Beamtest Data Analysis Status

Berrie Giebels

Data available as:

HBOOK **Ntuples** (CERNLIB)

ROOT **Files (Richard, Dan)**

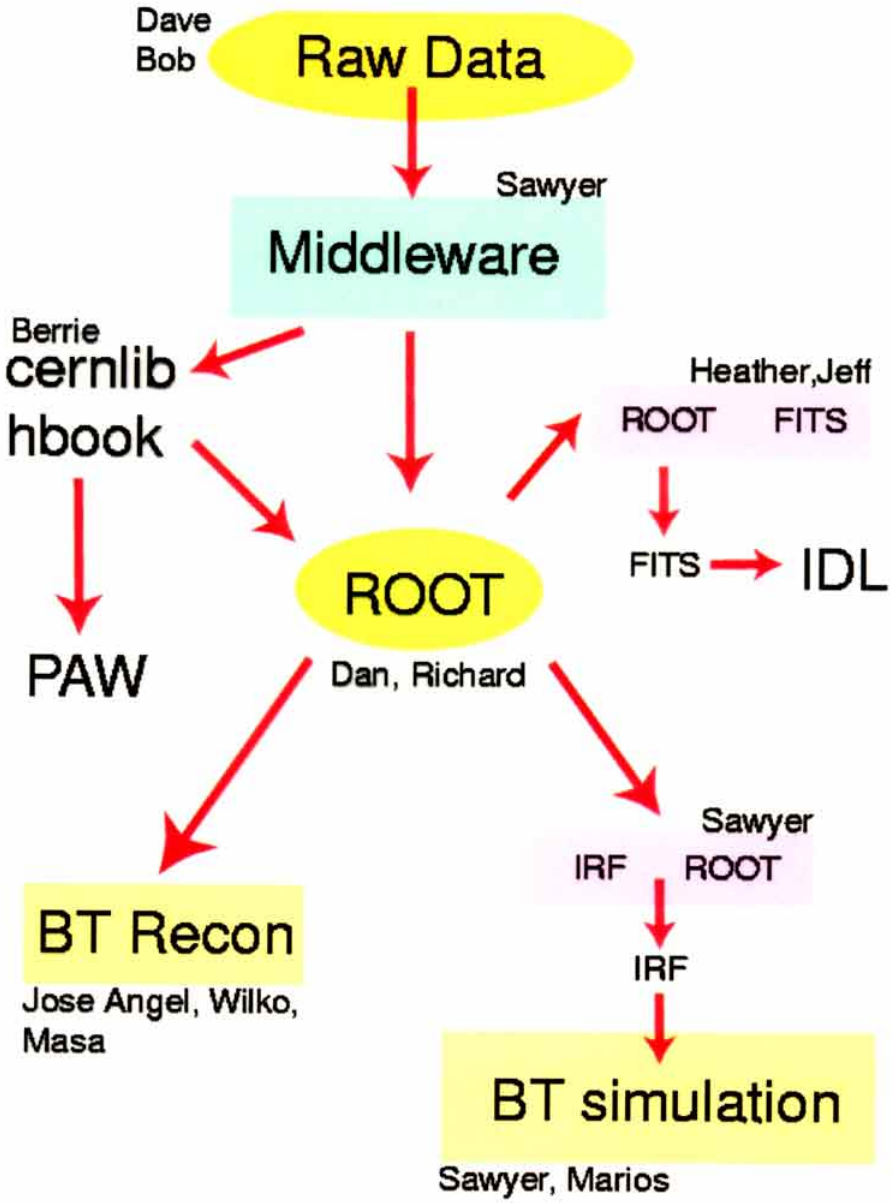
Reconstruction: tbrecon (Jose, Wilko, Masa...)

Simulation: tbsim (Sawyer, Marios, Arache...)

