Status report of
Electron response at Φ-crack

University of Rochester

Yeonsei Chung, Geumbong Yu

Getting started

- Dataset zewkae book=cdfpewk

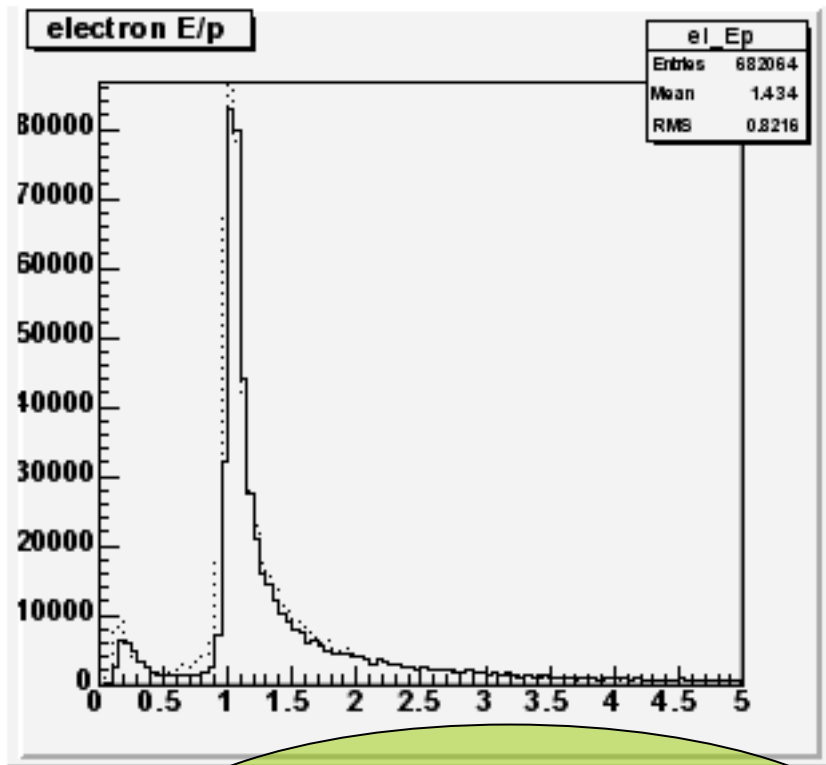
  1 million for MC
- One CEM electron + one track (Central region) are selected to form Z (19~24, 27~32 ieta used).
- Check 2X2 EM energy to get E/p of track.
- Form Z mass (by using track momentum and 2X2 EM energy).
- Global eta & phi distribution.
- Check E/p vs. relative phi distribution.

Electron & Track Selection

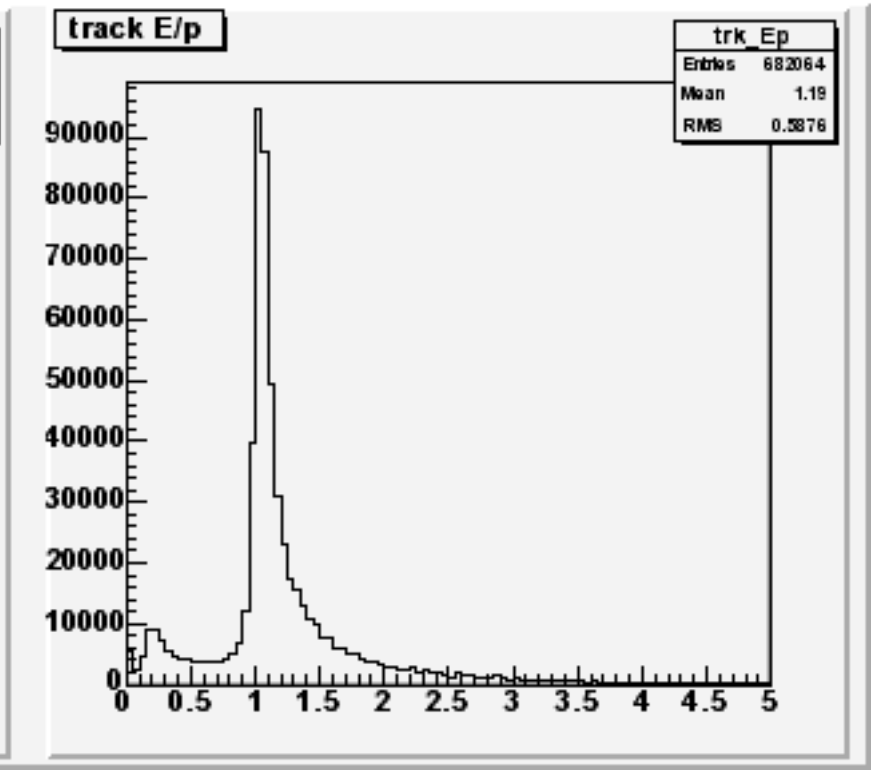
- Et>25
- Fiducial == 1
- |z0|< 60
- Had/Em < 0.055+0.00045*E
- calIsoRatio < 0.1
- Lshr < 0.2
- cesStripChi^2 < 10
- |ΔZ| < 3.0
- E/p < 2.0
- pt>10
- 0.5 <E(2x2)/p(track) <3.0
- Pt>10

