Optical Hit Reconstruction Toolkit Update
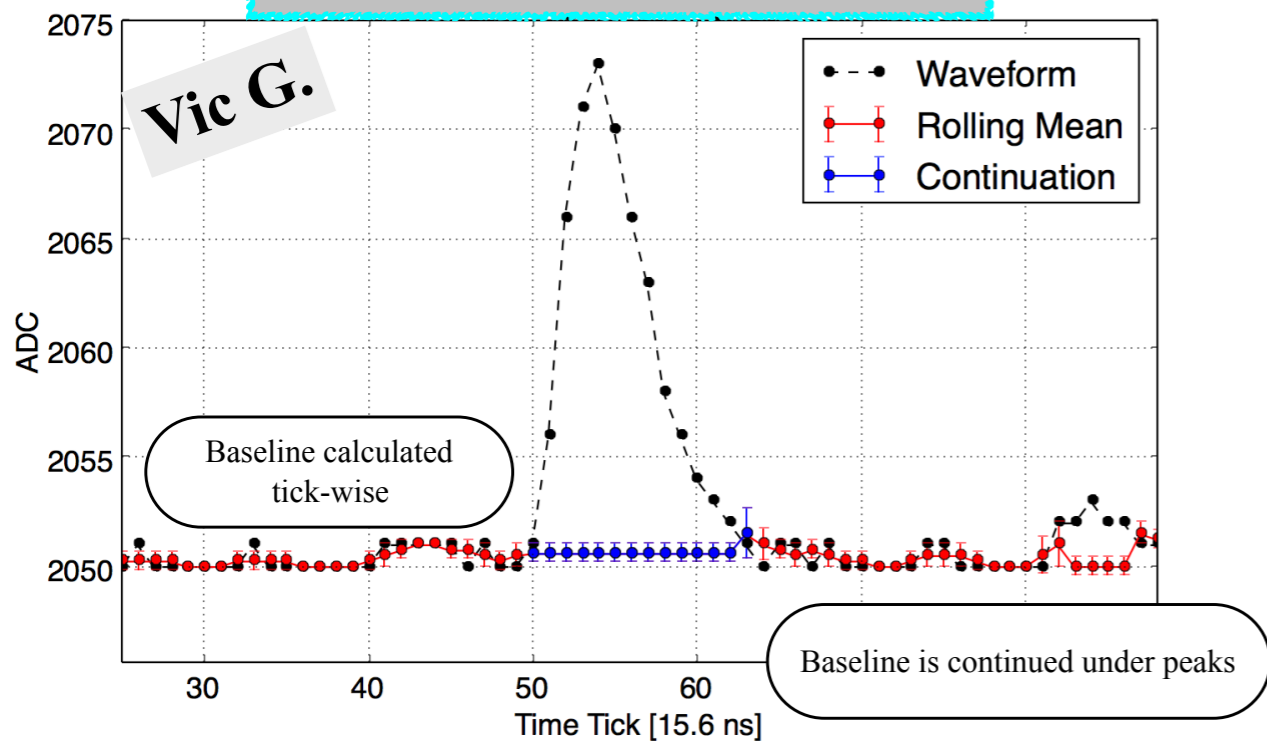
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What To Be Changed?

- Subject: larana/OpticalDetector
- Before (current):
  - PulseRecoManager executes AlgoPedestal + pulse reco algorithm A
  - A is configurable (MicroBooNE used AlgoThreshold)
- Change (new):
  - PulseRecoManager executes pedestal algo X + pulse reco algo Y
  - Both X and Y are configurable
  - X is responsible for estimating pedestal for the full span of waveform
- Addition of algorithms
  - Pedestal: PedAlgoEdges (former AlgoPedestal), PedAlgoRollingMean
  - Pulse Reco: AlgoSlidingWindow, AlgoCFD
  - AlgoThreshold updated (though pretty much obsolete)
  - AlgoSiPM remains same (except interface change)
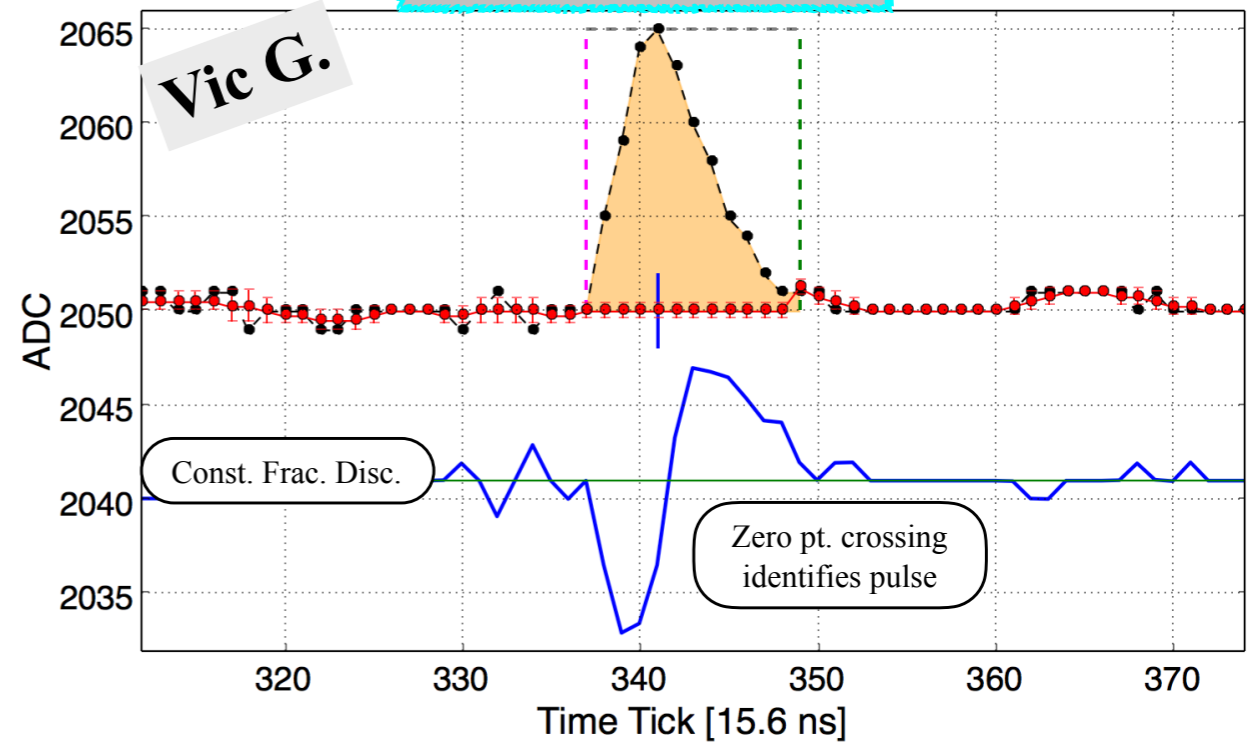
What To Be Changed?

- Original on <u>github</u>
  - includes interactive execution code (Python) for debugging/development

- New code base is in larana/OpticalDetector/OpHitFinder
  - Lives under feature/OpticalRecoUpdate branch

Pedestal Estimation

Pulse Reconstruction