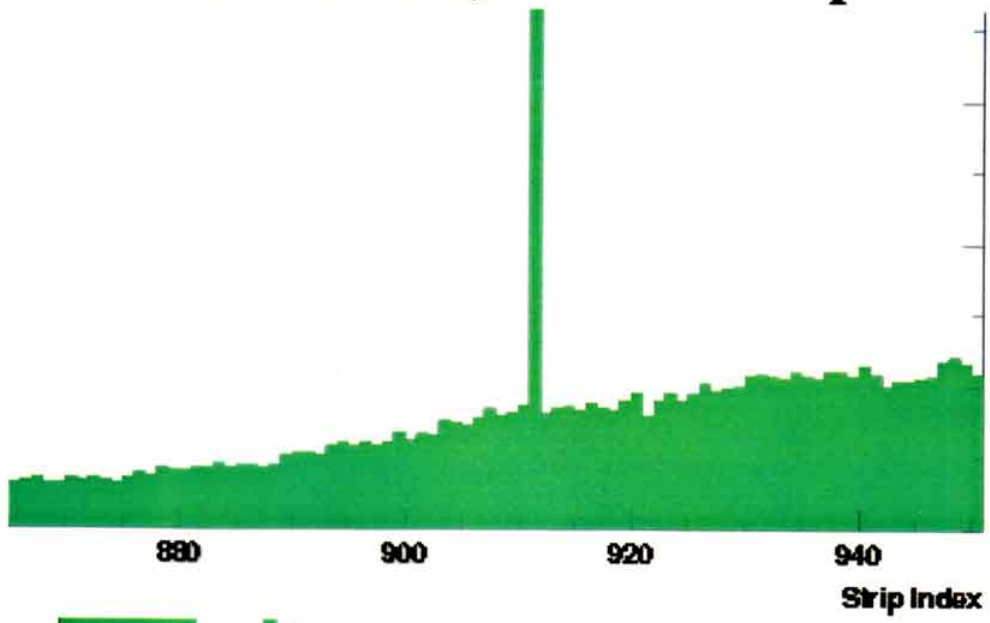
Documentation: Traudl

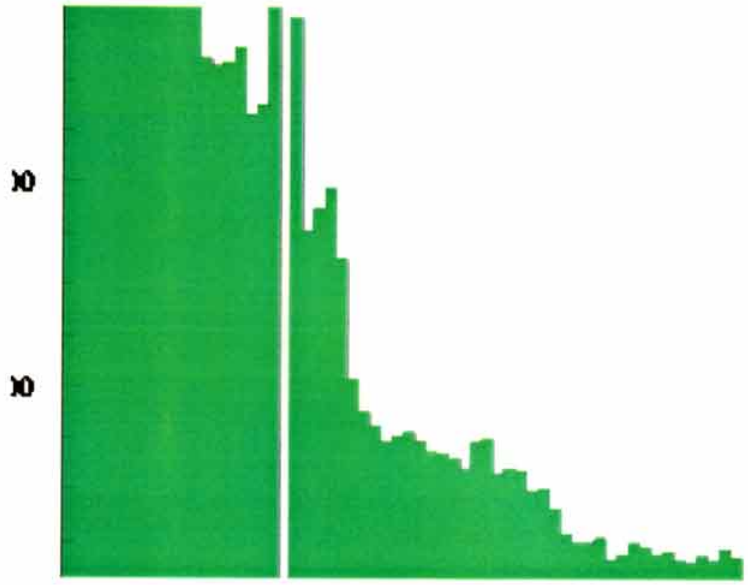
Skipper: Eduardo

Analysis group



Tracker data, hot/dead strips





Bad Channel List of the

GLAST Silicon Tracker for the Beamte

Bad channel list **reported** before assembly. *modified on Feb/29/2000*

Dead channel list from the beamtest data. *complete on Mar/01/2000*

Hot channel list from the beamtest data. *complete on Mar/01/2000*