E/P check

Electron E/p



Track E/p



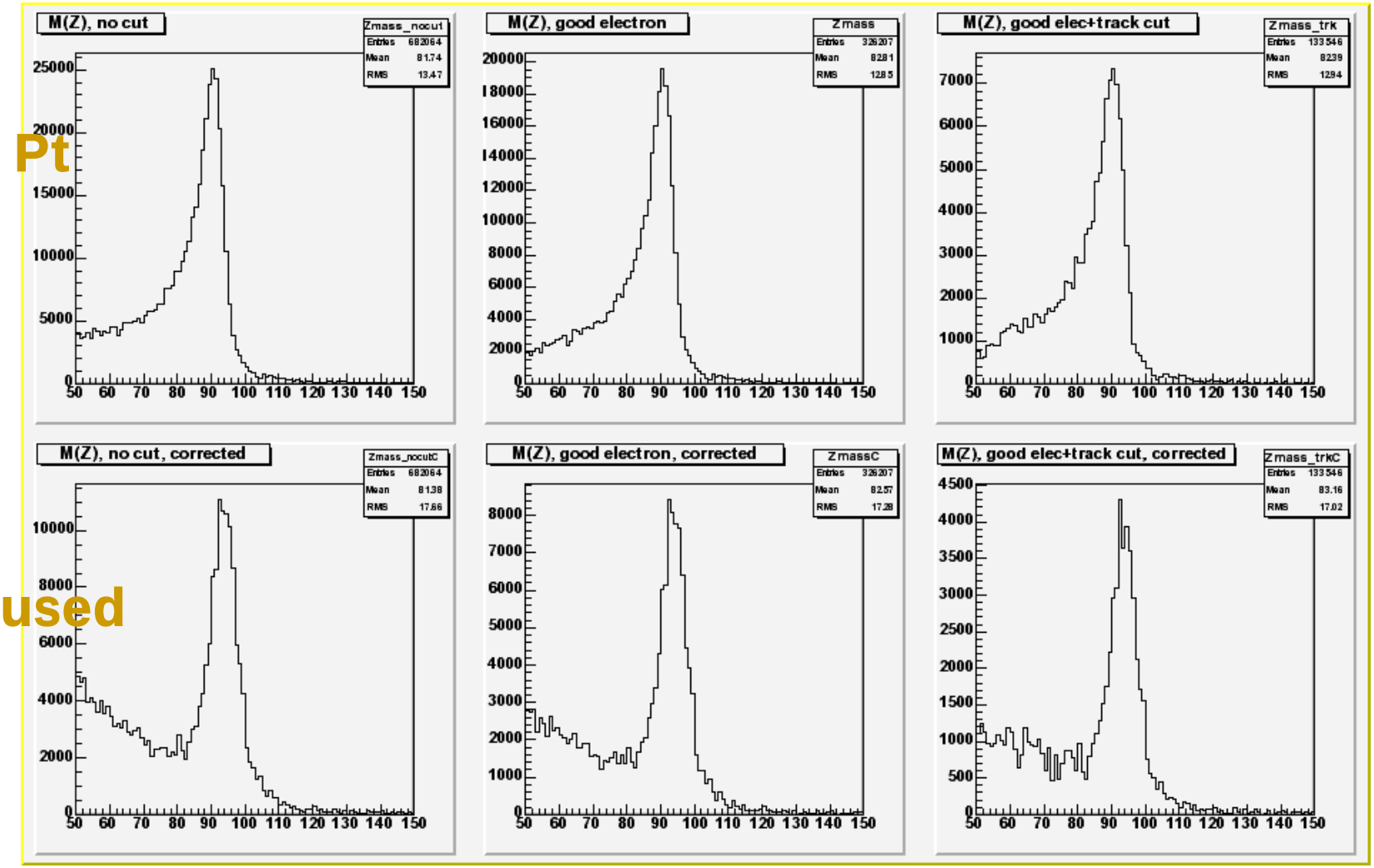
Solid : Reconstructed by Cal E
Dotted: EM Object E

Zmass(e+track)

