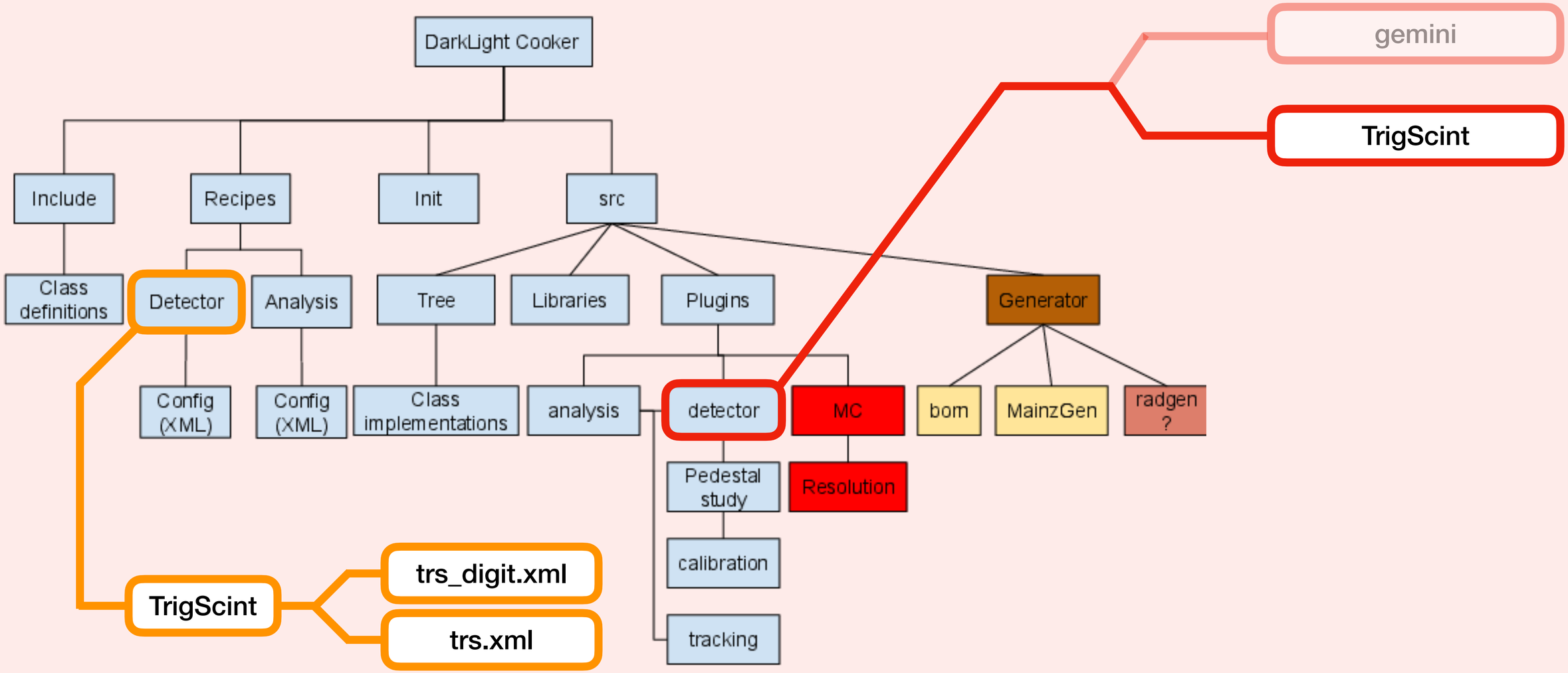
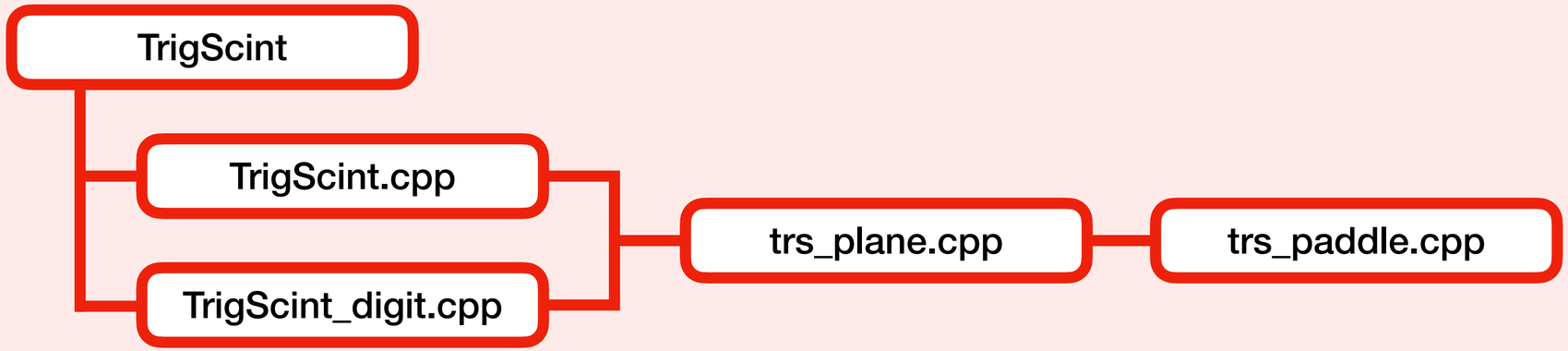
Trigger Digitization and Analysis

