BT summary plots

This is an attempt to gather the most meaningful plots from the many BT analysis performed.
This collection or parts of it should be used for:

- summarize the results to the collaboration
- summarize the results to the Geant4 collaboration to request their help on specific processes

Italics are used to highlight plots to be produced

Discrepancies plots

TKR

- total number of hits MC/data ratio summary: currently available for photons and electrons; need a similar *plot for hadrons* - Nicola
- total number of cluster MC/data ratio summary: currently available for photons and electrons; need a similar *plot for hadrons* - Nicola
- *average cluster size MC/data ratio summary: TBD for gammas, electrons, hadrons - Nicola* ?
- Total TKR hits for 5GeV pi and 150GeV p, Data and MC - Johan; *redo after G4 bug fix in extlib*

TKR hits and clusters in hadron runs: see Nicola's talk given to the EVO meeting on Jul 18th, 2007.

CAL

- Raw energy deposit - 2003 data, 2006 data, G4v6MC, G4v8MC - Johan
- Ad hoc correction factors for data/MC CalEnergyRaw agreement - Philippe
- *Summary at 90 degrees and on CAL1*
- Longitudinal profile fits with gamma function - Philippe, Benoit, Nicola

MonteCarlo Verifications

Geant4 verifications

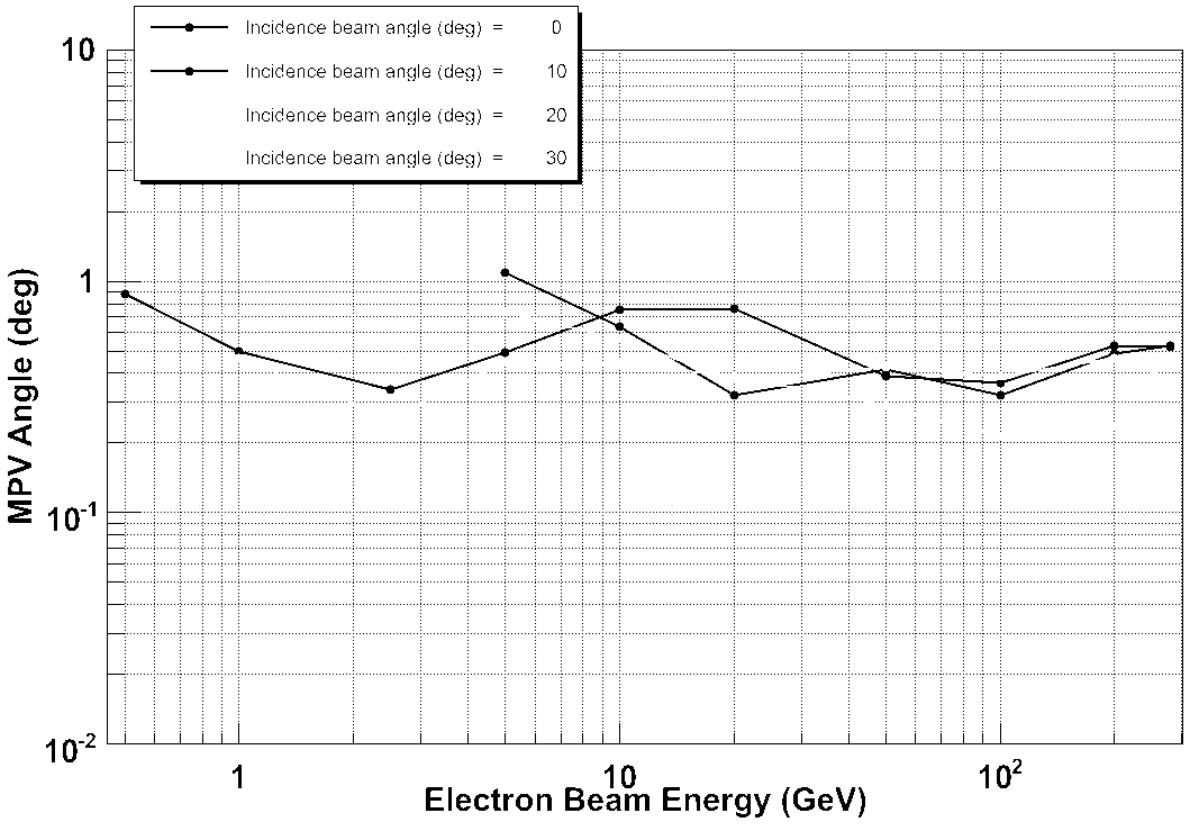
- shower development for data, BTRelease, standalone tower simulation with and w/o beamtest06 - Johan
- G4 vs G3, range cuts, LE EM physics - Francesco
- Comparison with Mars15 - David

