

UCN-count-to-monitor ratio

χ^2 / ndf	9.167 / 6
Prob	0.1644
p0	12.67 ± 0.1105
τ	40.44 ± 0.3336

10

1

0

20

40

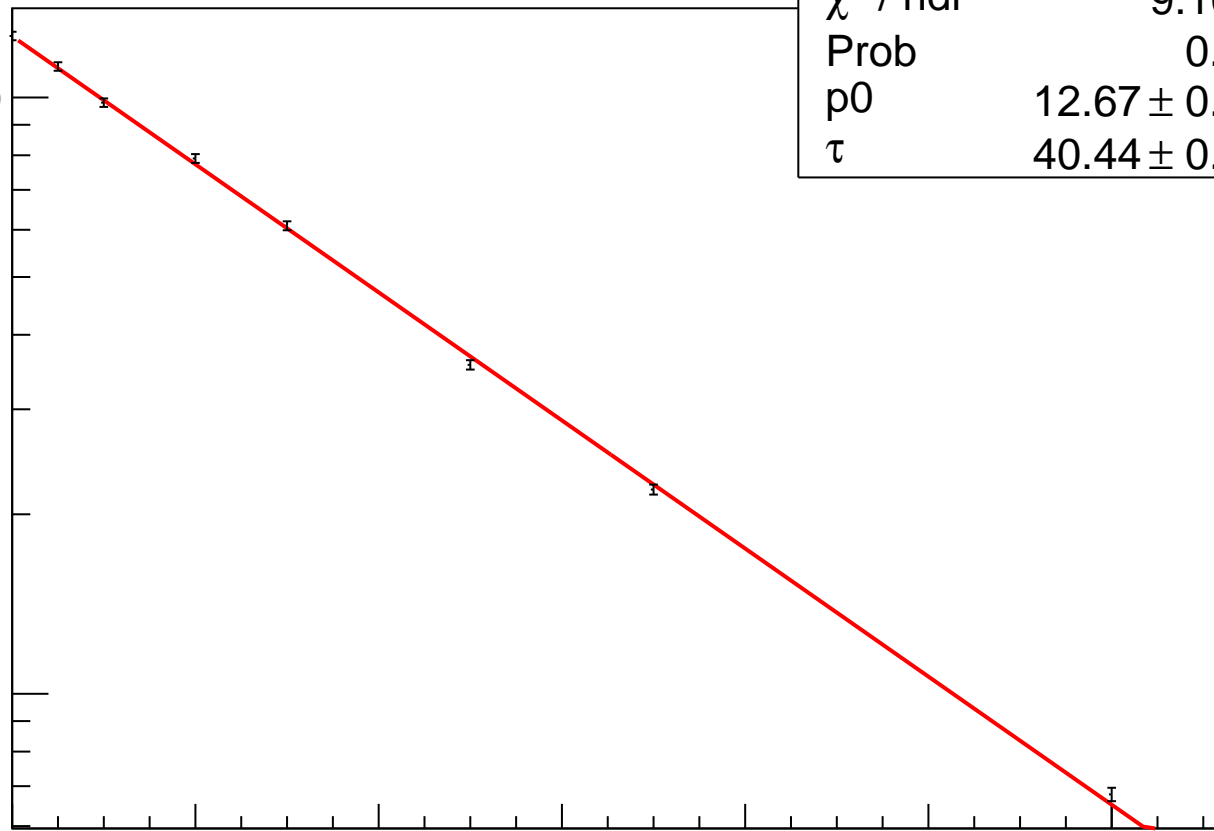
60

80

100

120

Storage time (s)



