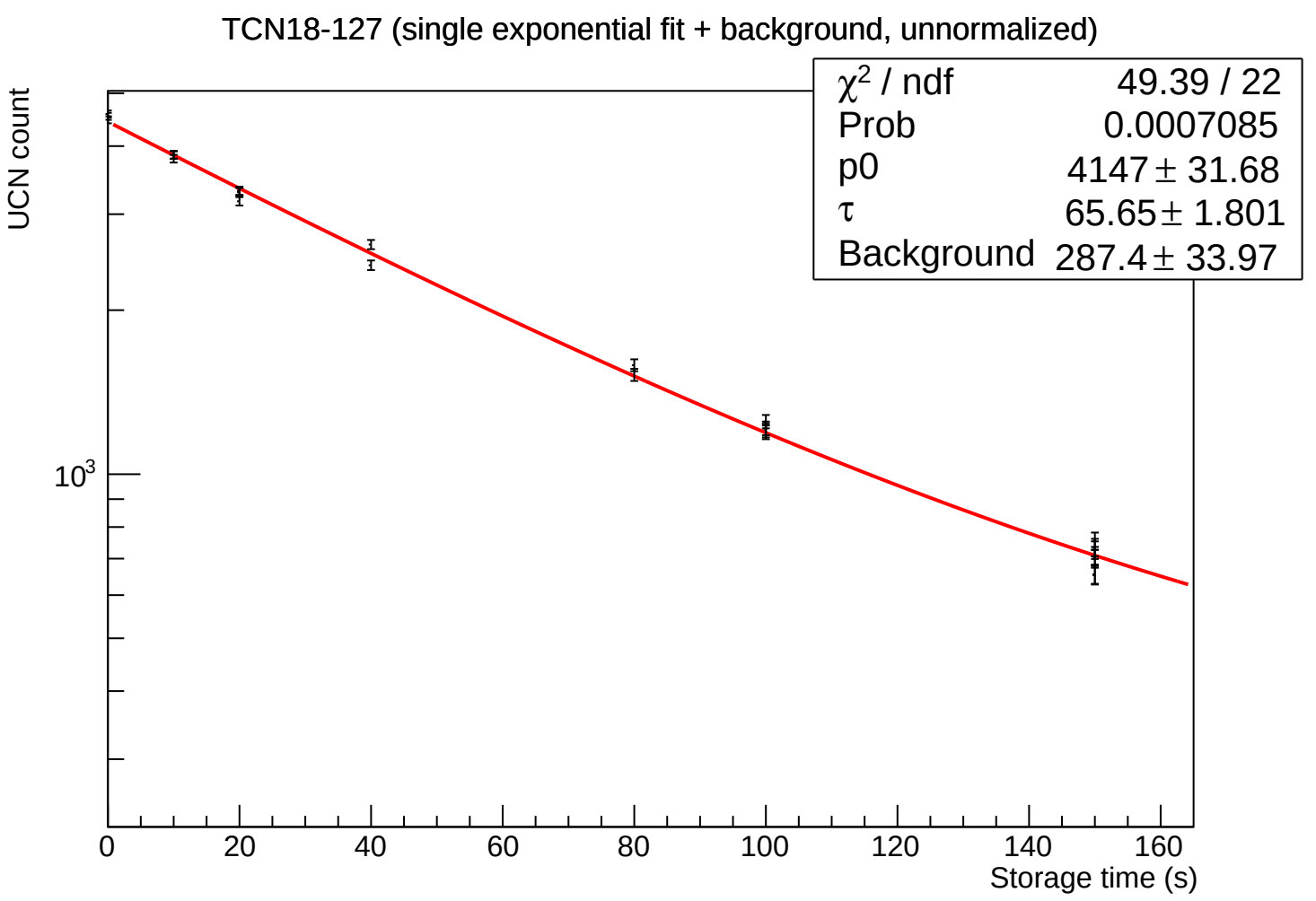
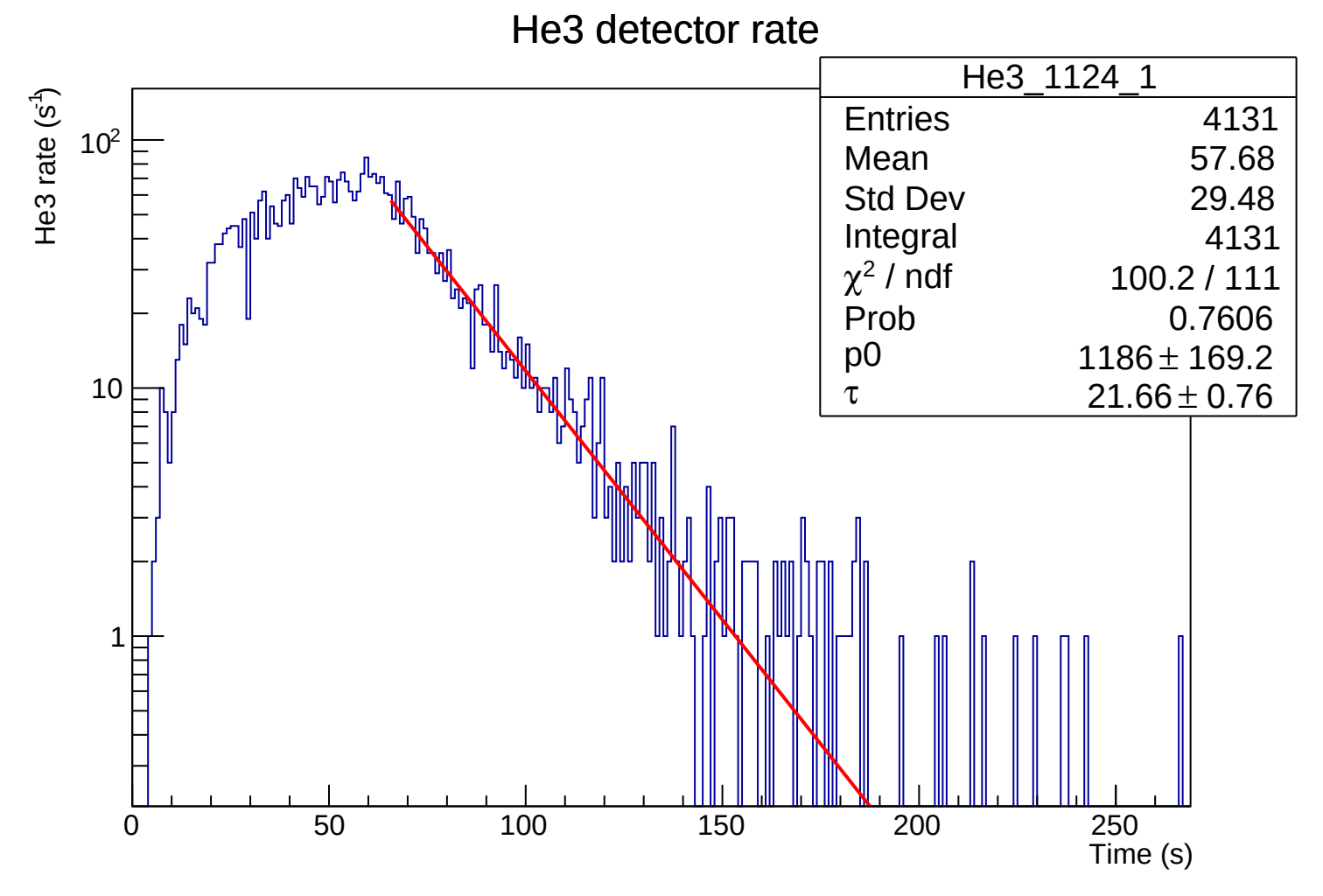
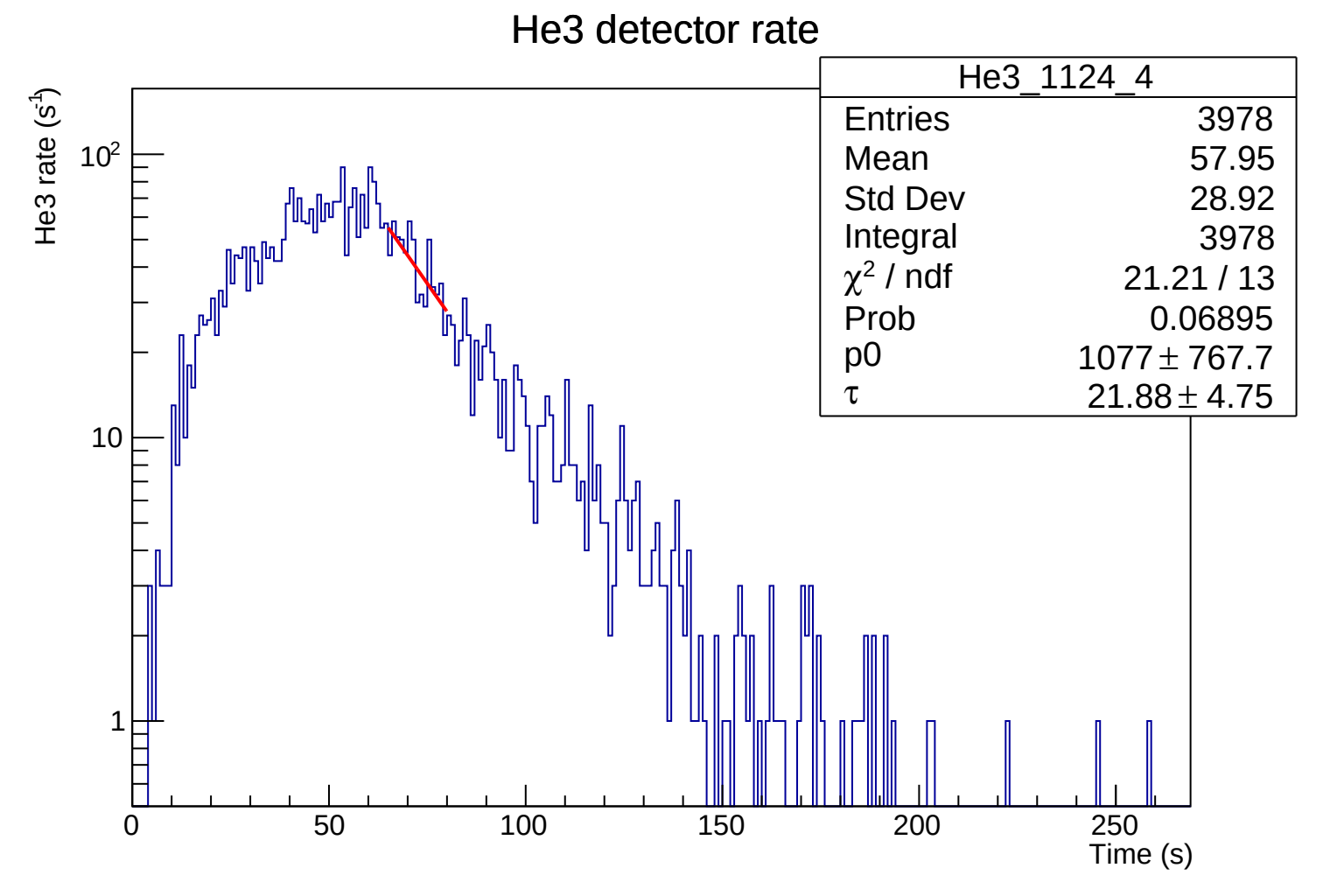

