Start Counter Attenuation Corrections

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Tracks selection and applied Cuts

- Get a quality charged track with the following cuts:
  - Number of Hits per track >=14
  - Track_FOM >= $2.69E^{-3}$
  - abs(vertex_z – target center) <=15 cm
  - Radial cut < 1 cm

- Define t_0 as the time based track time

- Loop over the ADC digihit object and get the hit time,sector, and pulse integral corrected for pedestal.

- Plot the time difference between the hit time and t_0.
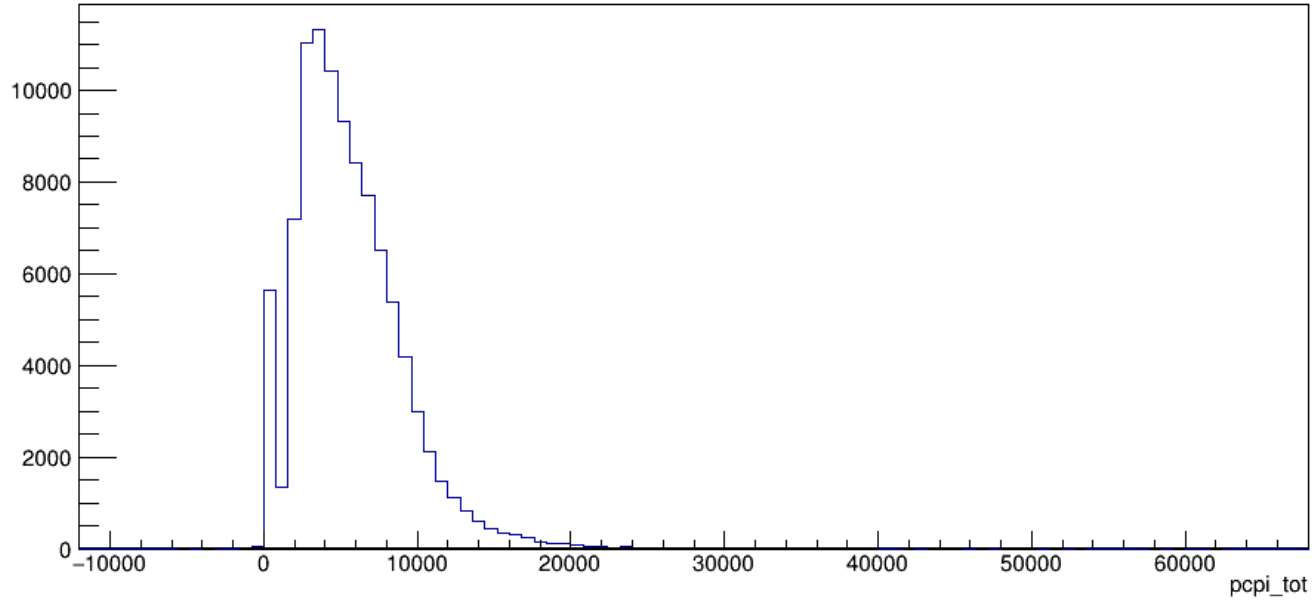
Timing Cut