No Cut | Electron Cut | Track Cut

Track Pt

Cal E used

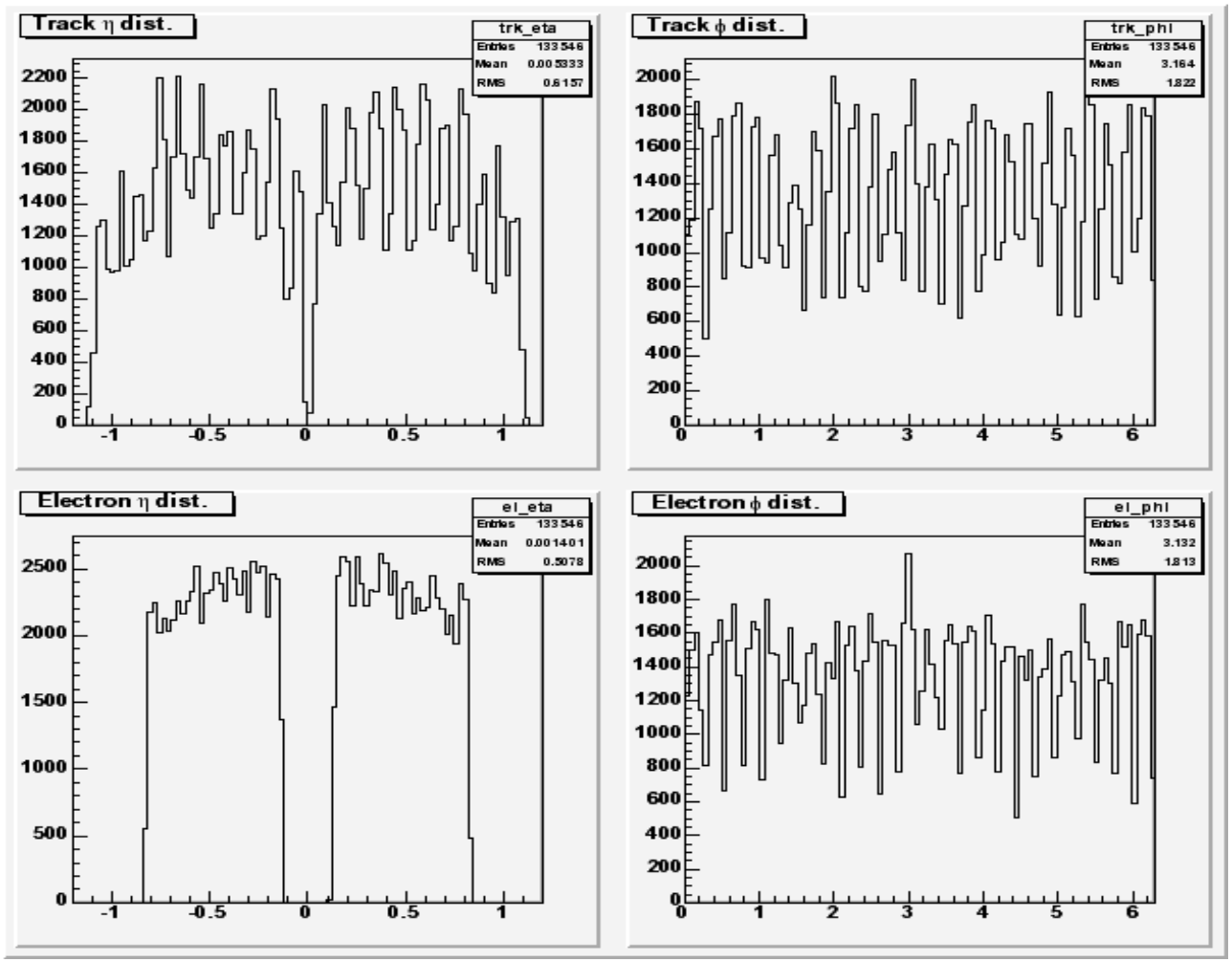


Global η & Φ distribution

η Φ

Track

Electron

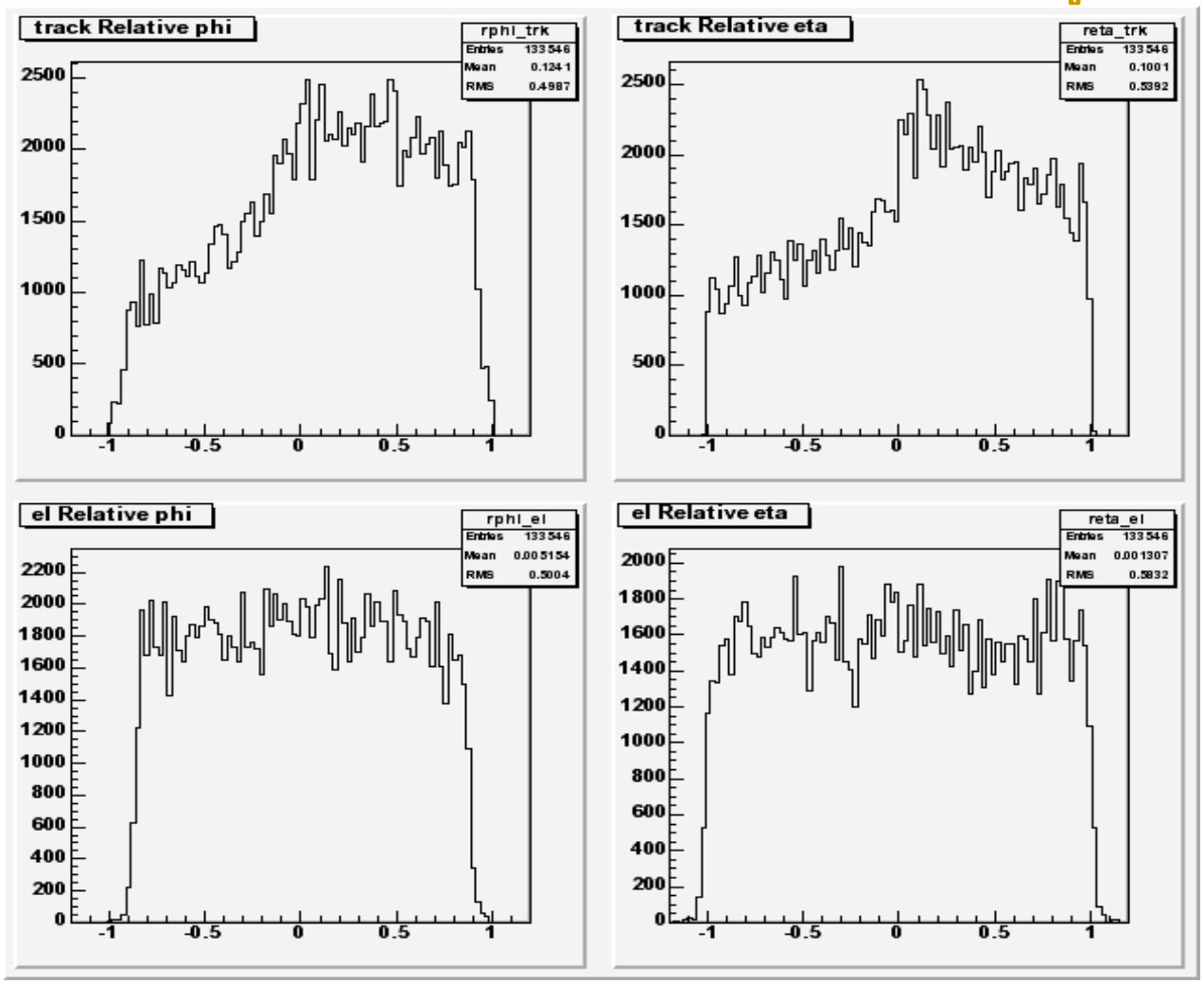


