# Total capture rates for ^{76}Se (v.2)

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Main idea of the analysis

- Main trigger is **C1C2** coincidence
  ($|T_{C1} - T_{C2}| < 100$ ns)

- No **C0** and/or **C3** event during special time window
  (9120 ns = 12000 - 2*1440 ns)

- No any **C#** event at 2*1440ns before main trigger

- Fit selected gamma lines at correlated spectra after **C1C2** with 12 ns steps by **"gaus+pol1(3)"** function

- Plot histograms for intensities time evolution

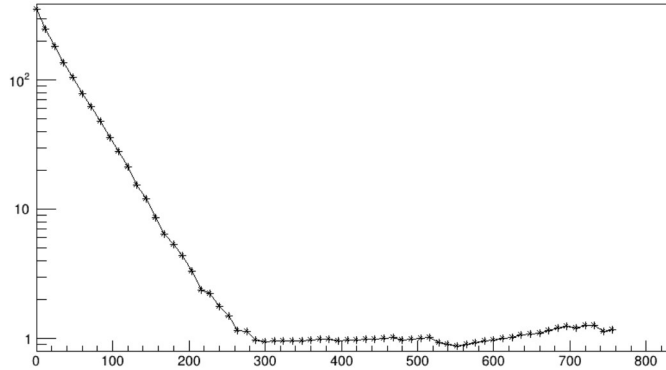- Fit left tail of the time evolution data with **"expo+pol0(2)"** model

