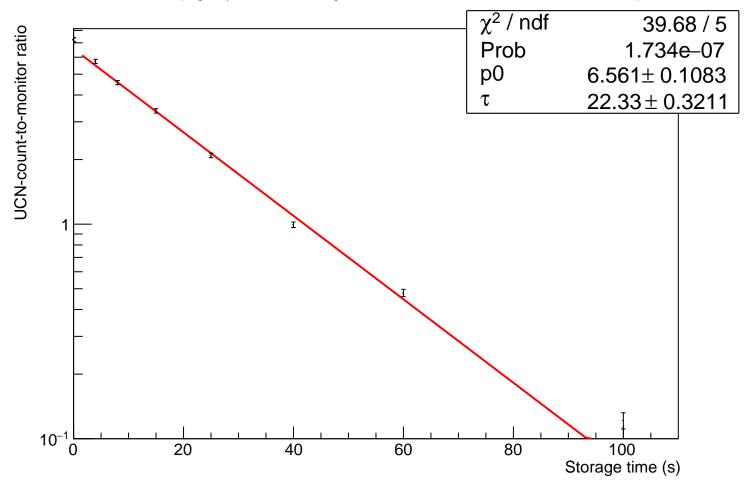
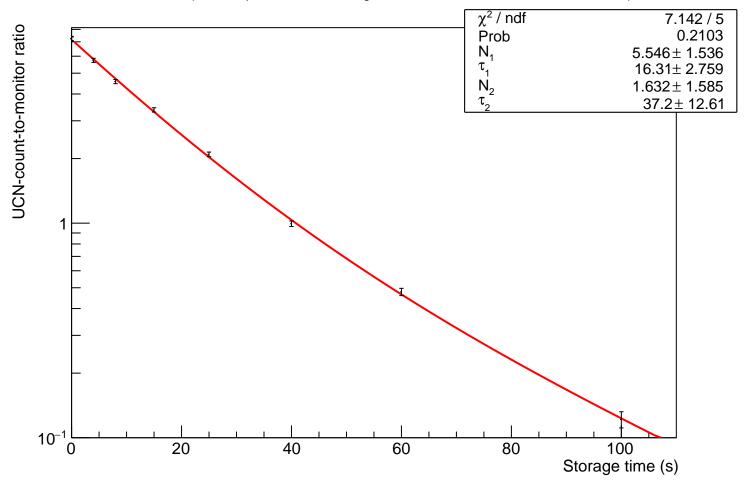
TCN18-059 (single exponential fit, with background subtracted, normalized to monitor detector)  $\chi^2$  / ndf 58.78 / 7 UCN-count-to-monitor ratio Prob 2.647e-10 p0  $6.9 \pm 0.07904$  $21.57 \pm 0.2582$  $10^{-1}$ 20 40 60 80 100 Storage time (s)



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



TCN18-059 (single exponential fit + background, unnormalized)  $\chi^2$  / ndf 47.2 / 6 **UCN** count Prob 1.708e-08 p0  $1.71e+04 \pm 76.93$  $19.53 \pm 0.1869$  $10^{4}$ Background  $437.8 \pm 23.71$ 10<sup>3</sup> 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  $\chi^2$  / ndf 96.33 / 83 Prob 0.1504 p0  $2299 \pm 422.8$ 10  $17.45 \pm 0.67$ 

150

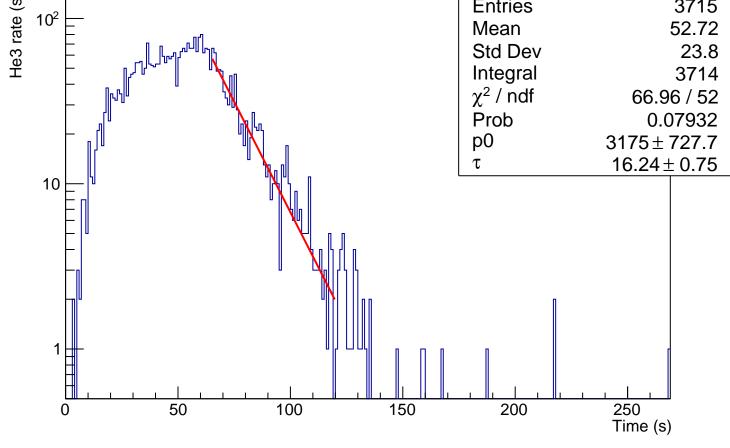
50

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  $\chi^2$  / ndf 66.96 / 52 Prob 0.07932 p0  $3175 \pm 727.7$  $16.24 \pm 0.75$ 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  $\chi^2$  / ndf 26.75 / 18 Prob 0.08373 p0  $1723 \pm 1053.8$  $18.06 \pm 2.72$ 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  $\chi^2$  / ndf 31.71 / 33 Prob 0.5313 p0  $1014 \pm 311.4$  $20.93 \pm 1.72$ 10 100 50 150 200 250 Time (s)

## $\tau$ = 17.2557434092 +/- 0.0510356818655 s

**Average lifetime from He3 data:**