UCN-count-to-monitor ratio

χ^2 / ndf	9.162 / 5
Prob	0.1028
p0	12.66 ± 0.1304
τ	40.45 ± 0.3636

10

1

0

20

40

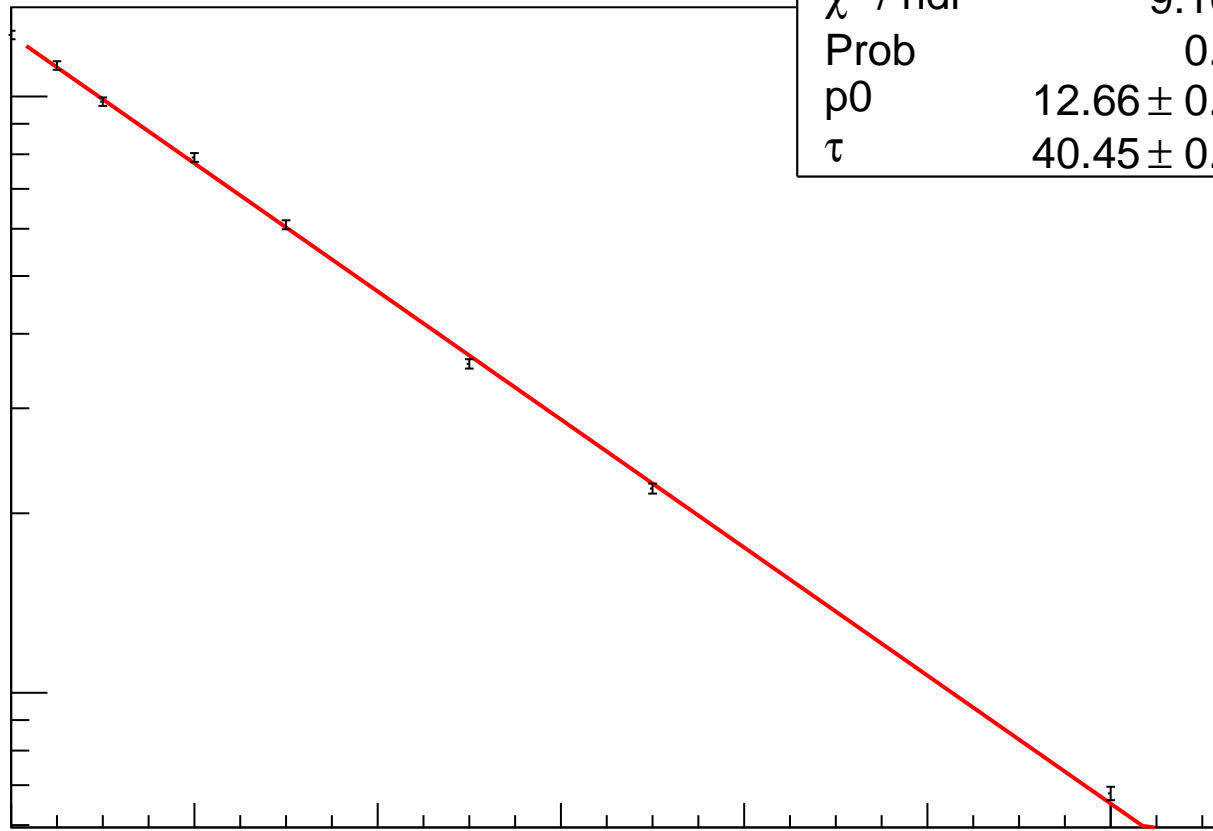
60

80

100

120

Storage time (s)



