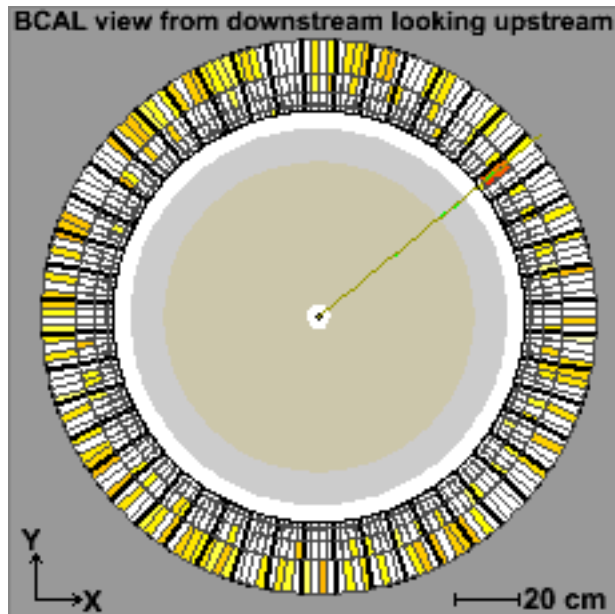
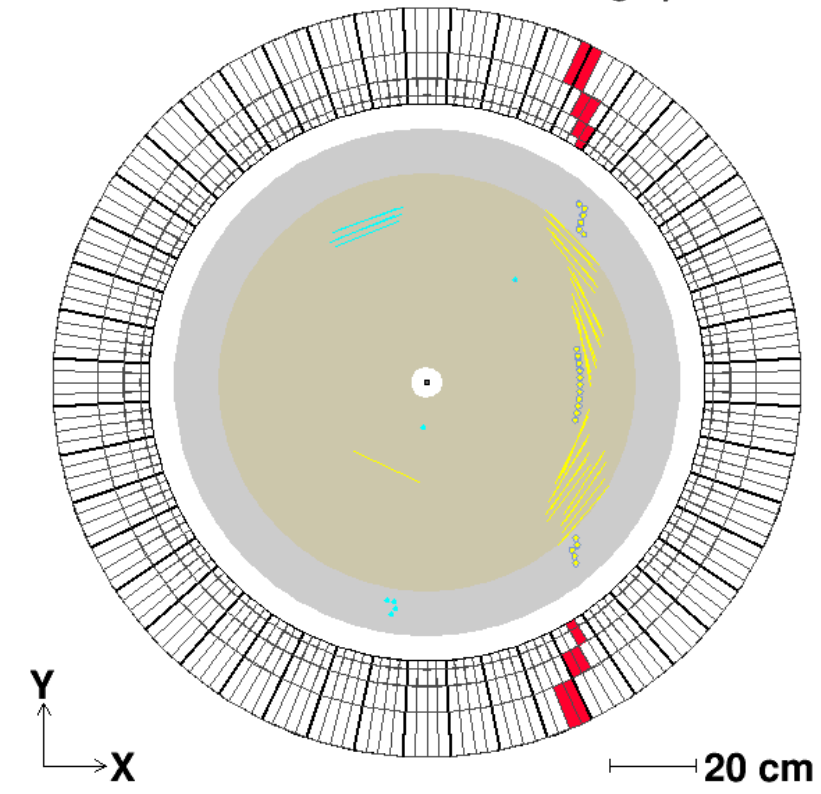


