Status of CalData

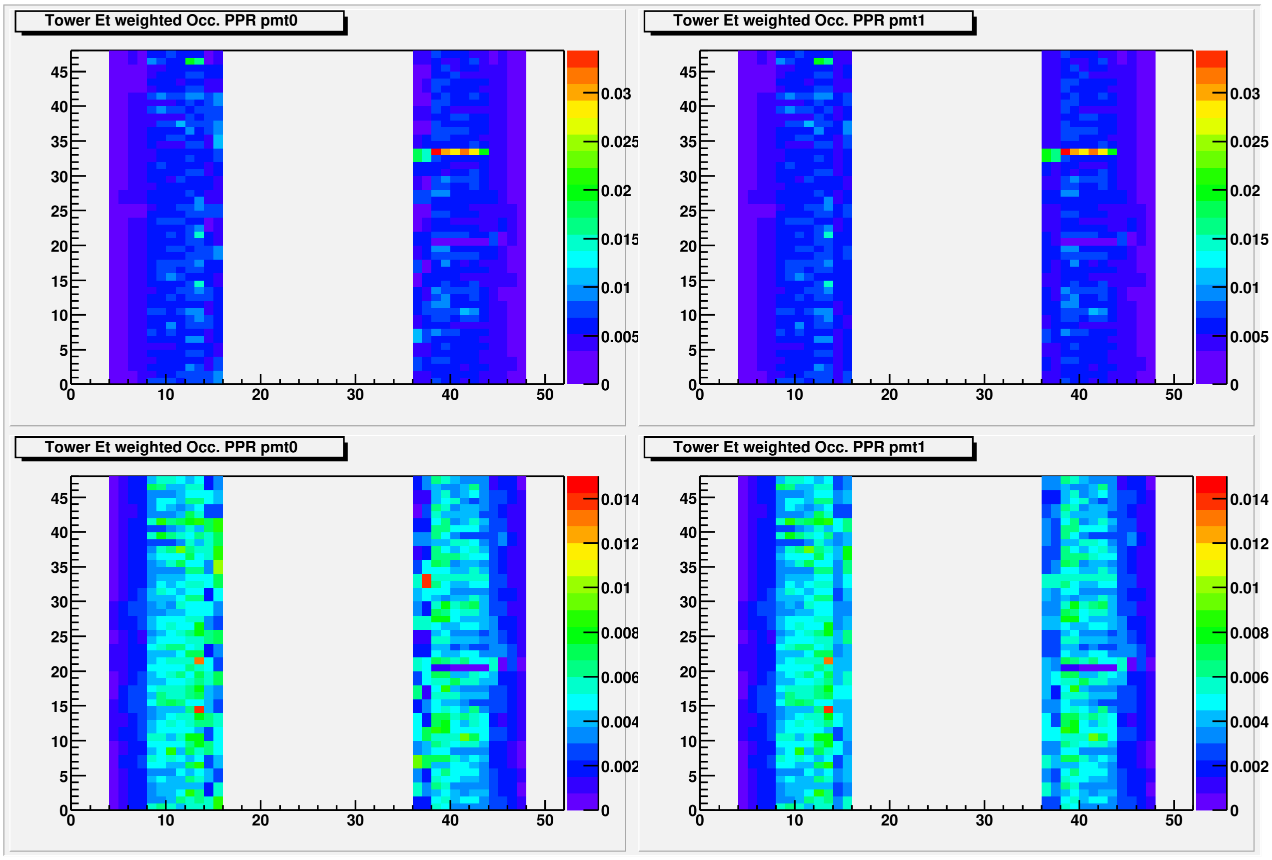
B. Heinemann (07/10/02)

- recent changes
- planned changes

Recent Changes

- 4.5.0: PPR by default added to EM energy ($E = E_{PEM} + 1 \cdot E_{PPR}$):
  - adds about 2% for Z electrons
  - adds about 10% for jets
  - seems reasonable but needs study of linearity to determine weight (presently set to 1)
- 4.7.0: MiniPlug stored in CalData but not used in $\not{E}_t$ or jet energy calculations (only WEST is read out)

