



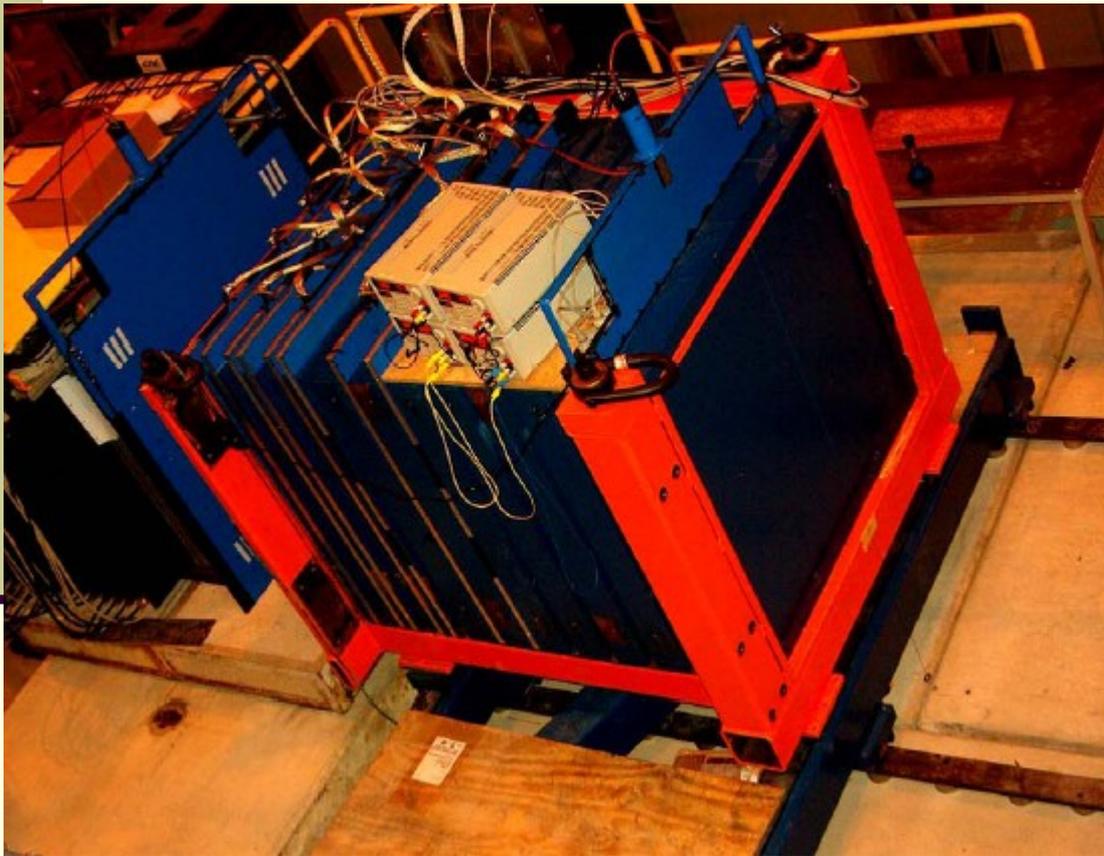
Calice TCMT beam test Status Report

Guilherme Lima
for the NICADD/NIU detector group

The TCMT prototype

HCAL

TCMT



A fine section ($\sim 2\text{cm}$ absorber) and
a coarse section ($\sim 10\text{cm}$ absorber)

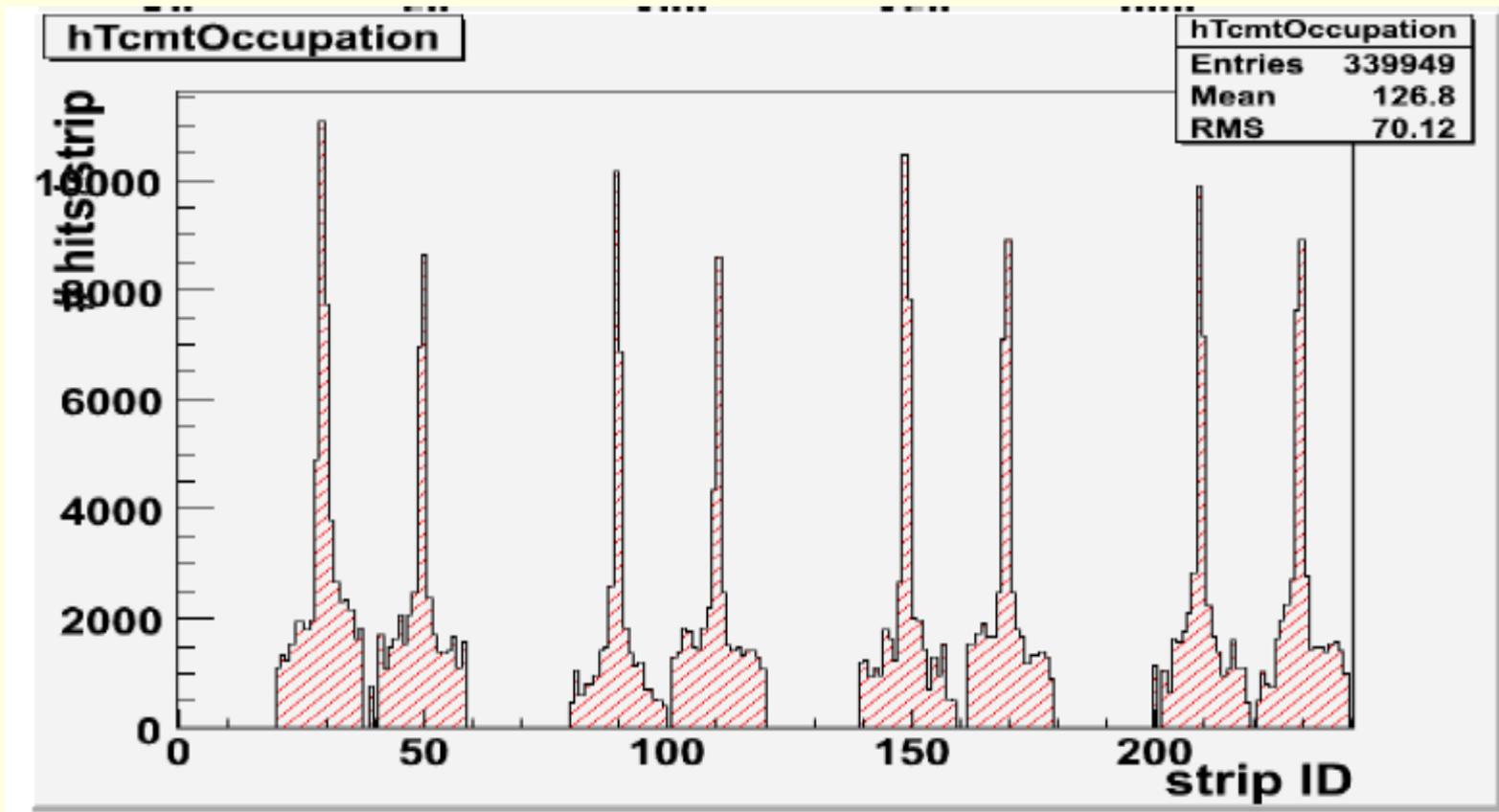
About half (8) the layers
were instrumented
4 X and 4 Y
20 channels / cassette

6 cassettes in fine section
(Layers 1,2,4,5,7,8)
2 cassettes in coarse section
(layers 10,11)