Summary of bad channels *under construction*

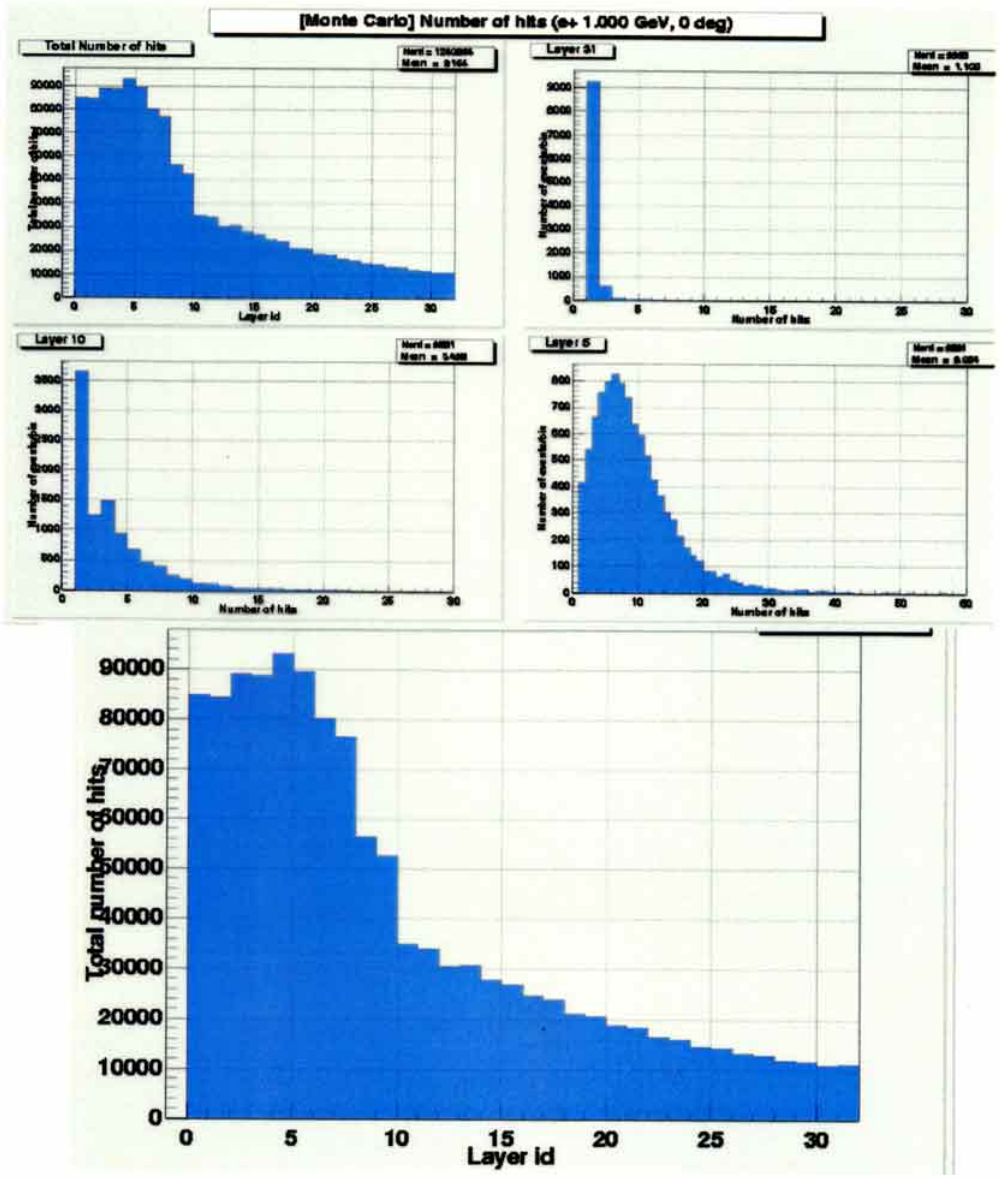
Back to Taka's beamtest page

Taka

---

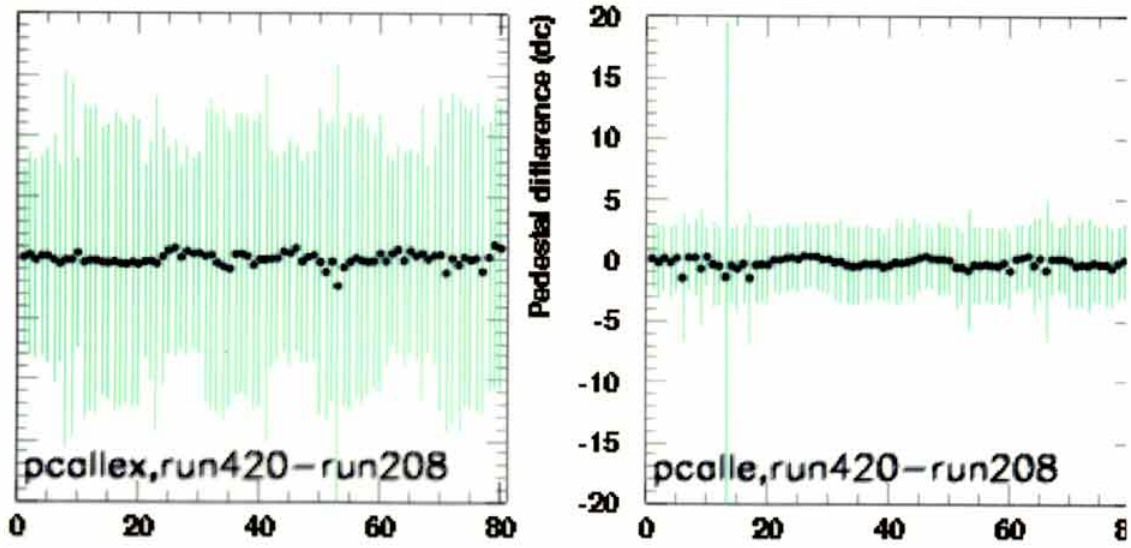
http://www.slac.stanford.edu/~handa

Tracker BT simulations



Calorimeter pedestals

Stability of the Calorimeter pedestals for a large fraction of runs. Clear change after X-mas break.



Possibly need only 2 or 3 different pedestal files for a first look at the data!