Time evolution fit
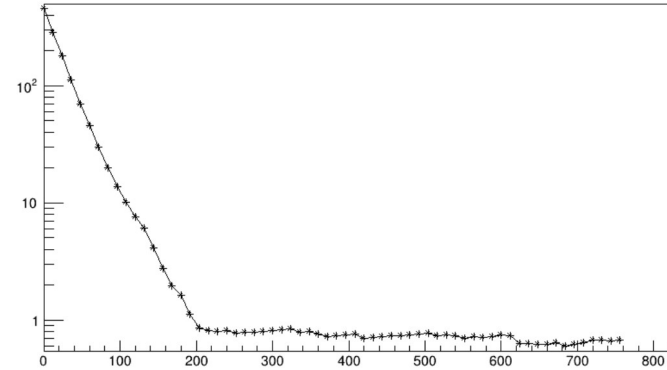## (red – real fit, green – extrapolation over time range with hardware distortion after 1000ns)
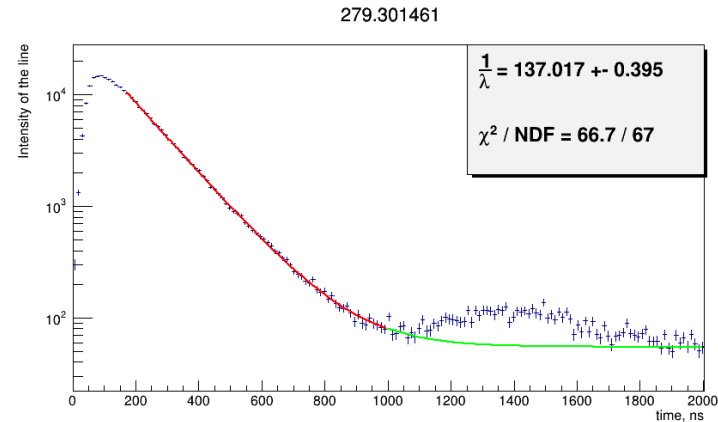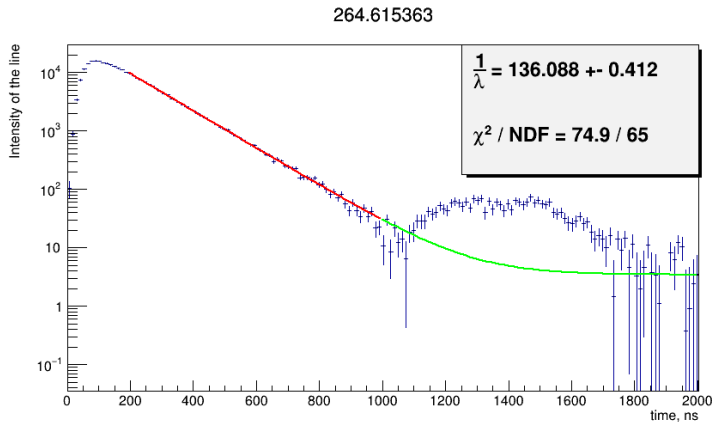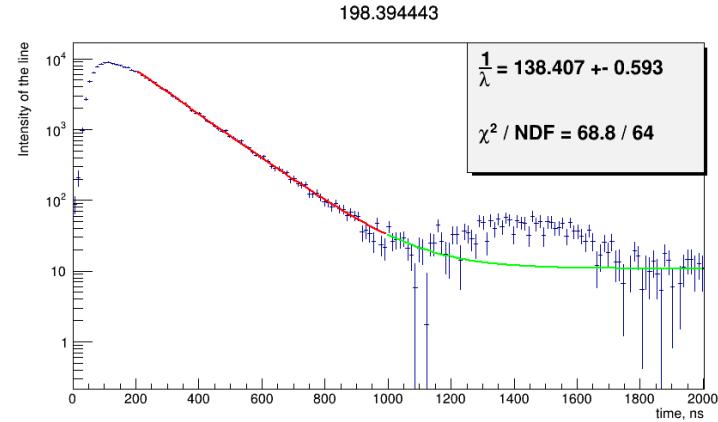