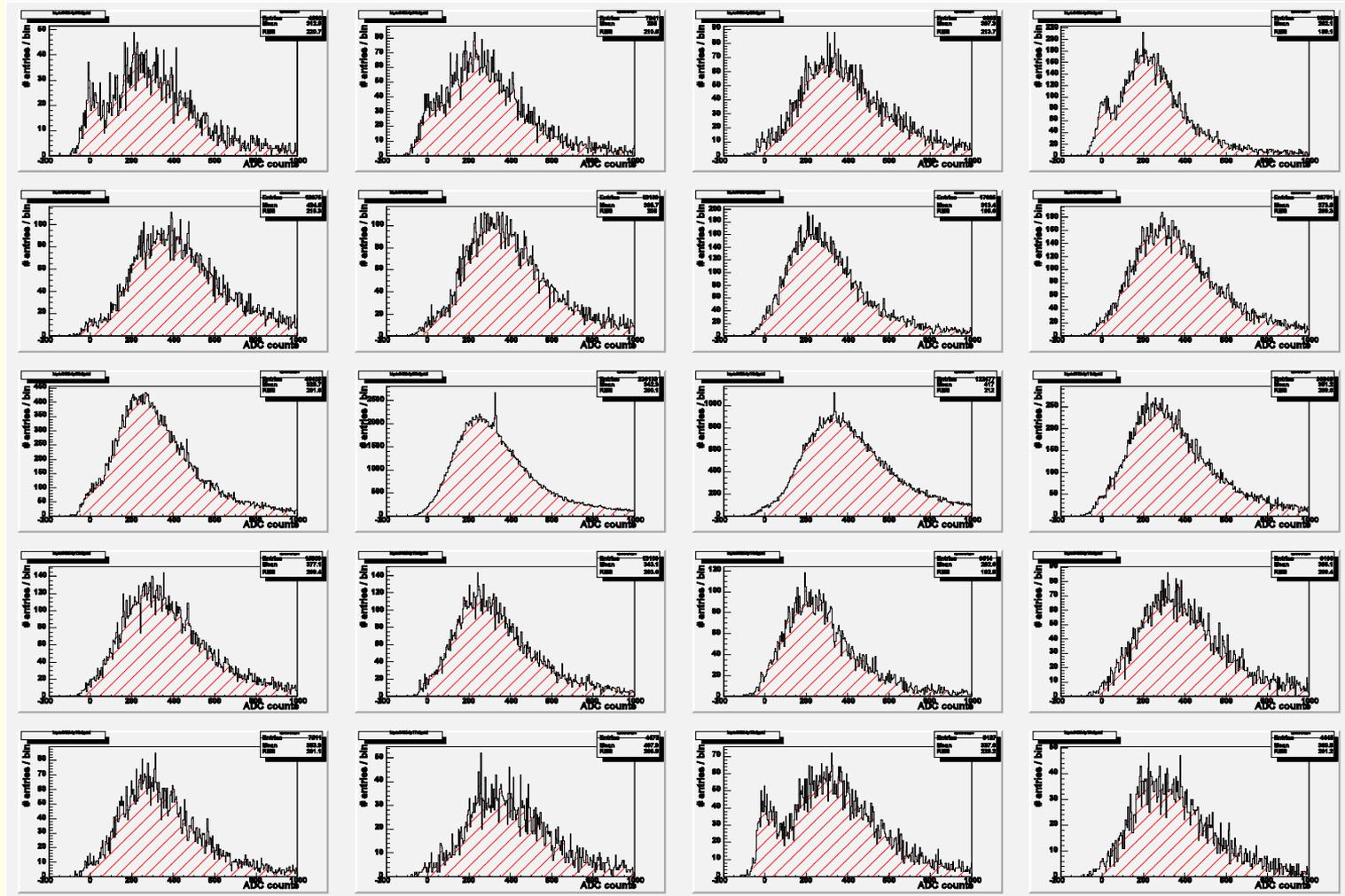
First Look at Data

- Sanity checks
- Muons (Run 300161) and pions (30 and 80 GeV) ECAL-out runs
- Not yet using the reconstruction framework
- Some things need to be better understood