UCN-count-to-monitor ratio

10

1

0

20

40

60

80

100

120

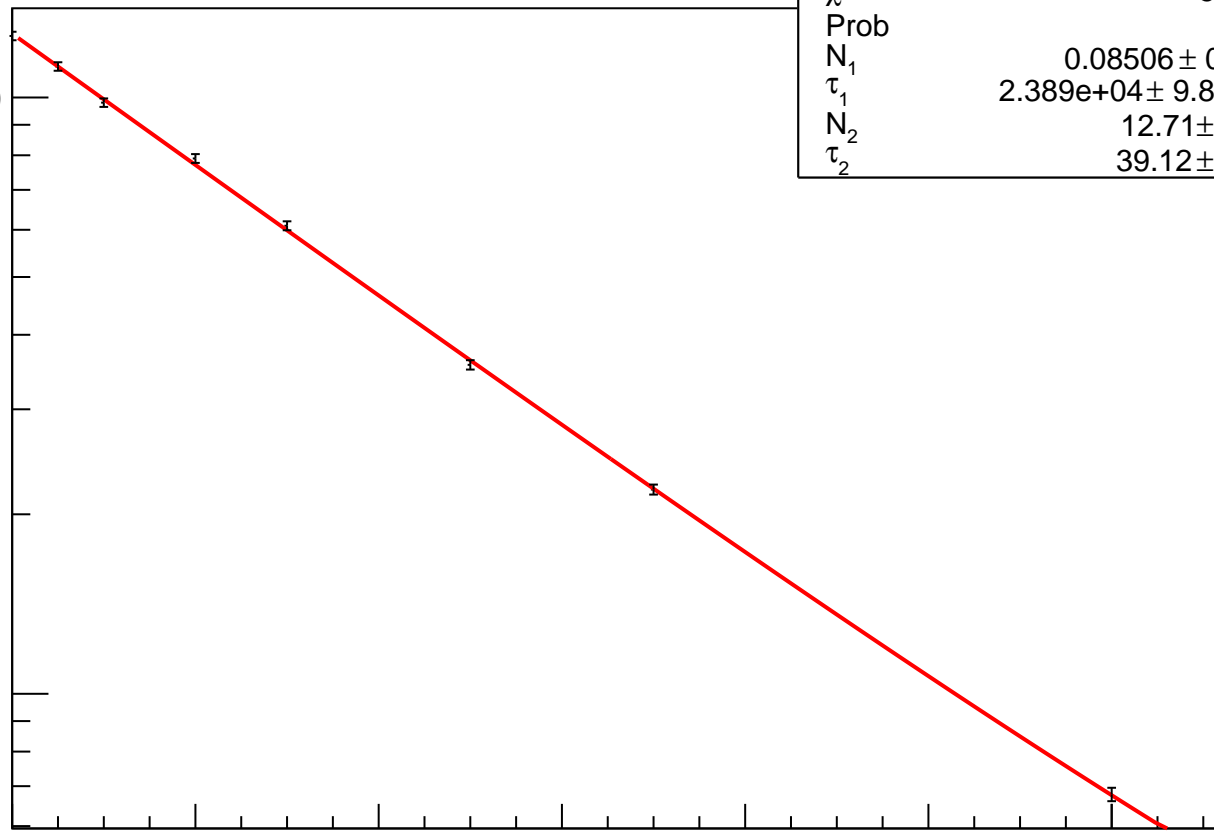
Storage time (s)

 χ^2 / ndf

5.019 / 4

Prob

0.2854

 N_1 0.08506 ± 0.04438 τ_1 $2.389\text{e}+04 \pm 9.861\text{e}+05$ N_2 12.71 ± 0.1103 τ_2 39.12 ± 0.6847 

TCN18-032 (source-IV2, with elbow) (single exponential fit + background, unnormalized)

UCN count

10^4

0

20

40

60

80

100

120

Storage time (s)

χ^2 / ndf

27.09 / 5

Prob

$5.487\text{e-}05$

p0

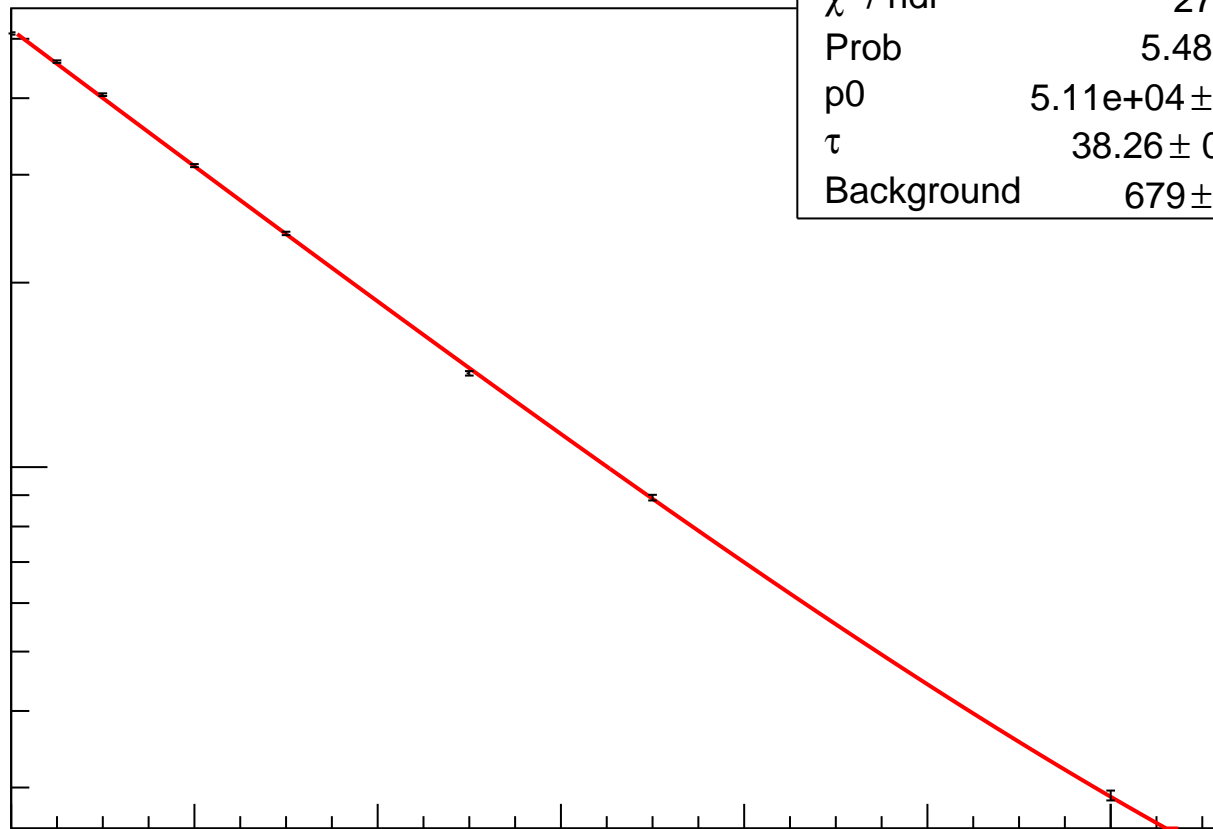
$5.11\text{e+}04 \pm 147.4$