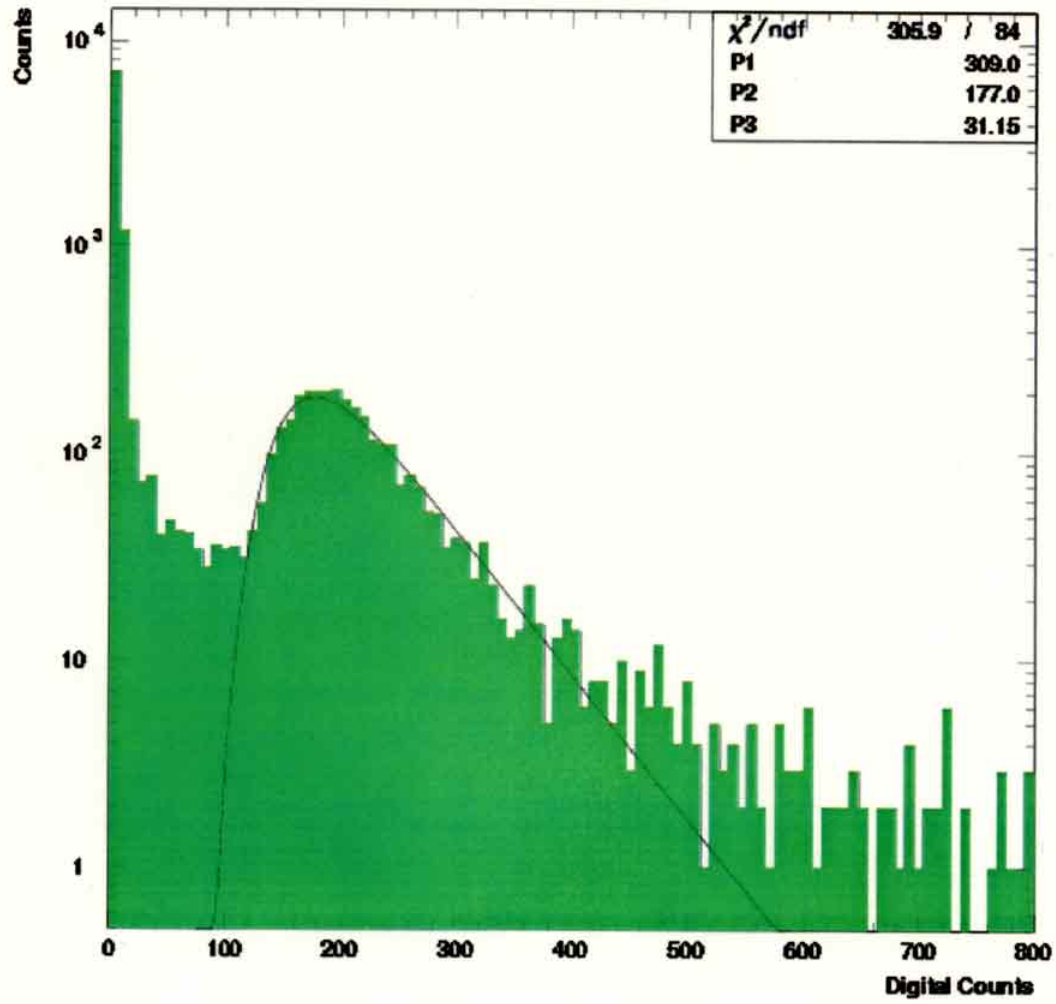
Calorimeter Calibration

Cosmic ray runs (muons): identified in the run description

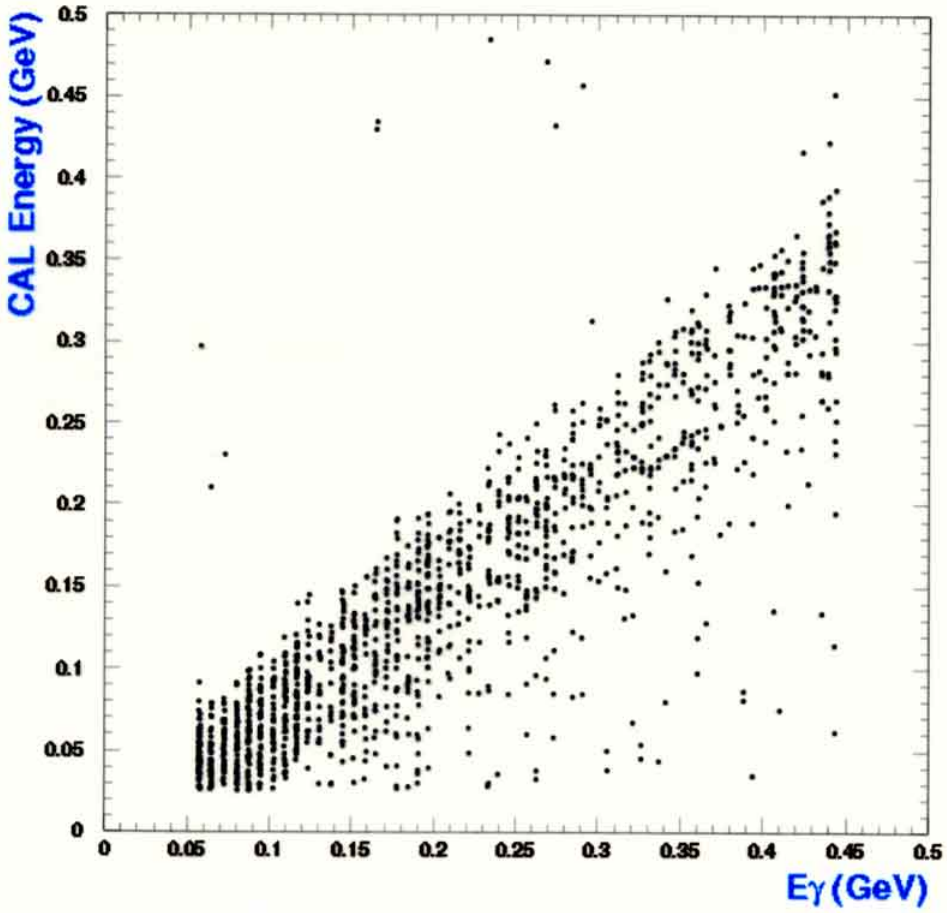
Hadron runs (protons, pions): make the correct cuts in the data using ESA ("onegoodp" cuts pions!) and/or Calorimeter information (MIP peak)