- Code structure:



Trigger Digitization and Analysis

- Code structure:



Parameters are set via Init/TrigScint.xml and stored to each paddle before startup:

load_sc_calibration: set resolution, time alignment etc.

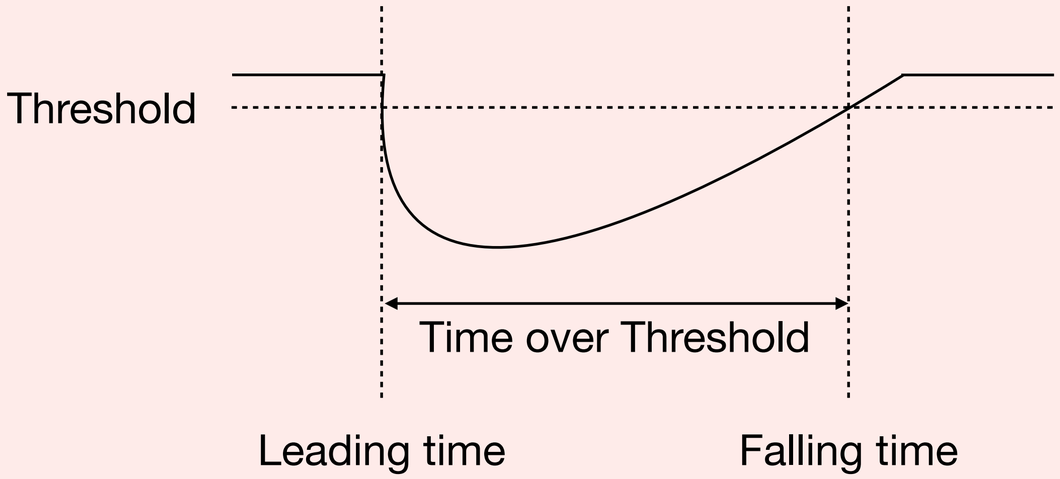
load_tdc_calibration: set time range of trigger events within trigger window

Trigger Digitization and Analysis

- Analysis:
  - Leading edge and trailing edge are recorded. Time over threshold is used for time-walk correction.