PPR

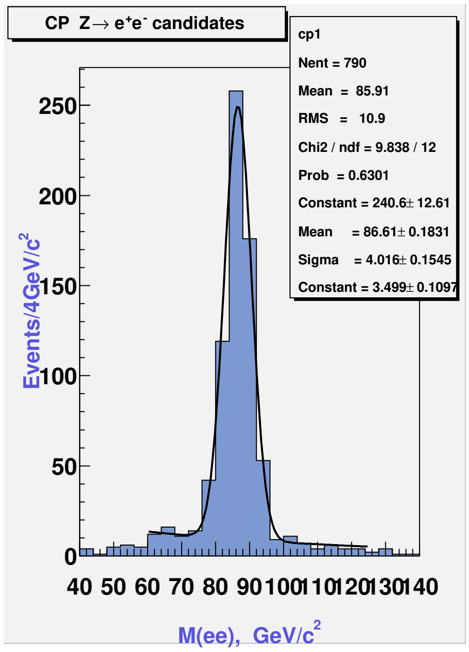


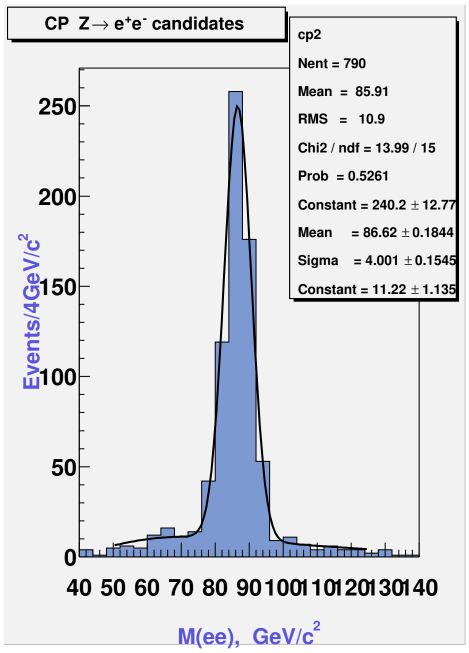
- calibrated 11/02 using source data

  (Yoshi, Satoru)
- flat apart from one hot wedge

Central-Plug $Z \to ee$ (Jedong)

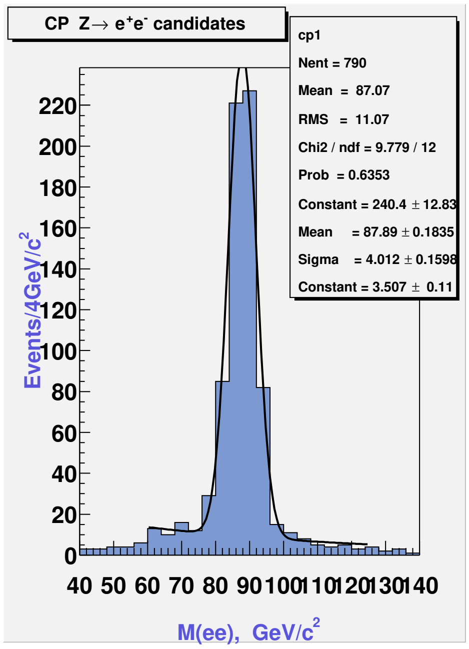
without PPR:

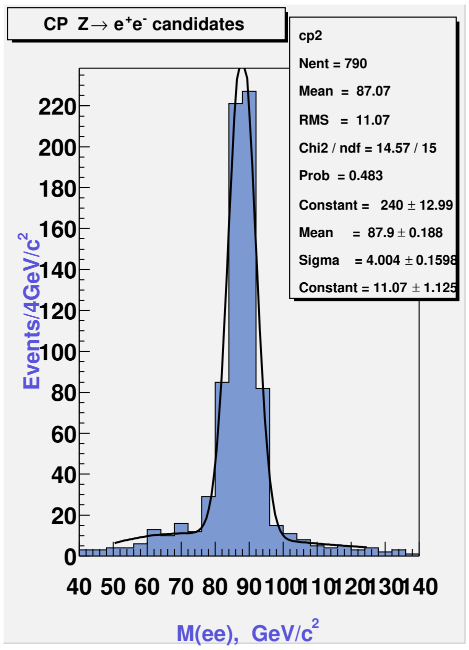




$M = 86.6$ GeV

with PPR:

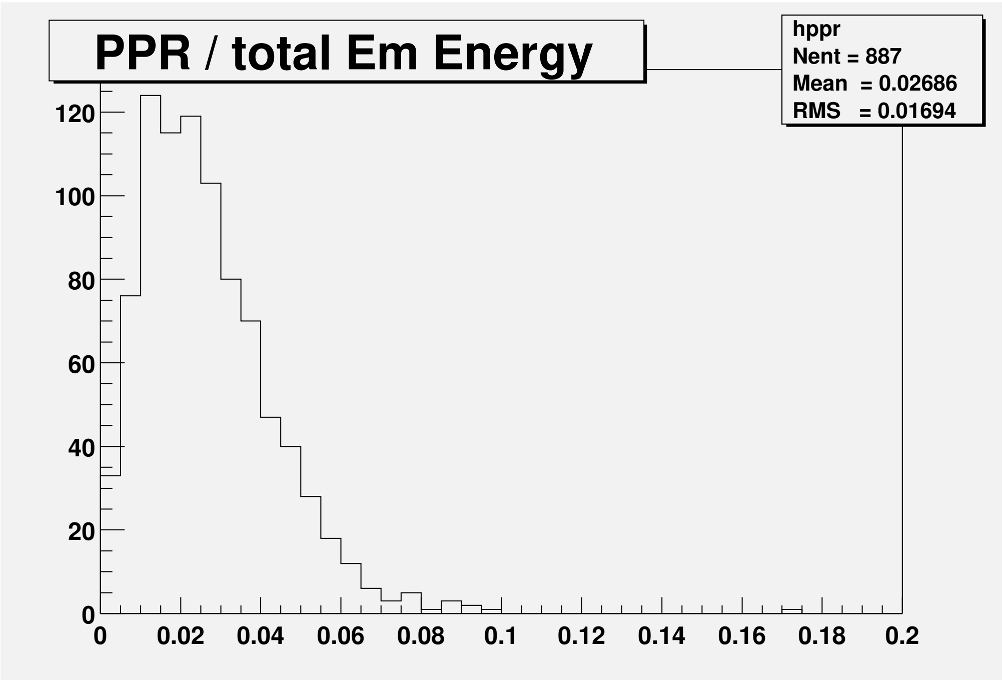




$M = 87.9$ GeV

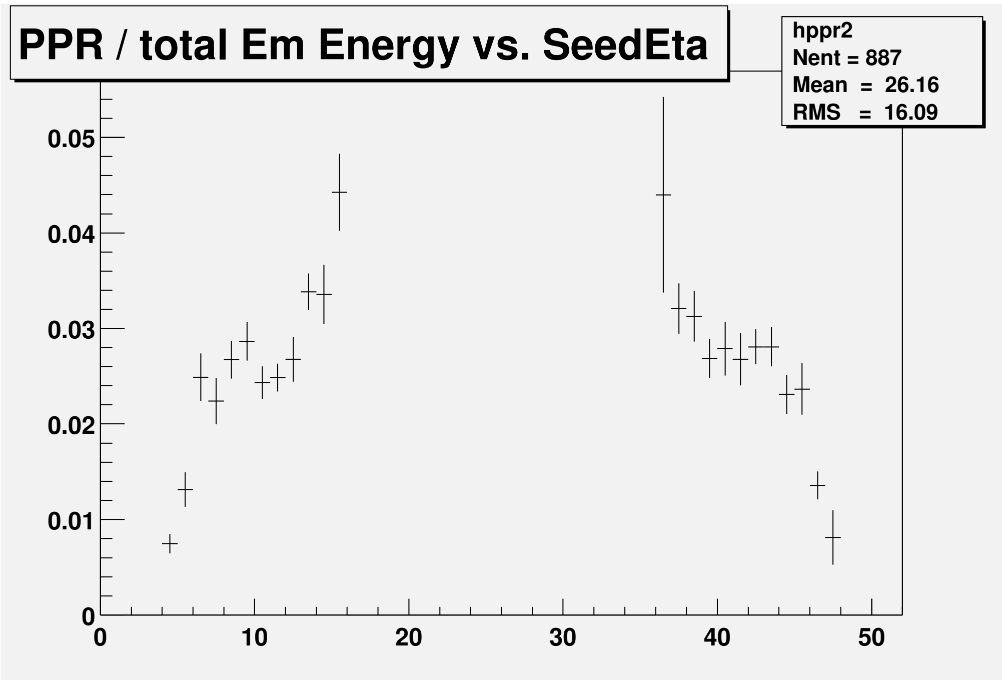
Central-Plug $Z \to ee$ (Jedong)

fractional energy of PPR:



$\approx 2 - 3\%$

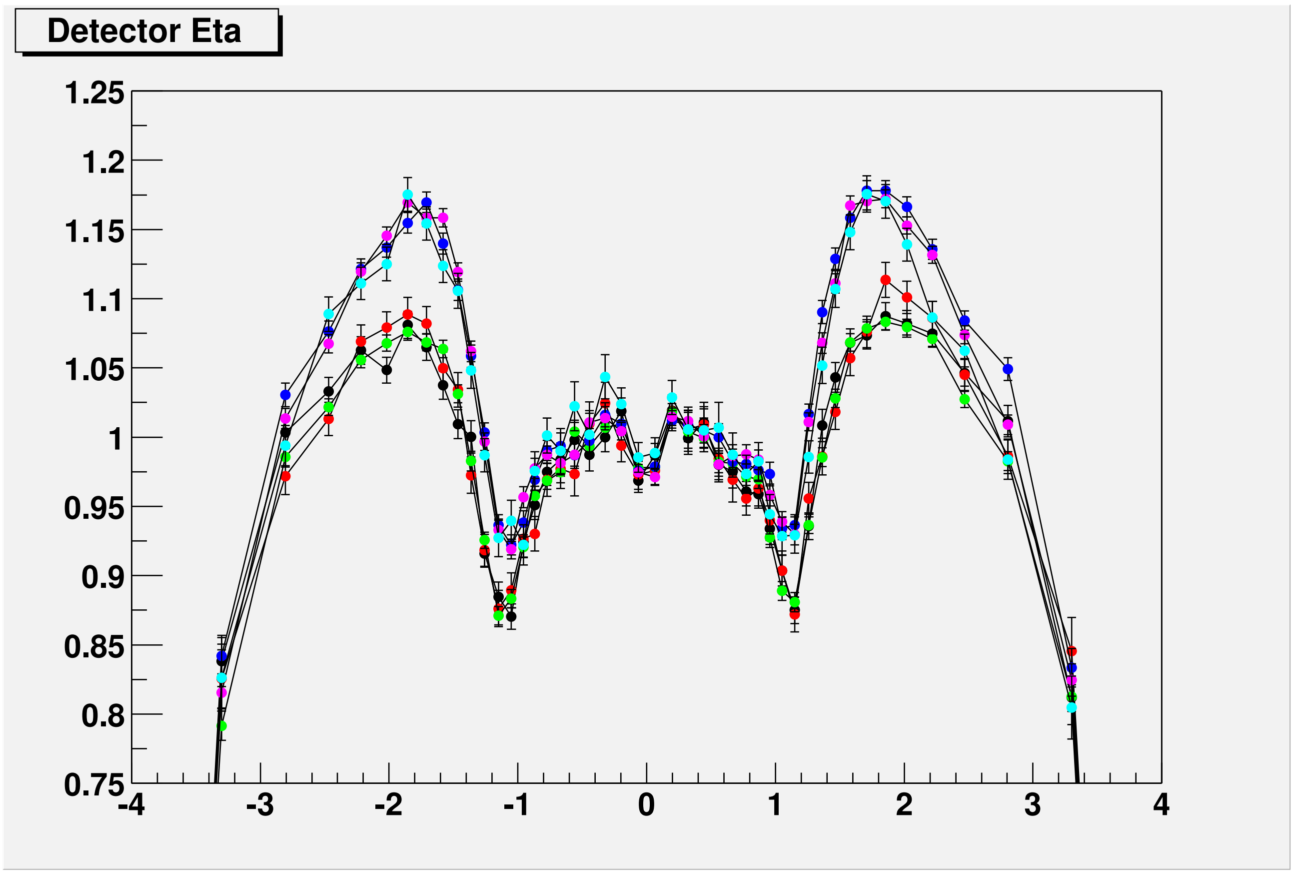
eta dependence:



NIM paper: 1.6% at 57 GeV, 10% at 5 GeV

Di-Jet Balancing (PPR vs no PPR)

balance of jet against central jet (A. Bhatti)



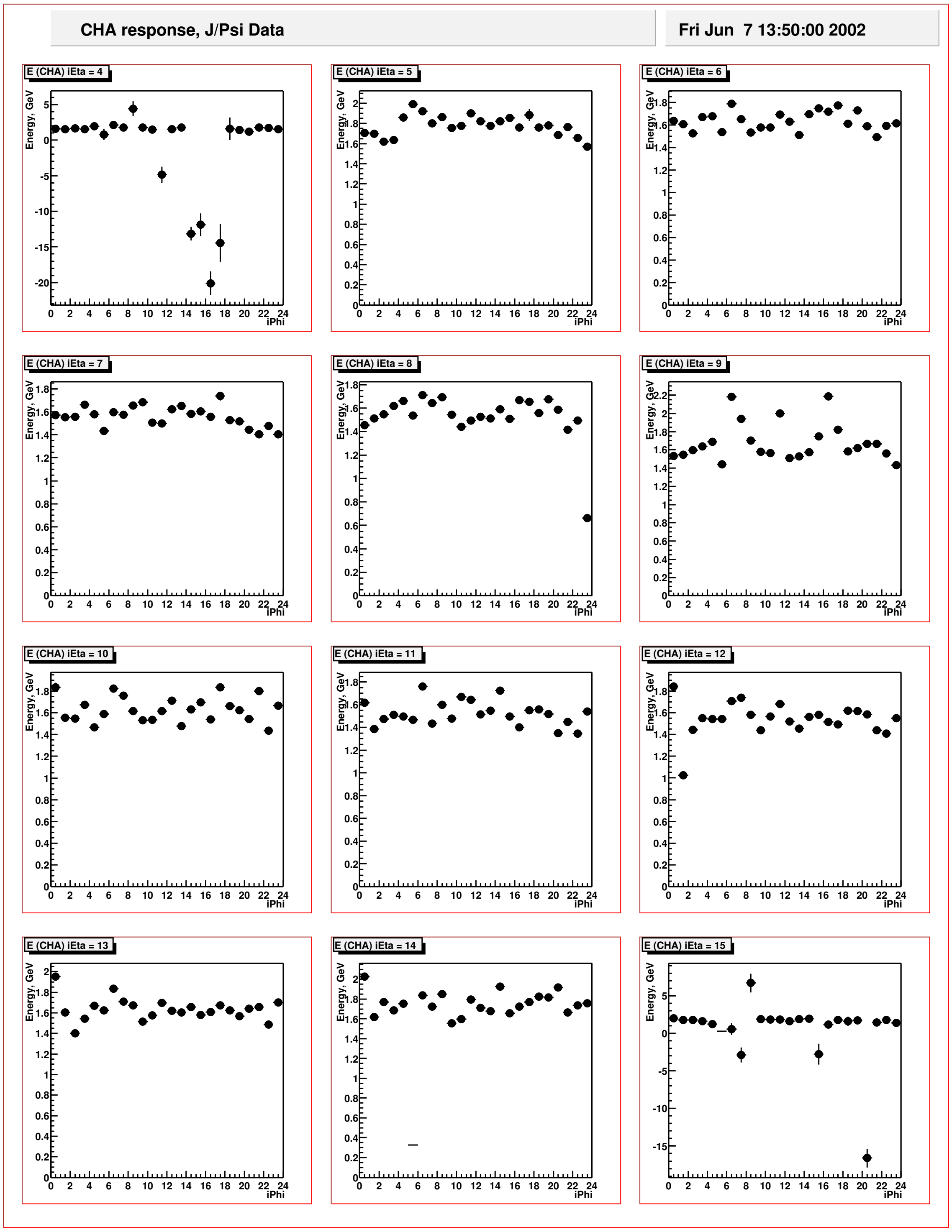
increase due to PPR $\approx 10\%$

Present/Future Changes

- apply CEM tower-by-tower corrections (Eva) to PhysicsTowerData
  - not to Caldata to preserve raw data such that reprocessing from Caldata possible
  - feeds through to electrons, jets and $\not{E}_t$
  - DB available but new TowerCorrection class needed which stores those constants
- CHA tower-by-tower corrections (Dmitri)
  - needs verification from hardware people
- Speed
  - use `ReadFastArray` $\Rightarrow$ anticipate I/O speed decrease by factor of 10 (puffing still slow but most users don't want to puff Caldata)
  - factor of 10 achieved e.g. for CESQ (M. Riveline)