Close to conclusion after some surprises

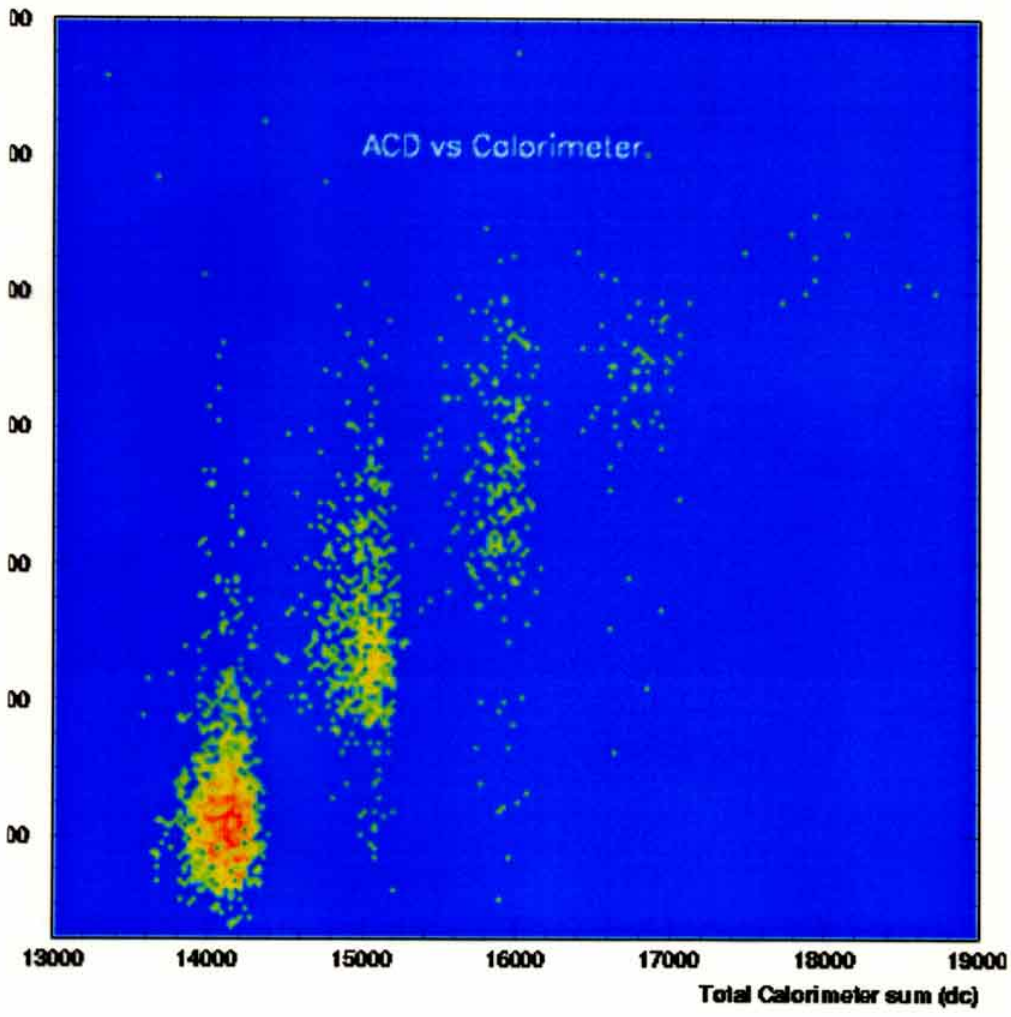
Closer look to a Cosmic ray run

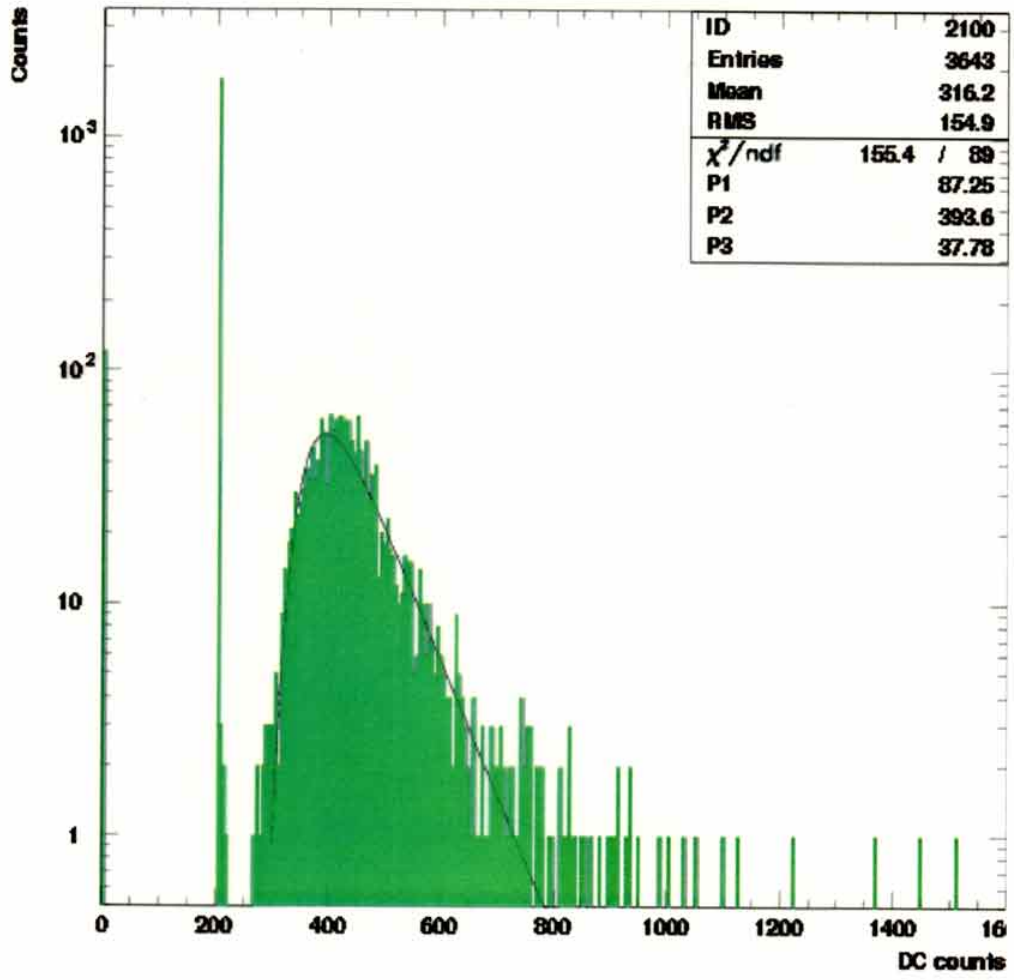


Comparison of Tagger and CAL



Anticoincidence