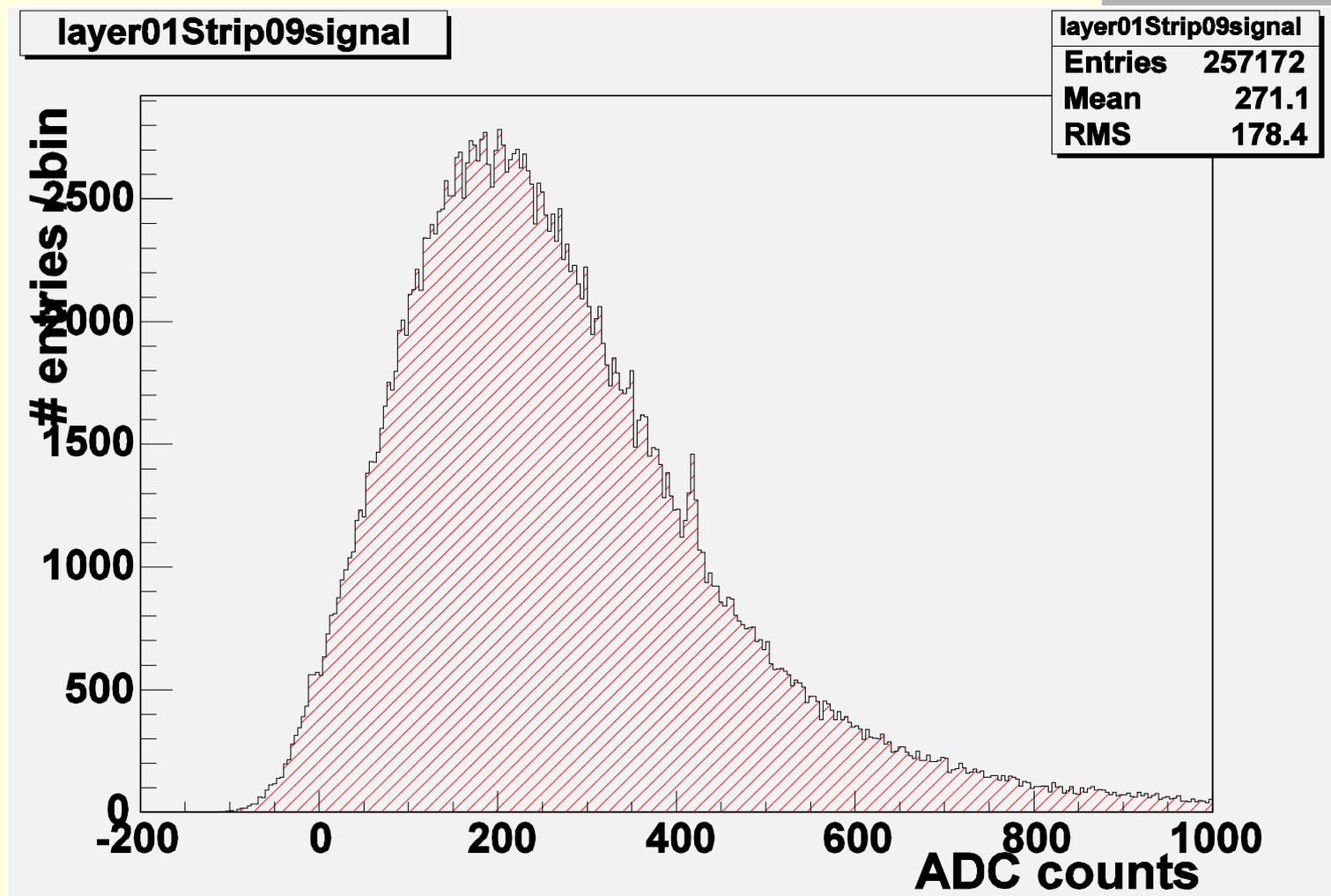
Muon 'beam' profile



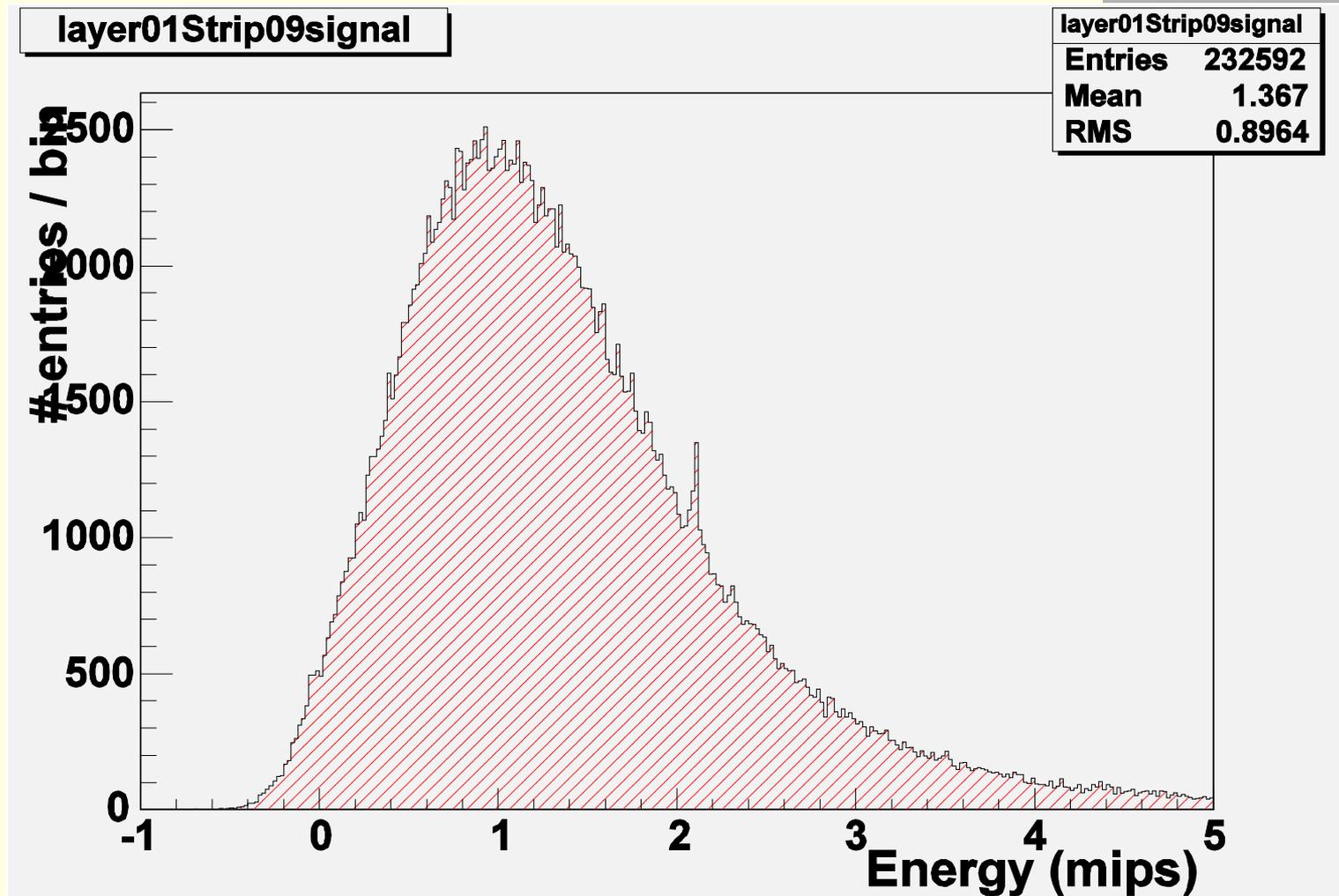
Layer 4, All channels



Muon Signal



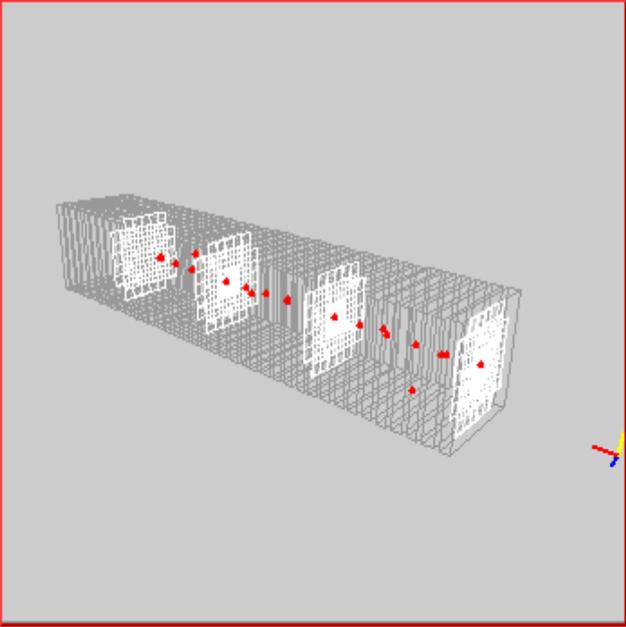
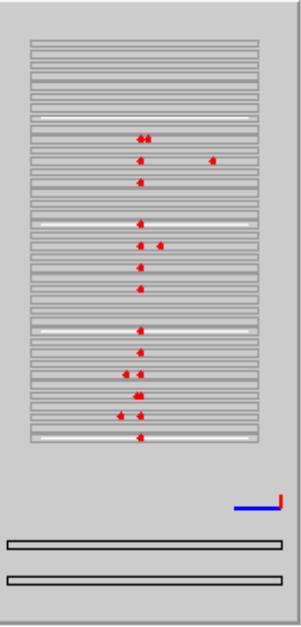
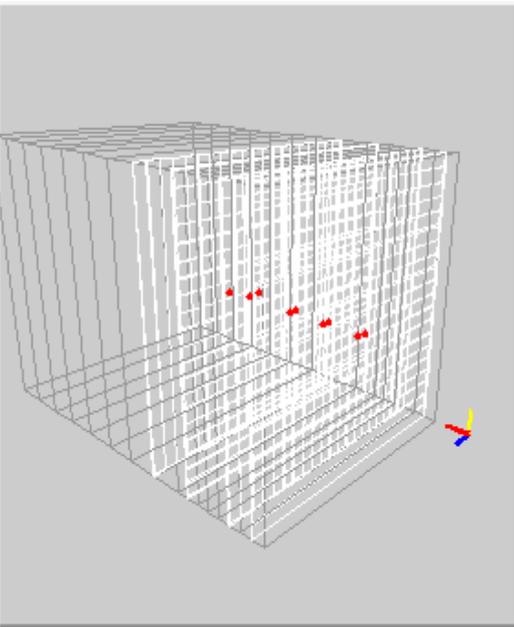
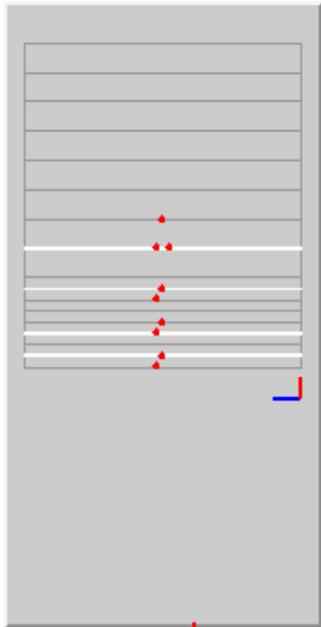
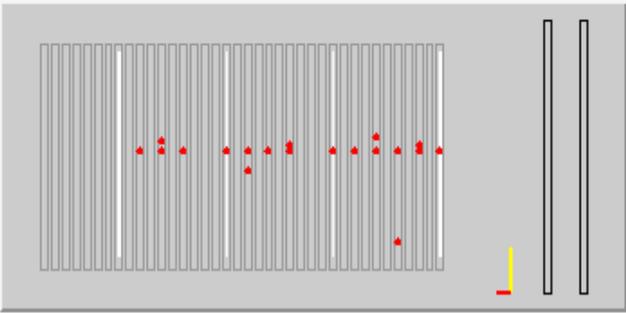
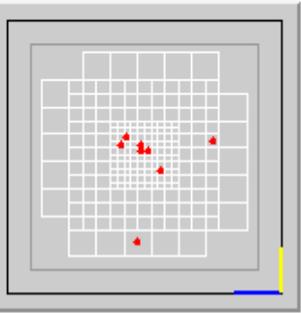
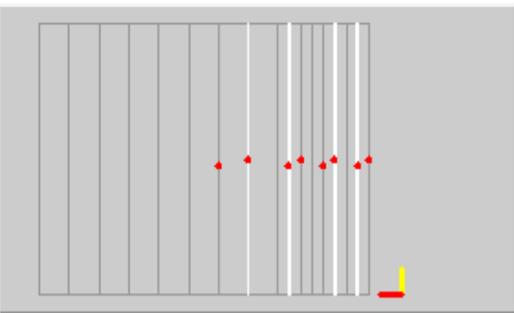
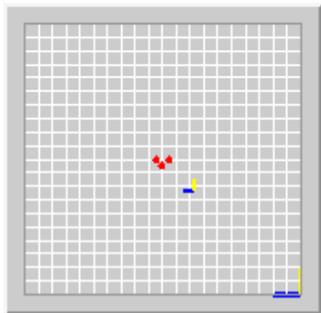
Response in MIP units