TCN18-127 (single exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 40.19 / 23
Prob 0.01464
p0 1.768 ± 0.01559
τ 75.38 ± 0.748
UCN-count-to-monitor ratio
1
10⁻¹
0
20
40
60
80
100
120
140
160
Storage time (s)

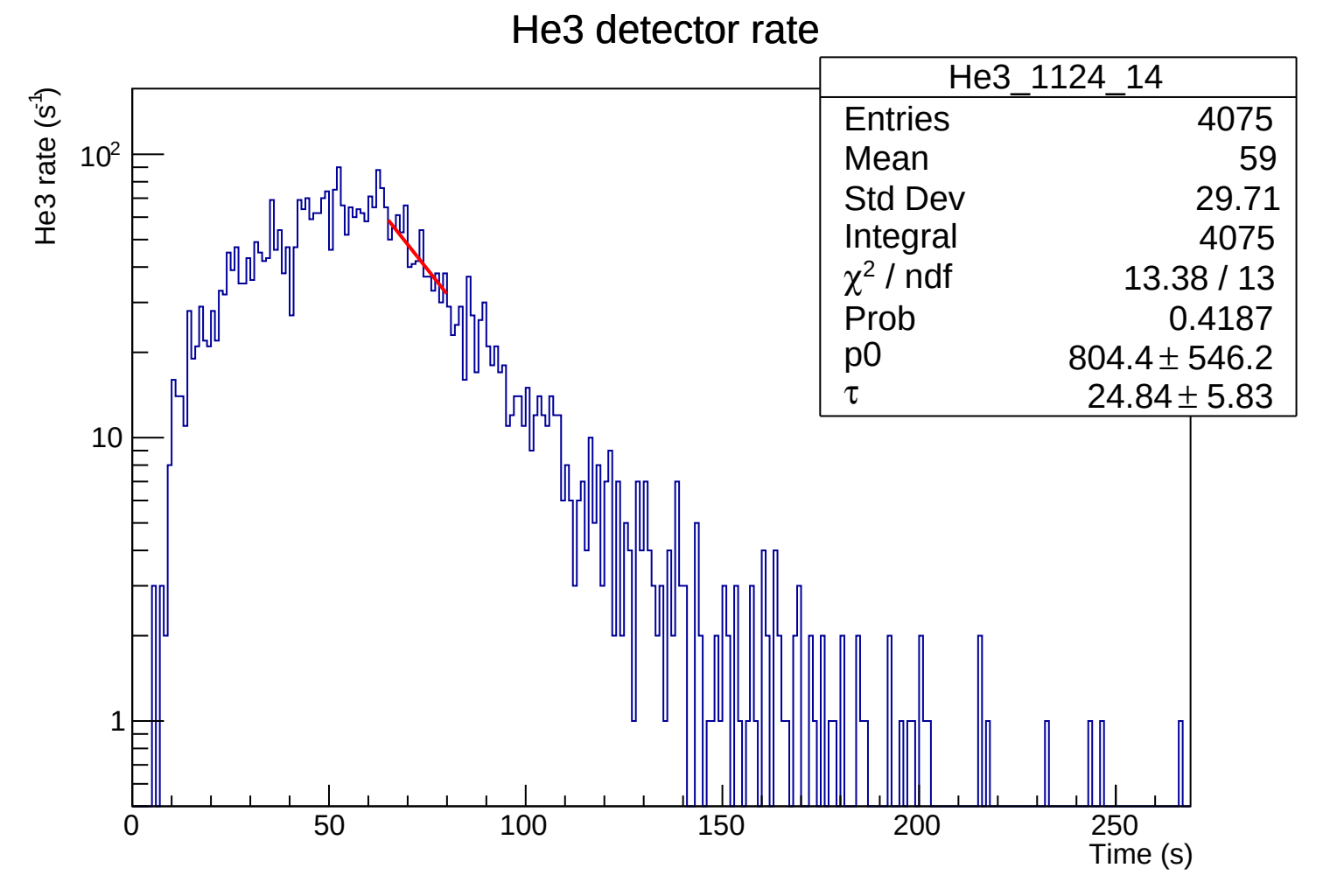

TCN18-127 (single exponential fit, with background subtracted, normalized to monitor detector, 0s excluded)
χ² / ndf 25.34 / 20
Prob 0.1886
p0 1.729 ± 0.01883
τ 76.68 ± 0.8533
UCN-count-to-monitor ratio
1
10⁻¹
0
20
40
60
80
100
120
140
160
Storage time (s)

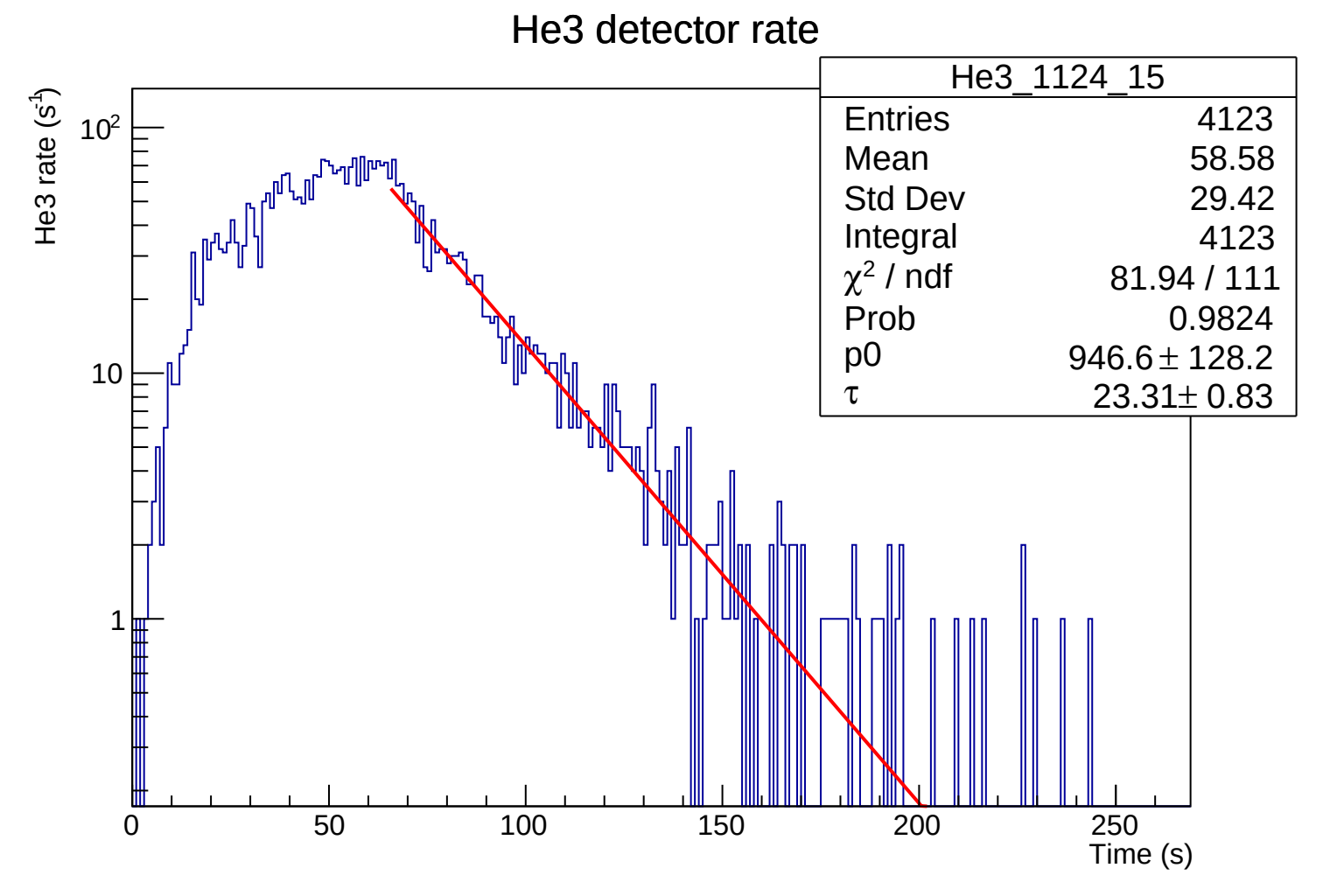

TCN18-127 (double exponential fit, with background subtracted, normalized to monitor detector)
χ² / ndf 25.43 / 21
Prob 0.2291
N1 1.647 ± 0.09526
τ1 79.18 ± 2.972
N2 0.1952 ± 0.09183
τ2 14.47 ± 10.14
UCN-count-to-monitor ratio
1
10⁻¹
0
20
40
60
80
100
120
140
160
Storage time (s)

