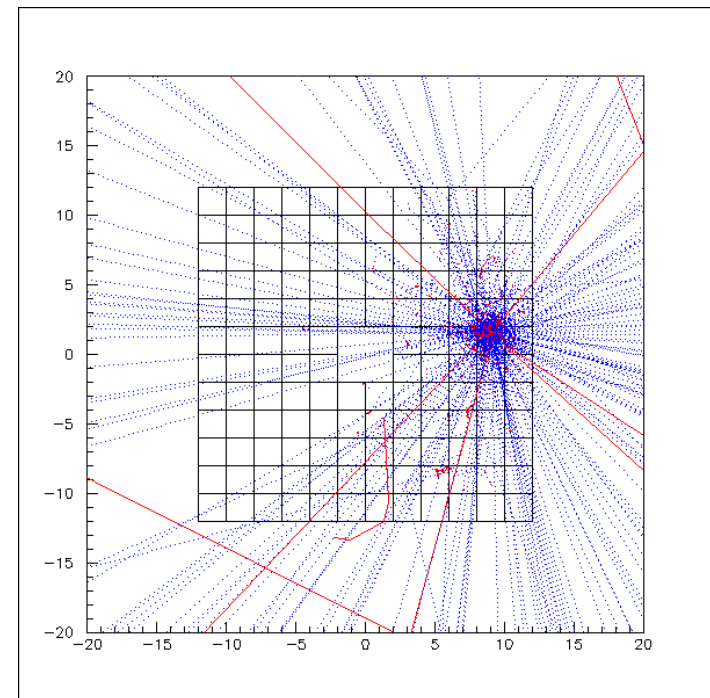
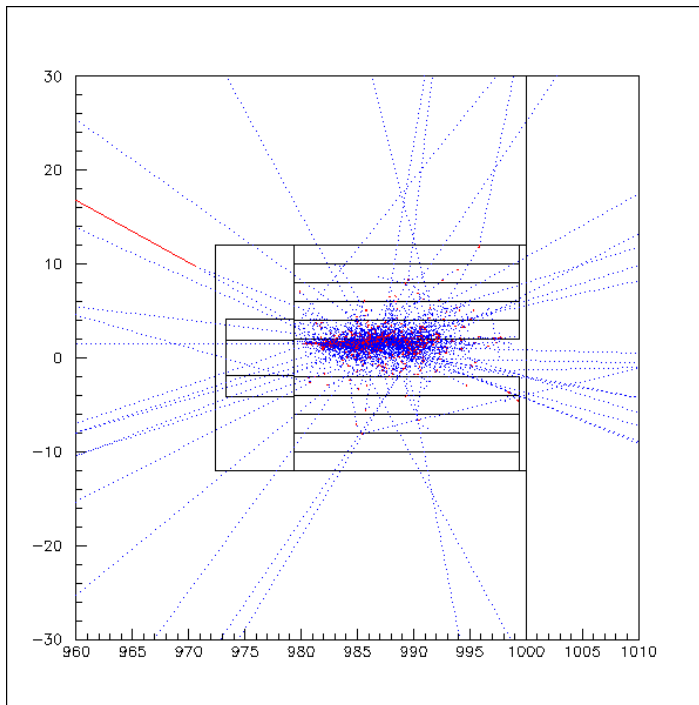