- $0 \leq t - t_0 < 4$ ns

250K events of run30279

t-t$_0$

h_pulse_time	
Entries	940550
Mean	4.968
Std Dev	11.51

3
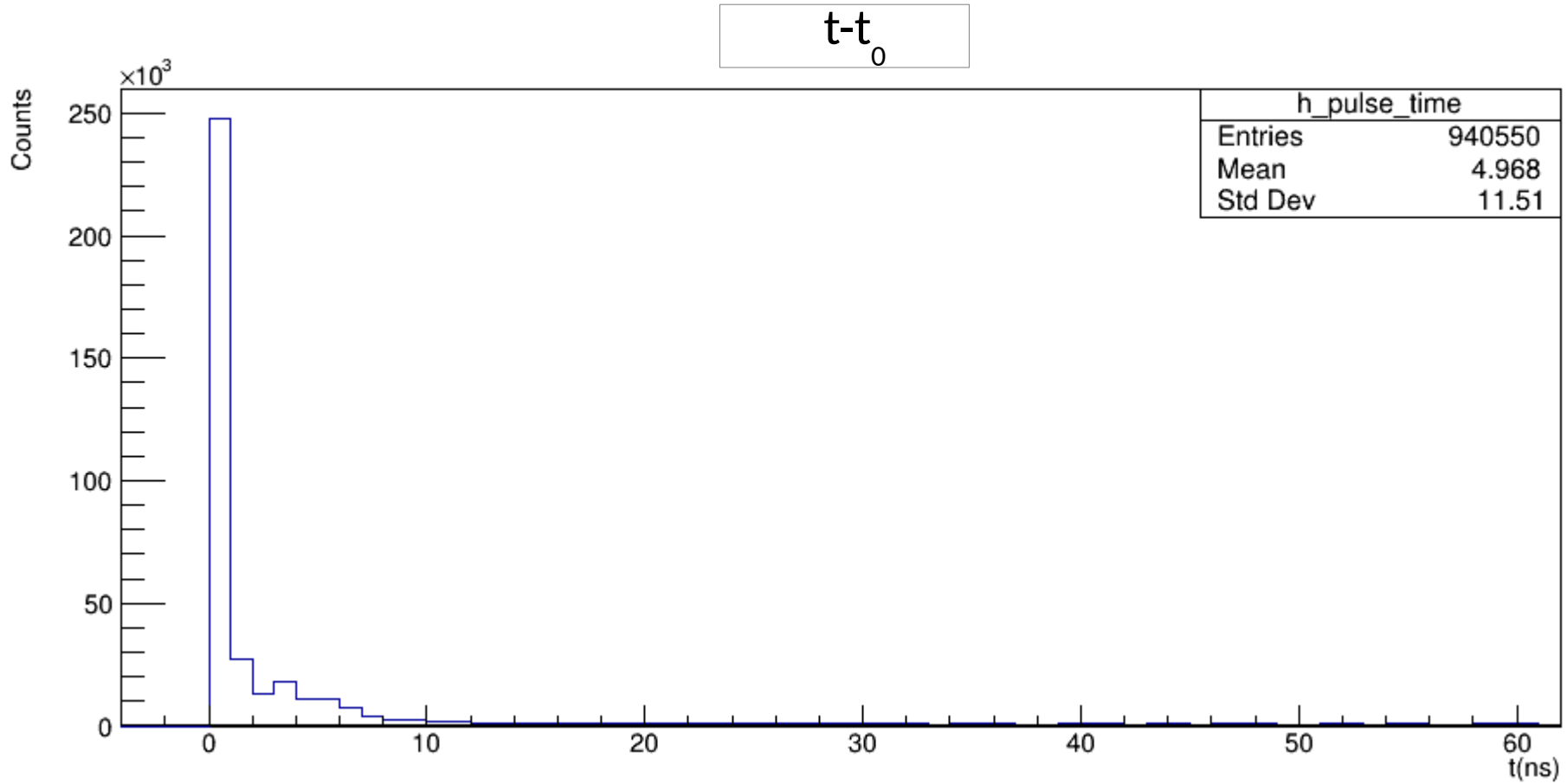
Pulse integral Plots
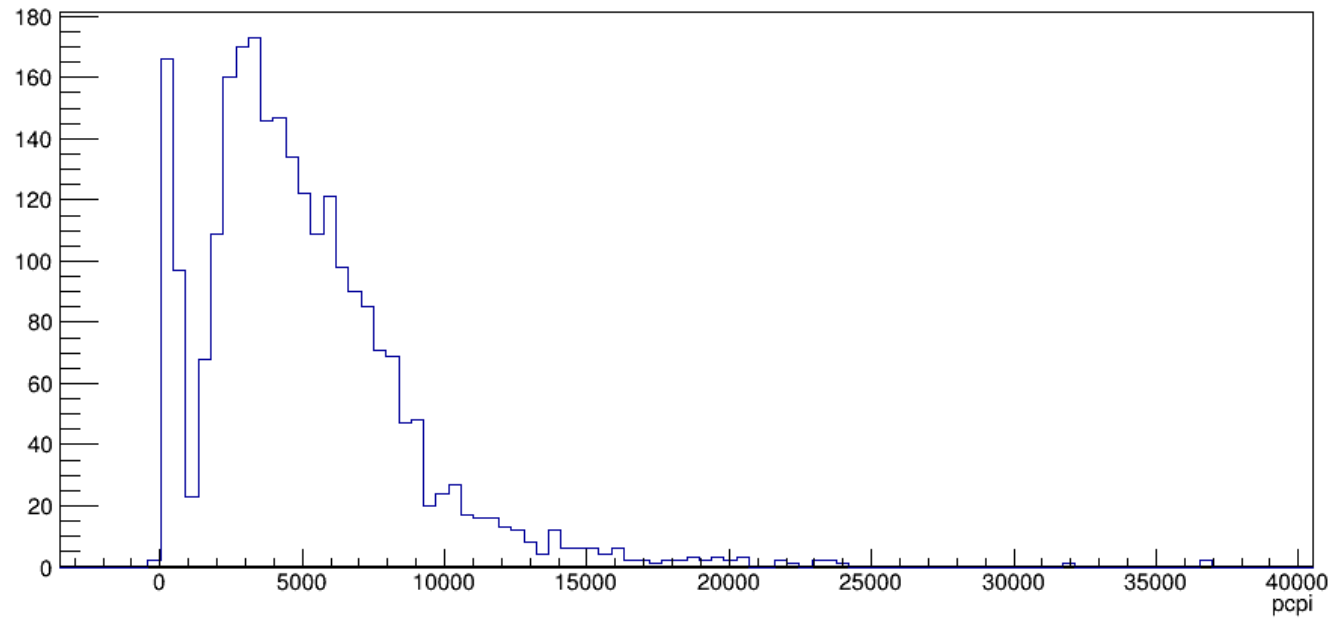

Total

Track sector is
the same as hit
sector.

