

Data reprocessing with EM hypothesis

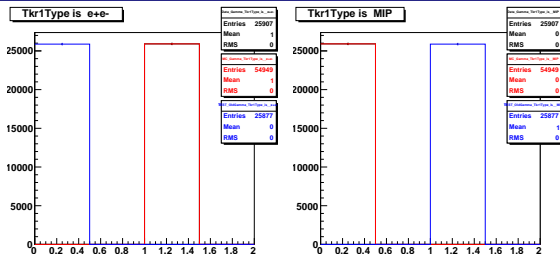
TKR cross-checks

C. Sgrò

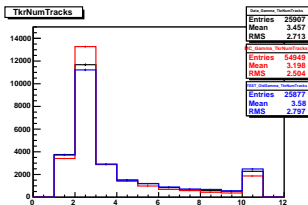
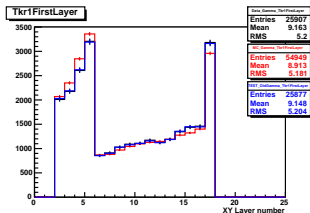
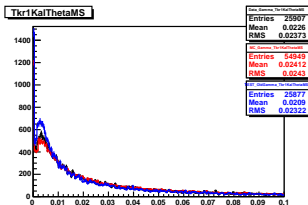
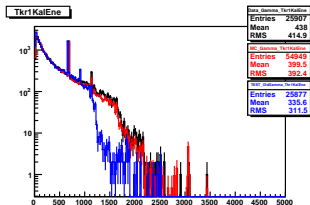
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INFN - Pisa

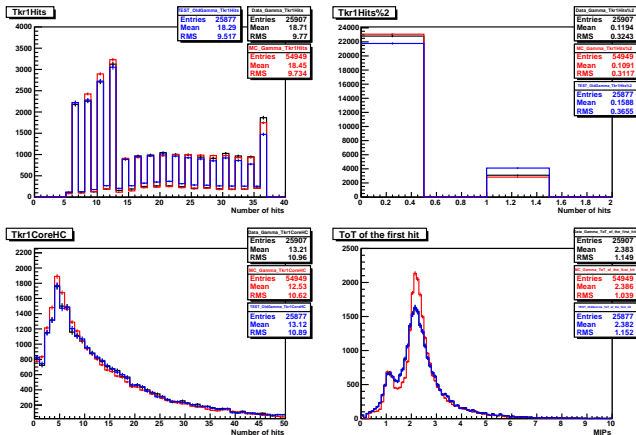
BeamTest EVO meeting - April 30, 2008



- We realized that we were using the wrong “TkrType” in the data:
 - we used the “MIP hypothesis” (TkrType&0x200)
 - instead of the “Electron hypothesis” (TkrType&0x100)
- Franz reprocessed few γ runs (1445-1455) (full-brem, twr 3, 0°) to look for differences:
 - Black: reprocessed data (run 1445 - v7r1215p0)
 - Red: Monte Carlo (run 1445 -v8r130101p0)
 - Blue: old data (run 1445 -v7r1215p0)



- Differences observed in Kalman filter variables (Energy, MS angle)
- Other high level quantities like number of tracks and vertex position remains constant.



- Small differences in how the track is made (number of hits in the track and its “parity”).
- No visible changes in other “hit counts” variables or TOT.

- Small difference observed in TKR variables...
- ... but all in the direction of a better Data-MC agreement
- Remember this is a continuous energy distribution case (we are integrating in energy): with monoenergetic beams (electrons) the gain in Kalman filter relate variable should be higher.
- No changes in CAL quantities, of course
- **We can use this setting as default for the future.**