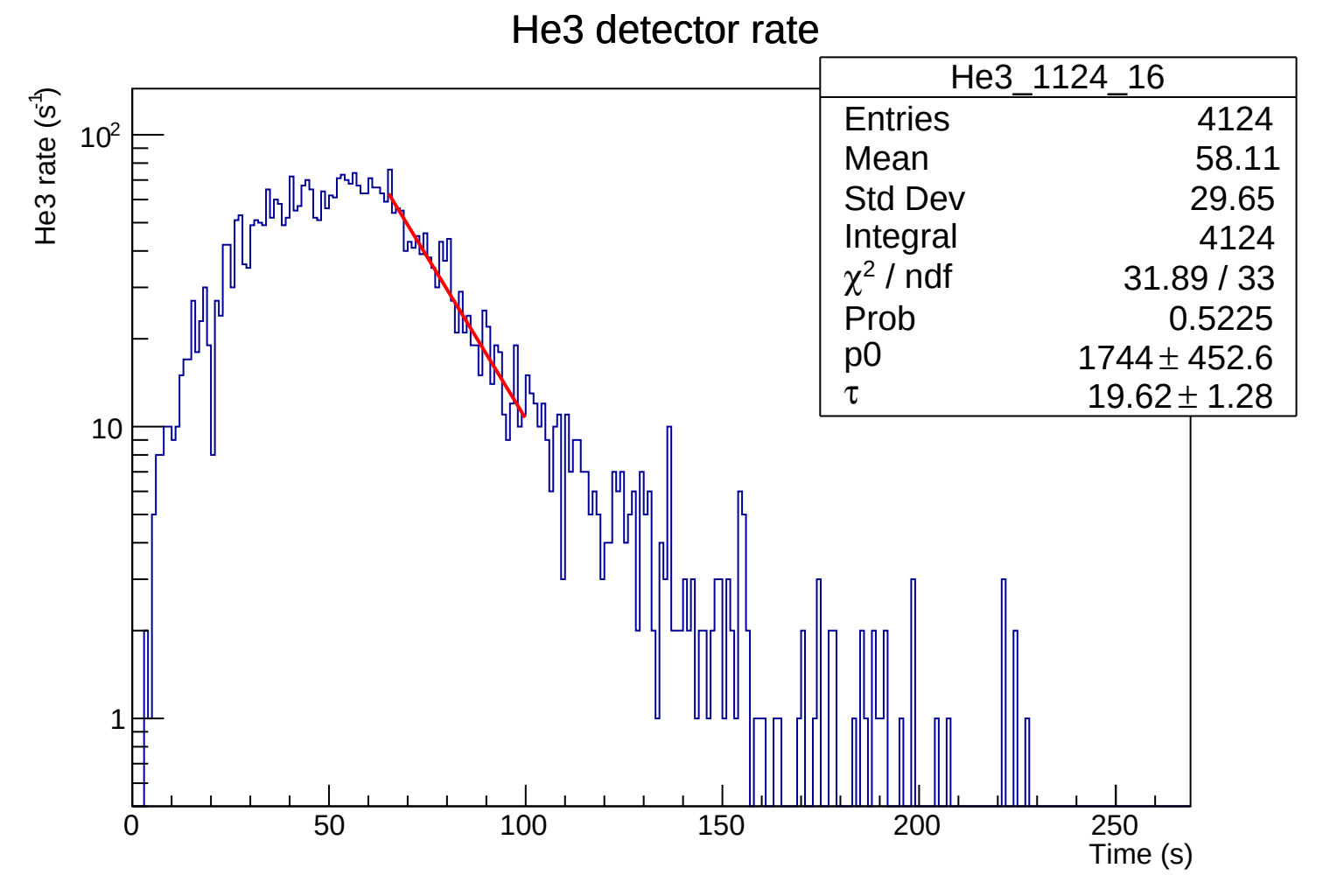

TCN18-127 (single exponential fit + background, unnormalized)
χ² / ndf 49.39 / 22
Prob 0.0007085
p0 4147 ± 31.68
τ 65.65 ± 1.801
Background 287.4 ± 33.97
UCN count
10³
0
20
40
60
80
100
120
140
160
Storage time (s)

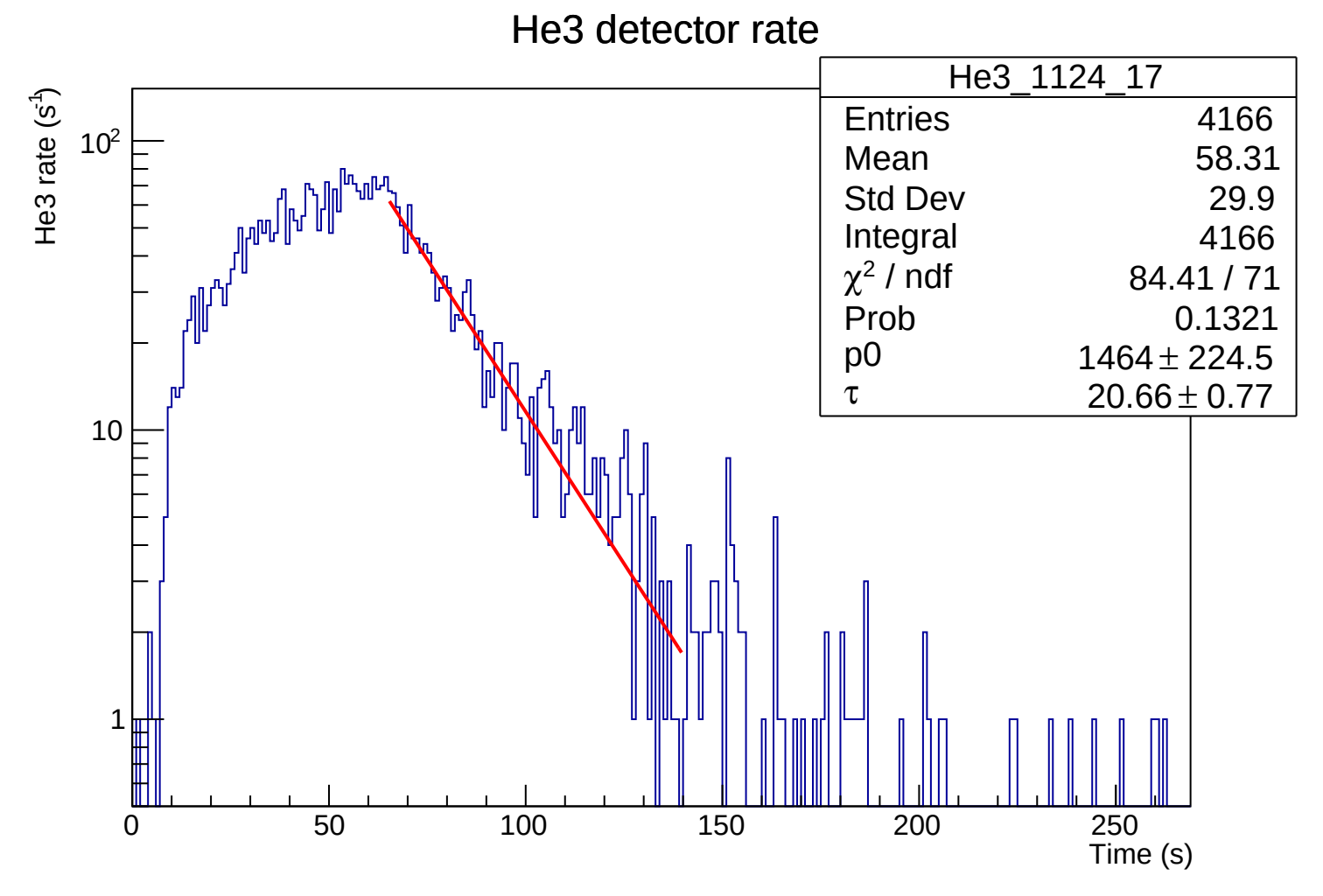

He3 detector rate
He3_1124_1
Entries 4131
Mean 57.68
Std Dev 29.48
Integral 4131
χ² / ndf 100.2 / 111
Prob 0.7606
p0 1186 ± 169.2
τ 21.66 ± 0.76
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

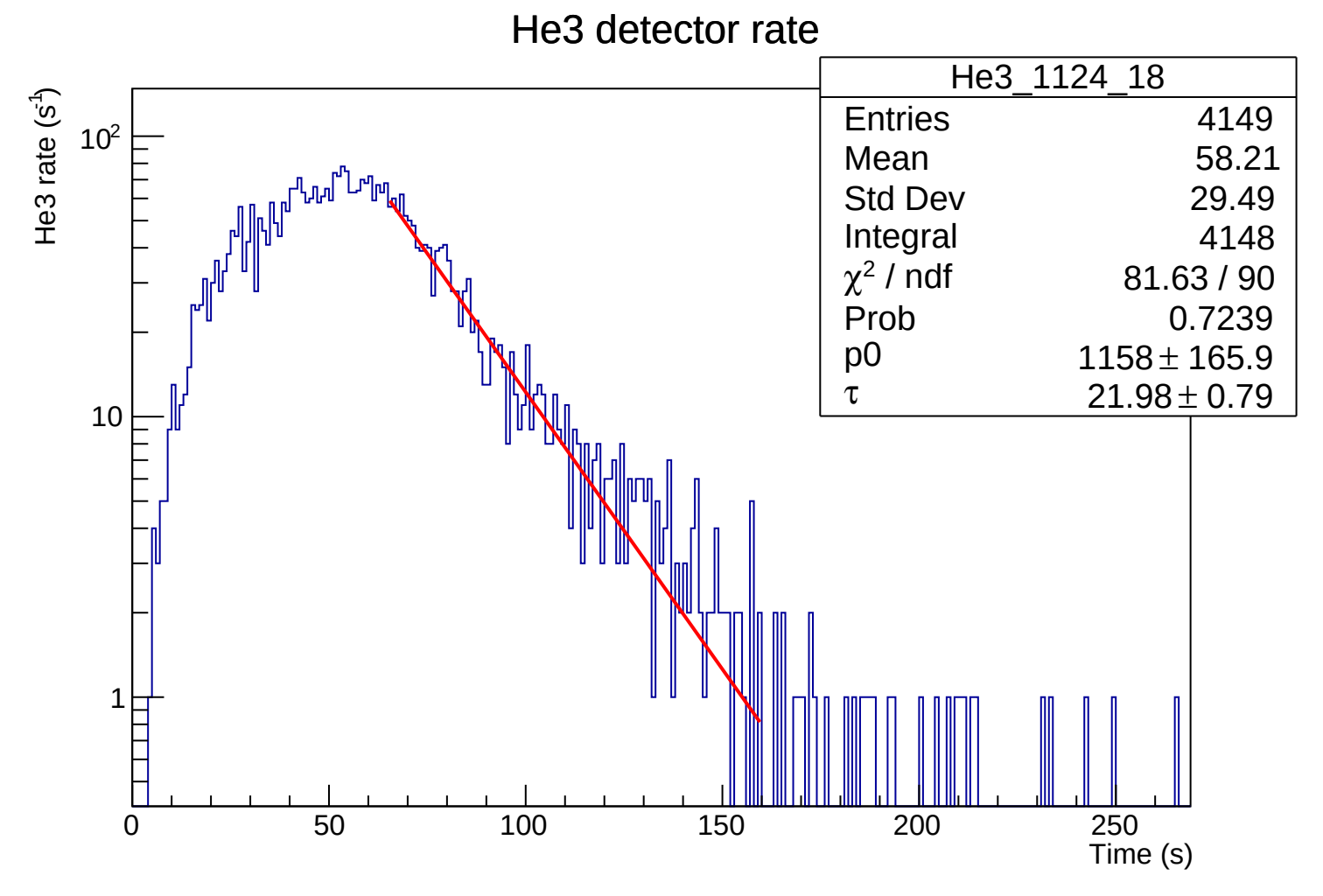

He3 detector rate
He3_1124_4
Entries 3978
Mean 57.95
Std Dev 28.92
Integral 3978
χ² / ndf 21.21 / 13
Prob 0.06895
p0 1077 ± 767.7
τ 21.88 ± 4.75
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