Muon Event

TCMT

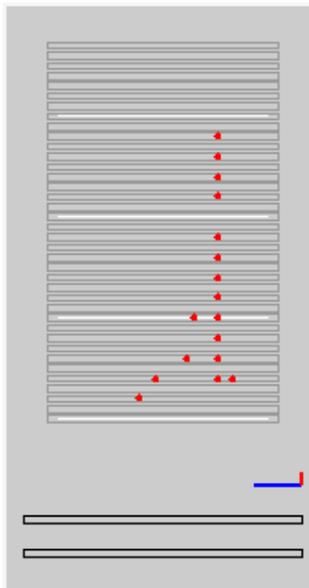
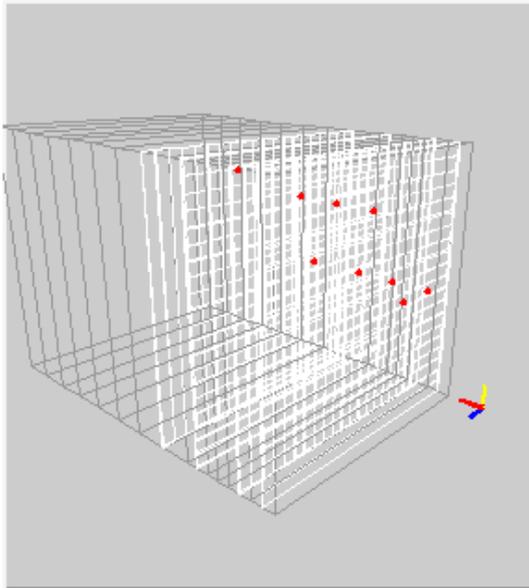
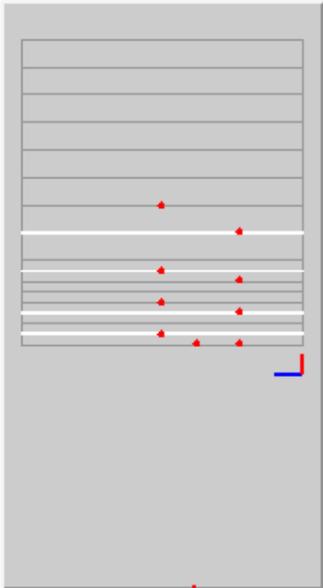
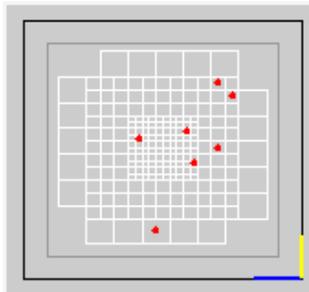
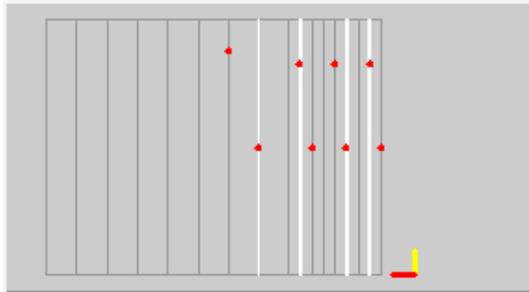
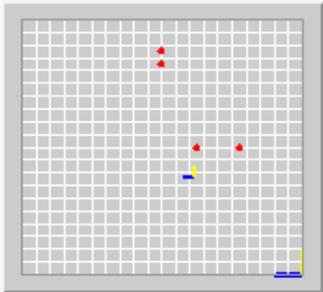
HCAL



An off-axis muon event

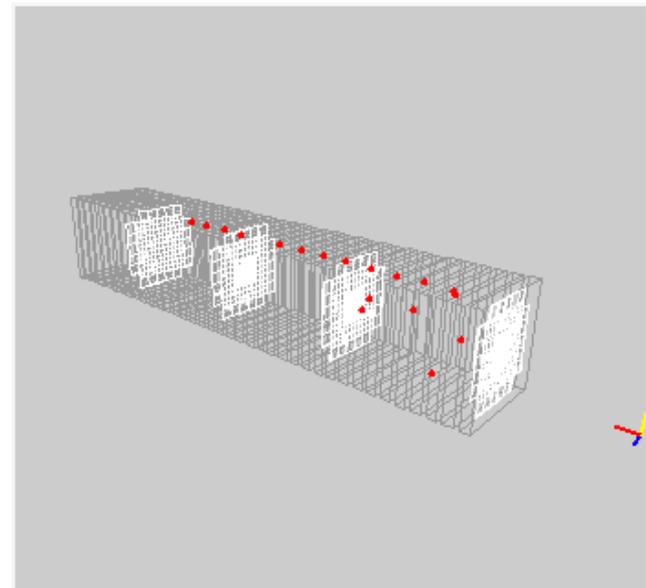
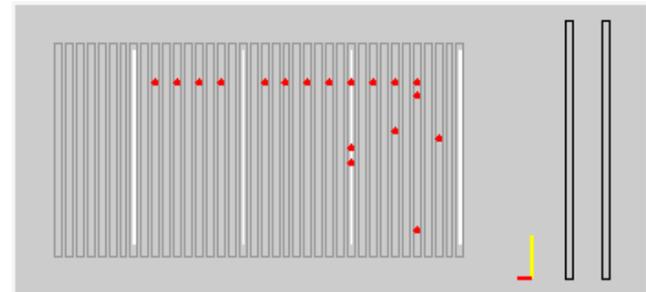
Run 300161:0 Event 1027