τ

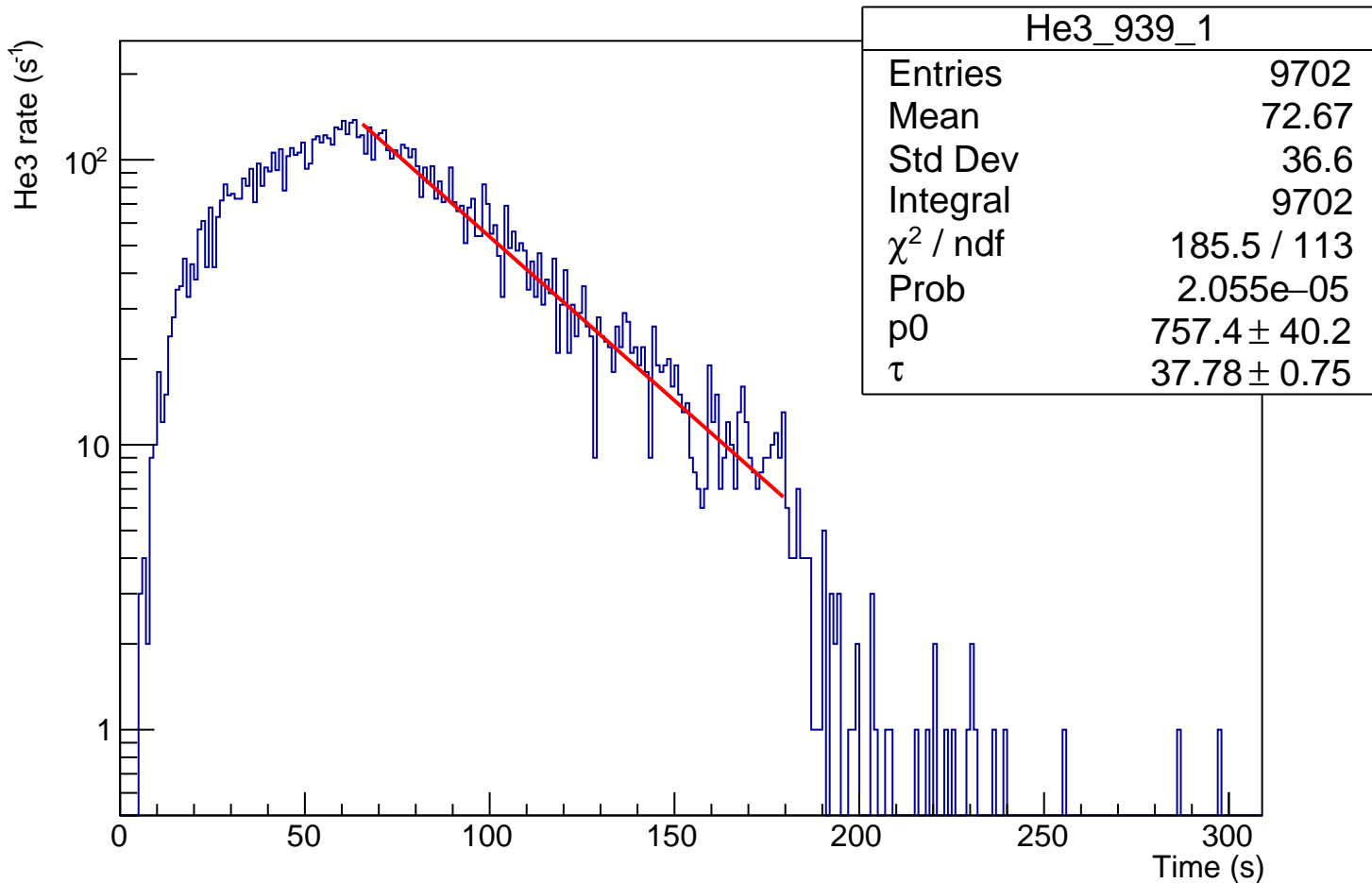
38.26 ± 0.2978

Background

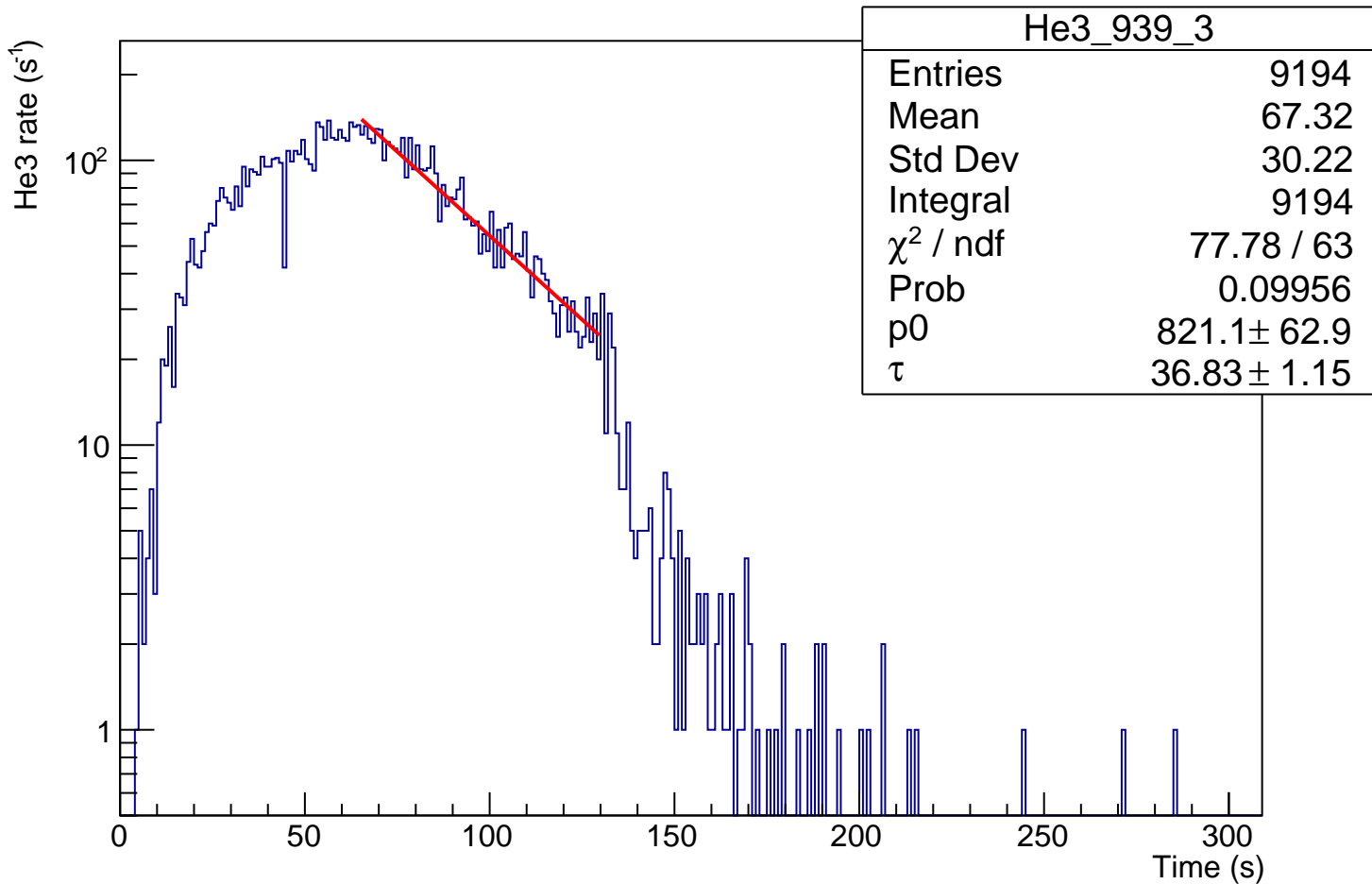