Rel. Φ dist. Of electron and track

Rel. Φ **Rel. η**

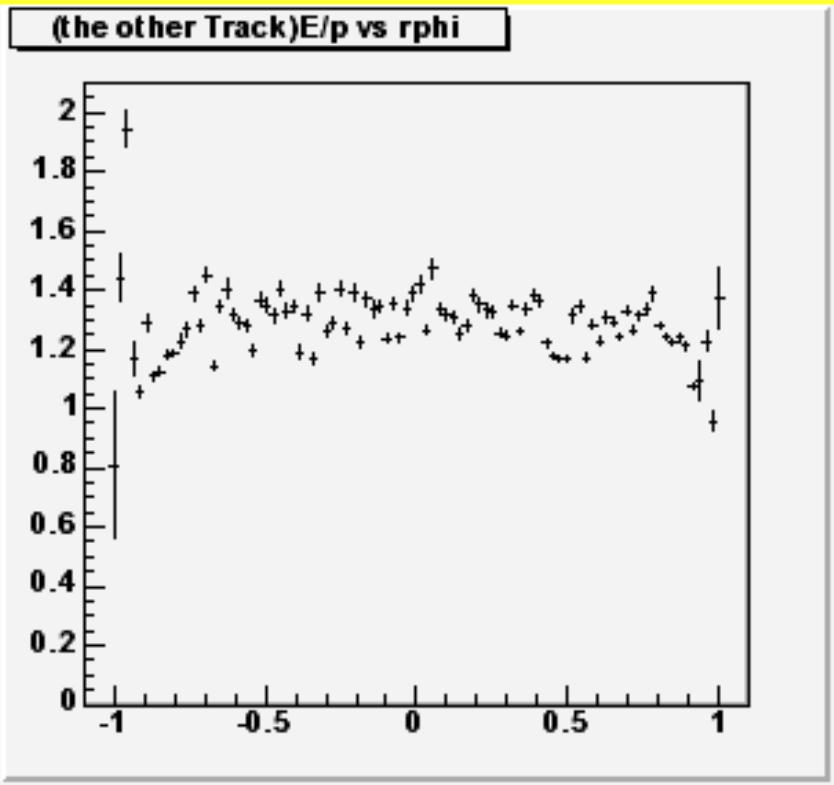
Track

Electron

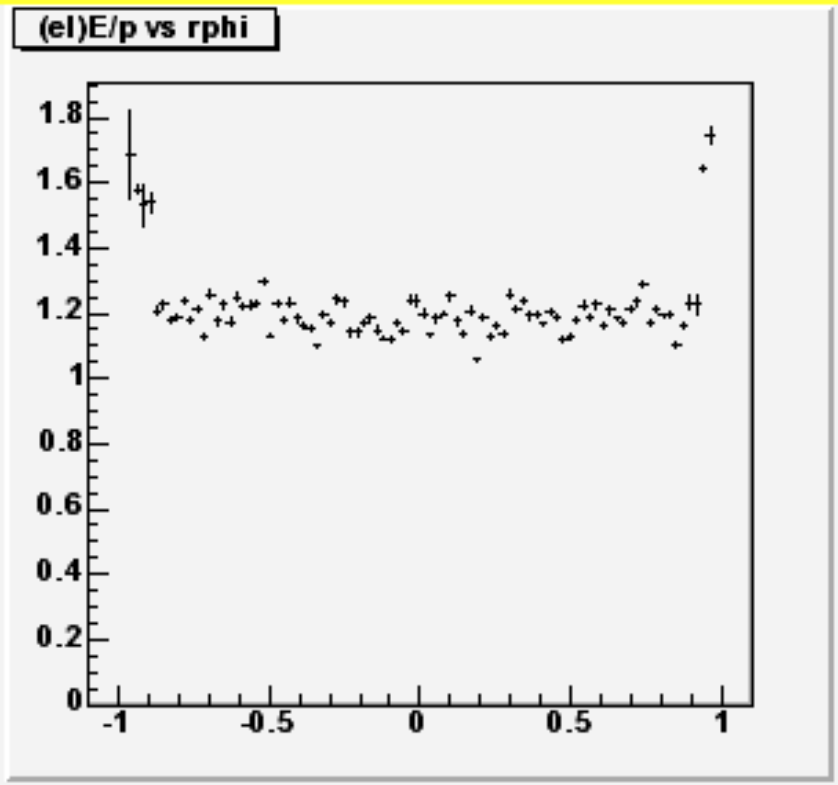