CCAL in Geant

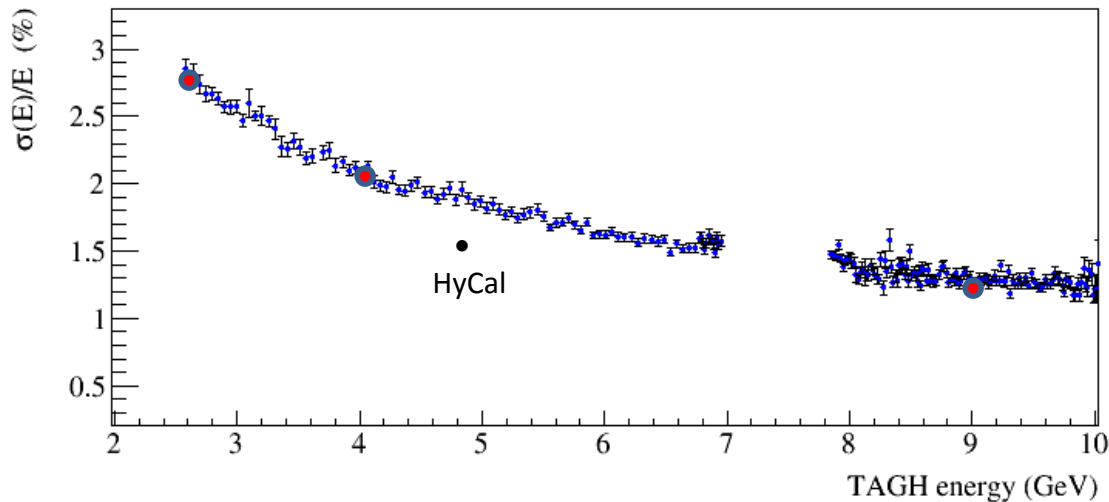
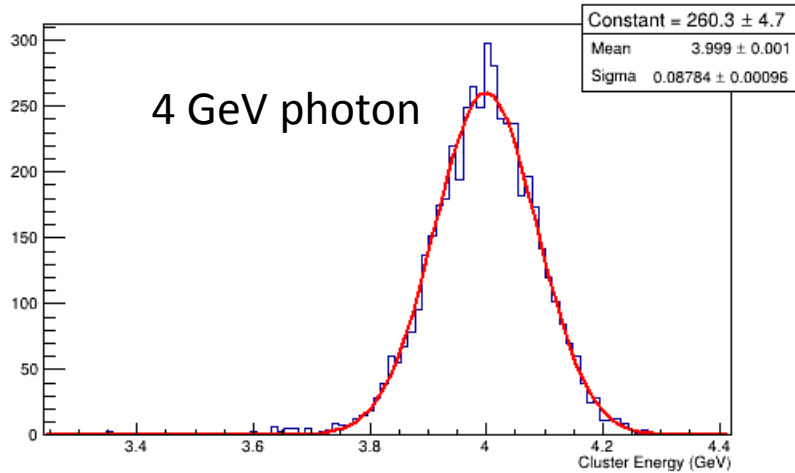
- **CCAL geometry in Geant**
- **geometry for each target types (no target)**
 - several branches in the git repository, have to recompile Geant to switch to the new configuration
 - realistic positions of targets (based on the survey group) in Geant
- **Geant geometry is used in reconstruction (stored in CCDB)**



