First look at the data from the TCMT prototype

Guilherme Lima, Vishnu Zutshi

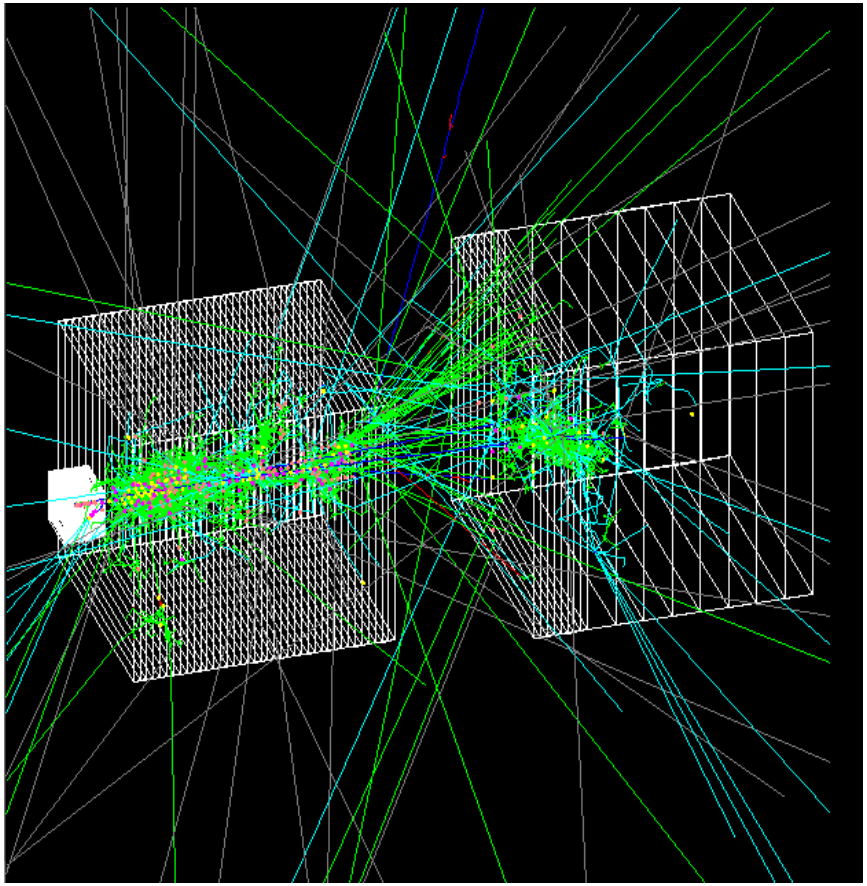
ALCPG-Cal meeting
September 11, 2006

The TCMT prototype

- Complete design:

  8 fine + 8 coarse layers, each with
  20 strips (100cm x 5cm x 0.5cm)