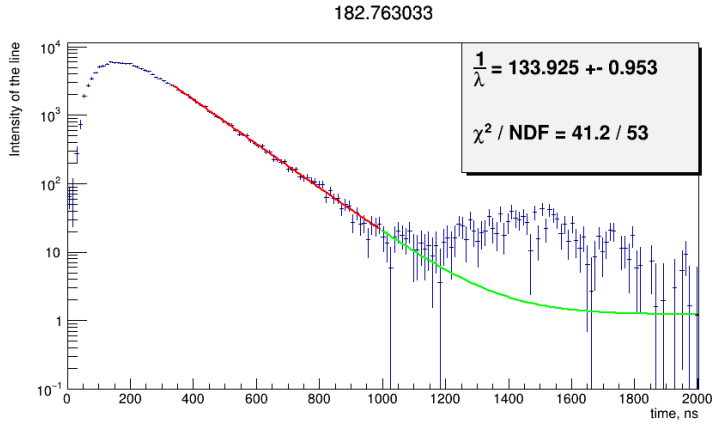
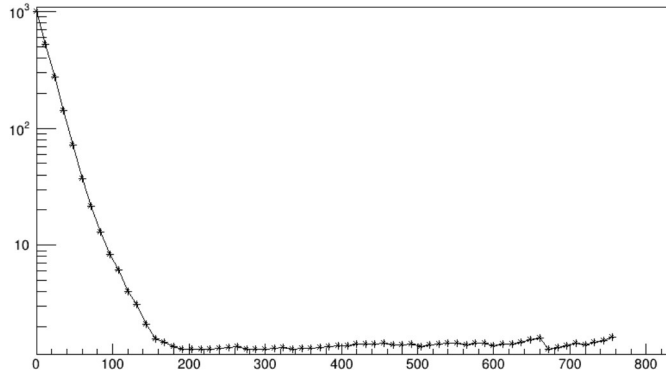# χ^2 / NDF vs left border of the fit range (GE1, right border =1000ns)
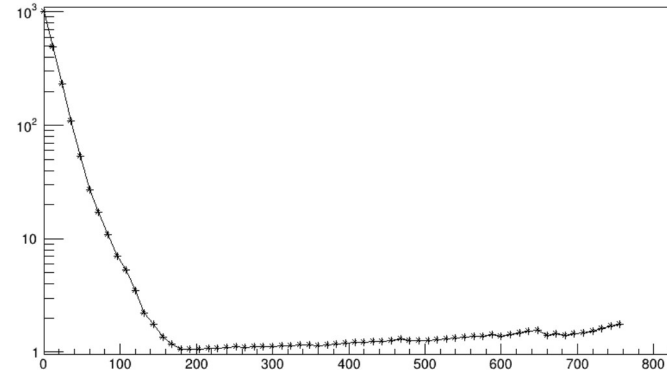
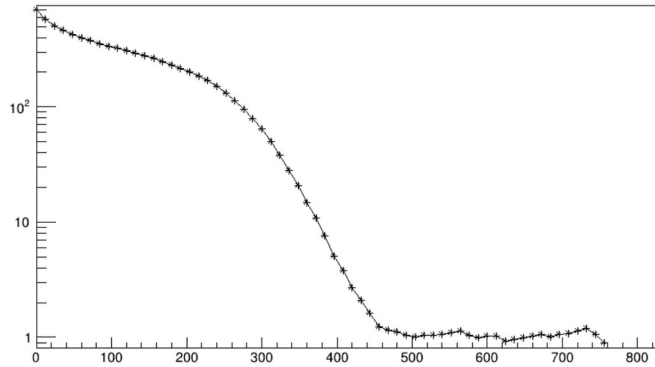Ge1 182.923996 graph