Time: 12:53:22:453:793 Tue Aug
Hits: 9 Energy: 11.2526 mJ



Run 300161:0 Event 1027

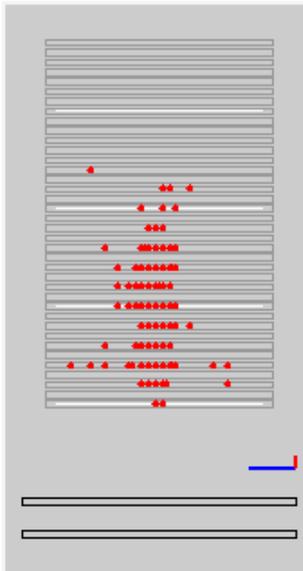
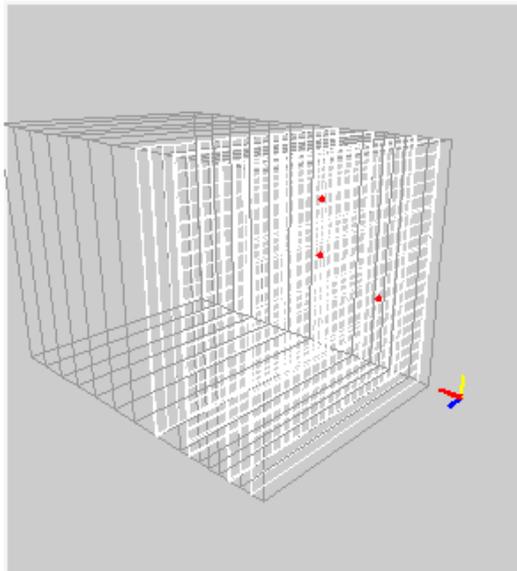
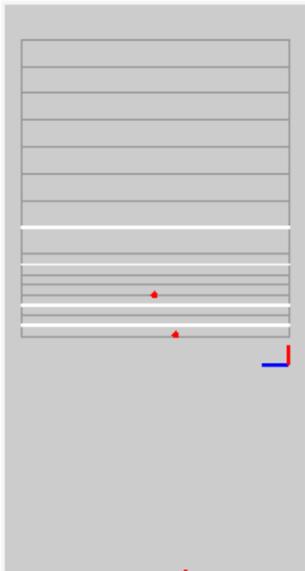
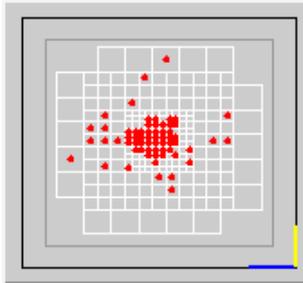
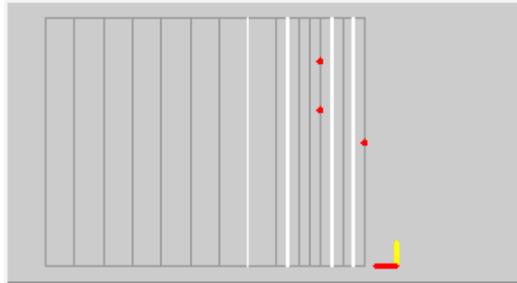
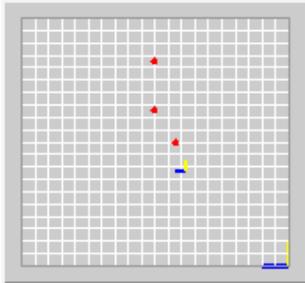
Time: 12:53:22:453:793 Tue Aug 22 2006
Hits: 18 Energy: 18.4715 mJps



80 GeV pion event (hcal-contained)

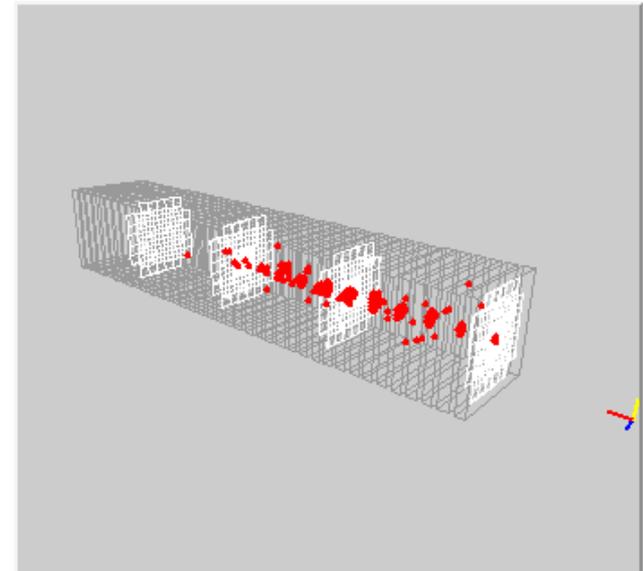
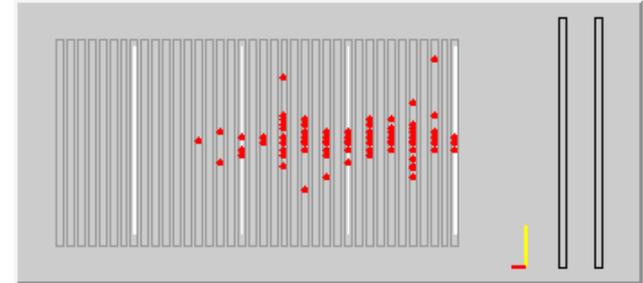
Run 320639:0 Event 1024

Time: 01:02:32:438:321 Sat Sep 2 2006
Hits: 3 Energy: 2.23117 mip



Run 320639:0 Event 1024

Time: 01:02:32:438:321 Sat Sep 2 2006
Hits: 185 Energy: 1046.12 mips

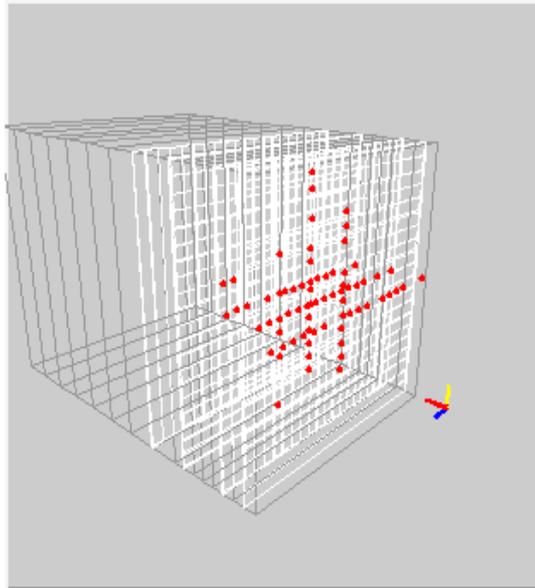
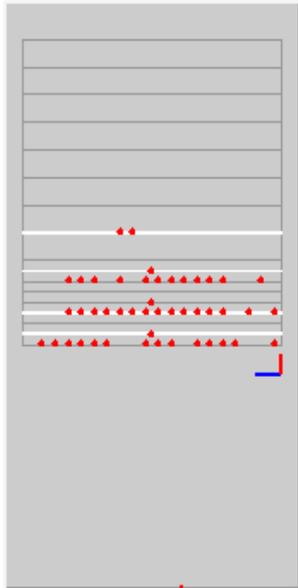
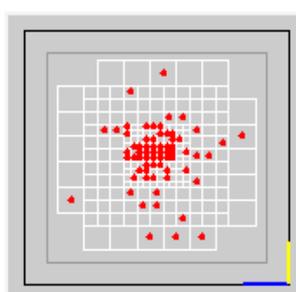
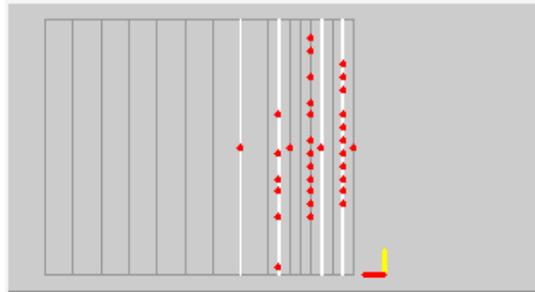
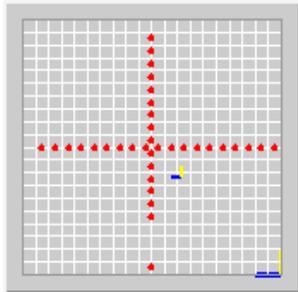