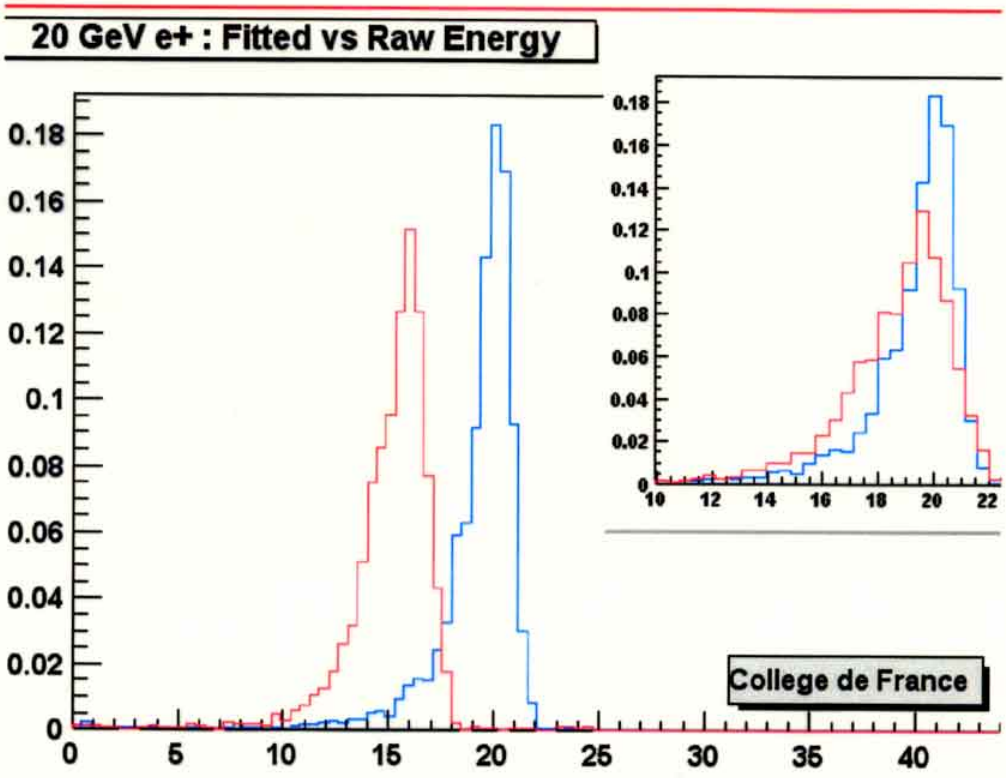



Counts
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
16
DC counts
ID 2100
Entries 3643
Mean 316.2
RMS 154.9
χ^2/ndf 155.4 / 89
P1 87.25
P2 393.6
P3 37.78