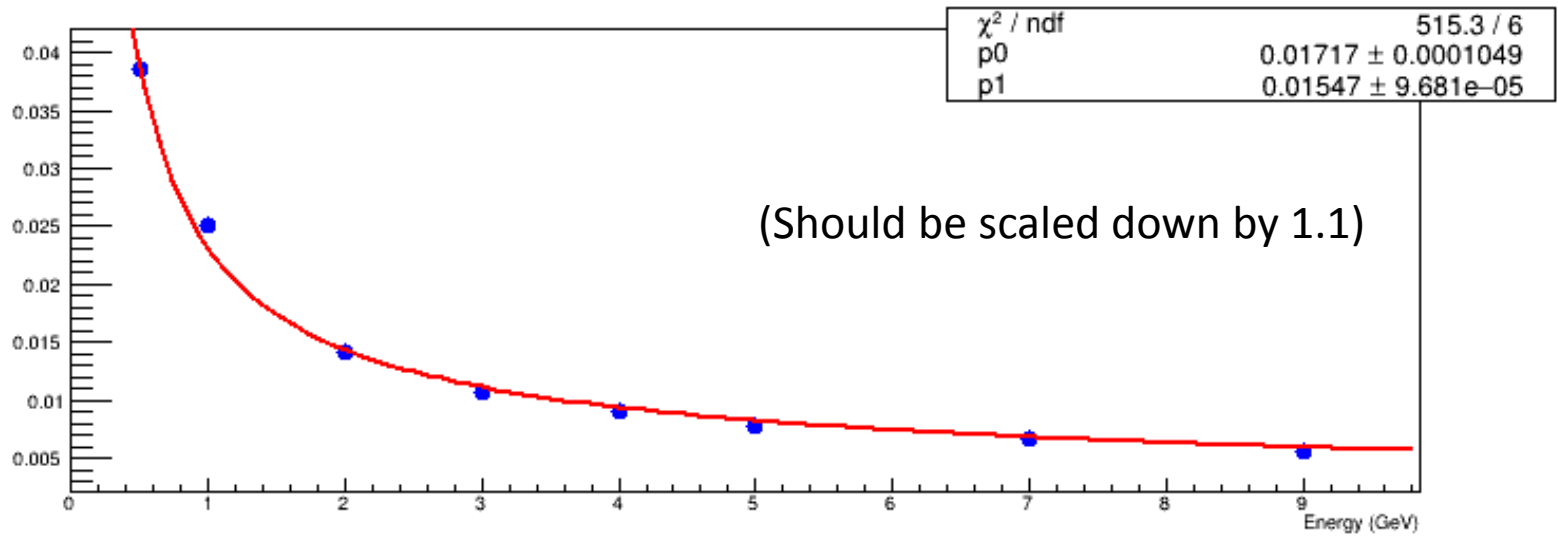
CCAL MC Reconstruction

MC simulation

- Geant (energy deposition)
 - MC truth point
- MC smearing
 - hits
 - smear energy, position, and time according to data

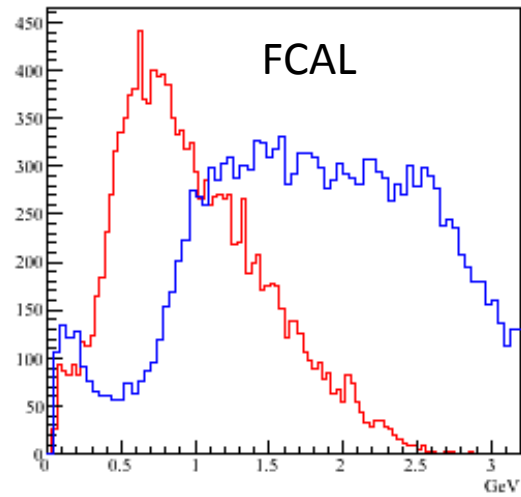
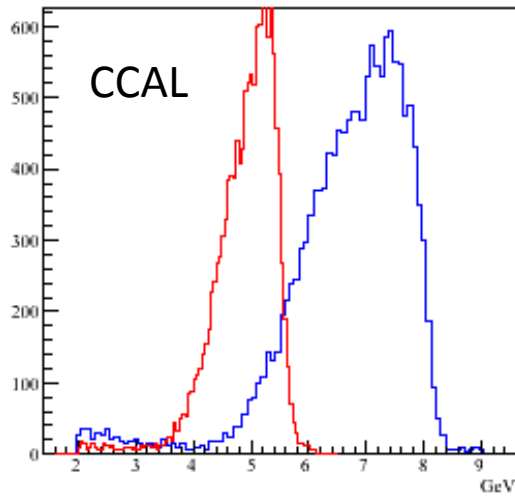


Energy Released in Geant



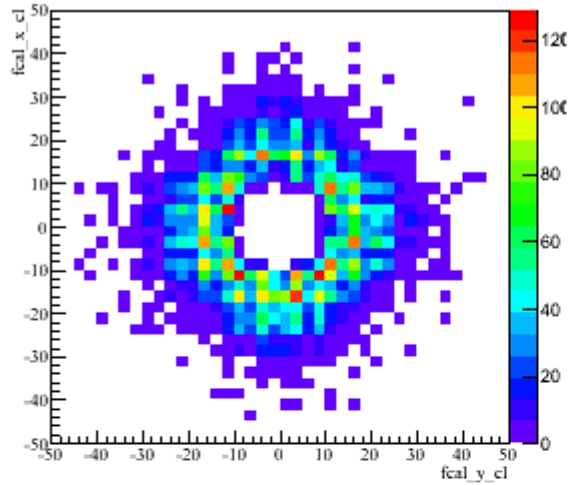
Compton Reconstruction

Cluster energy (Ebeam = 6 GeV and 9 GeV)