80 GeV pion event

Run 320639:0 Event 1004

Time: 01:02:32:317:005 Sat Sep 2 2006

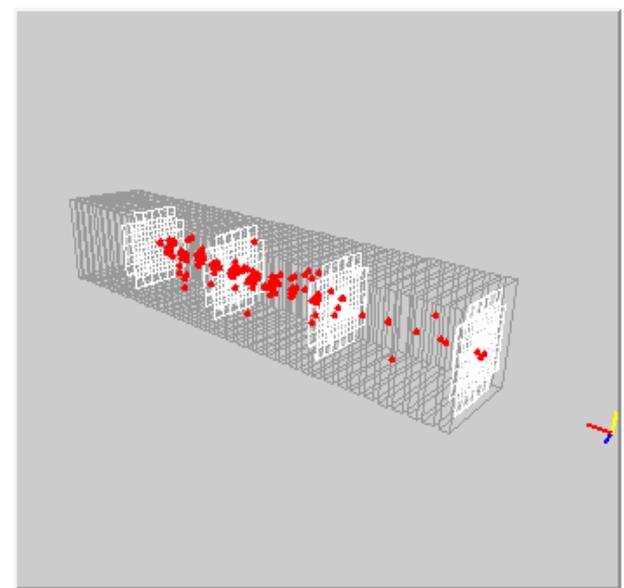
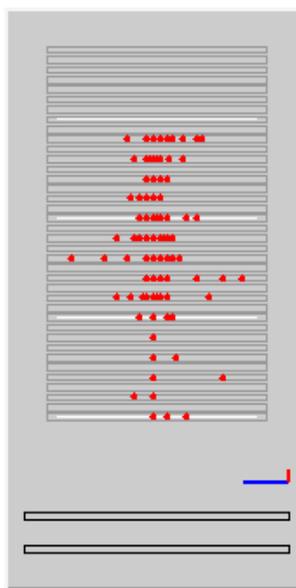
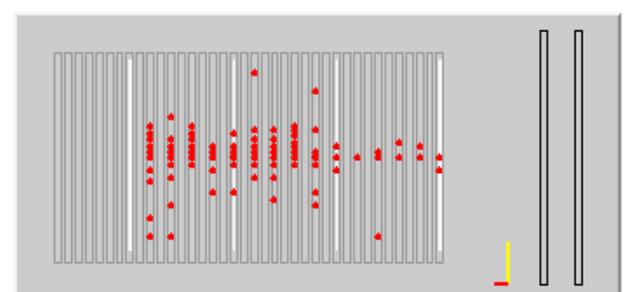
Hits: 72 Energy: 402.465 mip



Run 320639:0 Event 1004

Time: 01:02:32:317:005 Sat Sep 2 2006

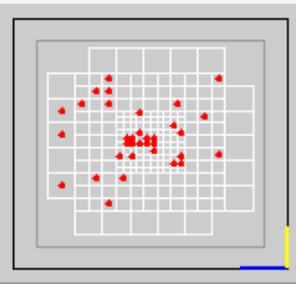
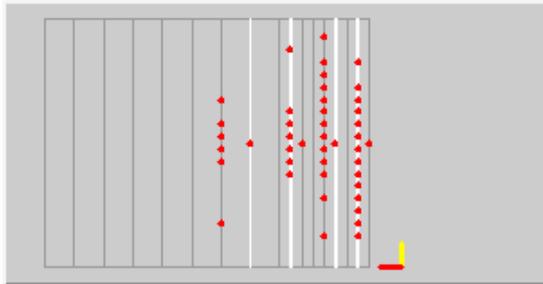
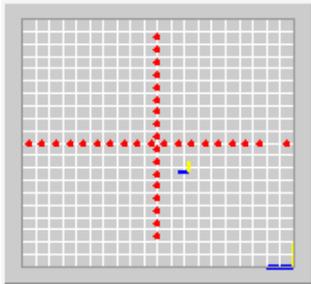
Hits: 155 Energy: 627.659 mip



80 GeV pion event

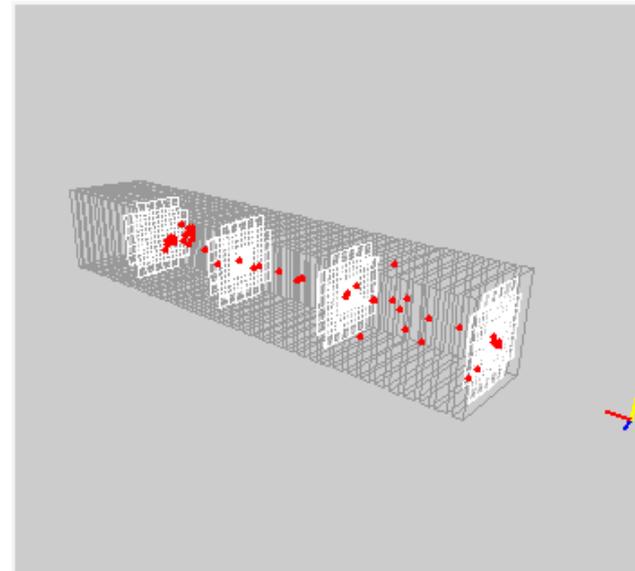
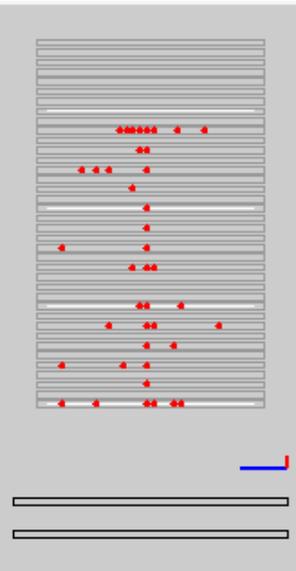
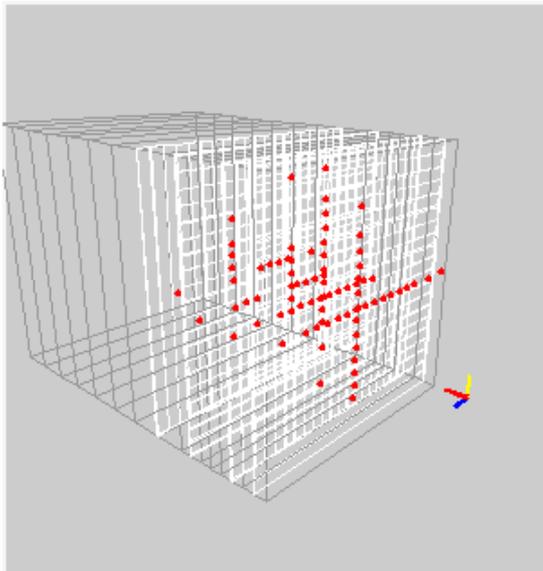
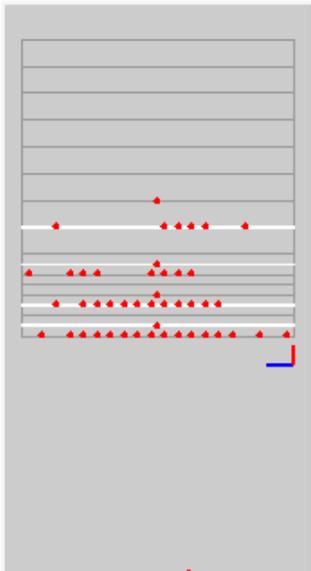
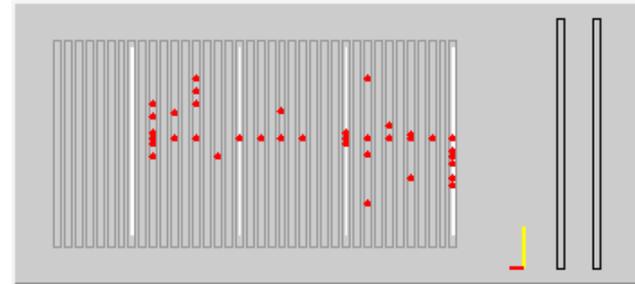
Run 320639:0 Event 1035