E/p vs rel. Φ

Track



Electron

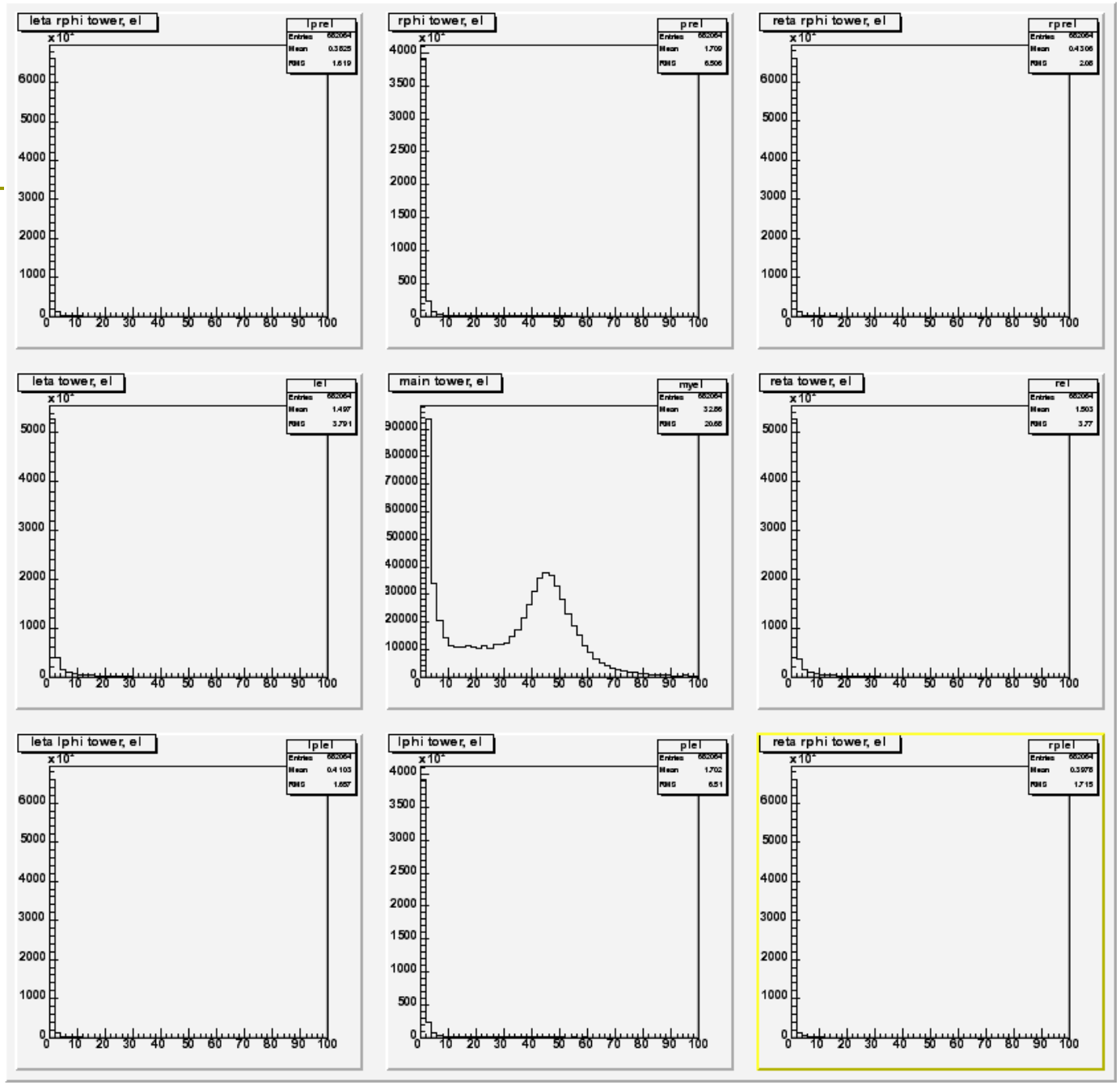


Summary

- We played with Z->ee MonteCarlo sample.
- Code correction needed. This work will be continued.

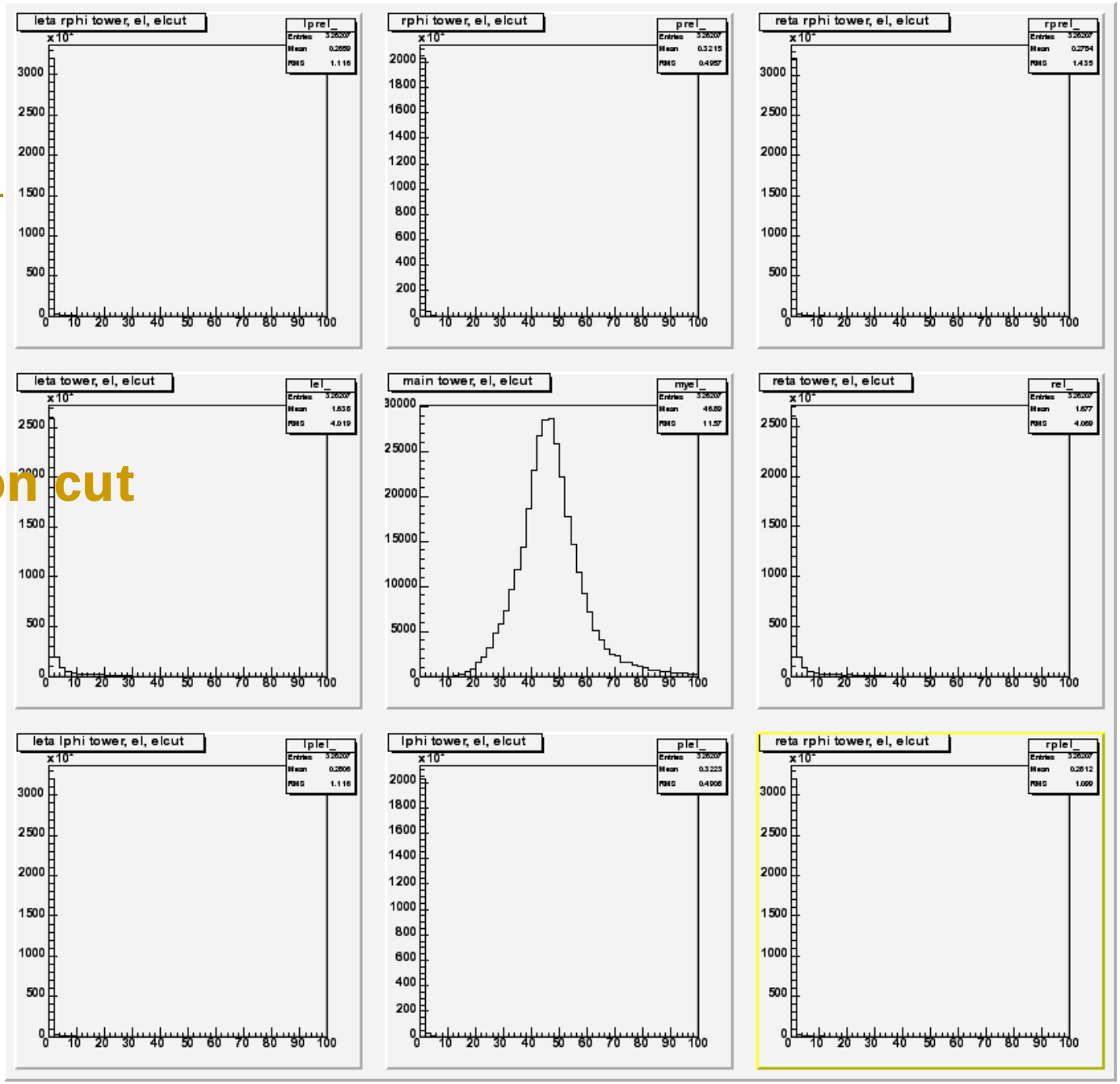
Cal E

Electron
No cut



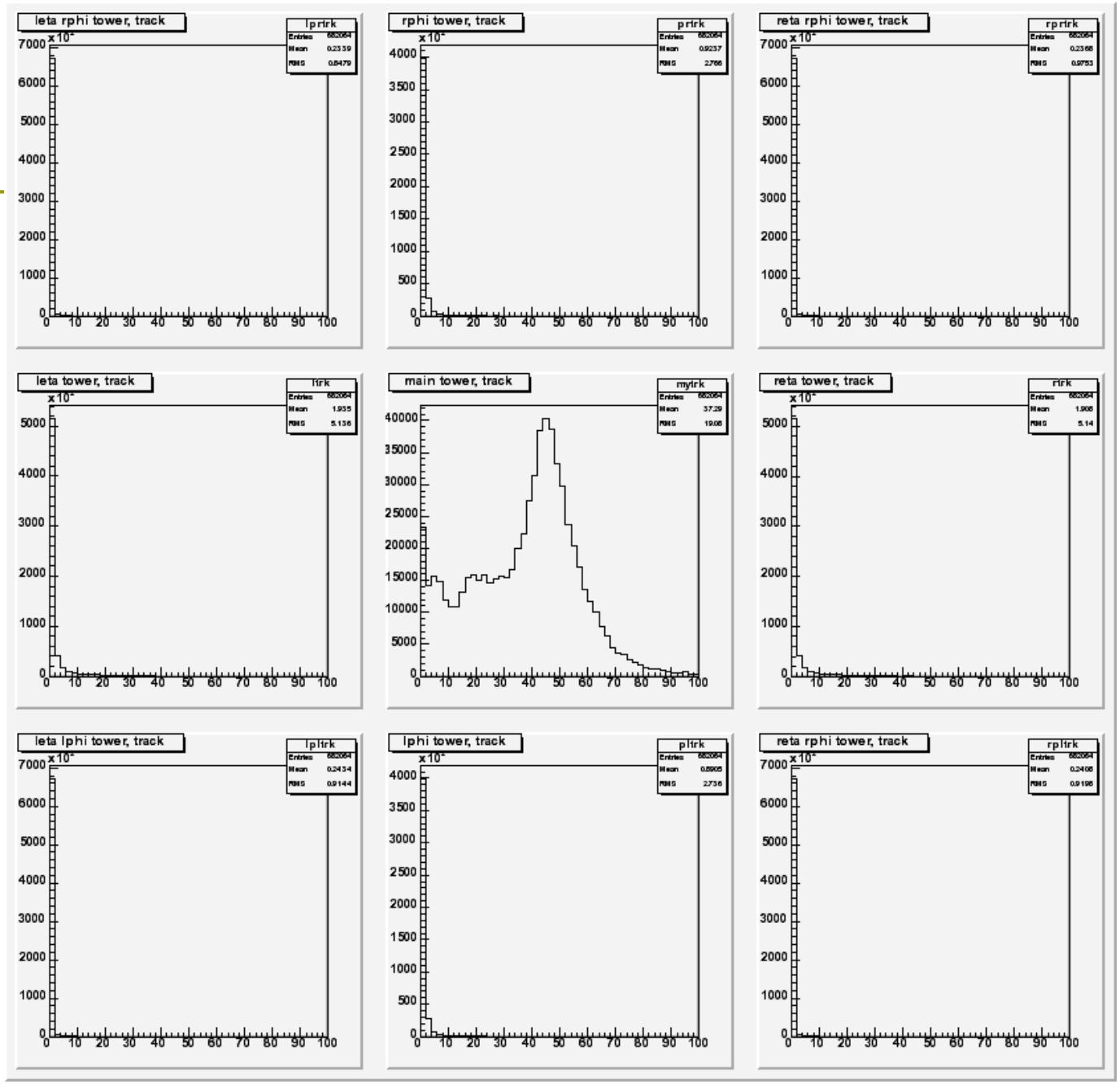
Cal E

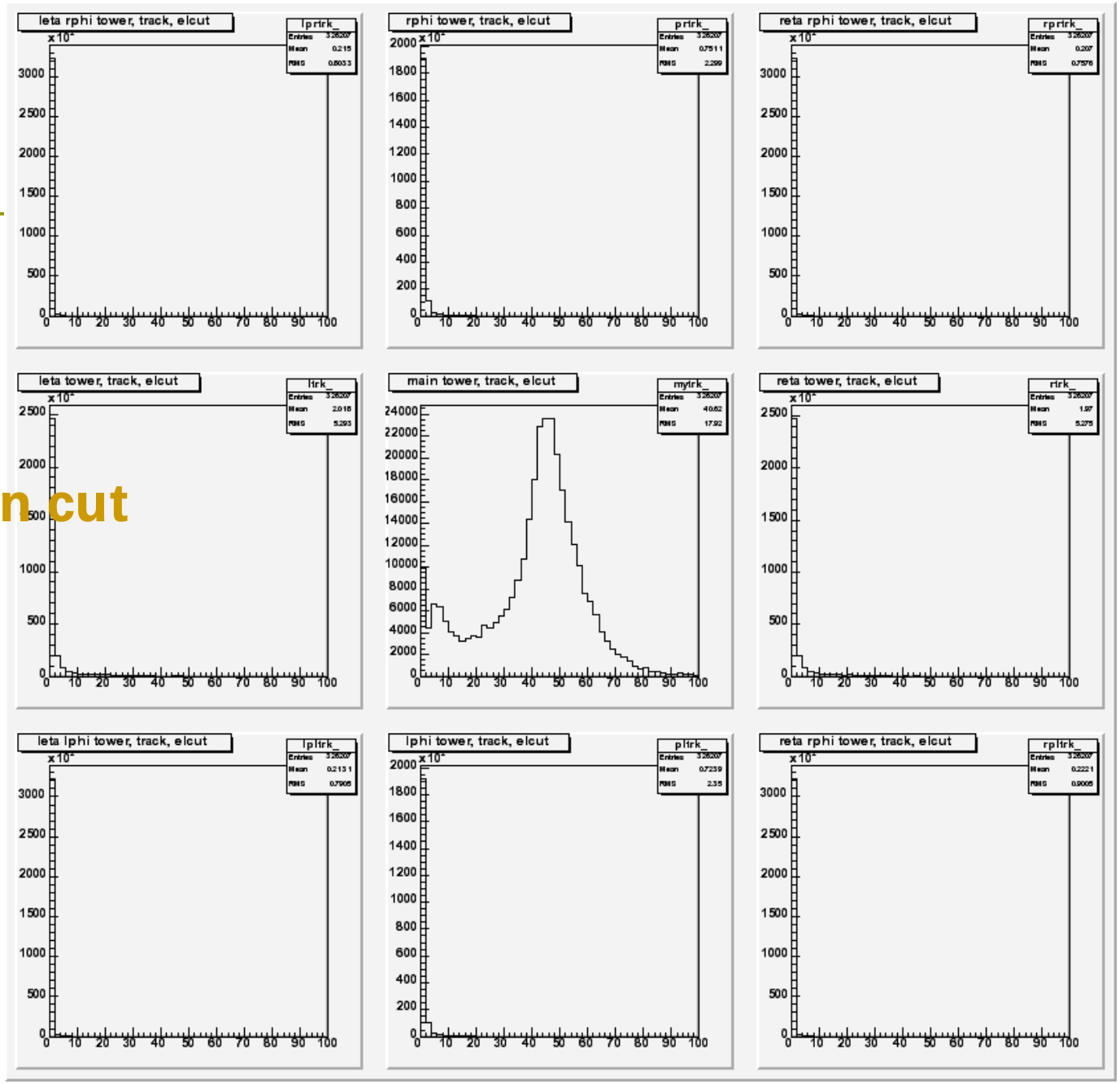
Electron
Good Electron cut



Cal E

Track
No Cut



Cal E

Track
Good Electron cut