Too many dark hits simulated

BCAL view from downstream looking upstream



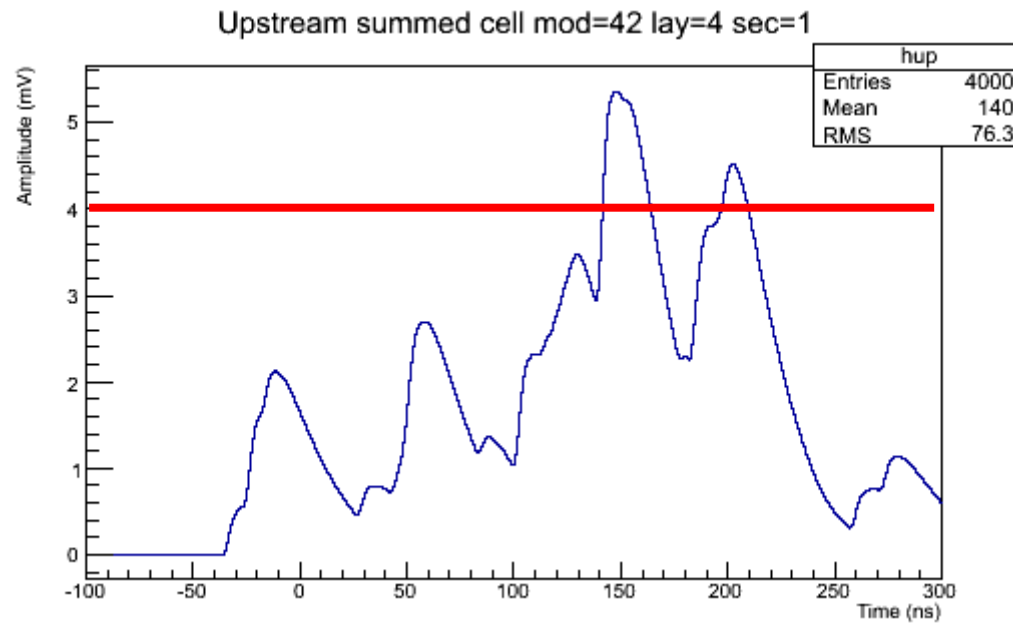
Simulation (single-photon)



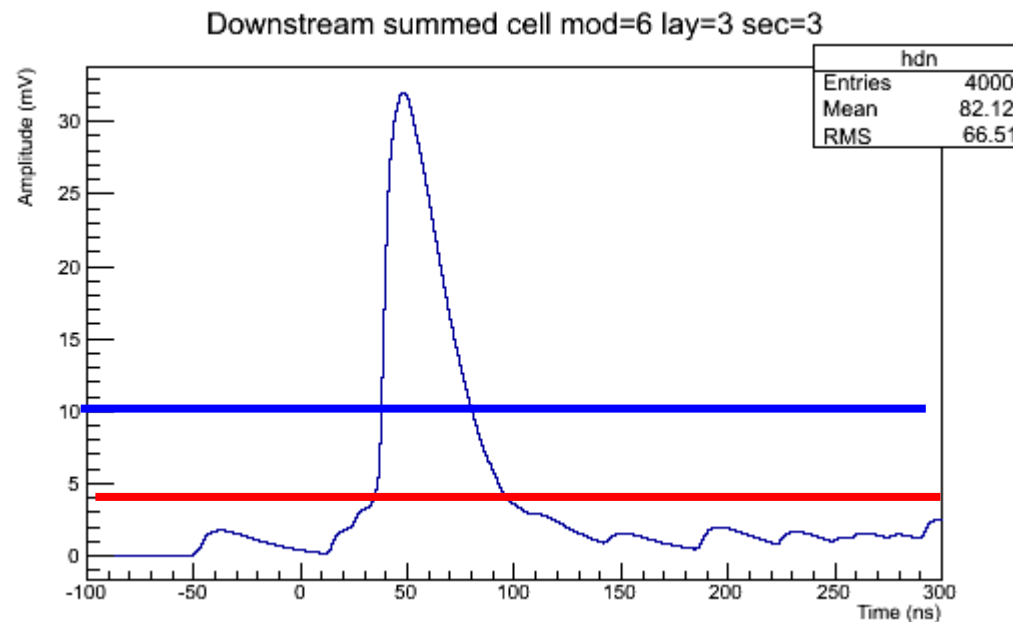
Cosmic data

What is the simulation doing?