CHA MIP peak (Dmitri T)

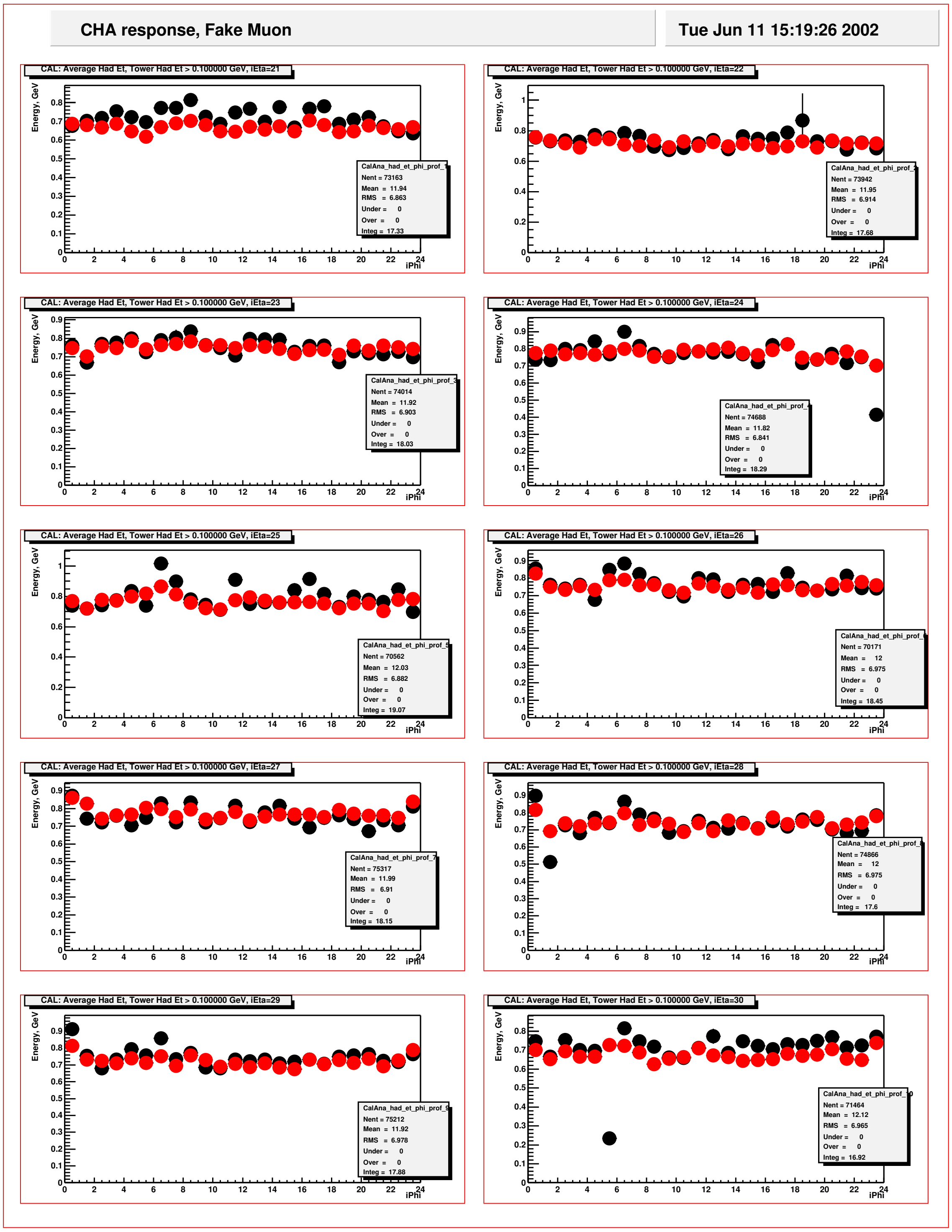
MIP peak position for J/ψ muons



non-negligible variations in some areas

CHA Jet20 average E_t (Dmitri T)

