

Shaper + FEM

Linearity Response Study

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Data Taking Set-Up

Trigger Module

Pulse Generator

RC Circuit

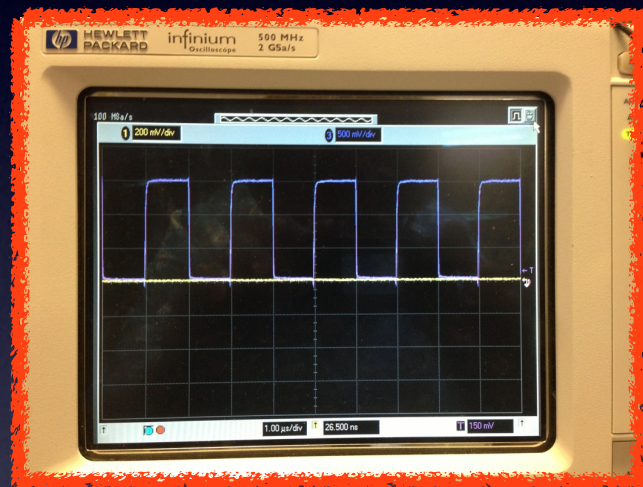
Shaper

Beam Gate

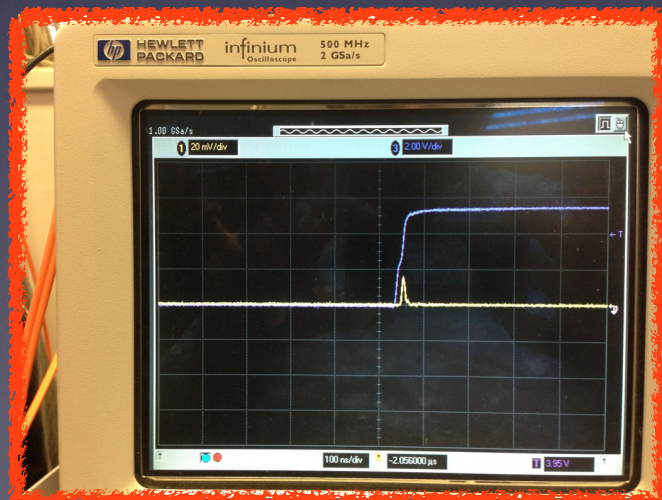
FEM

Ch. X

PC

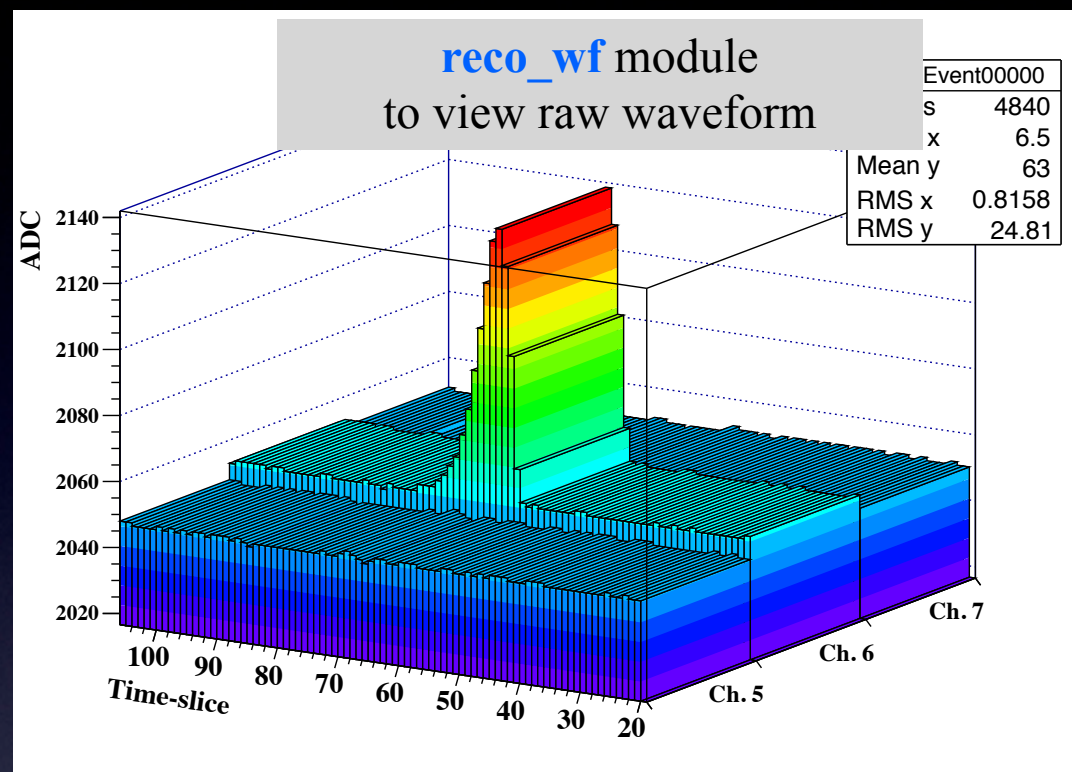


Pulse amplitude change for 9 levels

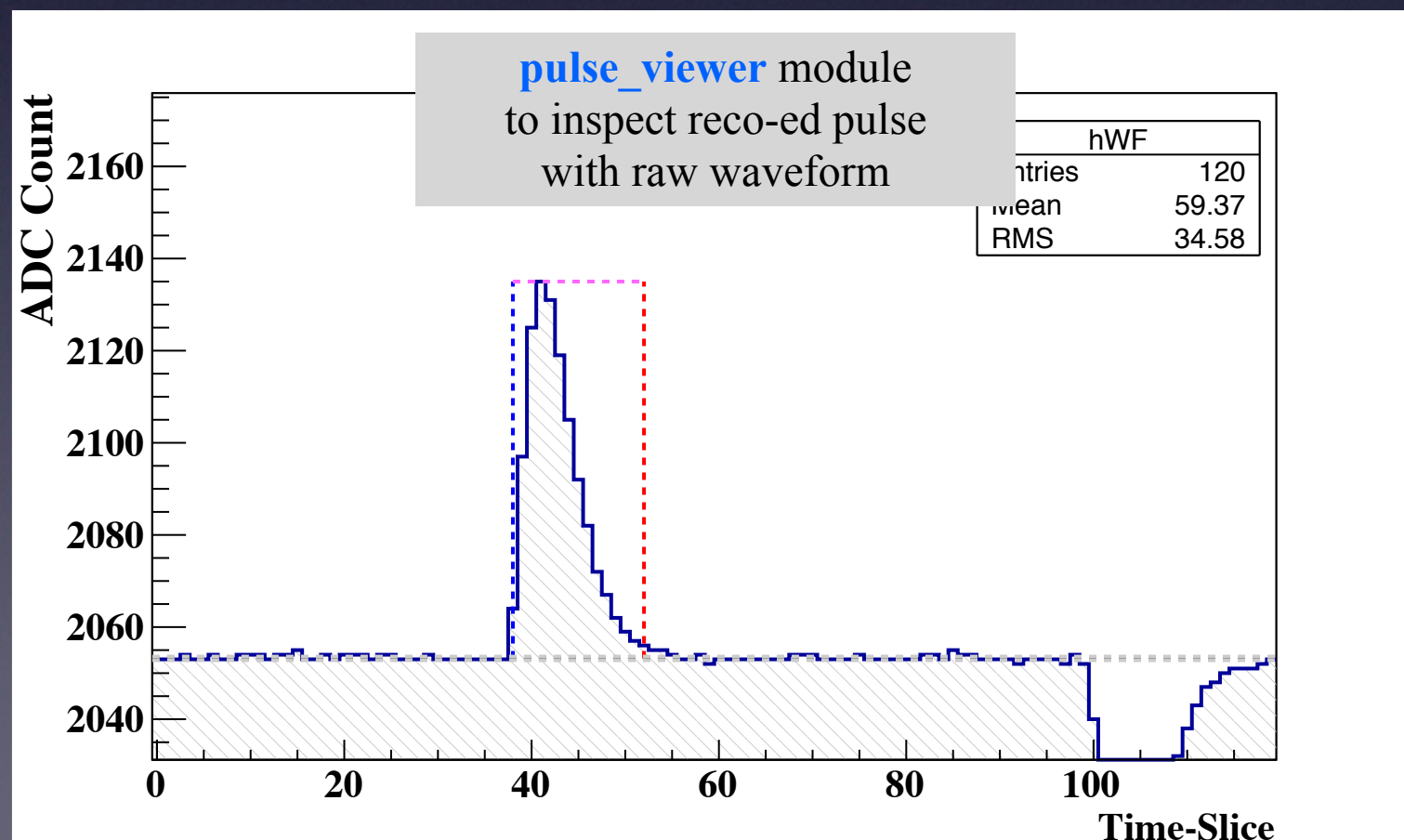


Take data for all 16 channels

Data Processing

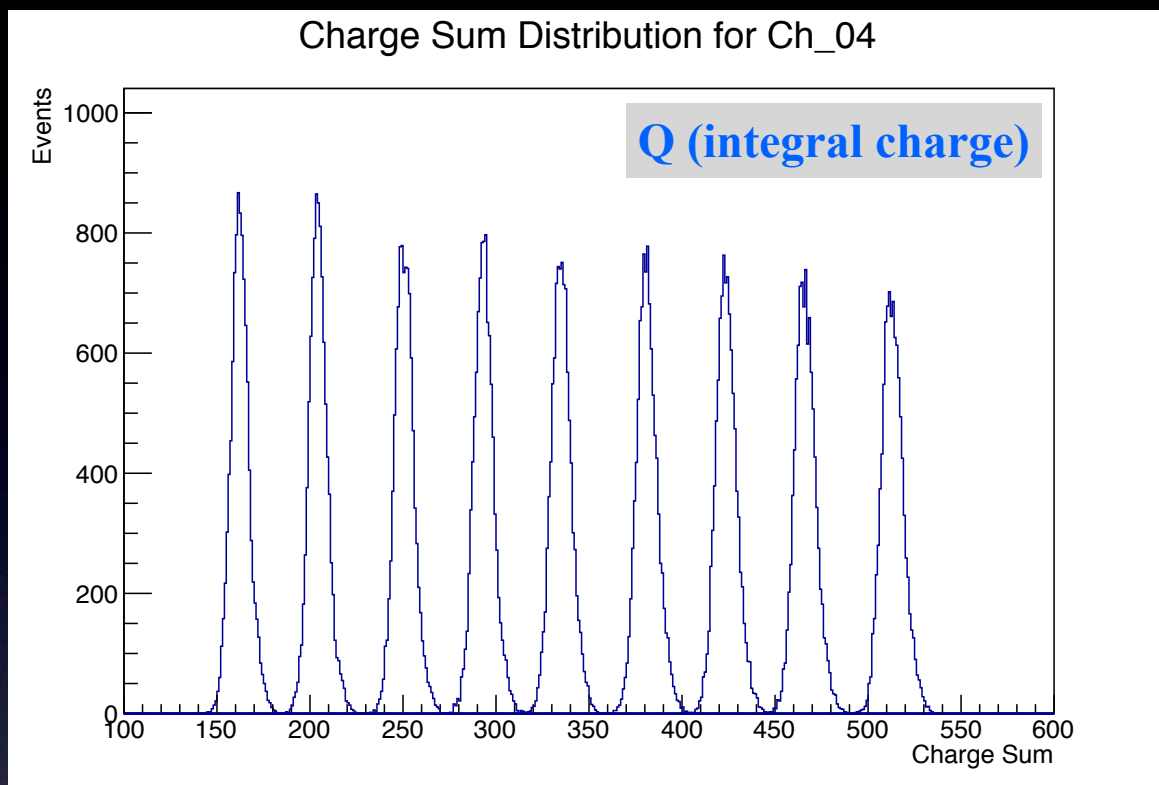


- Data copy & decoding
- Quick data quality check
 - Check ...
 - ▶ file size (all files should be same)
 - ▶ raw waveform (reco_wf module)

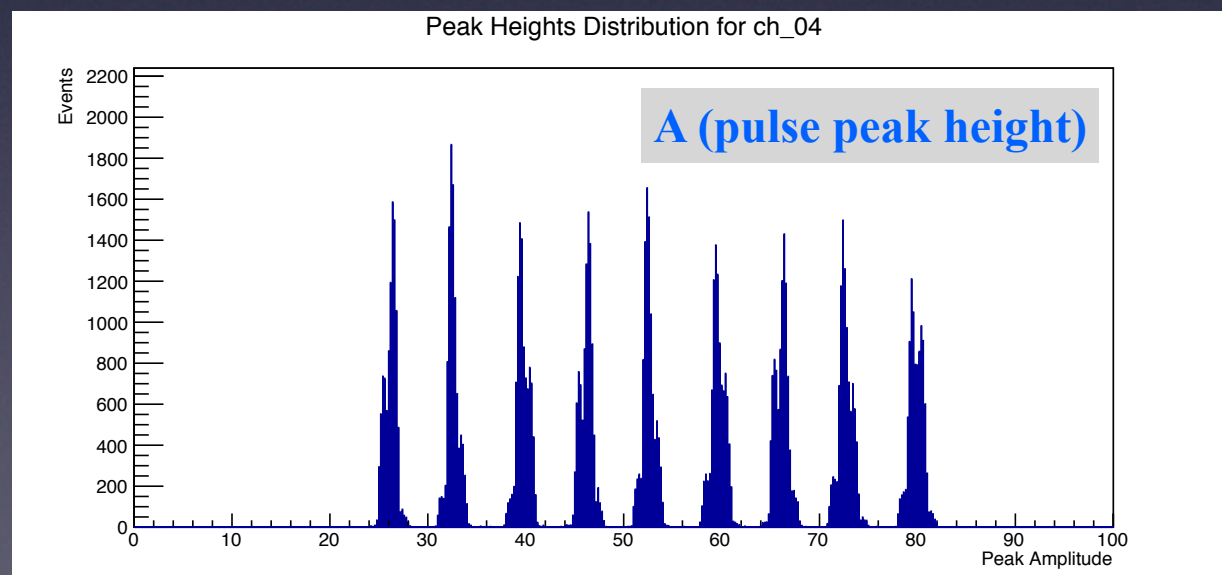


- Pulse reconstruction
 - pmt_baseline module
 - event-wise ped. analysis
 - save reco-ed parameters
 - ▶ pedestal info
 - ▶ start, max, end time
 - ▶ peak height & integral
 - debugged & ready for use

Analysis



courtesy of Daniel Garisto



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Goal: inspect...

- Electronics linearity
- Correlation of amplitude vs. charge
 - acronym: A vs. Q
- Uniformity over channels

Strategy:

1. For each channel ...

- Estimate energy from A & Q
 - Standard mean & RMS for A
 - Gauss. mean & σ for Q
- Plot linearity against V_{in}
- Fit the straight line

2. Plot fit parameters for all channels