Dark hits only
channel



Channel with real hit

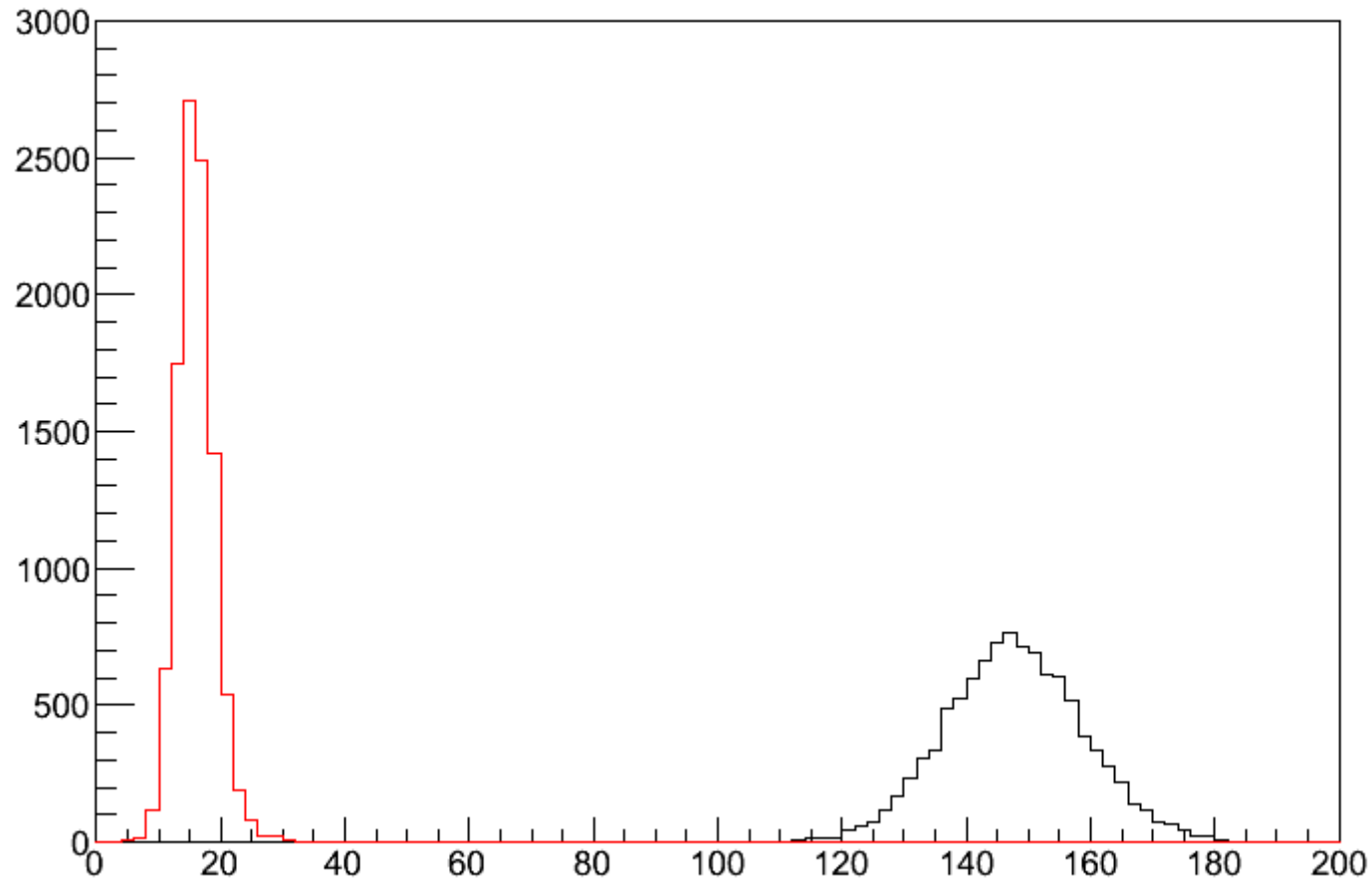


How to fix simulation?

- Disable dark hit generation in mcsmeas?
- Change simulation parameters (e.g. dark rate, dark pulse height, etc.)?
- Rethink whole simulation model?