Analysis of beamtest data

Segmented CAL allows energy profile fitting

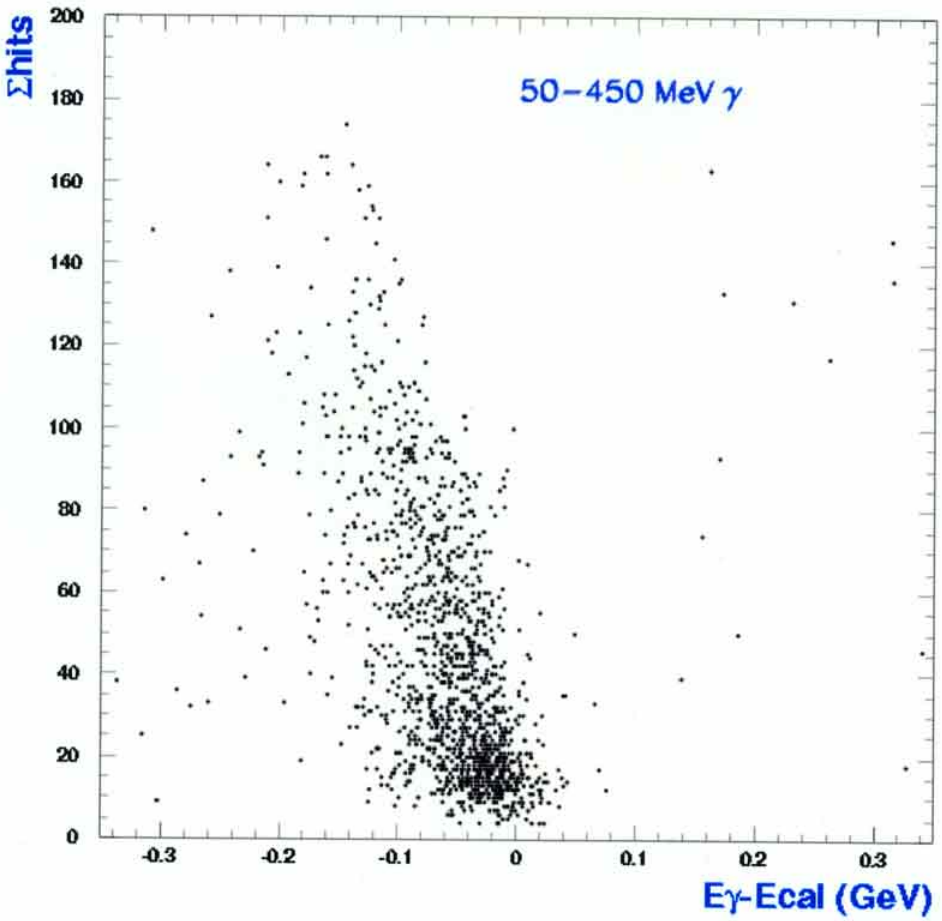
Example on BT data with 20 GeV electrons (prelim.)



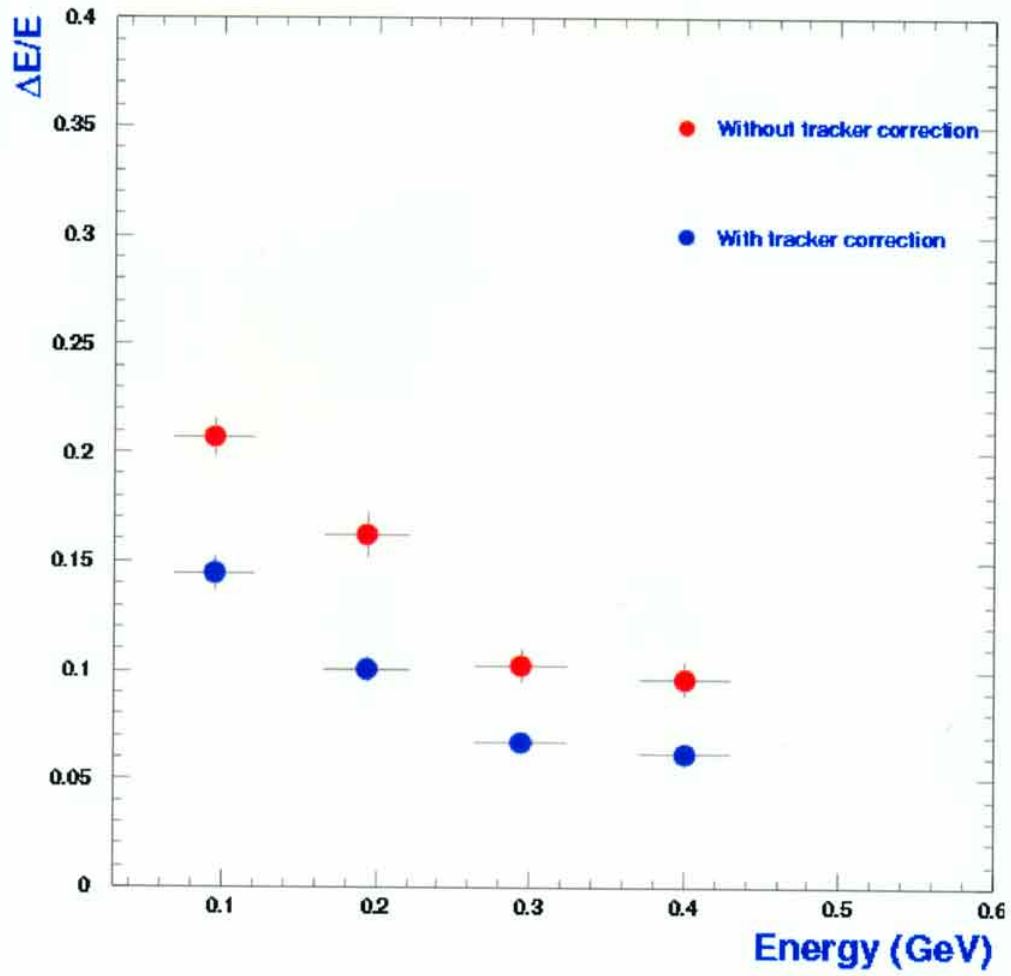
More will be told by Arache & Eric during TKR, CAL recon // session.