  * fine layers: 2cm-thick absorbers
  * coarse layers: 10cm-thick absorbers

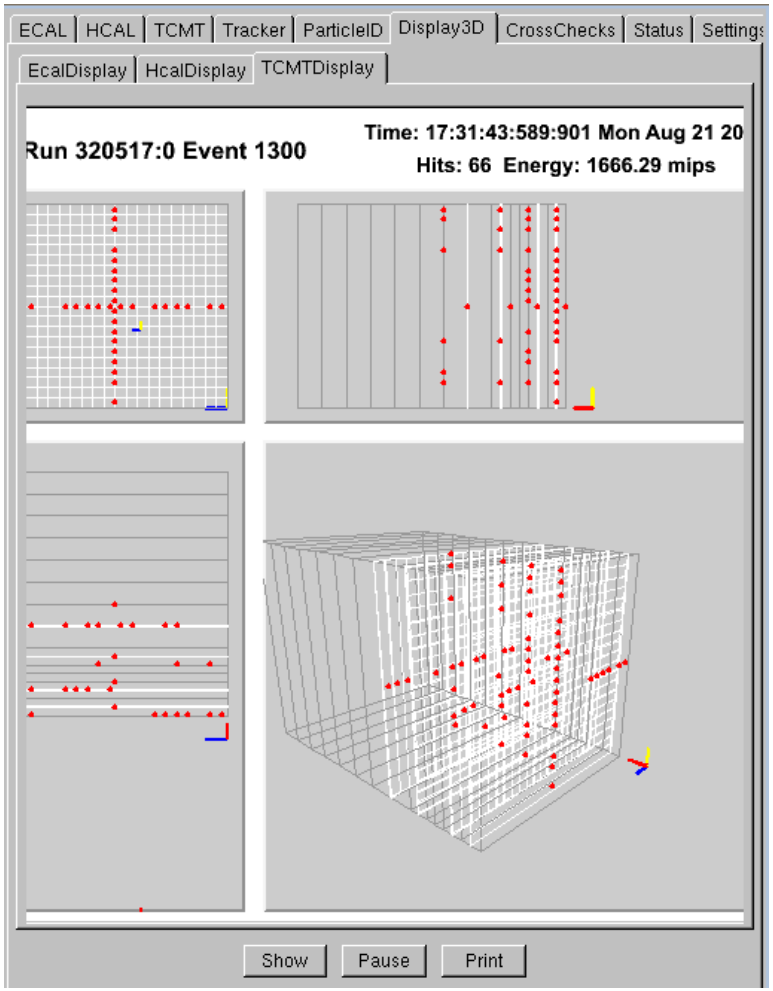


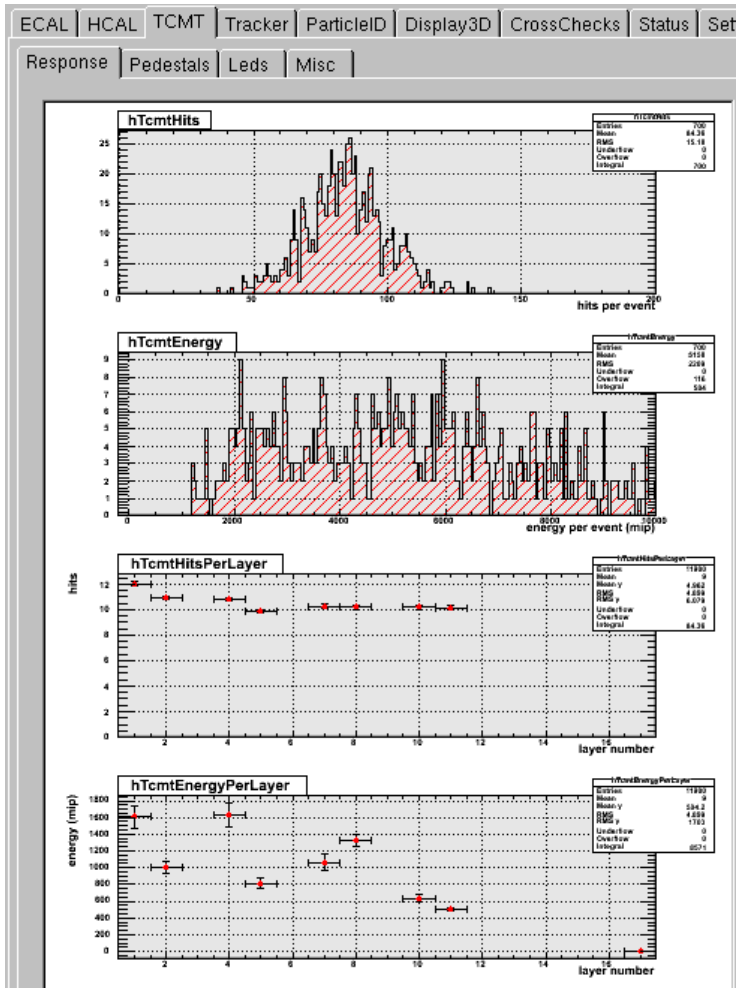
50 GeV π^+ in TBS: a test geometry
18x18cm Ecal and air gap, followed by
a 38-layer Hcal and
a fine+coarse 16-layers tail catcher

