

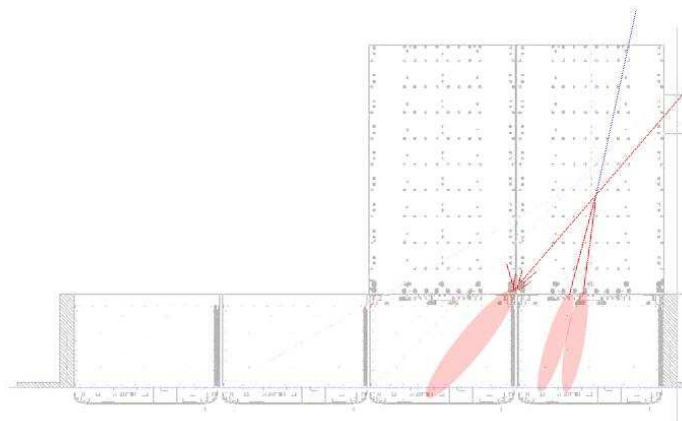
GLAST CERN 2006 Beamtest



BTR v7r1117p1
Status

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Beamtest Analysis - October 24th, 2007



Good Runs

- Large electron scan LINK
 - △ Known problems of beamspots for some high energy runs
 - △ Runs 2082 (20GeV) ran with different configs :
 - GLAST + Alignment (default)
 - No Alignment
 - Bari digitization (No Alignment)
 - LowEnergy + Alignment (default)
 - △ Cerenkov pressure scan for Philippe and Carmelo to play with: LINK

Good Runs

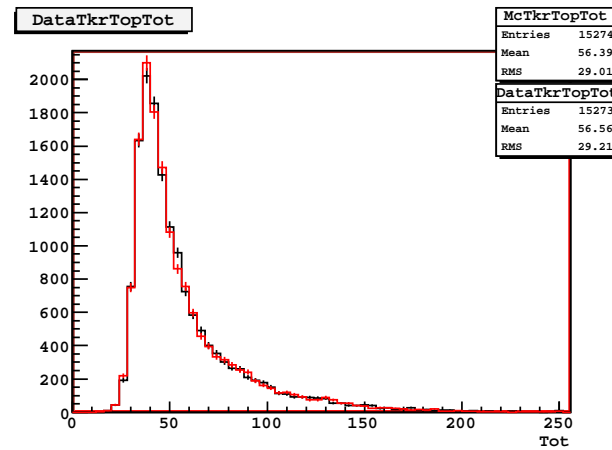
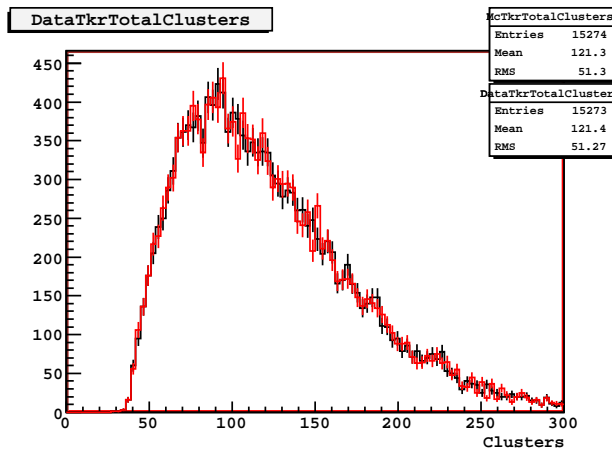
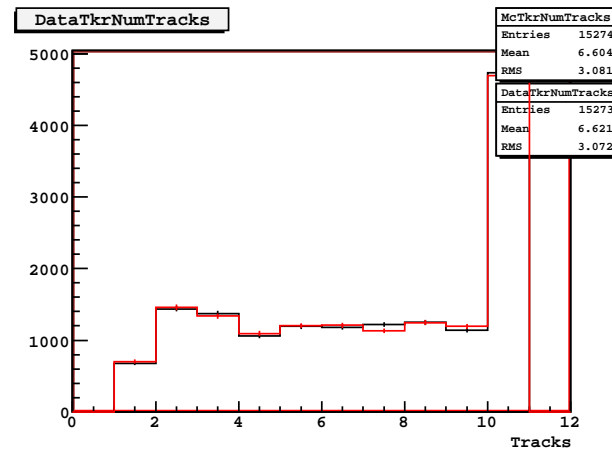
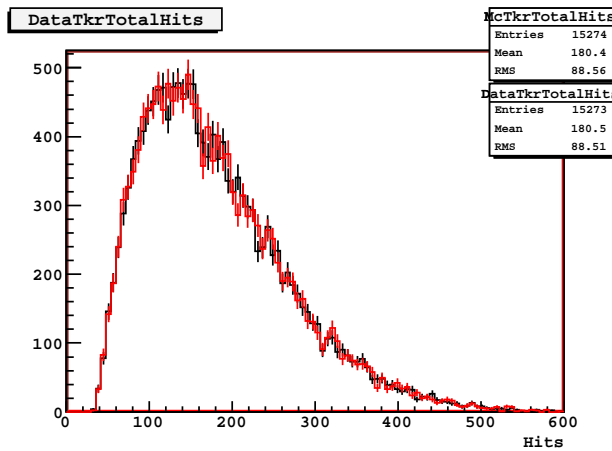
- Full Brehm Photon
 - △ Only 1181 (Tower 2) and 1445 (Tower 3) 0degree
 - △ BT-1445 (2.5GeV) ran with different configs :
 - GLAST + Alignment (default)
 - No Alignment
 - Bari digitization (No Alignment)
 - LowEnergy + Alignment (default)

