Strategy for each channel

- Estimate the energy:
  - We integrate over the reco-ed pulse to find the sum charge.
  - Distribution of peak heights, the mean of which is energy estimated.

- Plot mean sum charge and mean peak height against input signal amplitudes to check linearity.

- Fit straight line on the linearity plot to check.
Sum Charge

- Example distribution from channel 4.
- Fitting gaussian shows that the events have a high energy tail.

Chi^2 distributions for the charge sum from other amplitudes are also relatively high; this skewing is not unique to amplitude 4.
Linearization of means

- Take the mean from the fitted gaussian on sum charge.
- Plot against input amplitudes 4-12 (top right: ch. 4)
- For the pulse peak linearity, use a simple mean and RMS (bottom right: ch. 4)
Peak Heights and digitization

- Peak heights here show why the gaussians may be somewhat off. They have multiple peaks—usually two or three.
- Due to digitization effect.