First look at LE photon energy correction on BT data

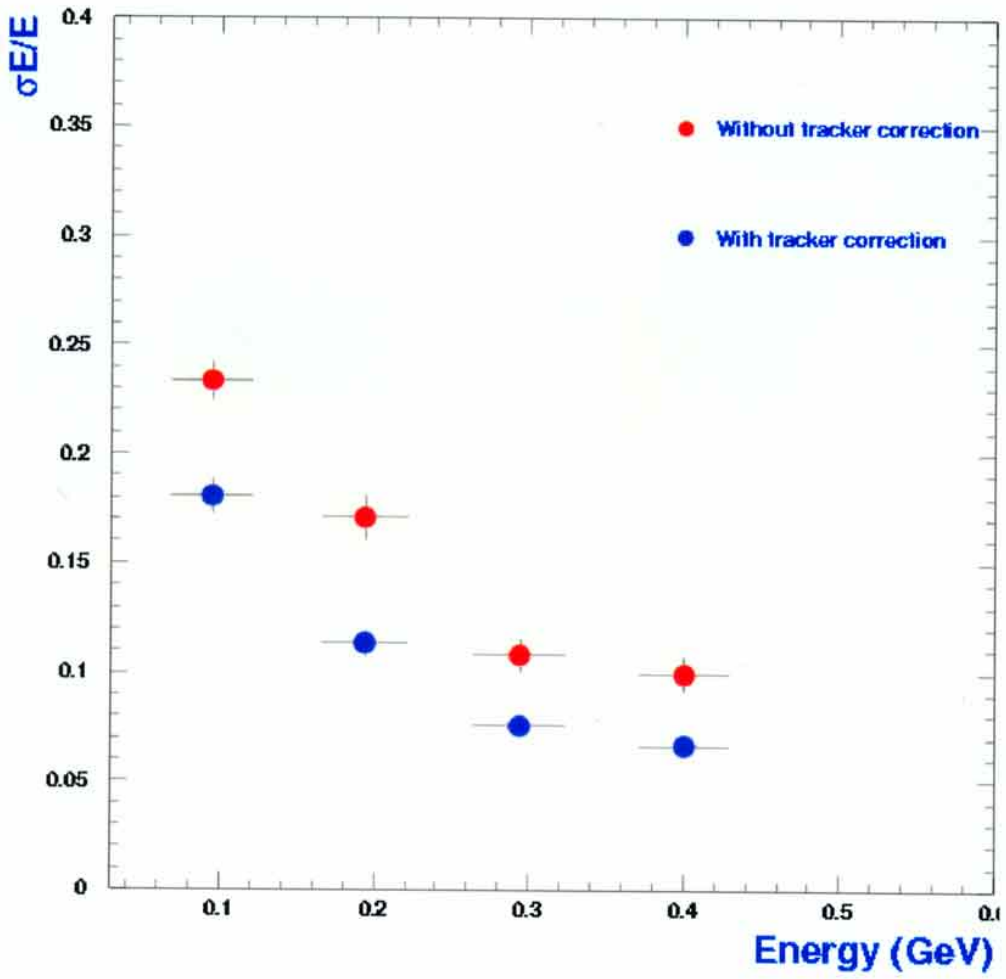
Correction using TRK, CAL and ACD data: find correlation between $E_\gamma - E_{CAL}$ and the hits in the tracker.



Find k in $E_\gamma - E_{CAL} = k \sum_{planes} hits$



but with more optimistic beam resolution:



Conclusions so far...

- TRK calibration almost completed.
- CAL calibration almost completed for selected runs. More work to be done for complete set of runs.
- ACD calibration: "soft trigger" needed.
- Tagger calibration: some work remains on beam resolution.
- BT reconstruction in progress.
- BT simulation in progress.
- Stay tuned on the BT weekly VRVS meetings!