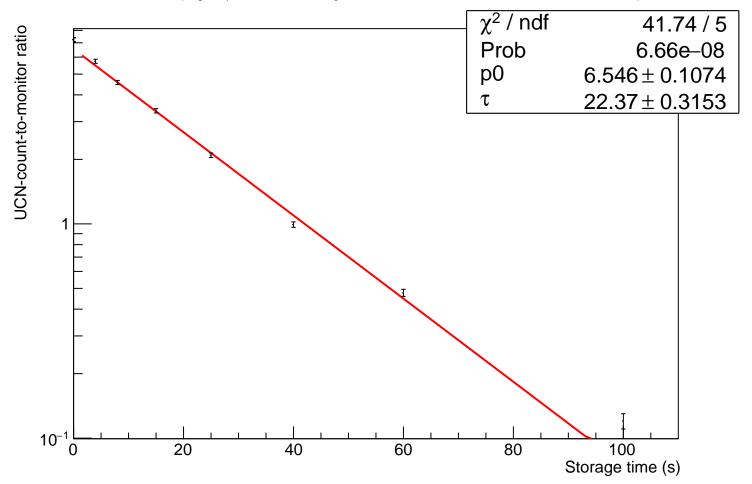
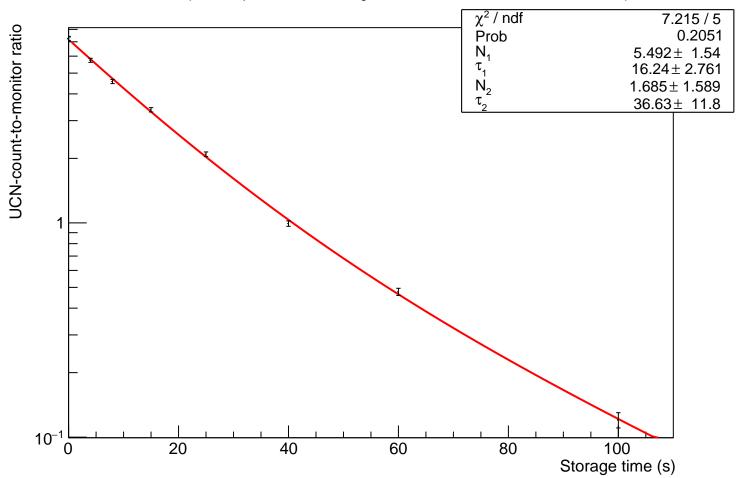
χ^2 / ndf 61.7 / 7 UCN-count-to-monitor ratio Prob 6.902e-11 p0 6.89 ± 0.07879 21.61 ± 0.2551 10^{-1} 100 20 40 60 80 Storage time (s)

TCN18-059 (single exponential fit, with background subtracted, normalized to monitor detector)



TCN18-059 (double exponential fit, with background subtracted, normalized to monitor detector)



TCN18-059 (single exponential fit + background, unnormalized) χ^2 / ndf 47.2 / 6 **UCN** count Prob 1.708e-08 p0 $1.71e+04 \pm 76.93$ 19.53 ± 0.1869 10^{4} Background 437.8 ± 23.71 10³ 100 20 40 60 80 Storage time (s)

He3 detector rate He3_1143_1 He3 rate (\bar{s}^1) **Entries** 3751 10^{2} Mean 53.97 25.6 Std Dev Integral 3751 χ^2 / ndf 96.33 / 83 Prob 0.1504 p0 2299 ± 422.8 10 17.45 ± 0.67

150

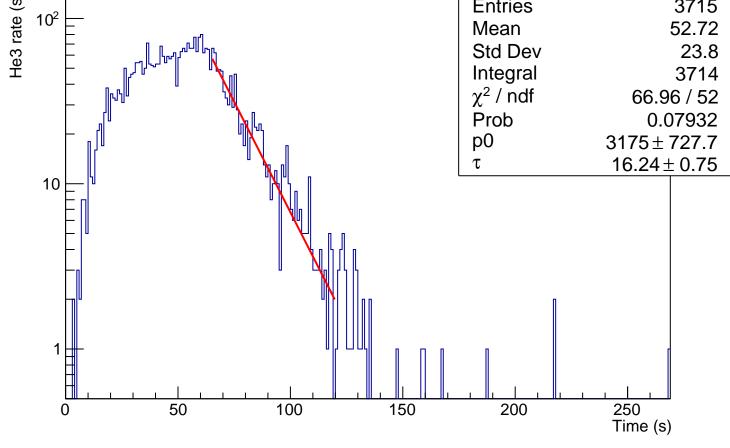
50

100

200

250 Time (s)

He3 detector rate He3_1143_3 He3 rate (s¹) **Entries** 3715 10^{2} Mean 52.72 Std Dev 23.8 Integral 3714 χ^2 / ndf 66.96 / 52 Prob 0.07932 p0 3175 ± 727.7 16.24 ± 0.75 10



He3 detector rate He3_1143_4 He3 rate (\bar{s}^1) **Entries** 3449 10^{2} 48.5 Mean Std Dev 20.5 Integral 3449 χ^2 / ndf 26.75 / 18 Prob 0.08373 p0 1723 ± 1053.8 18.06 ± 2.72 10 50 100 150 200 250

Time (s)

He3 detector rate He3_1143_5 He3 rate (s^{-1}) **Entries** 3686 10^{2} Mean 50.97 Std Dev 22.42 Integral 3686 χ^2 / ndf 31.71 / 33 Prob 0.5313 p0 1014 ± 311.4 20.93 ± 1.72 10 100 50 150 200 250 Time (s)

τ = 17.2557434092 +/- 0.0510356818655 s

Average lifetime from He3 data: