

# Results of learning NPS analysis

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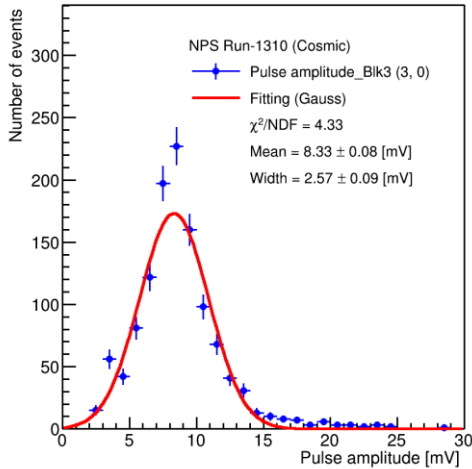
# Definition of variables

- 1. Ndata\_NPS\_cal\_fly\_adcCounter**
  - The size of variable “NPS\_cal\_fly\_adcCounter”
  - “Ndata” denotes the size of that variable in that certain event and run
- 2. NPS\_cal\_fly\_adcCounter”**
  - The number of each PMT
- 3. NPS\_cal\_fly\_adcSampPulseAmp**
  - The amplitude of pulse extract by hcana
- 4. NPS\_cal\_fly\_adcSampPulseInt**
  - The integration of a pulse (area under the waveform)
- 5. NPS\_cal\_fly\_adcSampPulseTime**
  - The pulse time of a waveform
- 6. NPS\_cal\_fly\_adcSampPed**
  - The pedestal (noise) of a waveform
- 7. NPS.cal.fly.adcSampWaveForm**
  - contains the waveform in all blocks

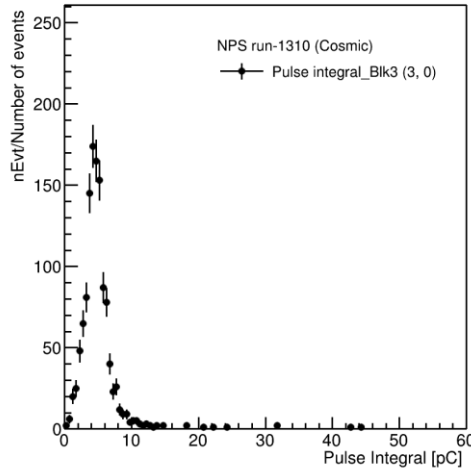
# Plots of variables

➤ Dataset: NPS Run 1310 (Cosmic), PMT-3

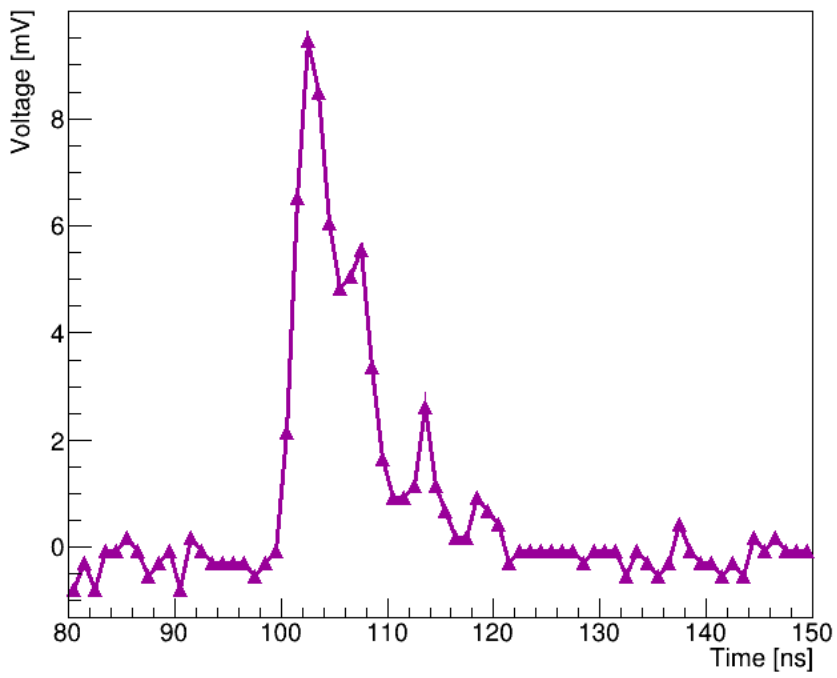
Pulse amplitude



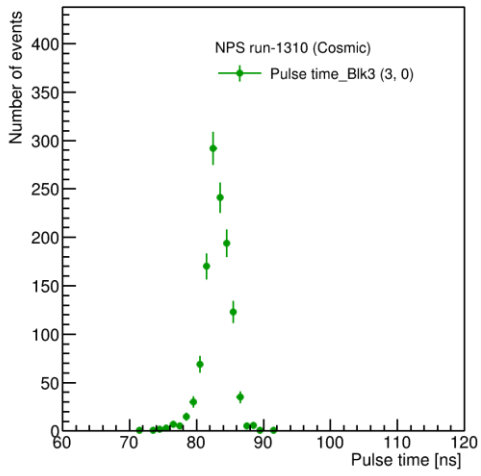
Pulse Integral



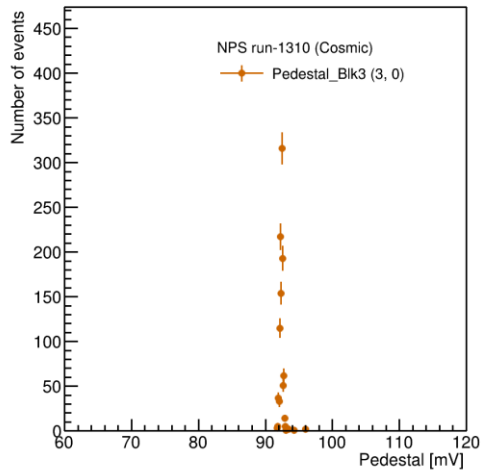
Pulse waveform (event #0)



Pulse time



Pedestal



- Learned the structures and definitions of several variables in NPS data
- Generated the plots of these variables

## NEST STEP

- Run through all events to summarize these variables
- Change and learn the pulse defining parameters in `nps_geaom.param`
- Read and learn the `raw.evio` coda file on `cdaq13`
- Go into depth to learn more about the experimental settings