Time: 01:02:32:505:769 Sat Sep 2 :
Hits: 82 Energy: 570.252 mips



Run 320639:0 Event 1035

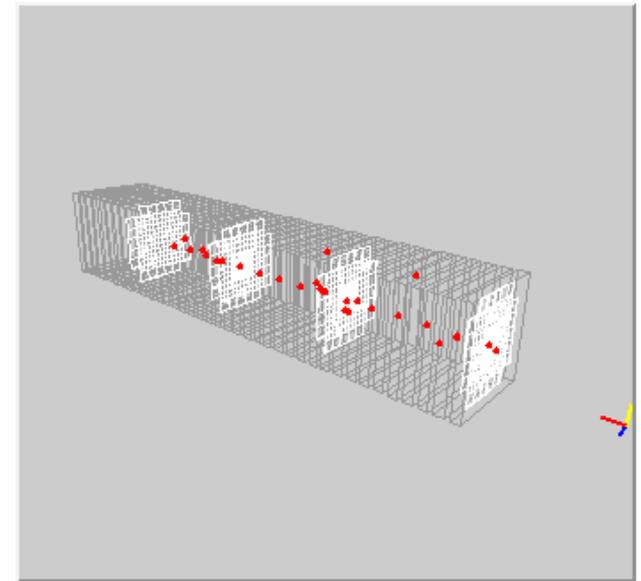
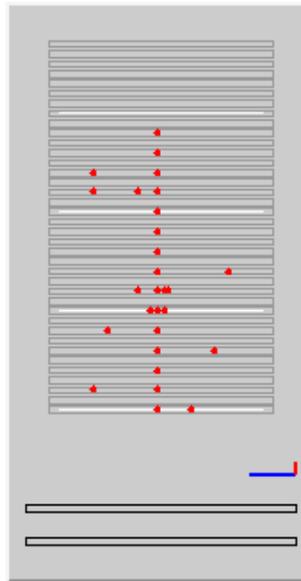
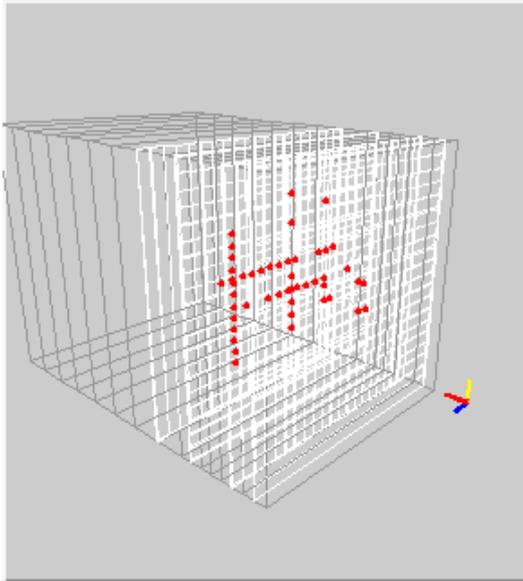
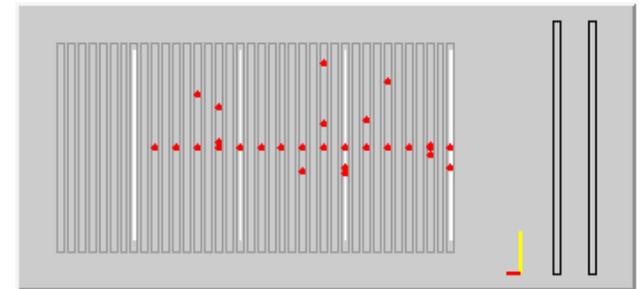
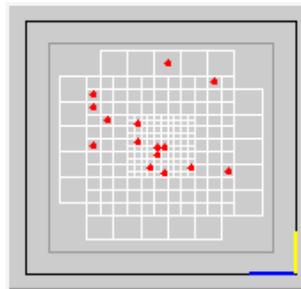
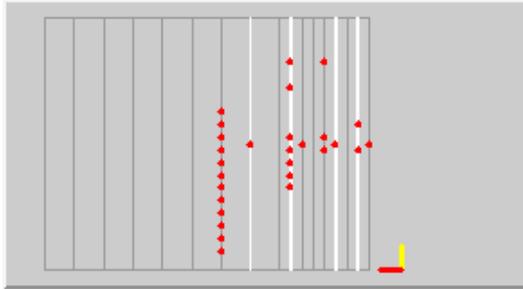
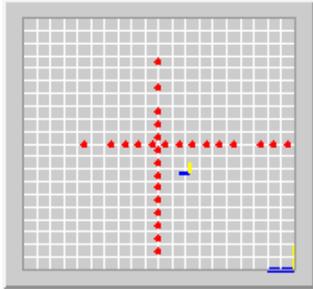
Time: 01:02:32:505:769 Sat Sep 2 2006
Hits: 48 Energy: 89.8849 mips