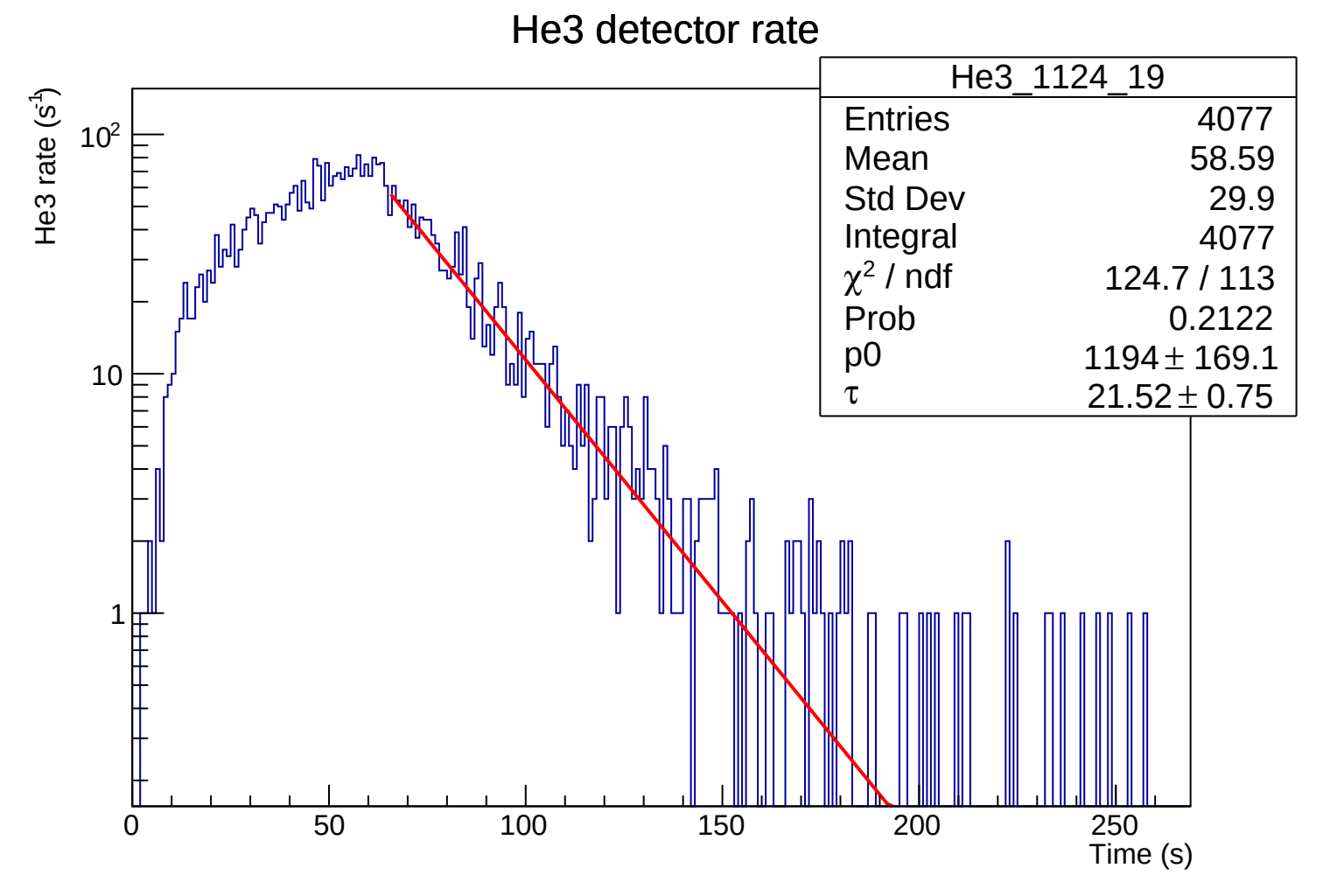

He3 detector rate
He3_1124_14
Entries 4075
Mean 59
Std Dev 29.71
Integral 4075
χ² / ndf 13.38 / 13
Prob 0.4187
p0 804.4 ± 546.2
τ 24.84 ± 5.83
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

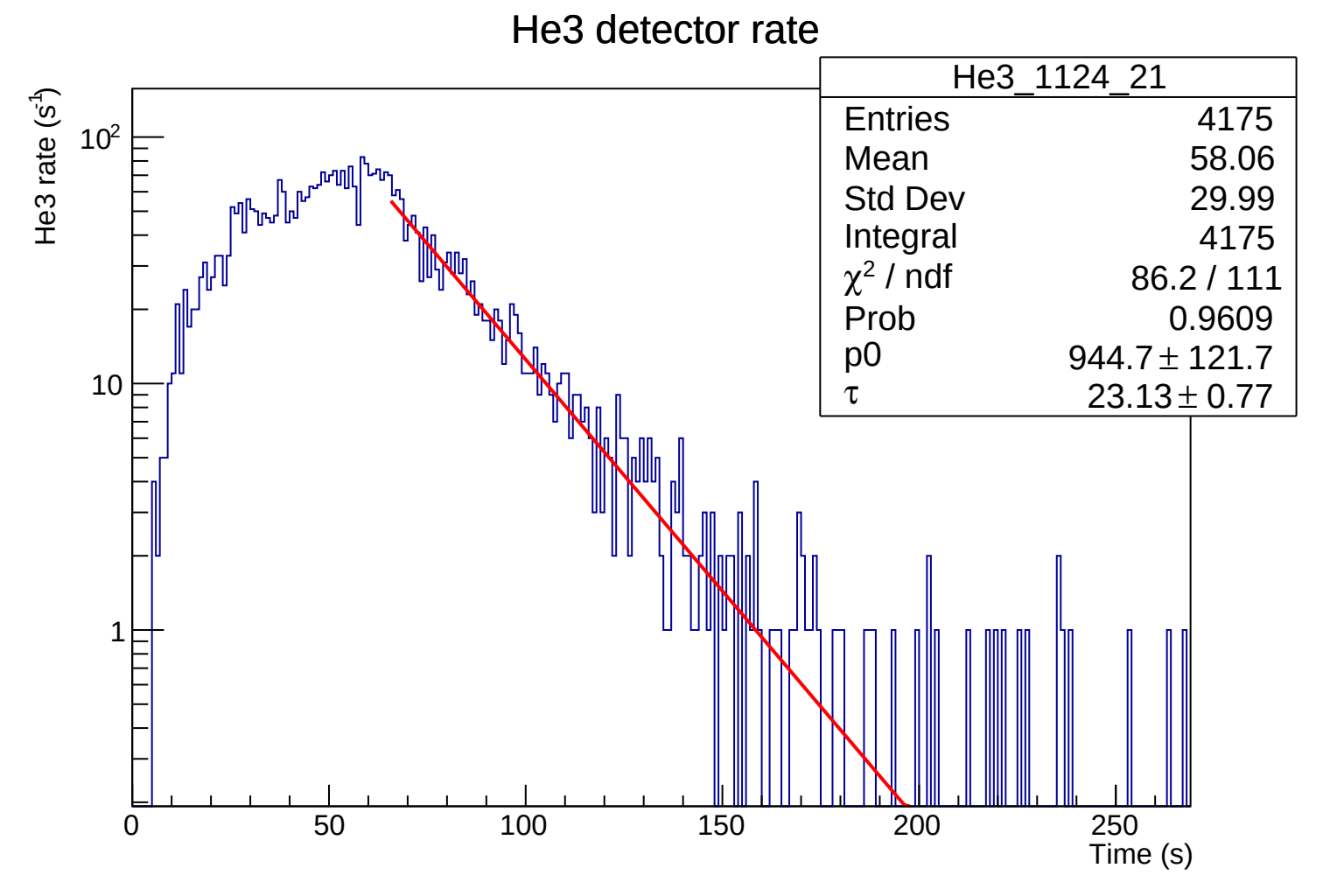

He3 detector rate
He3_1124_15
Entries 4123
Mean 58.58
Std Dev 29.42
Integral 4123
χ² / ndf 81.94 / 111
Prob 0.9824
p0 946.6 ± 128.2
τ 23.31 ± 0.83
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