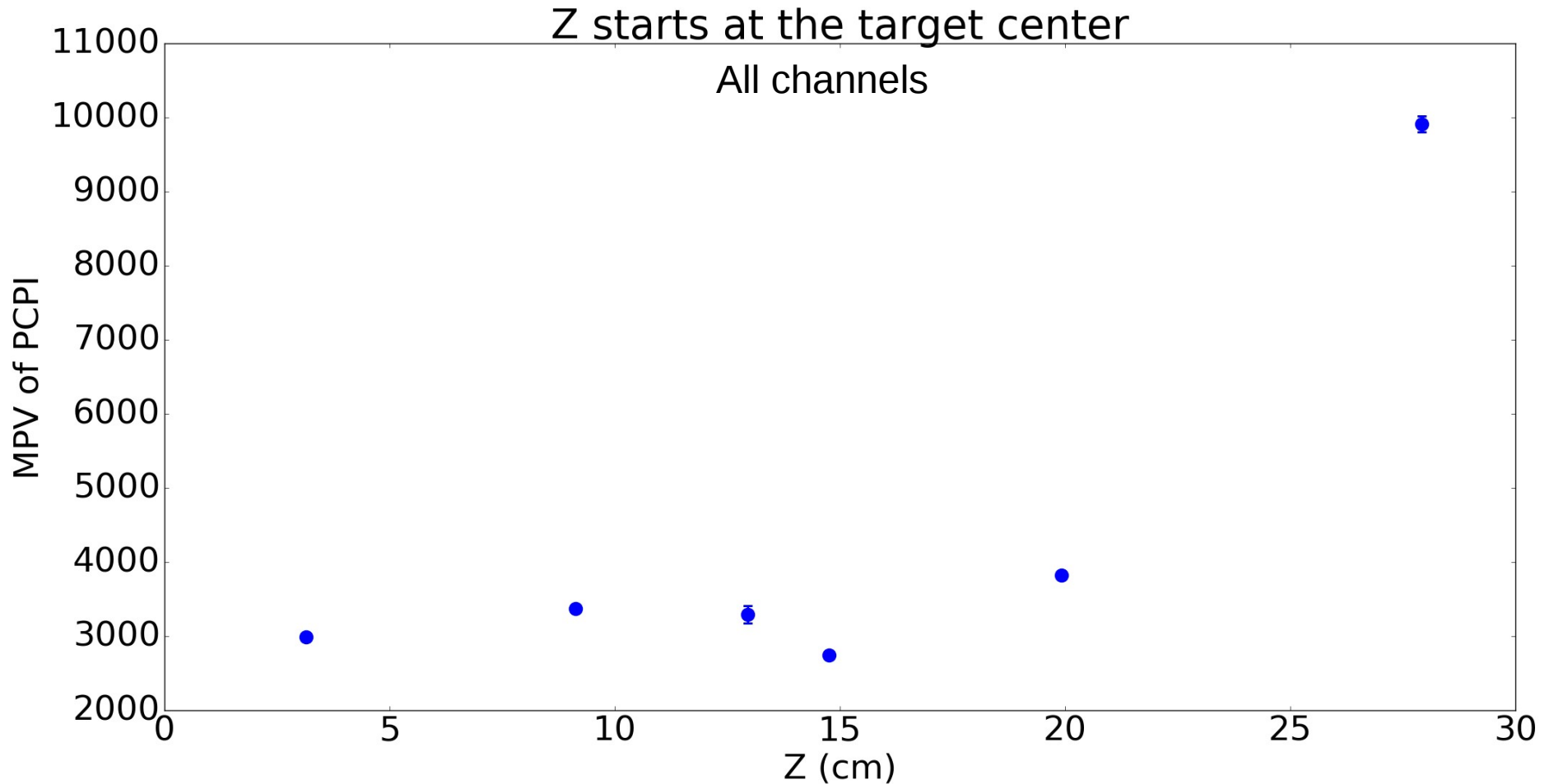Paddle1

MPV of PCPI Vs Z

Starting from z= 65 cm, divide each start counter geometrical section into two intervals.

Fit the peak using vavilov function (The fit range adjusted manually)

To do list

- Run the plugin for 1 full run.

- Get the MPV vs Z for each individual paddle.

- Apply the attenuation corrections and compare dEdx before and after corrections.

- Create the calibration figures for the NIM paper.