The TCMT prototype

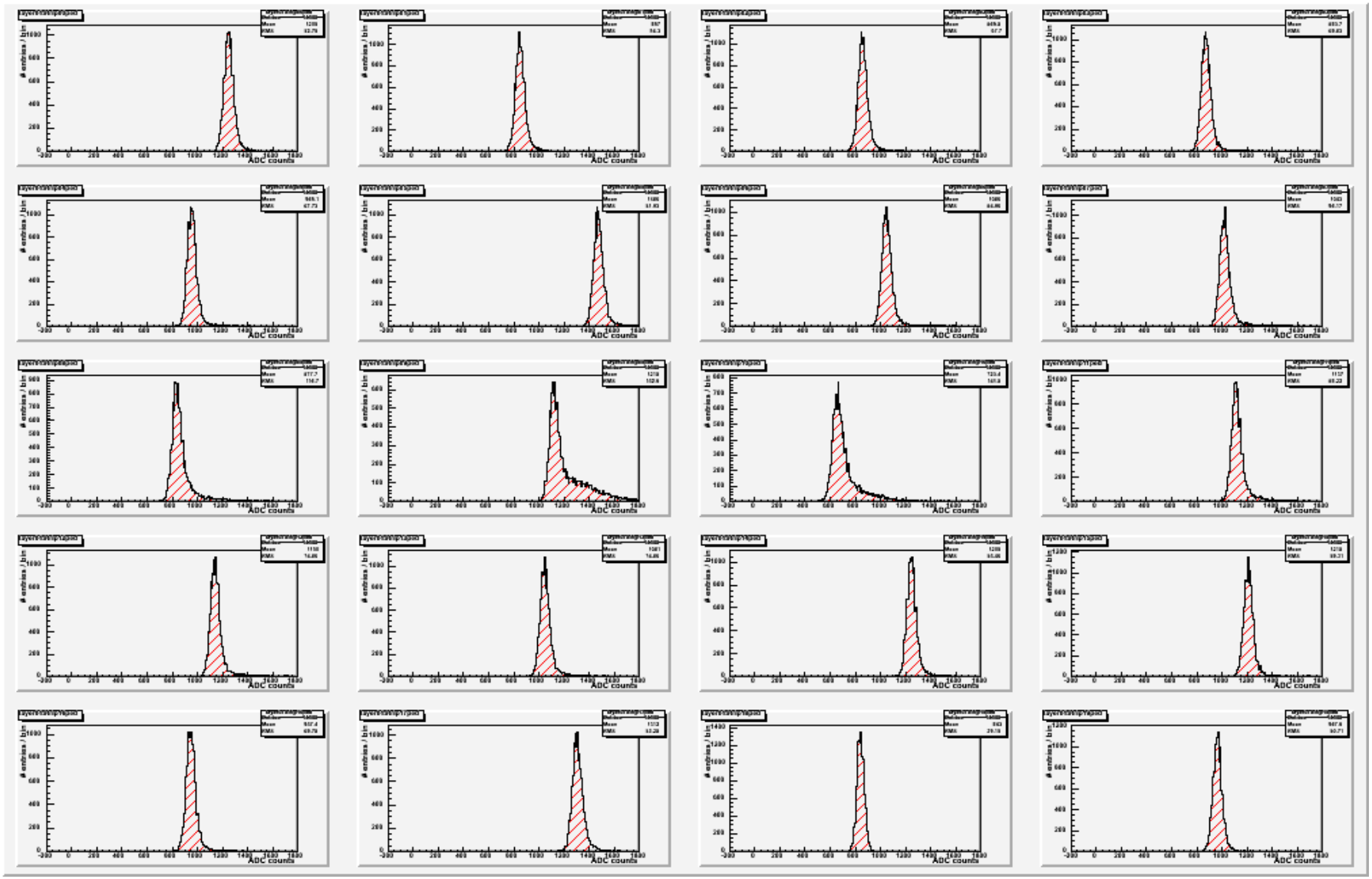
- CERN test beam July-September TCMT was on between August 21-September 08
- Current TCMT version: 8 out of the 16 layers, with 3 channels non-instrumented