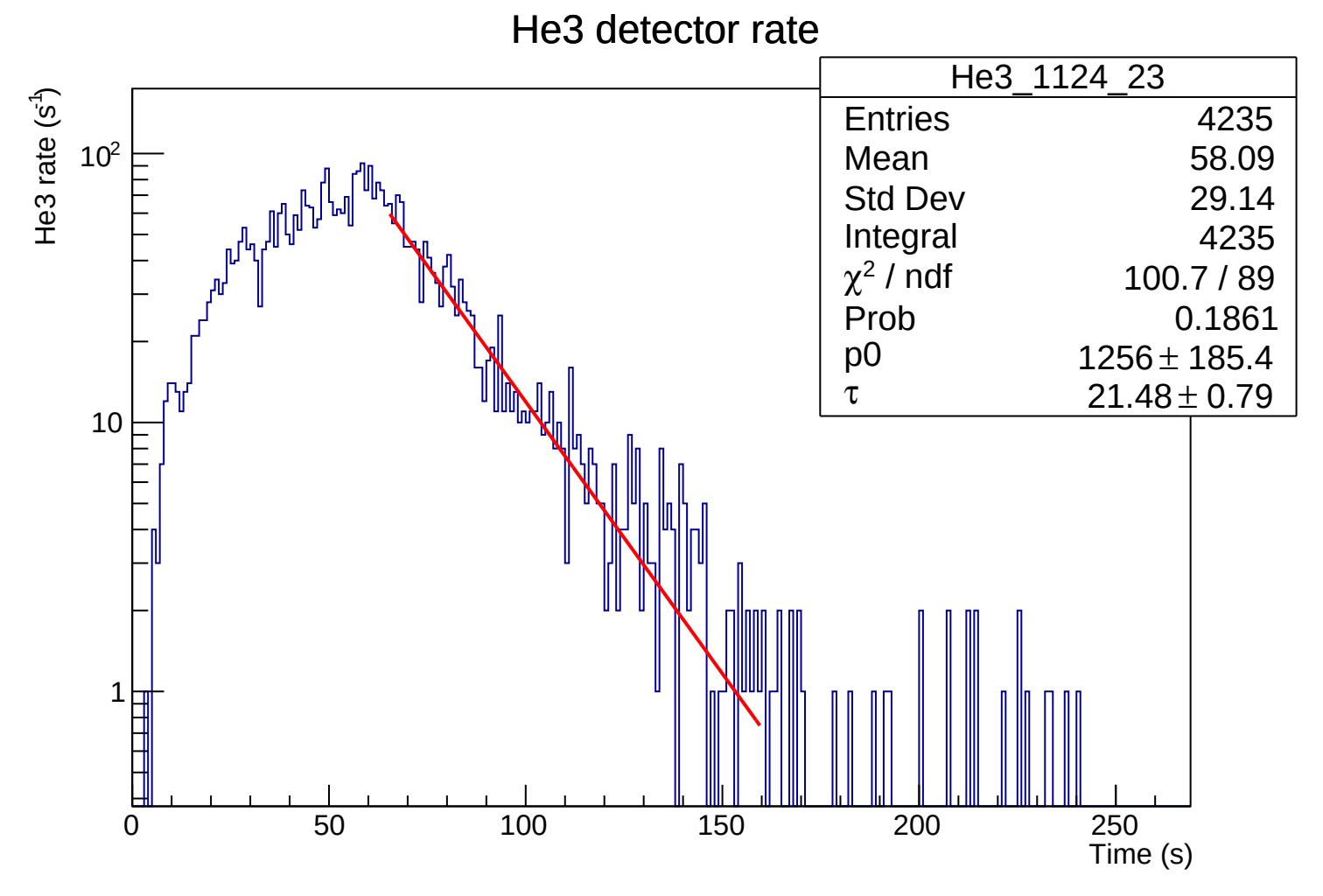

He3 detector rate
He3_1124_16
Entries 4124
Mean 58.11
Std Dev 29.65
Integral 4124
χ² / ndf 31.89 / 33
Prob 0.5225
p0 1744 ± 452.6
τ 19.62 ± 1.28
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

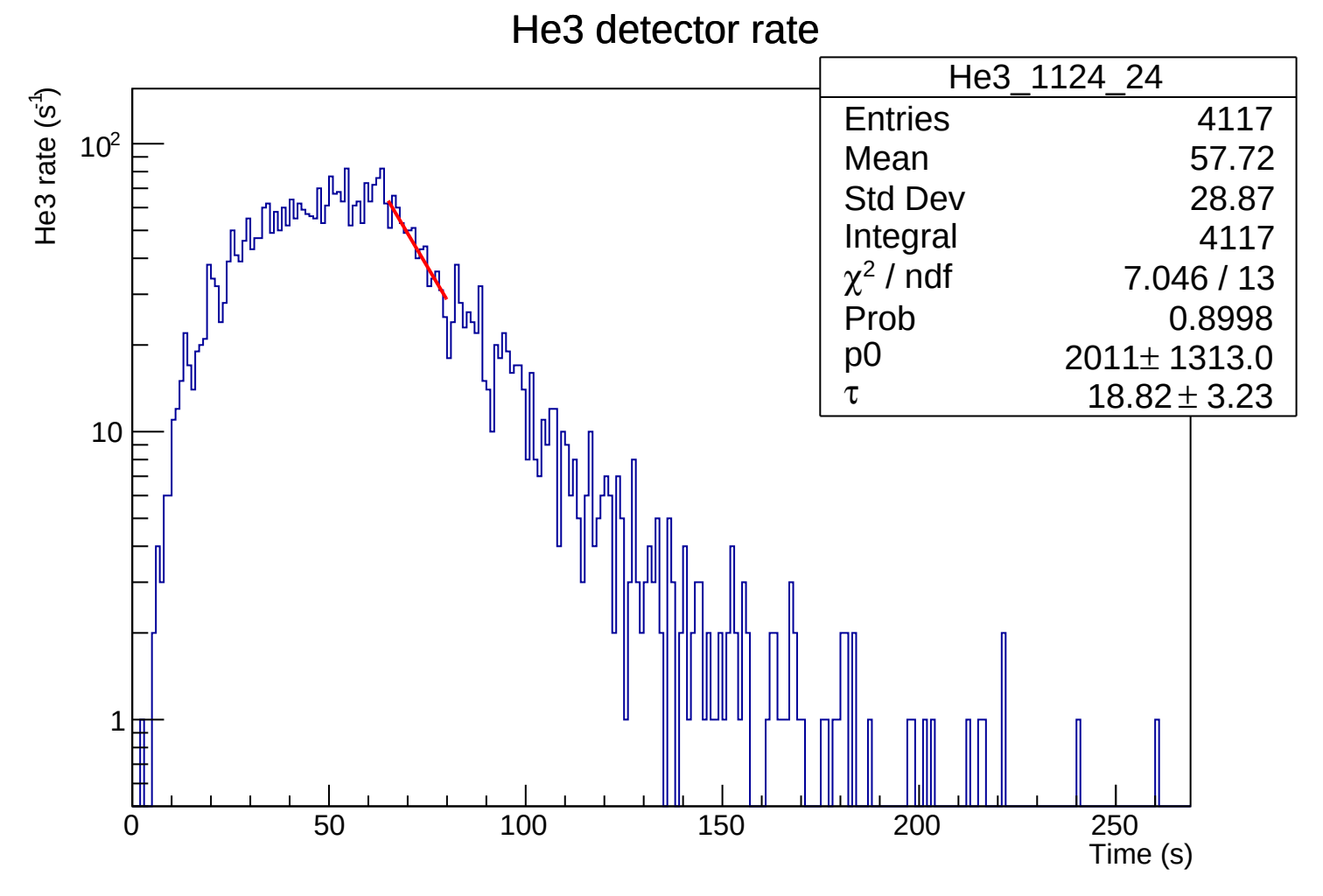

He3 detector rate
He3_1124_17
Entries 4166
Mean 58.31
Std Dev 29.9
Integral 4166
χ² / ndf 84.41 / 71
Prob 0.1321
p0 1464 ± 224.5
τ 20.66 ± 0.77
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

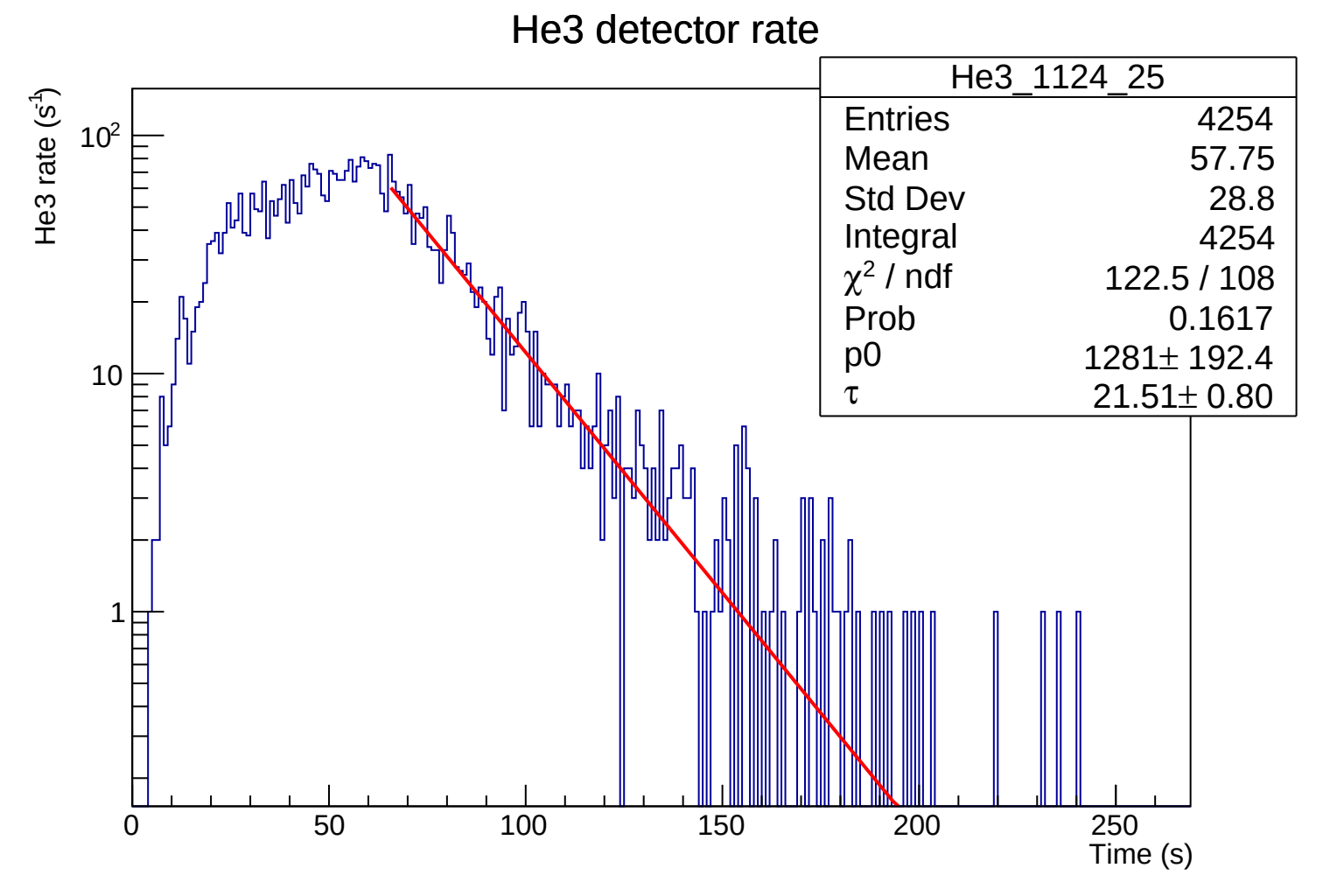

He3 detector rate
He3_1124_18
Entries 4149
Mean 58.21
Std Dev 29.49
Integral 4148
χ² / ndf 81.63 / 90
Prob 0.7239
p0 1158 ± 165.9
τ 21.98 ± 0.79
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