80 GeV pion (punchthrough)

Run 320639:0 Event 1028

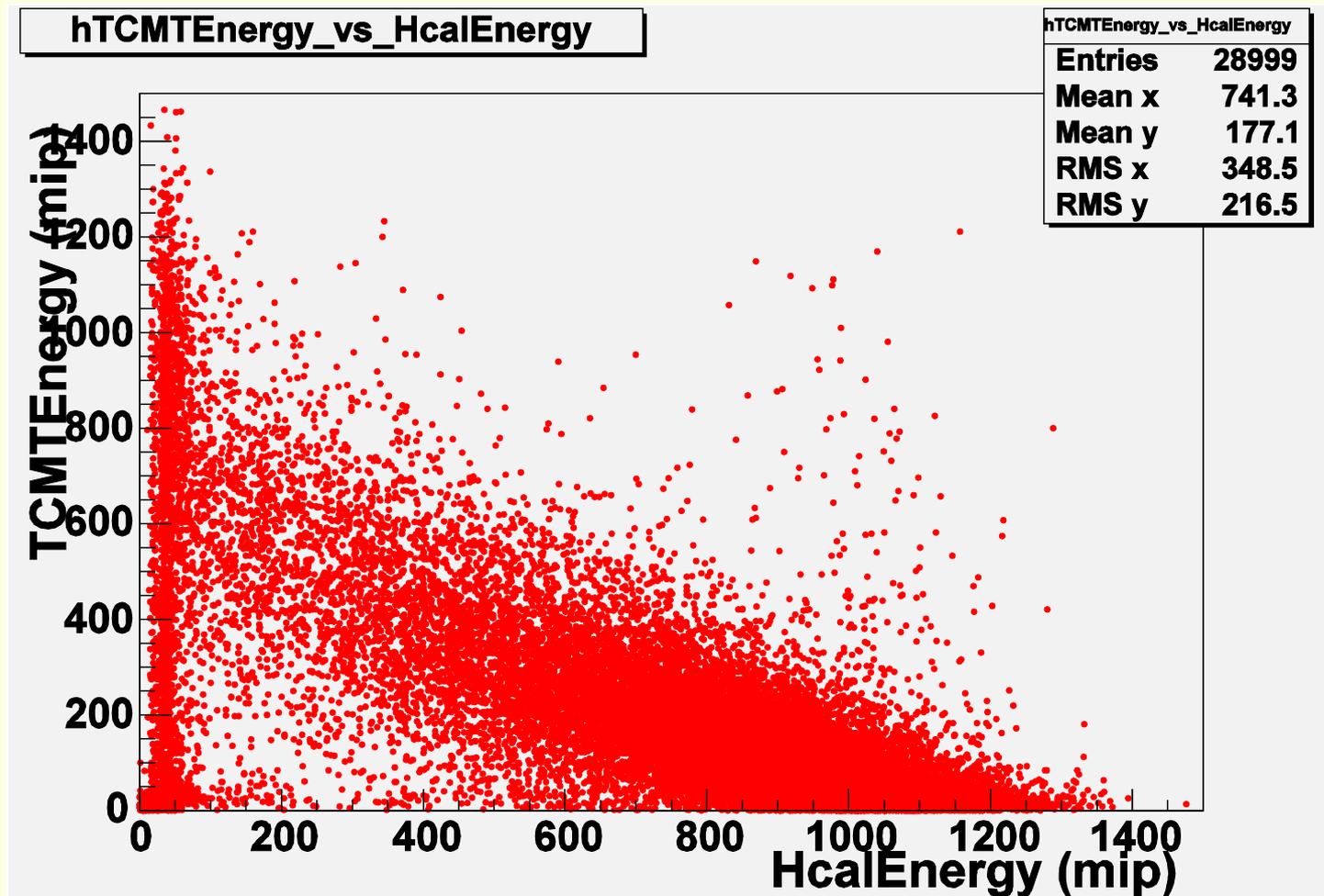
Time: 01:02:32:463:742 Sat Sep 2 2006
Hits: 48 Energy: 307.104 mip



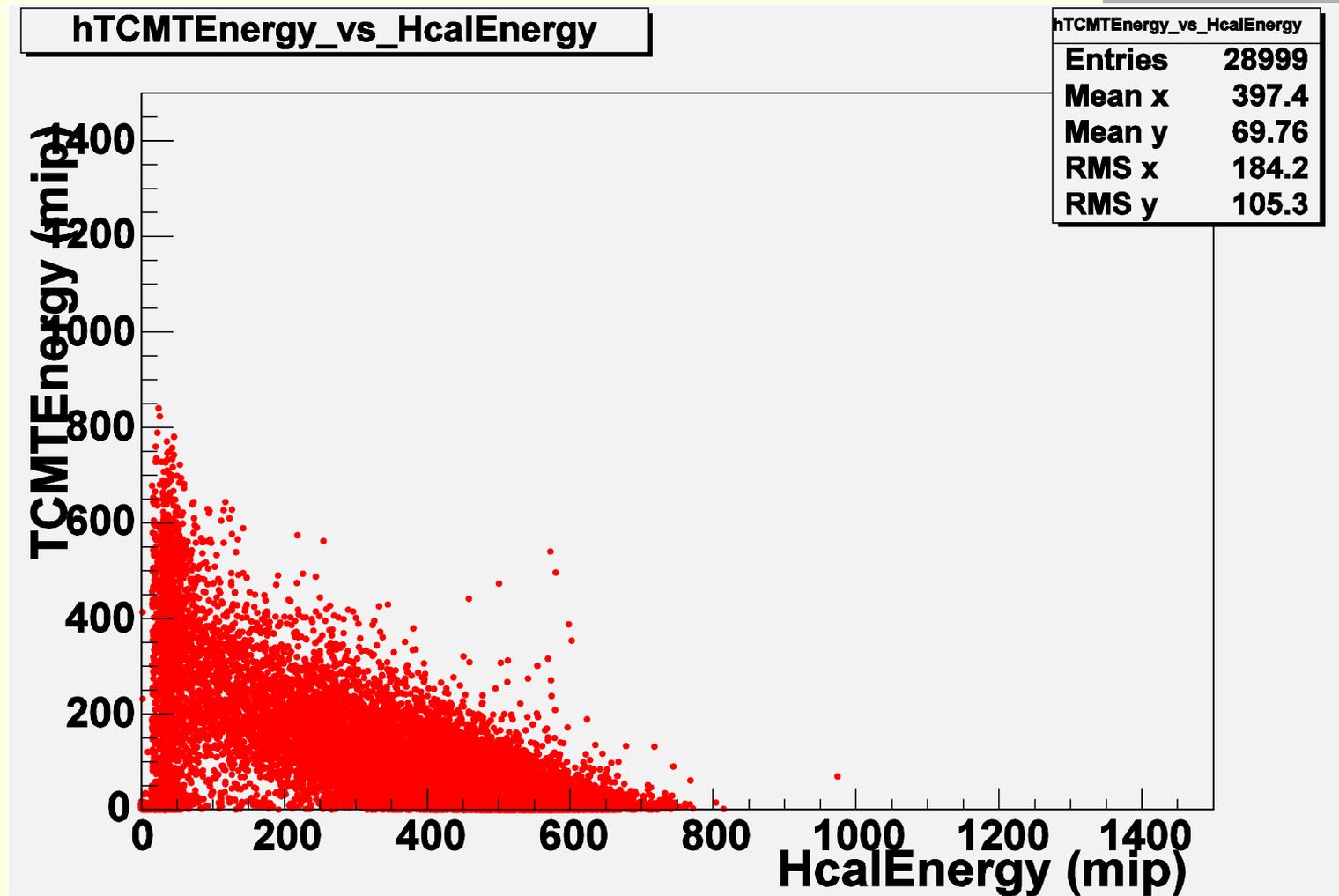
Run 320639:0 Event 1028

Time: 01:02:32:463:742 Sat Sep 2 2006
Hits: 29 Energy: 50.3177 mip

80 GeV Pions



30 GeV Pions



Summary

- Very preliminary look is encouraging, more data analysis is underway
- Developing TCMT reconstruction into the official Calice framework
- Plan to have a more complete detector for the upcoming October run
- Remaining cassettes being shipped to CERN