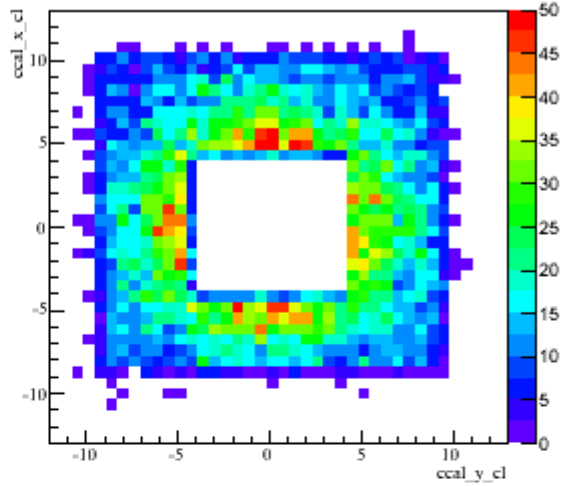


Compton Reconstruction

data_x_cl=18, data_y_cl=18, data_z_cl=18, data_e_cl=18, data_e_cl=18, data_e_cl=18

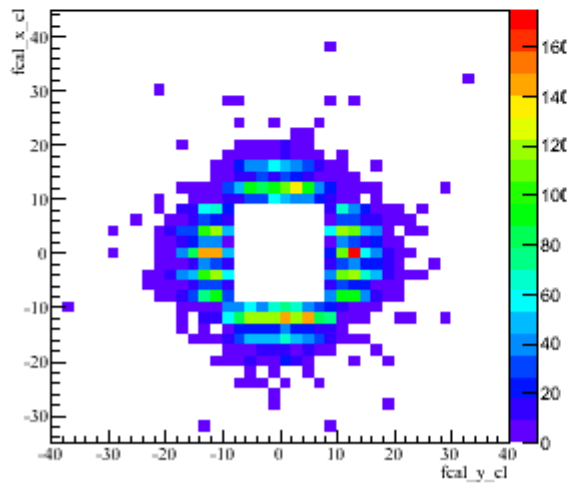


_cl {fcal_en_cl+cacal_en_cl>5}

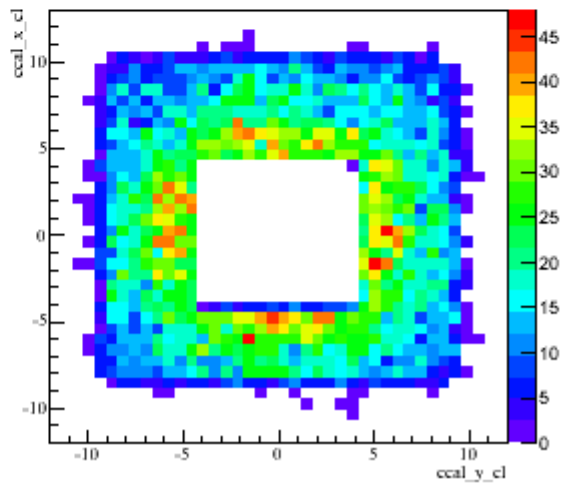


6 GeV

data_x_cl=18, data_y_cl=18, data_z_cl=18, data_e_cl=18, data_e_cl=18, data_e_cl=18