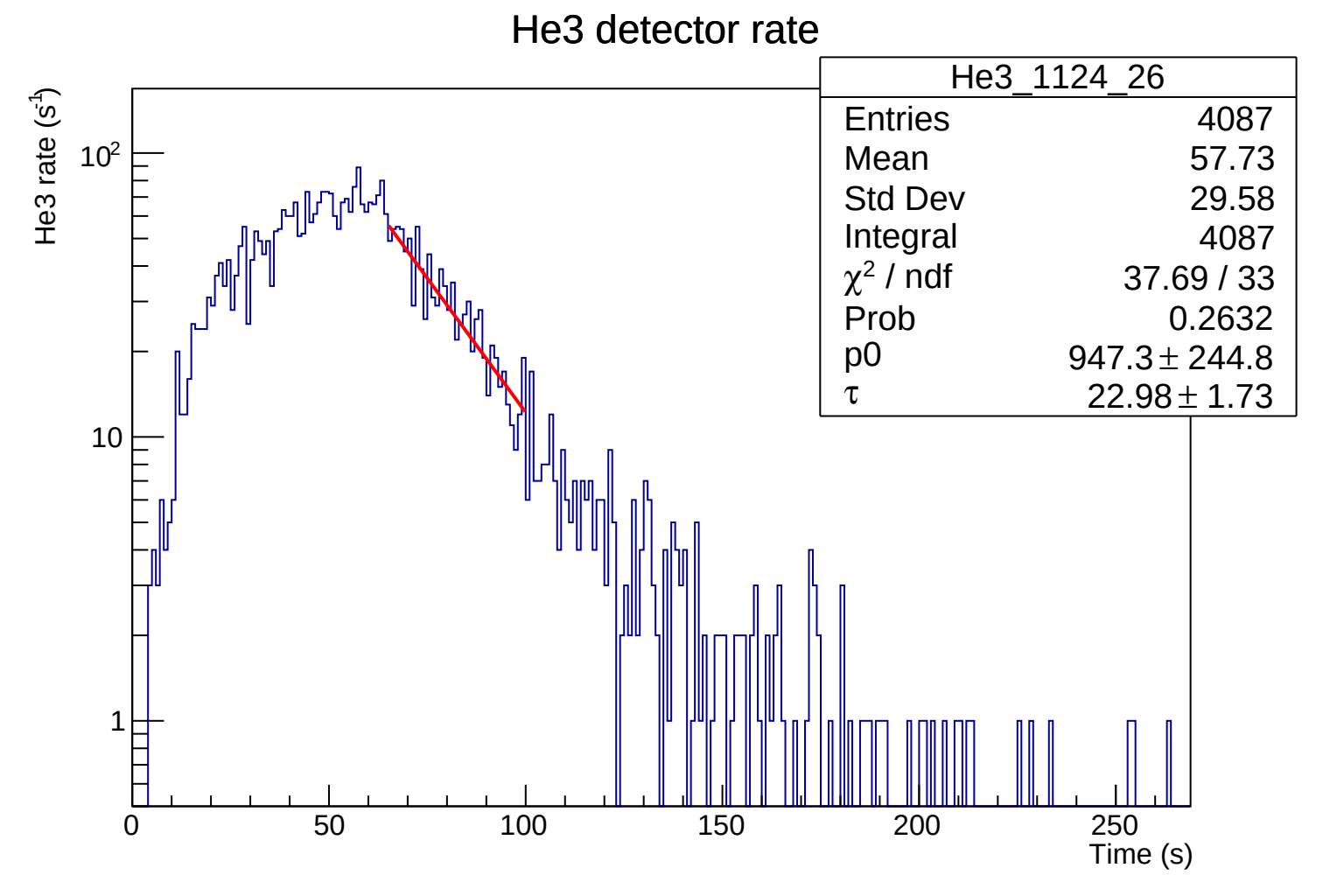

He3 detector rate
He3_1124_19
Entries 4077
Mean 58.59
Std Dev 29.9
Integral 4077
χ² / ndf 124.7 / 113
Prob 0.2122
p0 1194 ± 169.1
τ 21.52 ± 0.75
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

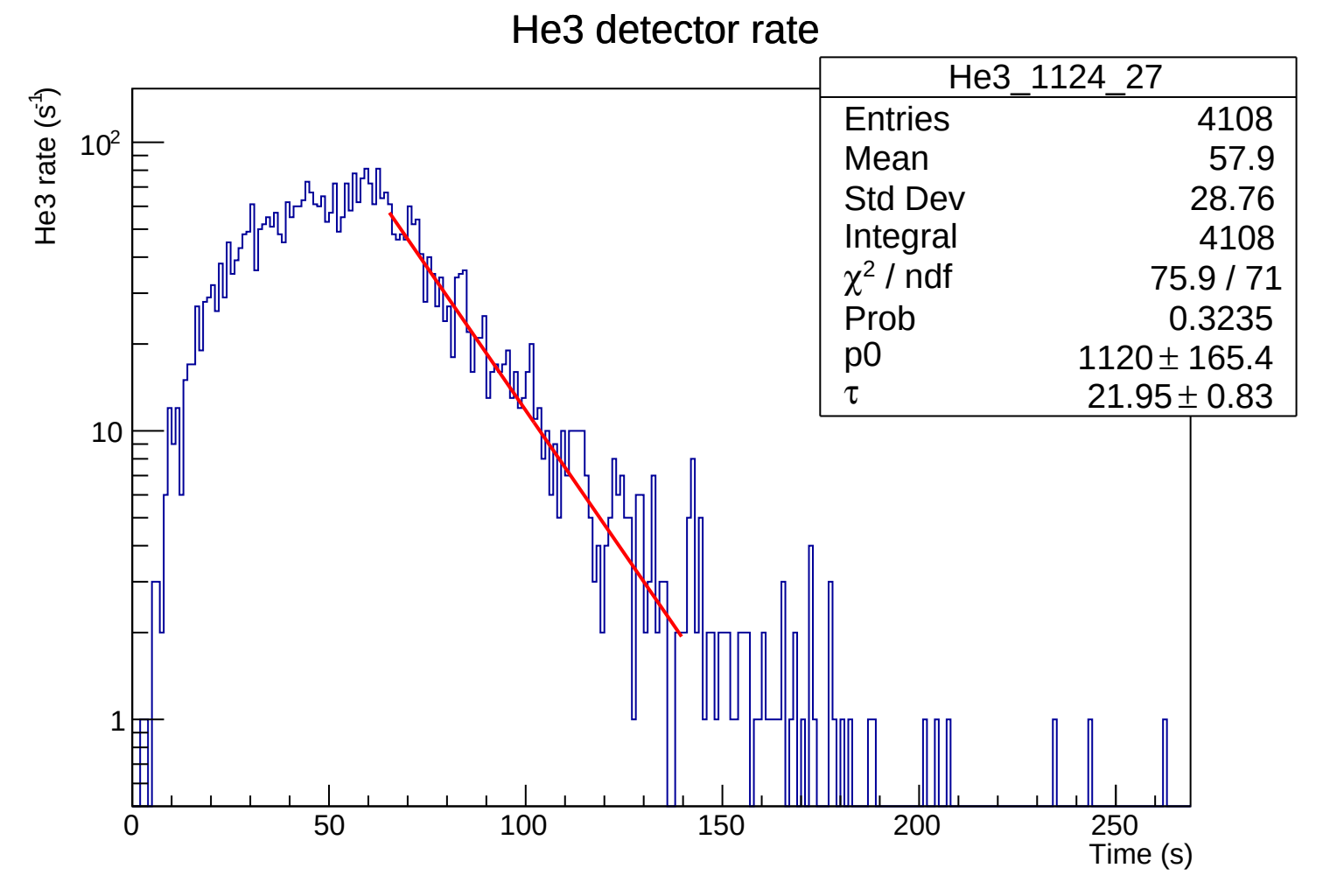

He3 detector rate
He3_1124_21
Entries 4175
Mean 58.06
Std Dev 29.99
Integral 4175
χ² / ndf 86.2 / 111
Prob 0.9609
p0 944.7 ± 121.7
τ 23.13 ± 0.77
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