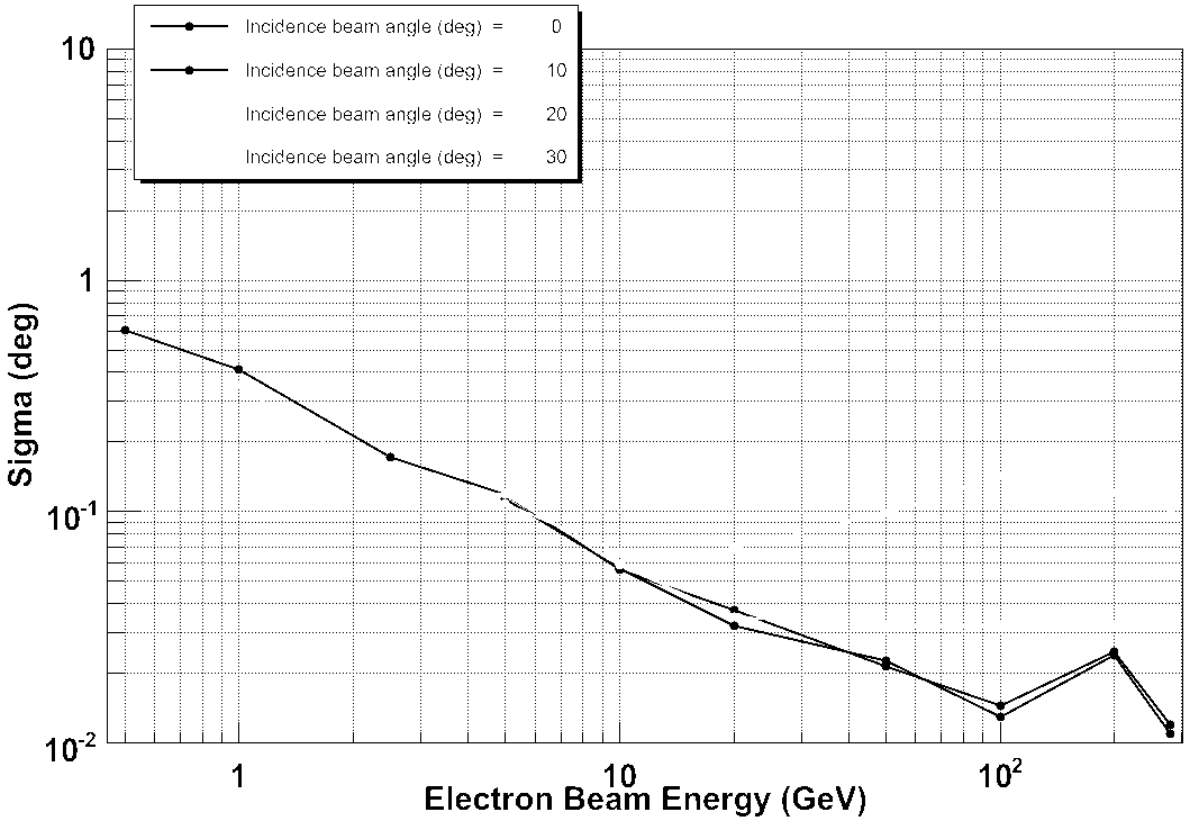
Performance Plots

- TKR PSF: *extend to LE (Luca) and to high energy electrons (Nicola)*
- ACD backsplash probability - Luis, Tyrel

Angular resolution with high energy electrons (see Nicola's talk given at teh EVO meeting on Jul, 18 2007).

The angle has been evaluated with respect to the nominal beam direction bu using the first track directions. The angle distributions look like gaussian, then they are fitted with a gauss function to evaluate the peak value (MPV) and the sigma value. These results are preliminary, since the CU needs to be better alligned with to respect the beam direction.


Incidence beam angle (deg) = 0
Incidence beam angle (deg) = 10
Incidence beam angle (deg) = 20
Incidence beam angle (deg) = 30
MPV Angle (deg)
10
1
10^{-1}
10^{-2}
1
10
10^2
Electron Beam Energy (GeV)


Incidence beam angle (deg) = 0
Incidence beam angle (deg) = 10
Incidence beam angle (deg) = 20
Incidence beam angle (deg) = 30
Sigma (deg)
10
1
10^{-1}
10^{-2}
1
10
10^2
Electron Beam Energy (GeV)