Number of ADC hits

N

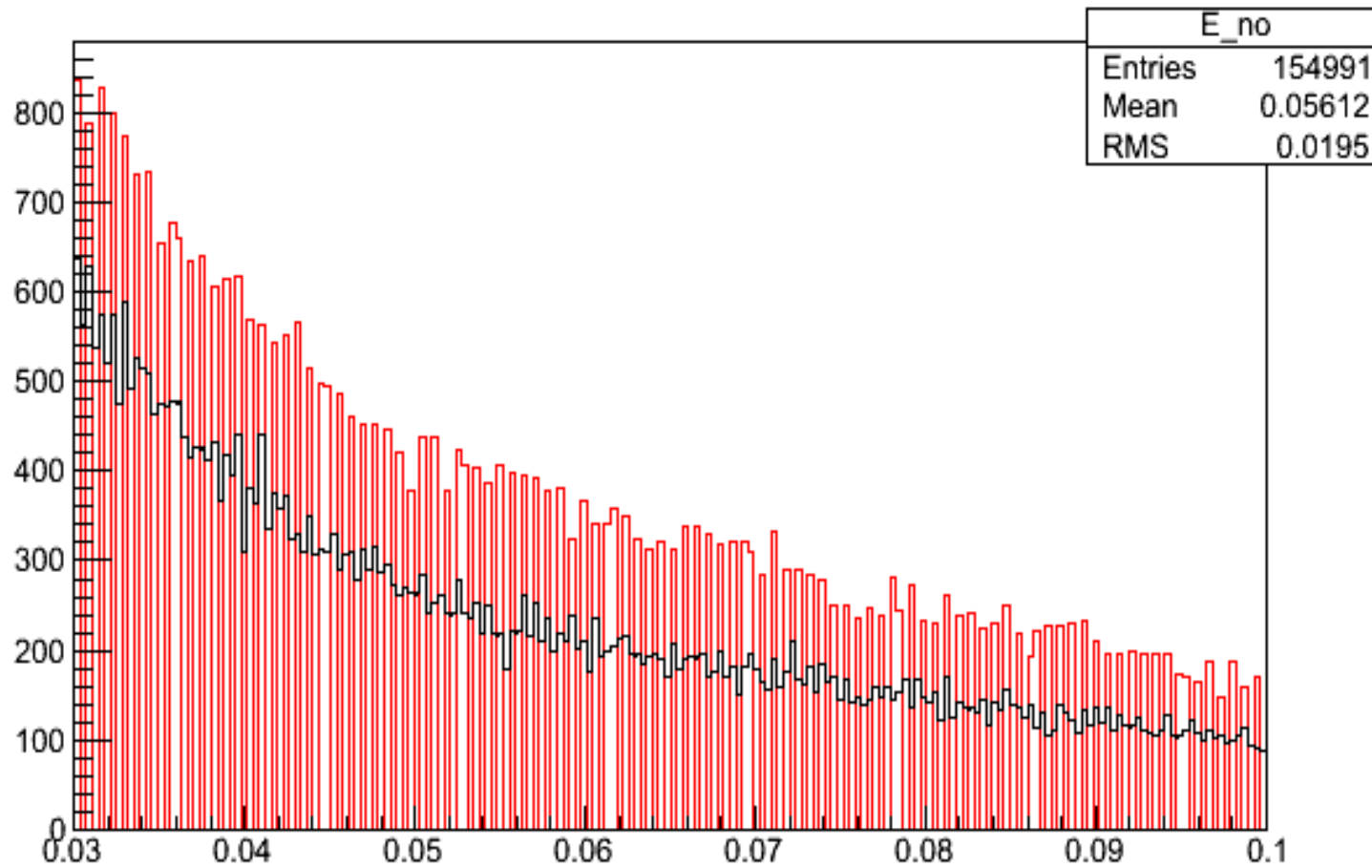


Red – no dark hits

Black - full dark hits

Energy of ADC hits

E

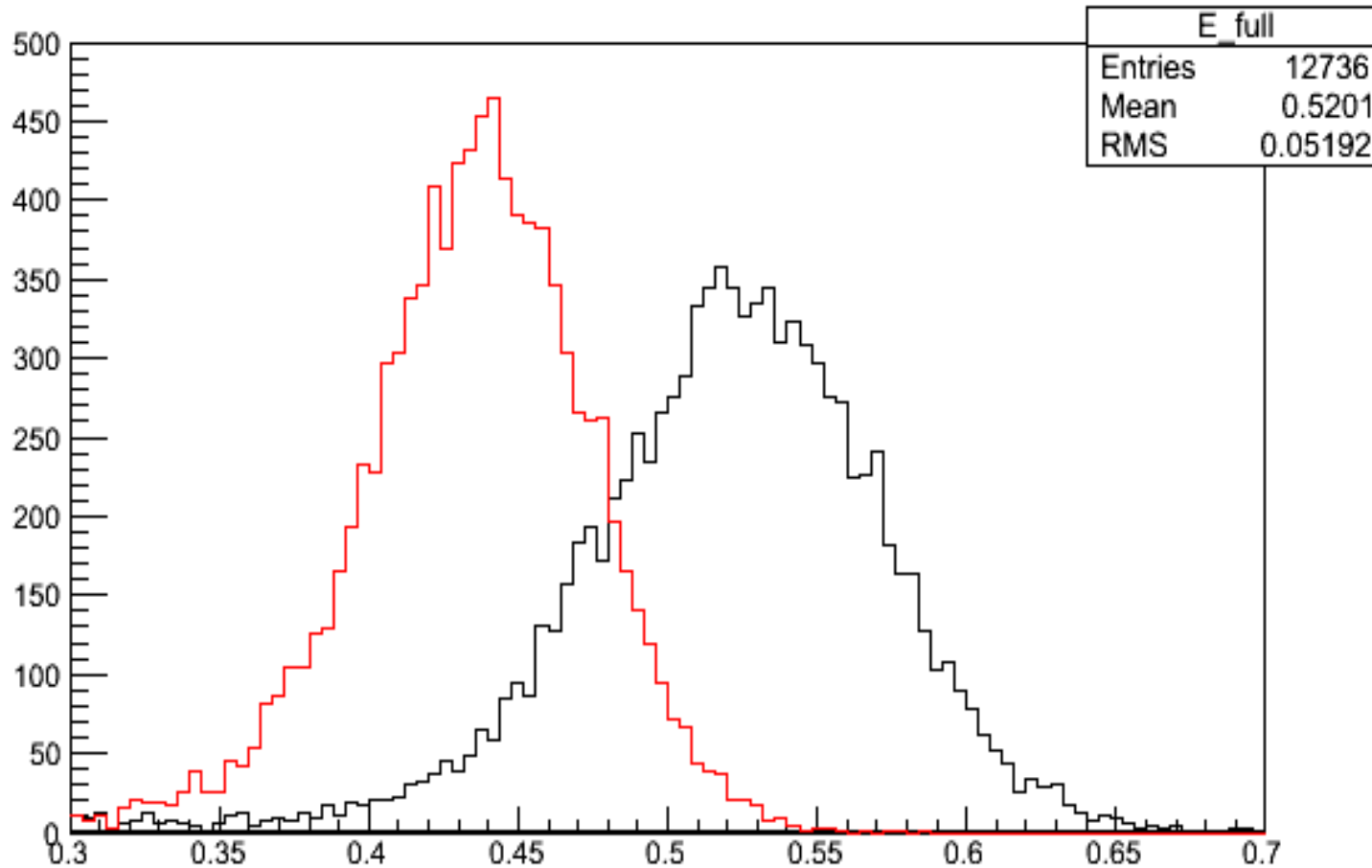


Red – no dark hits

Black - full dark hits