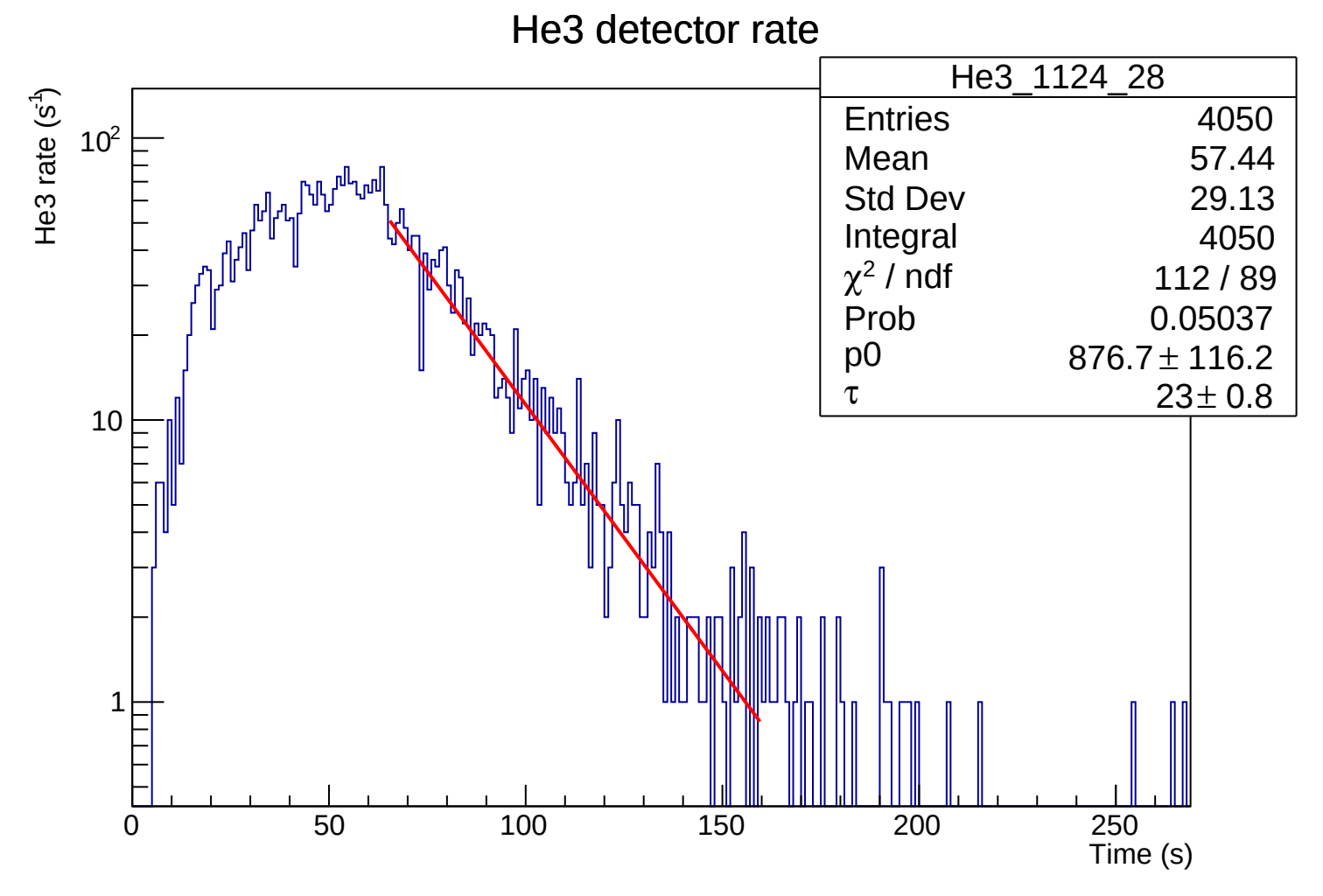

He3 detector rate
He3_1124_23
Entries 4235
Mean 58.09
Std Dev 29.14
Integral 4235
χ² / ndf 100.7 / 89
Prob 0.1861
p0 1256 ± 185.4
τ 21.48 ± 0.79
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

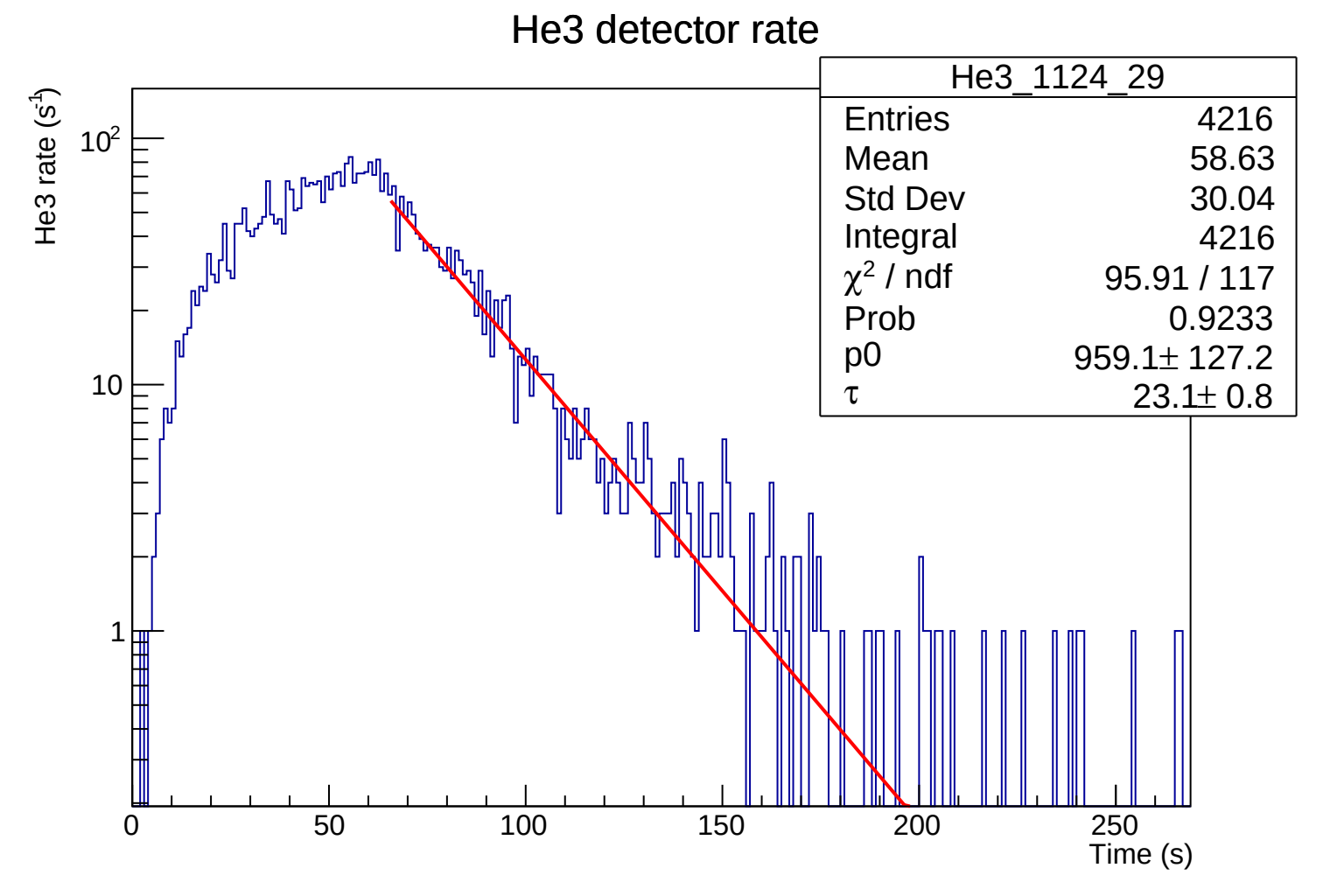

He3 detector rate
He3_1124_24
Entries 4117
Mean 57.72
Std Dev 28.87
Integral 4117
χ² / ndf 7.046 / 13
Prob 0.8998
p0 2011± 1313.0
τ 18.82 ± 3.23
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

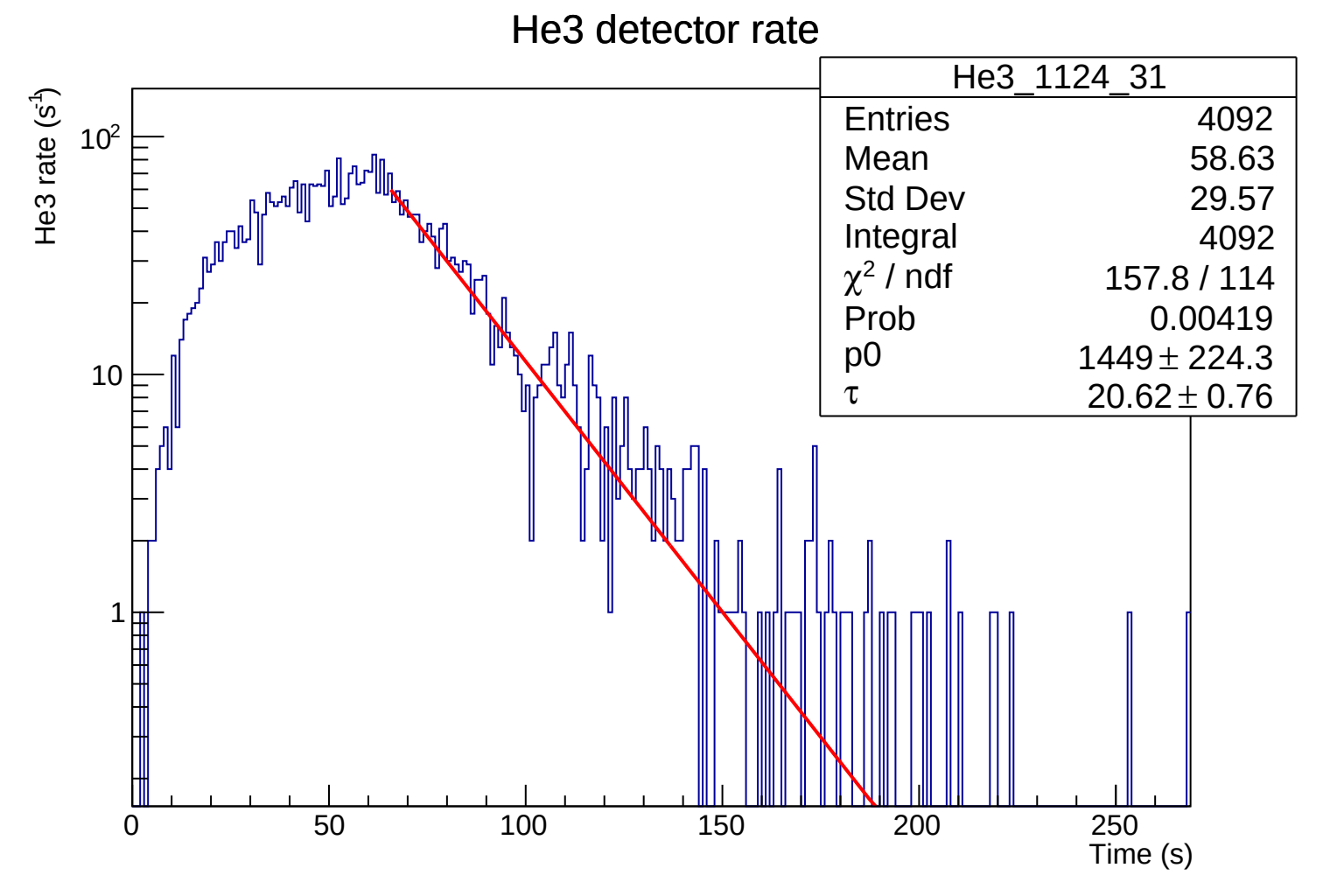

He3 detector rate
He3_1124_25
Entries 4254
Mean 57.75
Std Dev 28.8
Integral 4254
χ² / ndf 122.5 / 108
Prob 0.1617
p0 1281± 192.4
τ 21.51± 0.80
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