Good Runs

- Tagged $-\gamma$
 - △ BT-1439 (Tower 3) 0degree
 - △ BT-1439 (2.5GeV) ran with different magnet settings
 - I = 600A (Expected value) : shows wrong E_γ -TaggerPosition correlation
 - I = 550A (trial value) : fixes the E_γ -TaggerPosition correlation
 - first time we produced a reasonable MC for Tagged $-\gamma$
- Hadrons
 - △ to come...

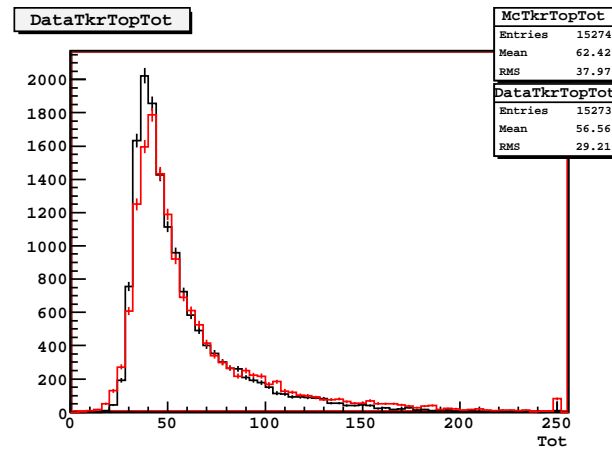
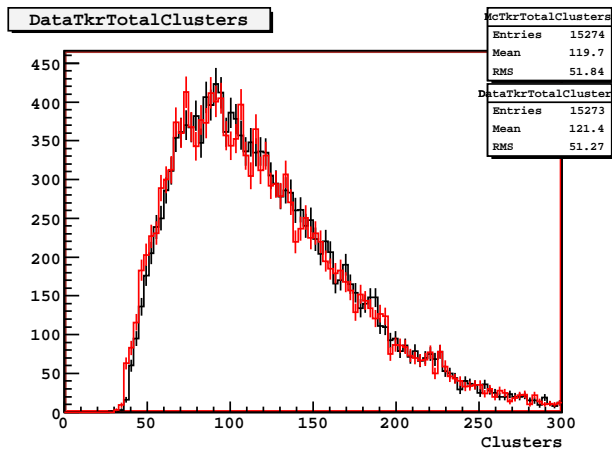
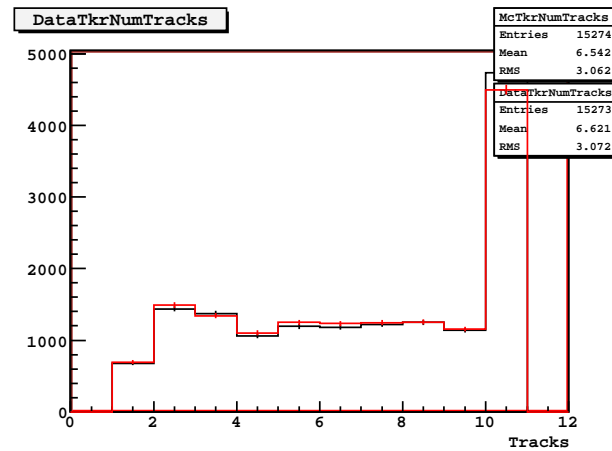
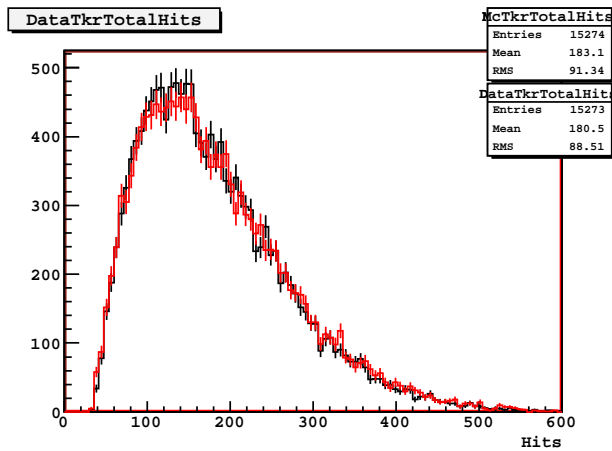
Alignment (fixed)