679 ± 92.34



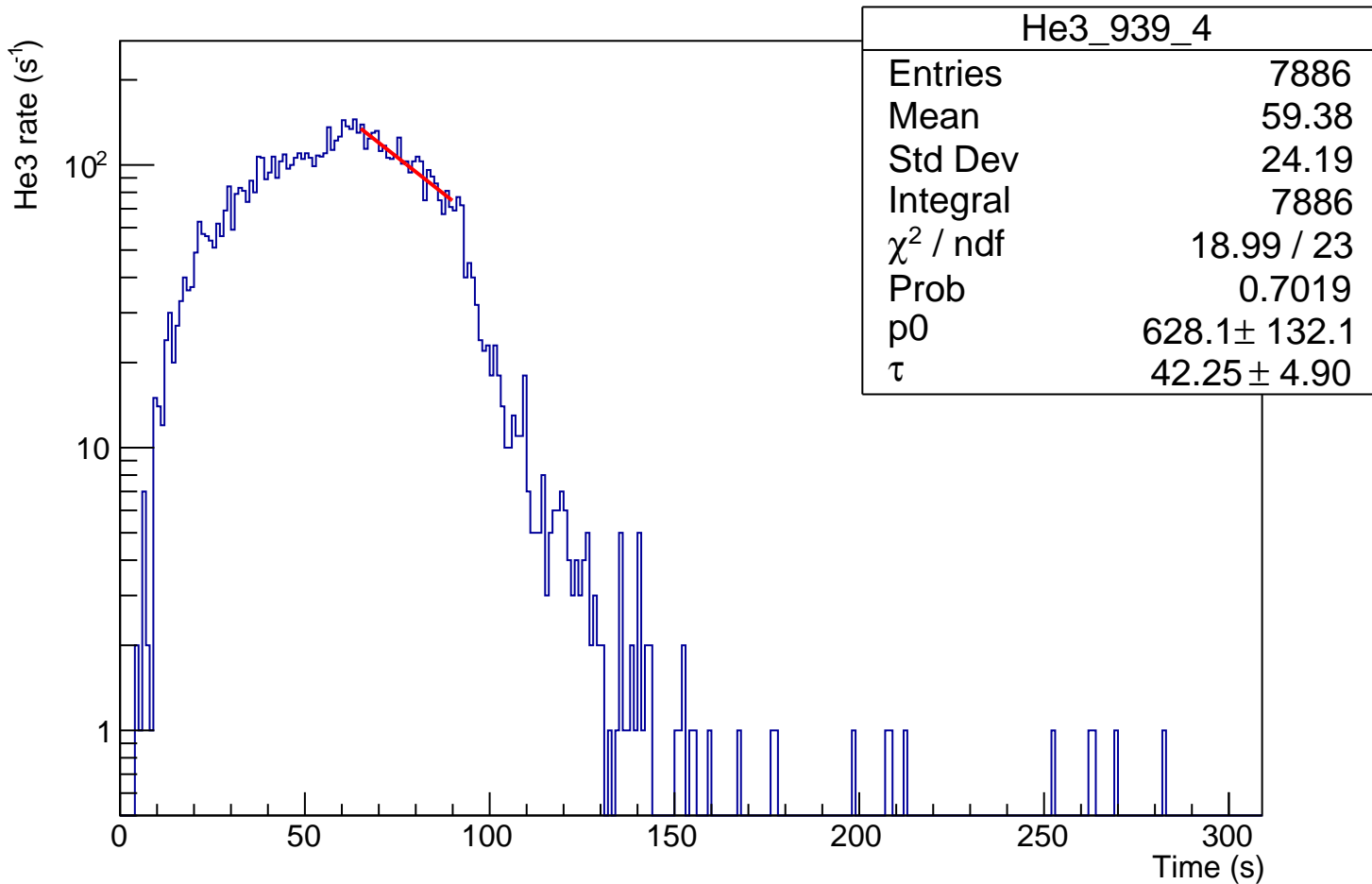
He3 detector rate



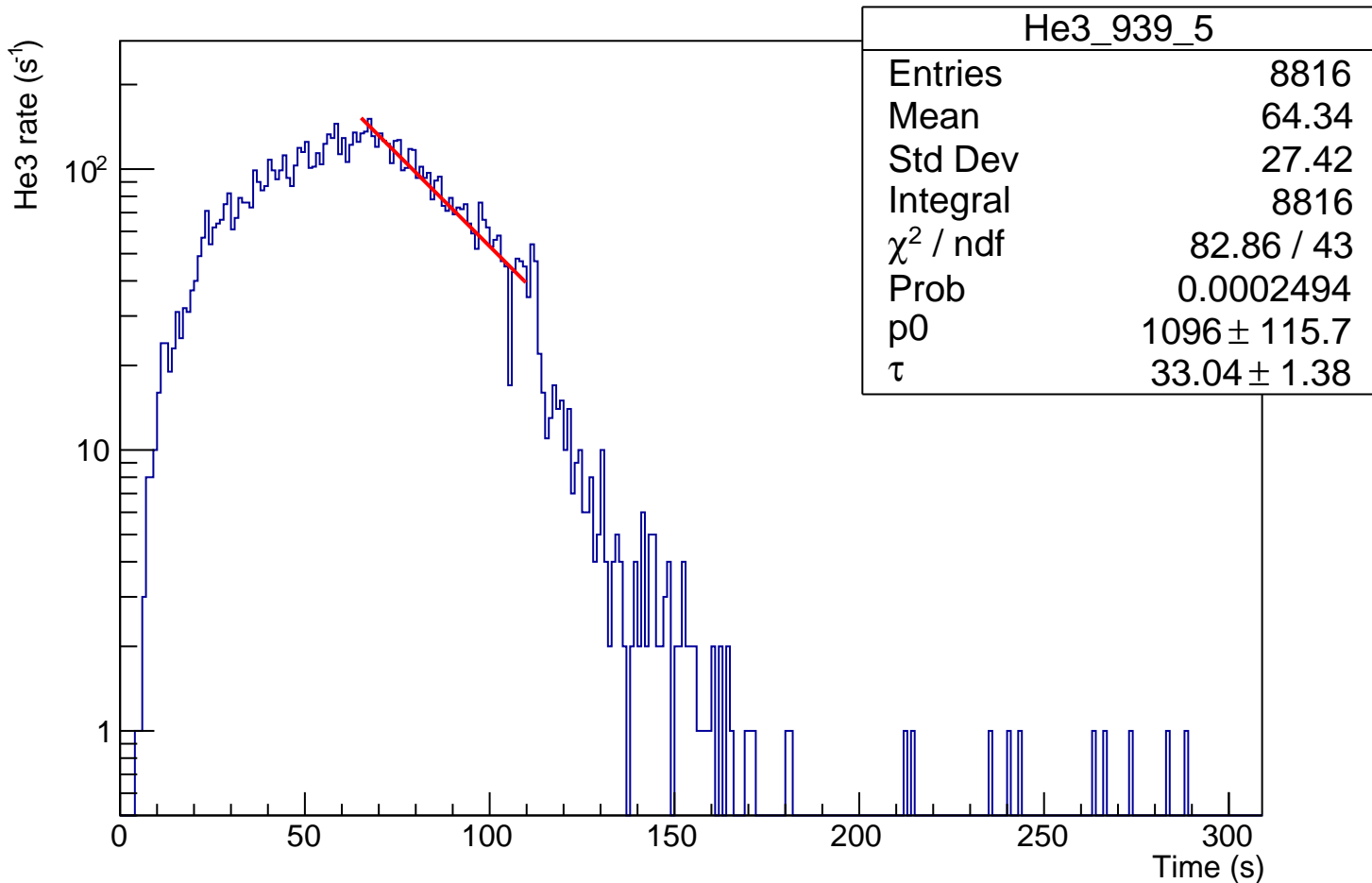
He3 detector rate



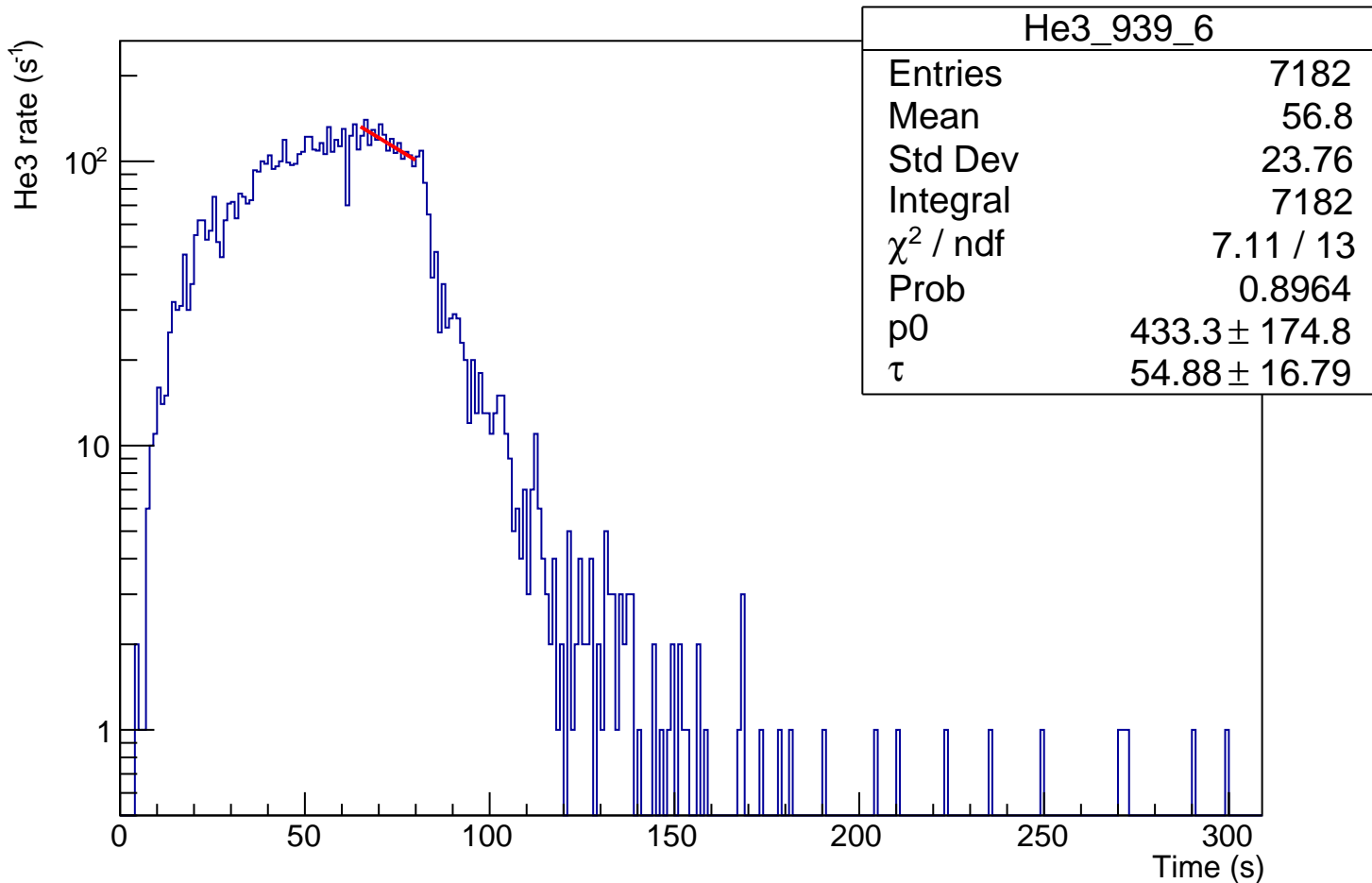
He3 detector rate



He3 detector rate



He3 detector rate



Average lifetime from He3 data:

$$\tau = 36.8249837976 \pm 0.10418422577 \text{ s}$$