_cl {fcal_en_cl+cacal_en_cl>5}

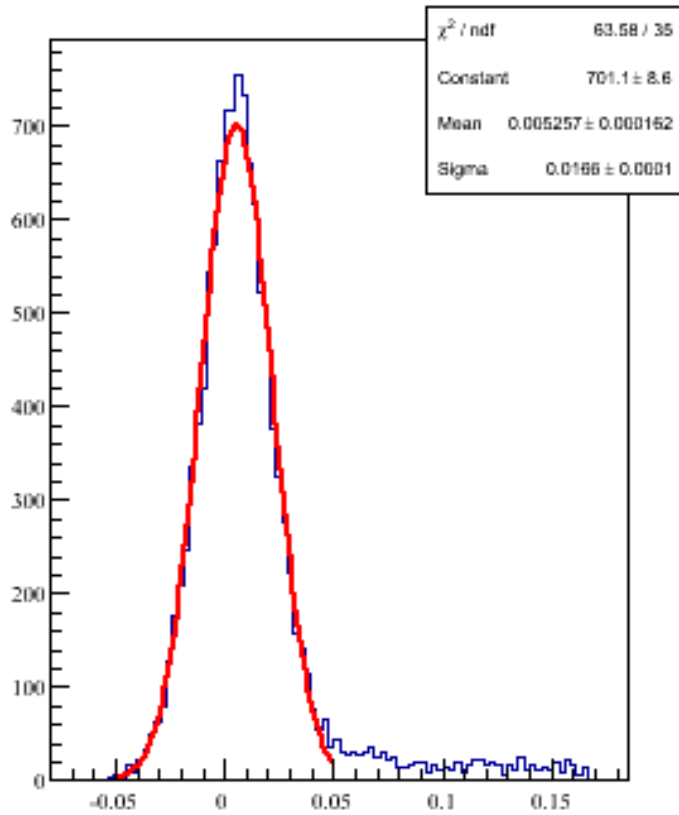


9 GeV

Compton Reconstruction

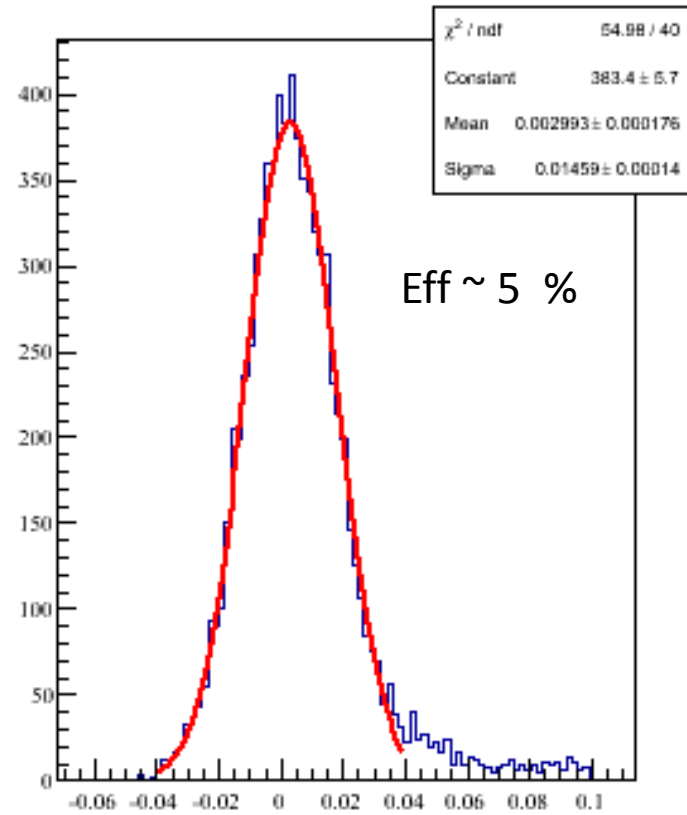
6 GeV

`ga_c=ccal_en_dh(5/7)(aba)cal_x_d(9àaba)cal_y_c(9/9)`



9 GeV

`ga_c=ccal_en_dh(0.17)(aba)cal_x_c(9àaba)cal_y_c(9/9)`



$$(E_{\text{beam}} - E_{\text{FCAL}} - E_{\text{CCAL}}) / E_{\text{Beam}}$$