Ge1 198.539482 graph

Ge1 264.592711 graph

Ge1 279.216296 graph

χ^2 / NDF vs left border of the fit range
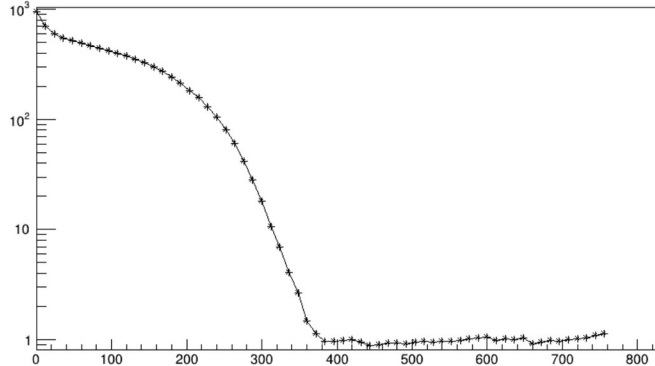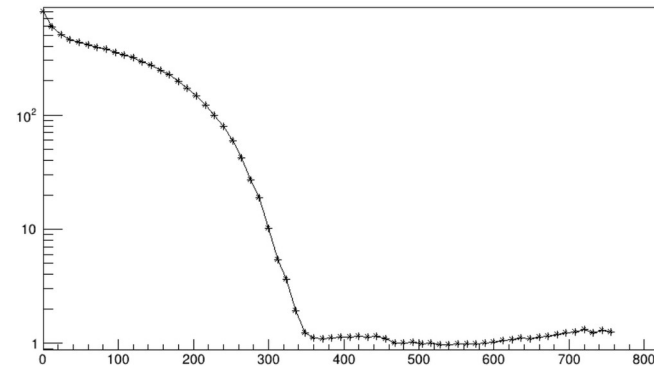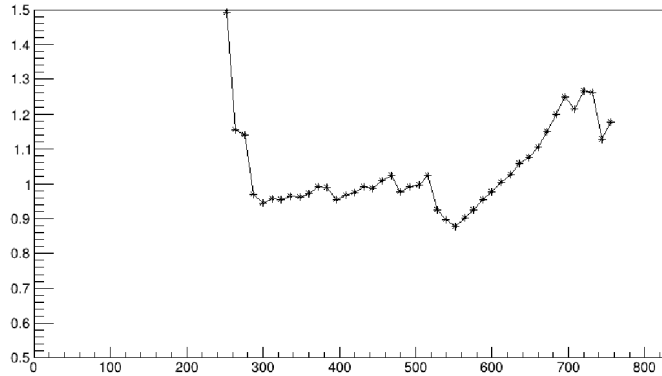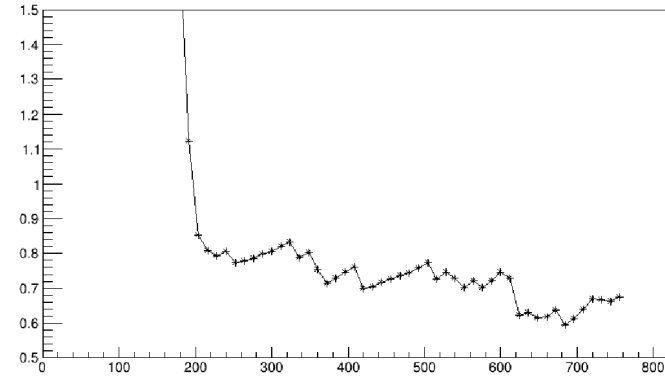## (GE2 – problems with time alignment at MIDAS, right border = 1000ns)
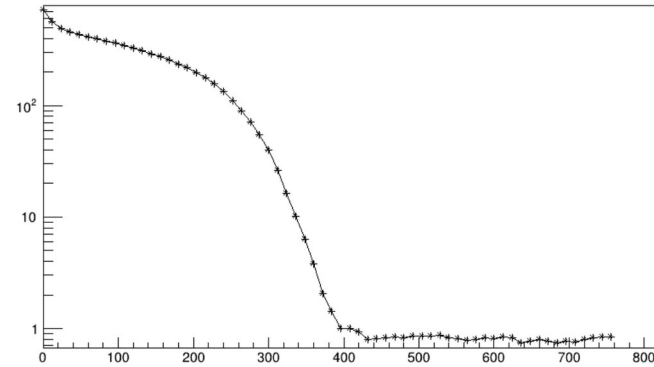
χ^2 / NDF vs left border of the fit range
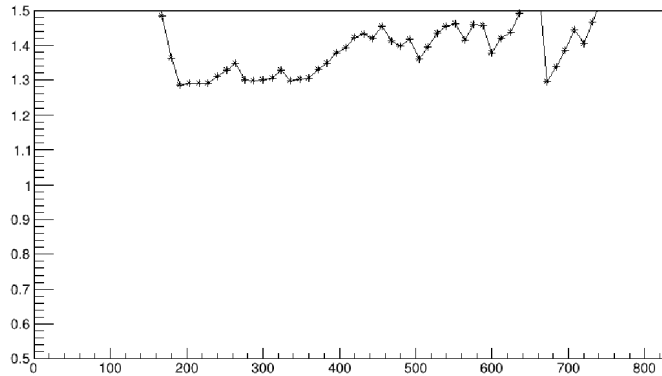## (Ge1 zoom on,
right border = 1000ns)
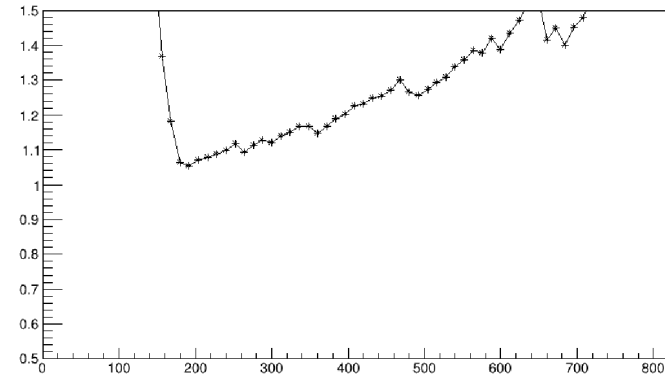

Ge1 182.923996 graph

Ge1 198.539482 graph

Ge1 264.592711 graph

Ge1 279.216296 graph

Preliminary result for ^{76}Se total capture rate
(over 8 Ge detectors and 4 gamma-lines, teoretical estimation for 99% ^{76}Se ~ 137.29 ns):

$$\frac{1}{\lambda_{total}} = 137.030 \pm 0.046_{stat} \; ns$$