- No effect on the number of hits
- BT-2082 20GeV e^- **With** and **Without**



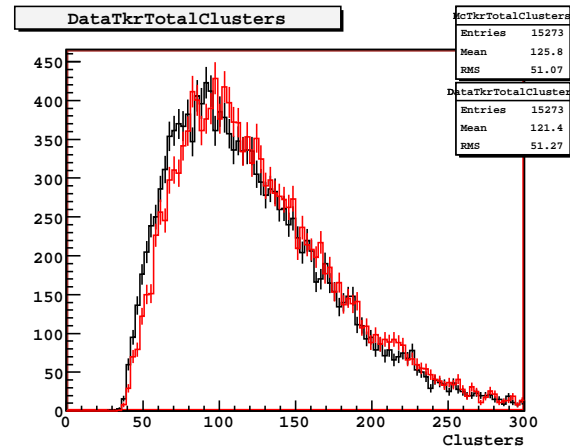
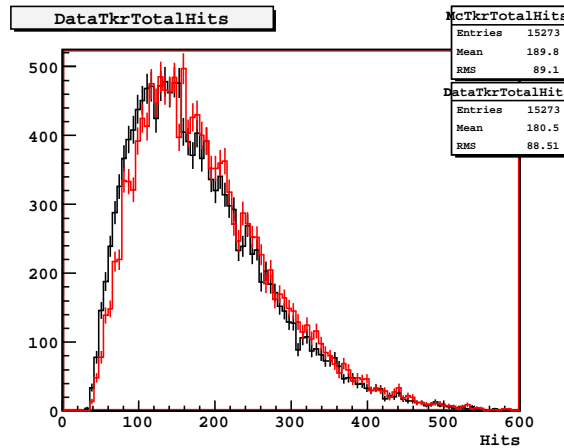
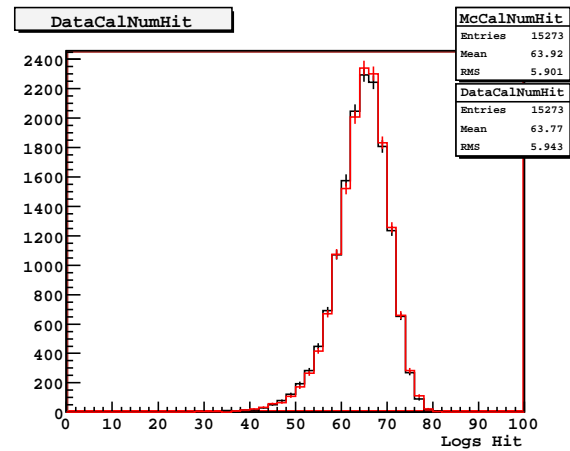
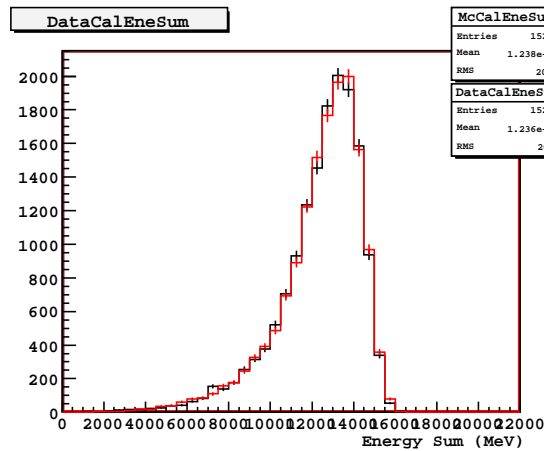
Bari digitization

- *Subtle* effect on the number of hits, significant one on ToT
- BT-2082 20GeV e^- **Simple** and **Bari**



LowEnergy physics

- More hits and clusters - no more effect on CAL
- BT-2082 20GeV e^- **GLAST** and **LowEnergy**



Conclusions

- Current MCs offer a good coverage of the phase space (hadrons missing)
- Alignment has been fixed and has no effect anymore - **closed**
- **LowEnergy** physics have been fixed and significantly higher energy deposit is no longer observed
- Both **Bari** digitization and **LowEnergy** physics have an impact on Hits, Clusters and ToT
 - △ we need to decide whether its wise using one or the other or both of them
 - deeper analysis needed
- no more idea (for now...) about how to change GEANT4 settings to improve Data/Mc agreement for CAL variables for EM showers