Monitoring software / event display

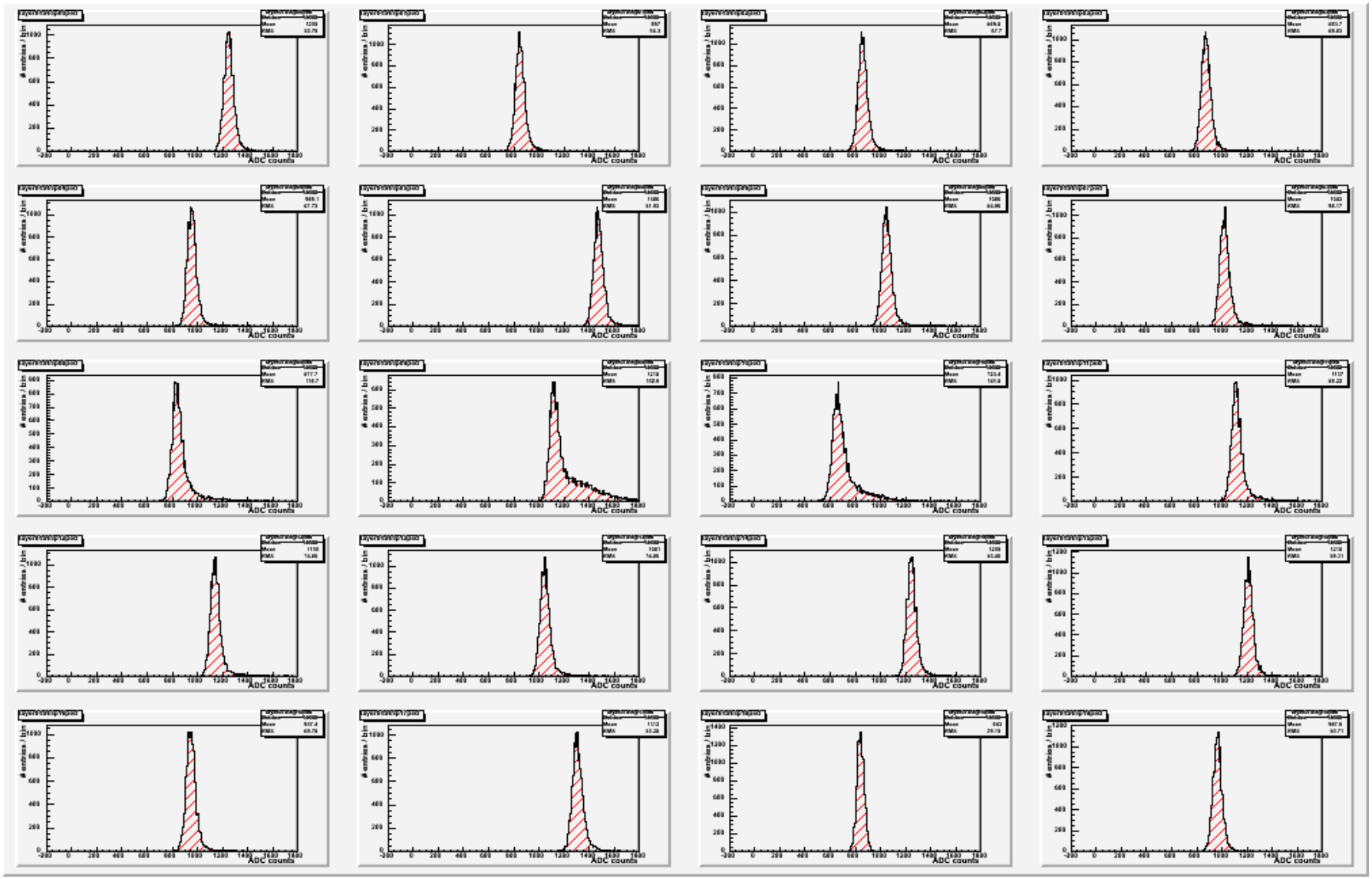




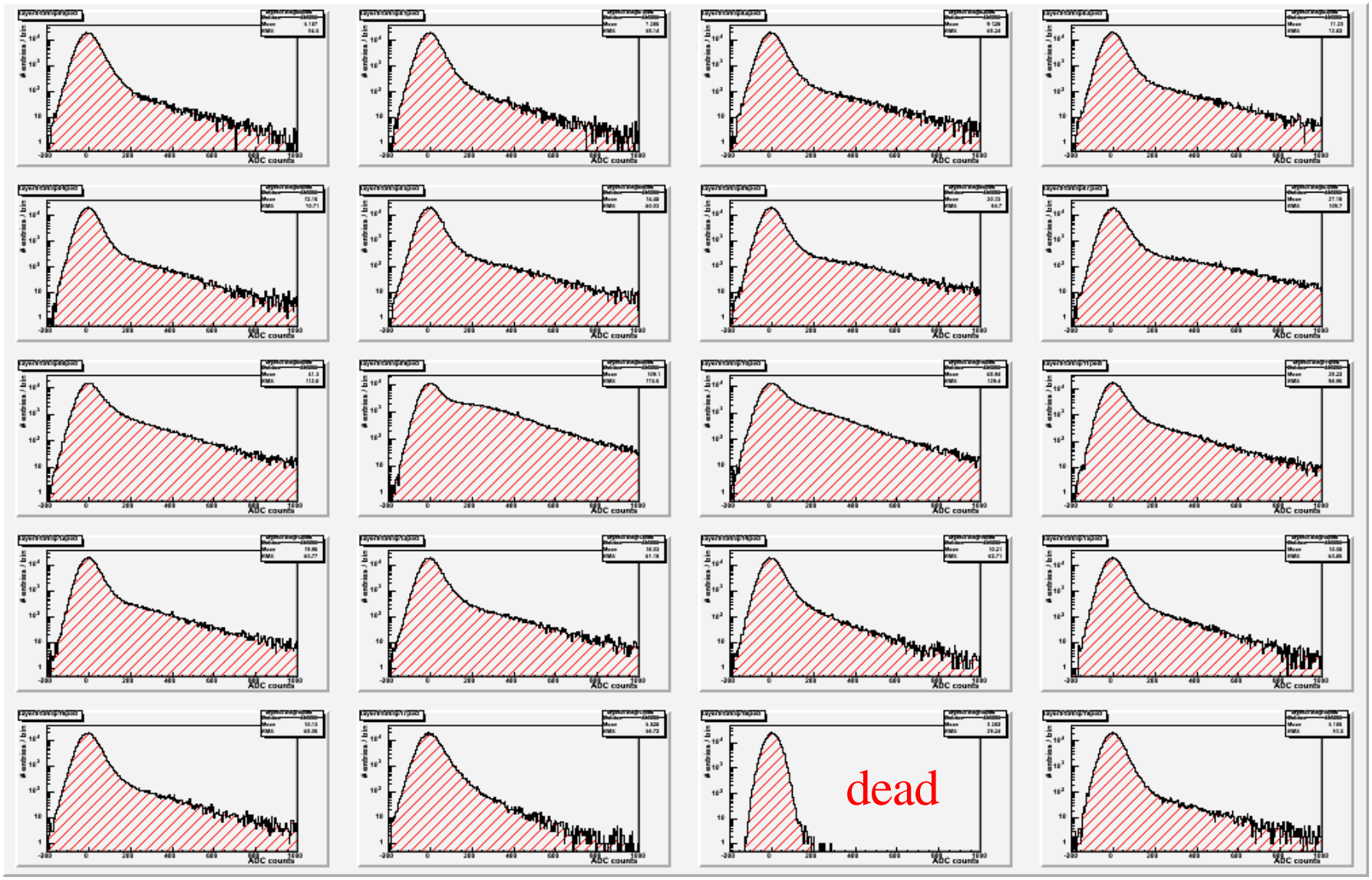
Pedestal calibrations – TCMT layer 1



Pedestal calibrations – TCMT layer 1