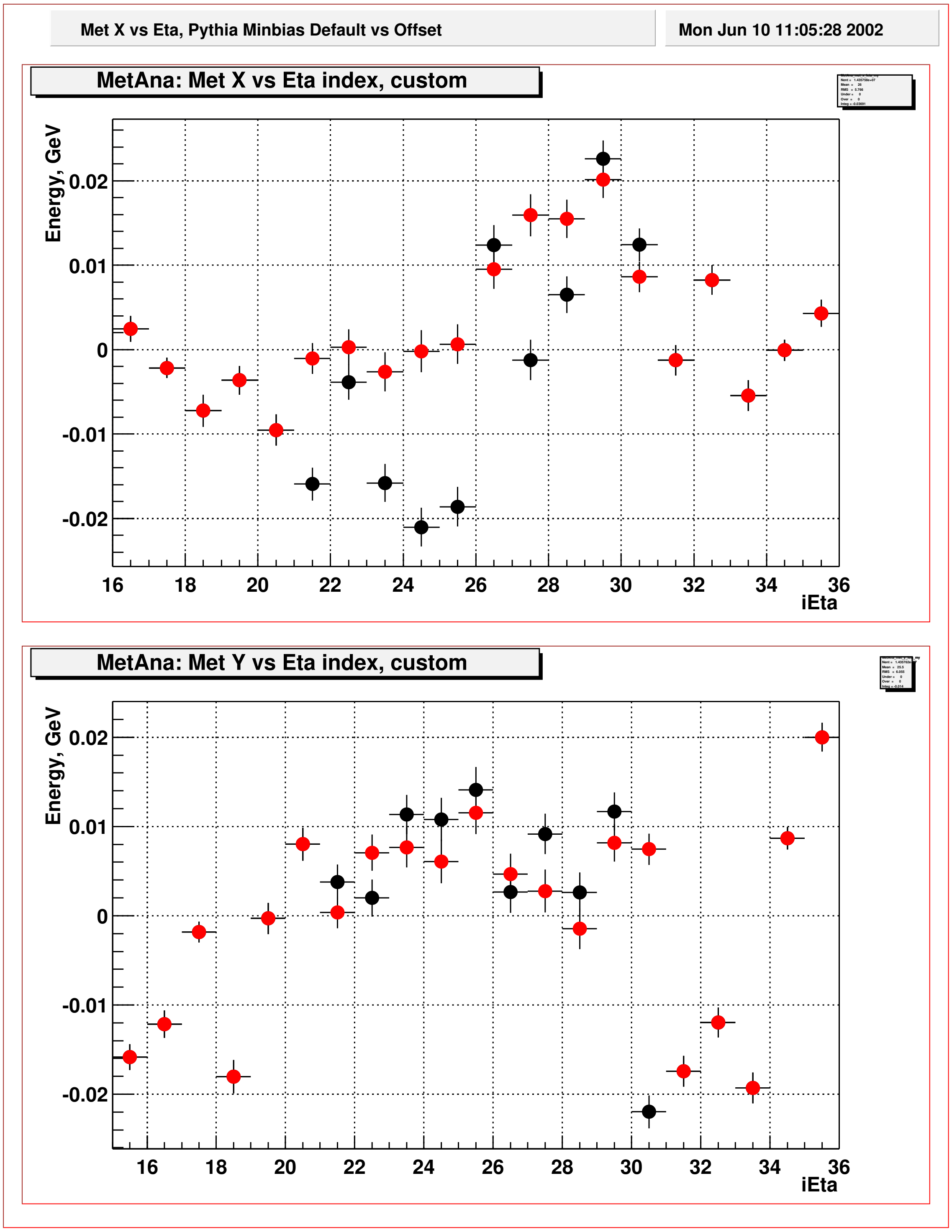
before correction / after correction



smoother distributions

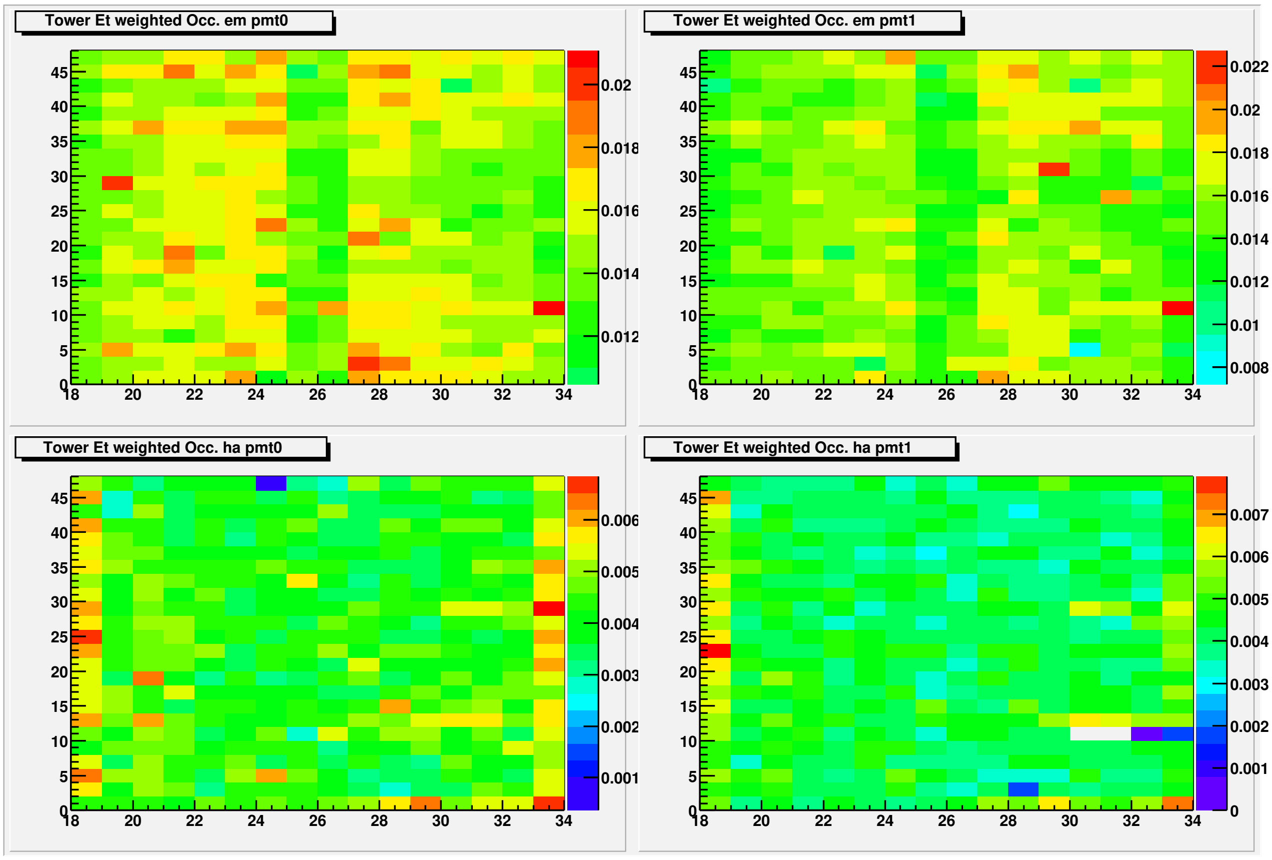
HAD component of $\not{E}_t$ (Dmitri T)

before correction / after correction



nice in EAST, WEST needs further study

MinBias Events Occupancy



2 cold PMTS confirm MIP study results by Dmitri:

- EAST: tower 1, wedge 23, PMT0
- WEST: tower 2, wedge 1, PMT1

Calorimeter Meeting (07/10/02)

1. News and announcements
2. DBANA bug assessment - Mario/Jack/Isamu
3. Update on Plug HV status. - Franco
4. Status of CPR reconstruction - Tania
5. Status of Calorimeter reconstruction (CalData) - Beate
6. Plug PMT Assessment (Where are we?) - Willis
7. Analysis os Plug source mode data during injection - Satoru
8. More on Plug laser stability/HV/PMT tests - Howard