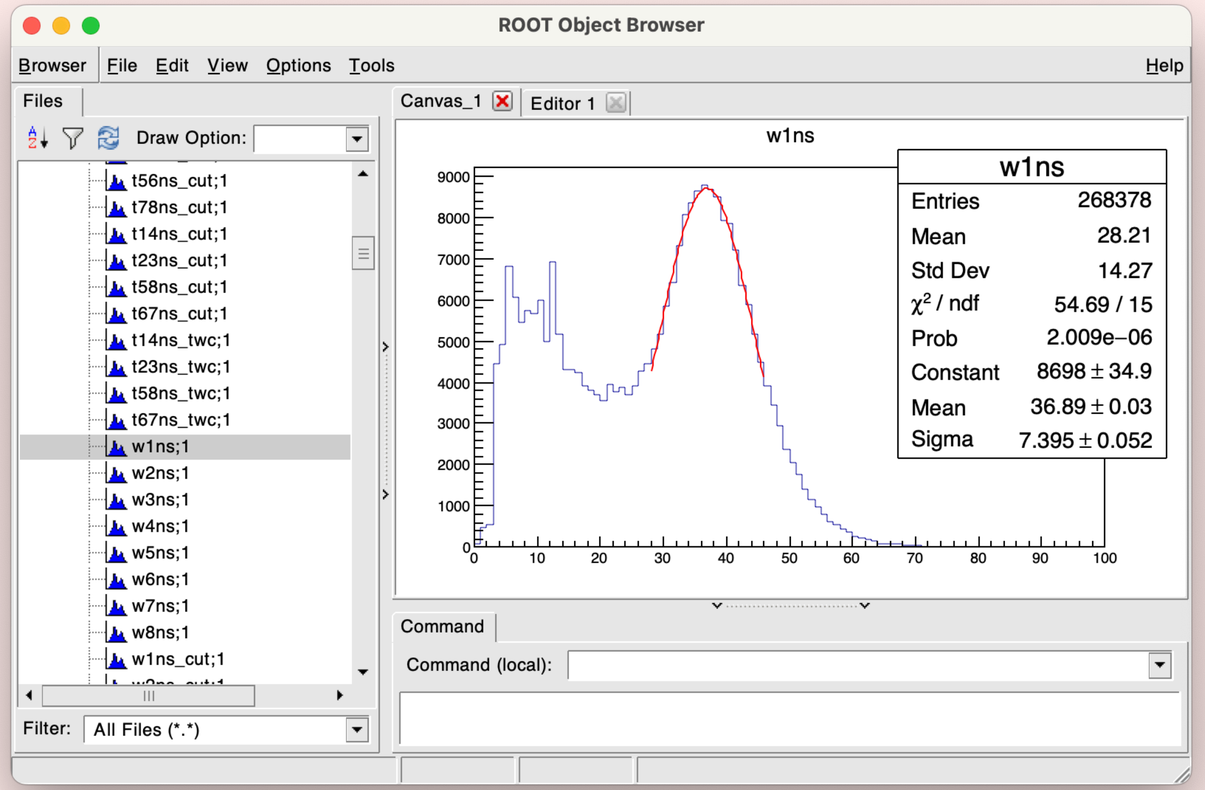
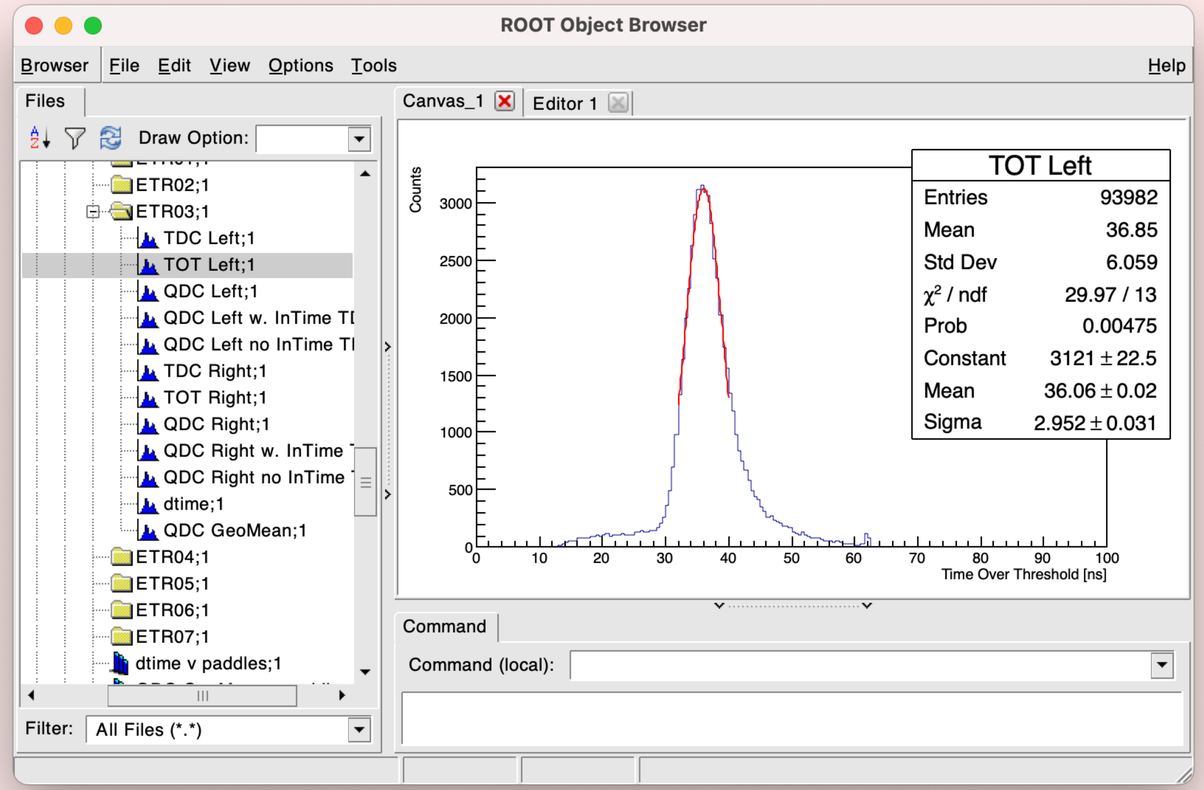
- Simulation:
  - Leading time: randomize simulated time using Gaussian with σ = 160 ps
  - Trailing time: leading + time over threshold, then randomized using Gaussian with σ = 160 ps
  - Time over Threshold: Sqrt(energy deposited with added resolution * factor)

Need more tuning!



Trigger Digitization and Analysis

Cosmic Data



Simulation