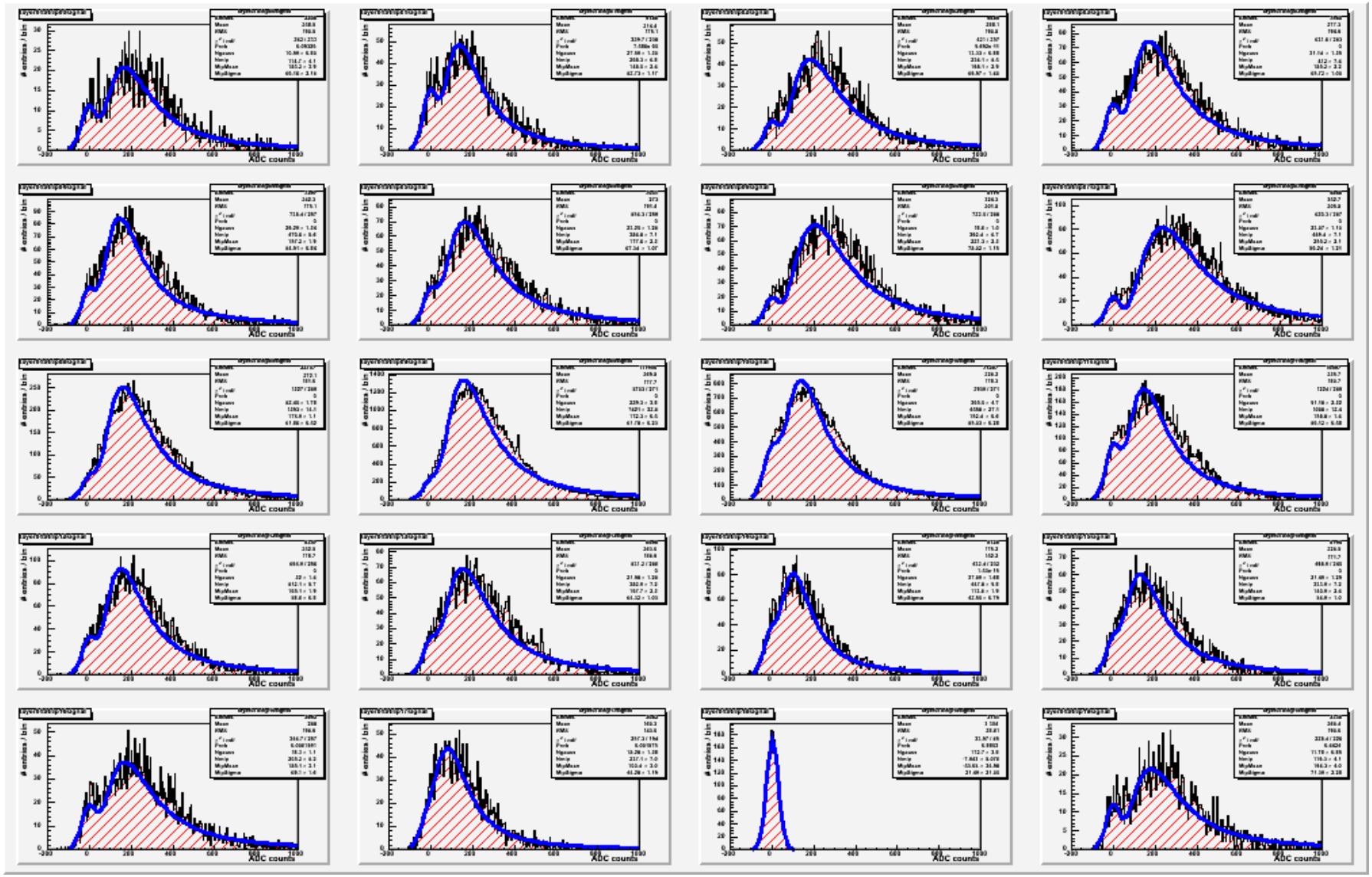
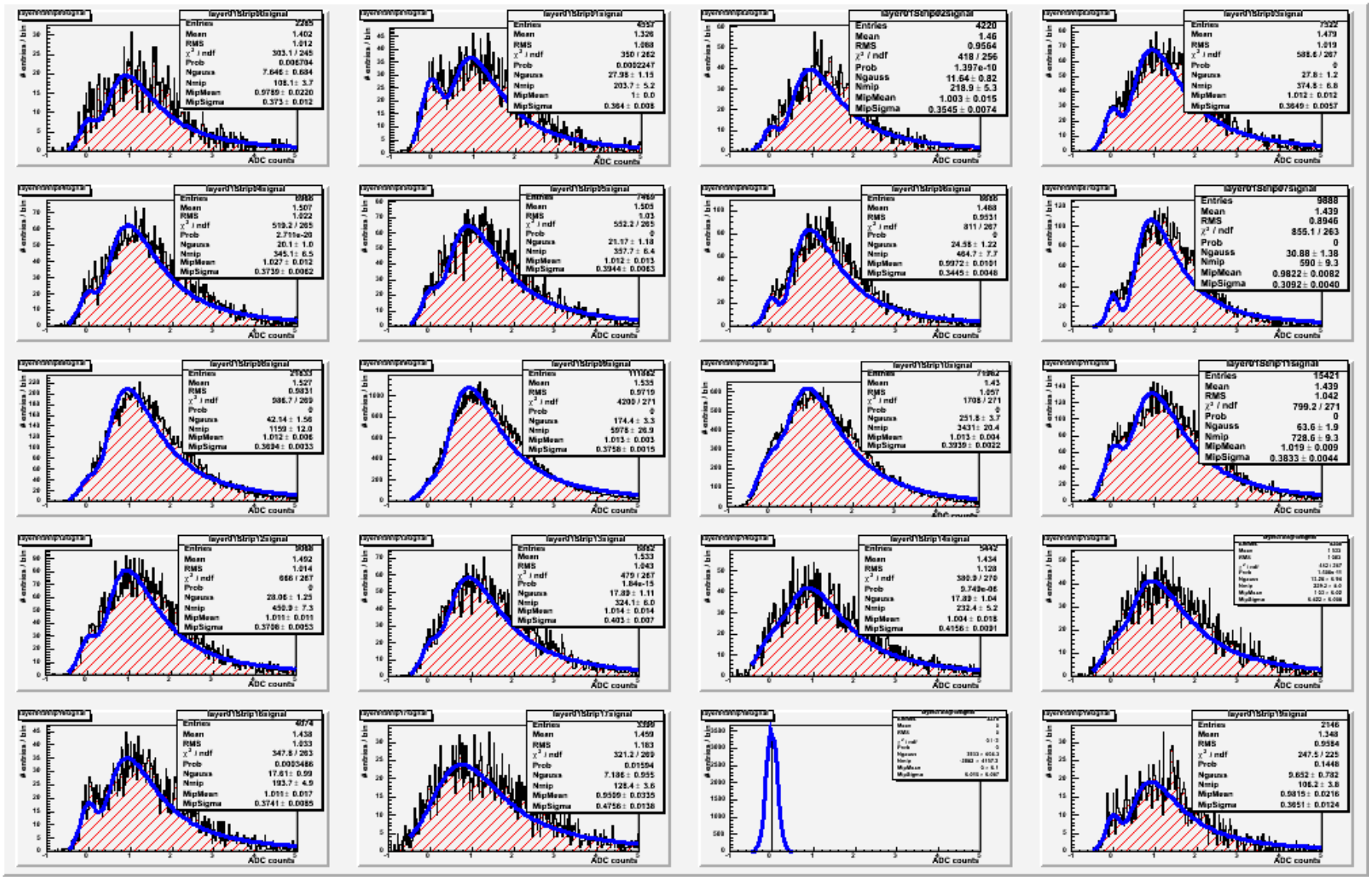
Pedestal subtraction – TCMT layer 1



MIP calibration procedure

- Used a muons run (300161)
- For each strip, require coincidence of all its parallel strips
  - (6+3) dead strips and (2) bad strips are considered on for the coincidence --> mostly nice MIP peaks, but some pedestals
- Fit distributions to a gaussian (pedestal) + landau (mip)
  - Gaussian mean,width are fixed to pedestal fits
  - MIP values taken to be Landau's MPV parameter

MIP Calibration – TCMT layer 1



MIP Calibration - TCMT layer 1 - Final