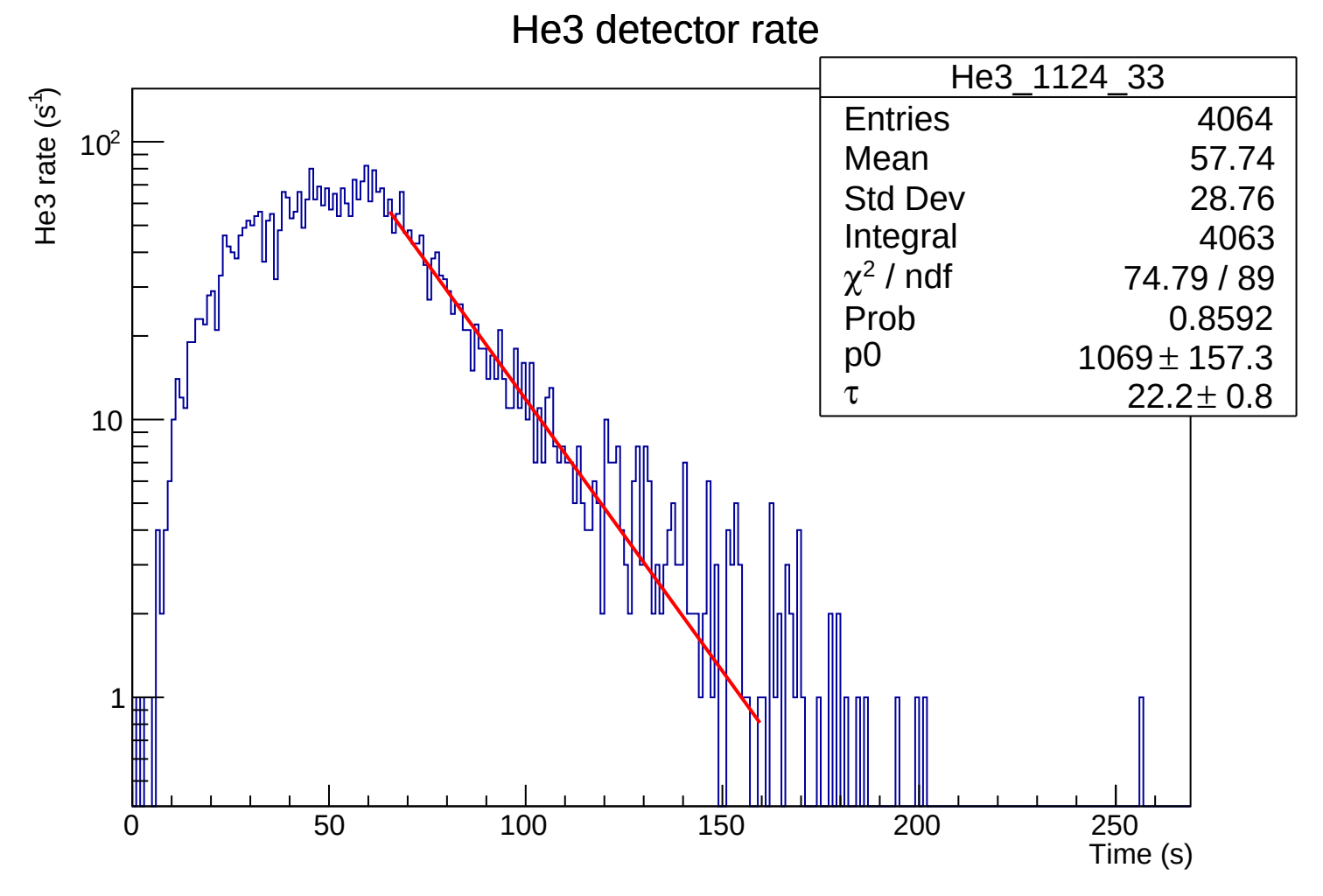

He3 detector rate
He3_1124_26
Entries 4087
Mean 57.73
Std Dev 29.58
Integral 4087
χ² / ndf 37.69 / 33
Prob 0.2632
p0 947.3 ± 244.8
τ 22.98 ± 1.73
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

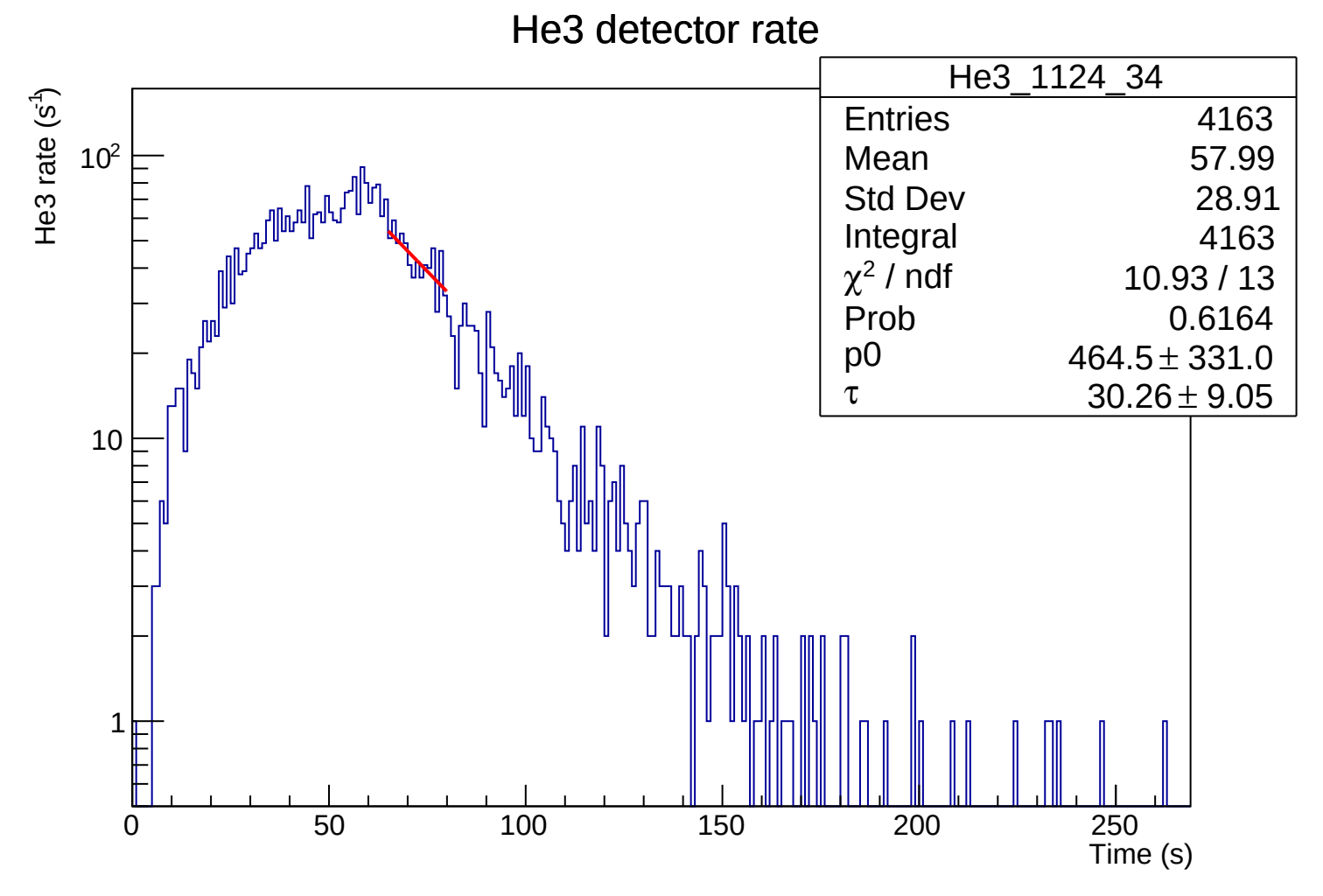

He3 detector rate
He3_1124_27
Entries 4108
Mean 57.9
Std Dev 28.76
Integral 4108
χ² / ndf 75.9 / 71
Prob 0.3235
p0 1120 ± 165.4
τ 21.95 ± 0.83
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_1124_28
Entries 4050
Mean 57.44
Std Dev 29.13
Integral 4050
χ² / ndf 112 / 89
Prob 0.05037
p0 876.7 ± 116.2
τ 23 ± 0.8
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_1124_29
Entries 4216
Mean 58.63
Std Dev 30.04
Integral 4216
χ² / ndf 95.91 / 117
Prob 0.9233
p0 959.1± 127.2
τ 23.1± 0.8
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_1124_31
Entries 4092
Mean 58.63
Std Dev 29.57
Integral 4092
χ² / ndf 157.8 / 114
Prob 0.00419
p0 1449 ± 224.3
τ 20.62 ± 0.76
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_1124_33
Entries 4064
Mean 57.74
Std Dev 28.76
Integral 4063
χ² / ndf 74.79 / 89
Prob 0.8592
p0 1069 ± 157.3
τ 22.2 ± 0.8
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)


He3 detector rate
He3_1124_34
Entries 4163
Mean 57.99
Std Dev 28.91
Integral 4163
χ² / ndf 10.93 / 13
Prob 0.6164
p0 464.5 ± 331.0
τ 30.26 ± 9.05
He3 rate (s⁻¹)
10²
10
1
0
50
100
150
200
250
Time (s)

Average lifetime from He3 data:

τ = 21.9263827363 +/- 0.00206521009649 s