Energy-BCAL clusters

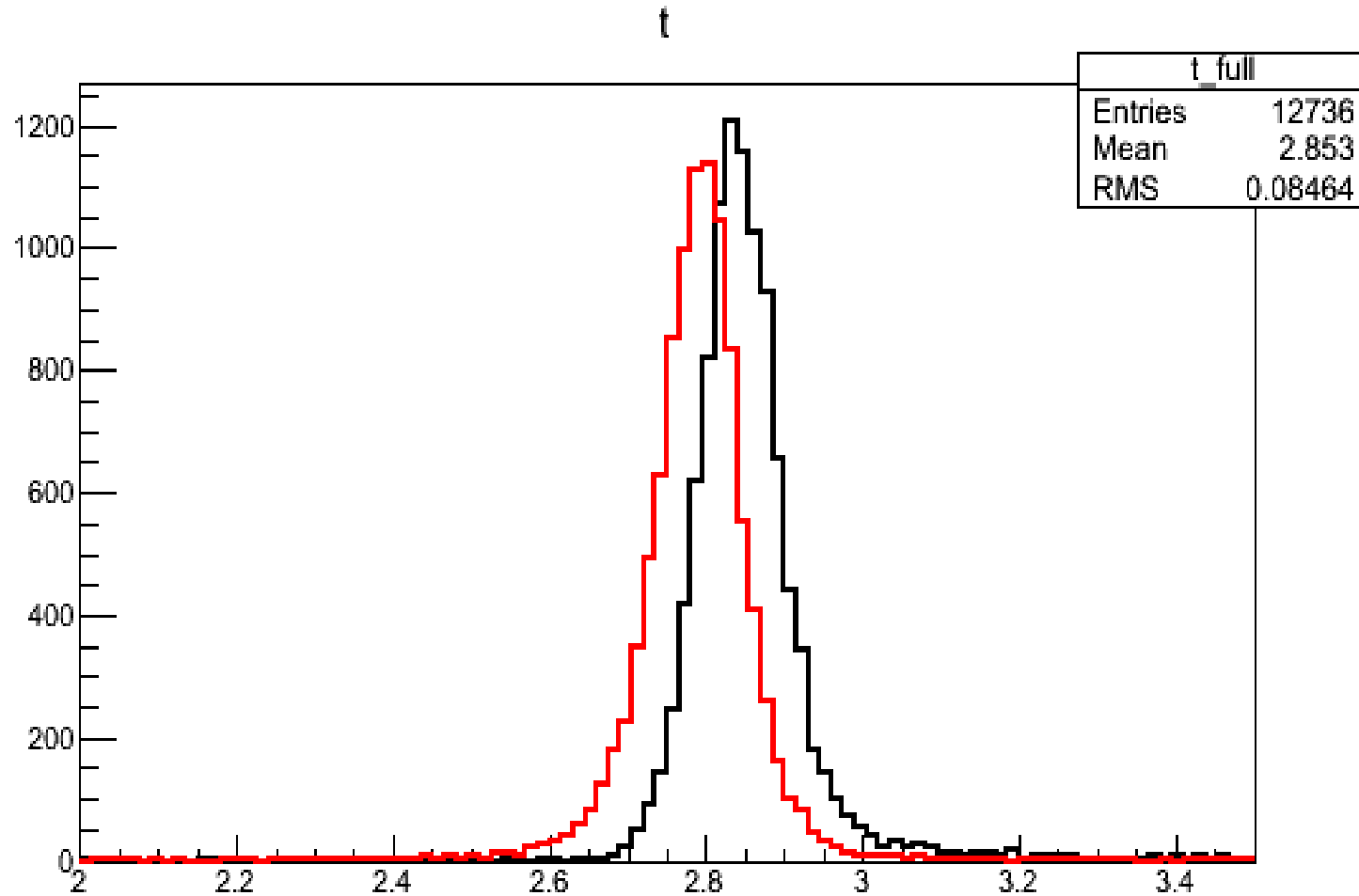
E



Red – no dark hits
Black - full dark hits

Energy resolution is different even after adjusting for energy scale

time-BCAL clusters



Red – no dark hits

Black - full dark hits

How to fix simulation?

- Disable dark hit generation in mcsmeas?
- Change simulation parameters (e.g. dark rate, dark pulse height, etc.)?
- Rethink whole simulation model?