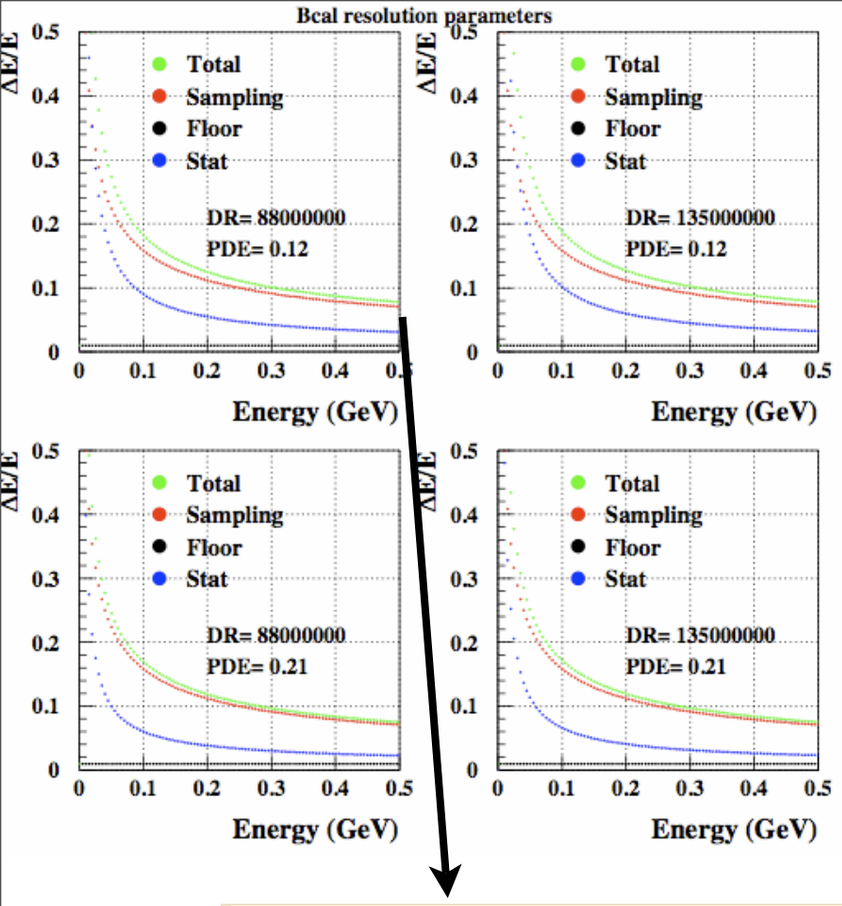
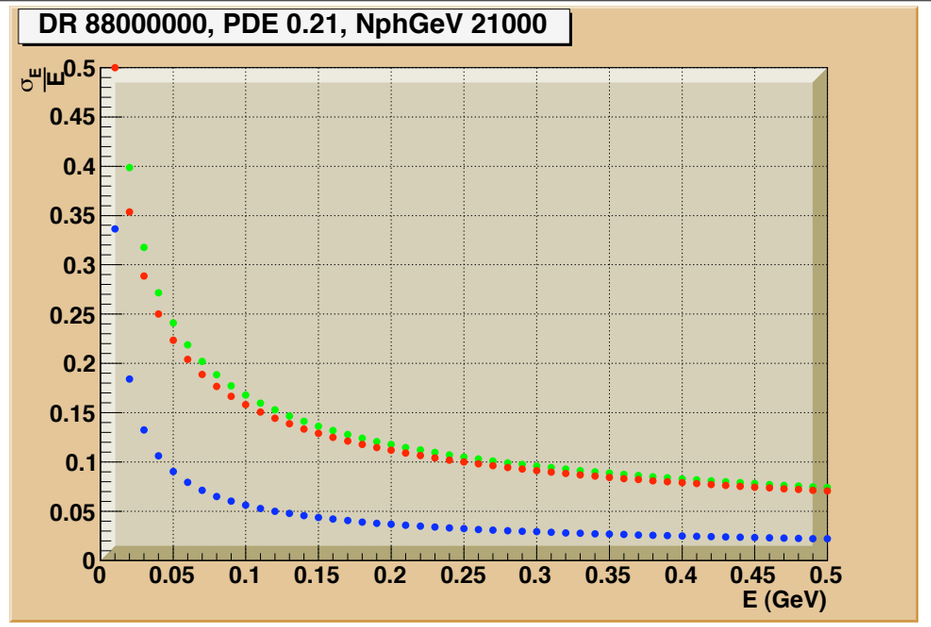
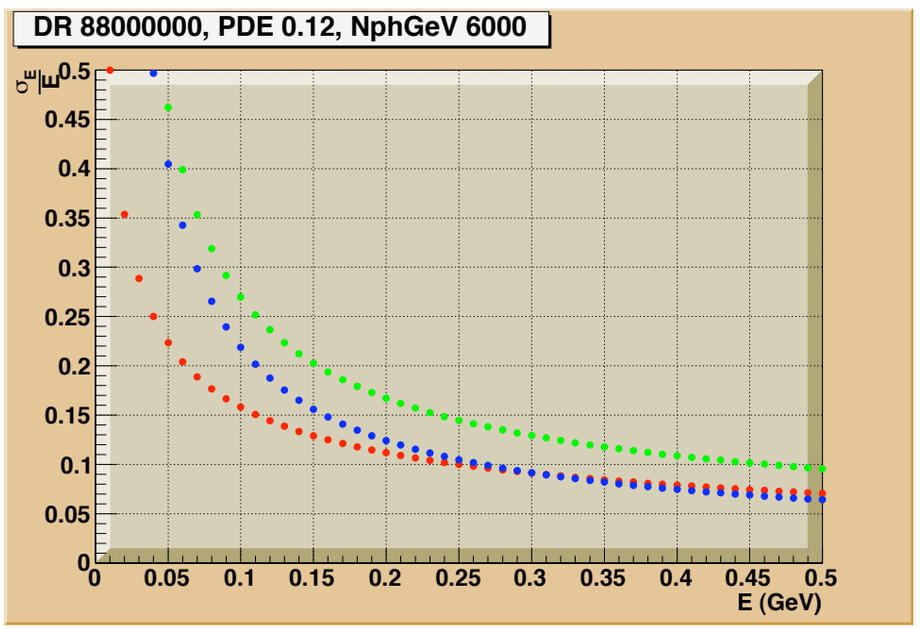
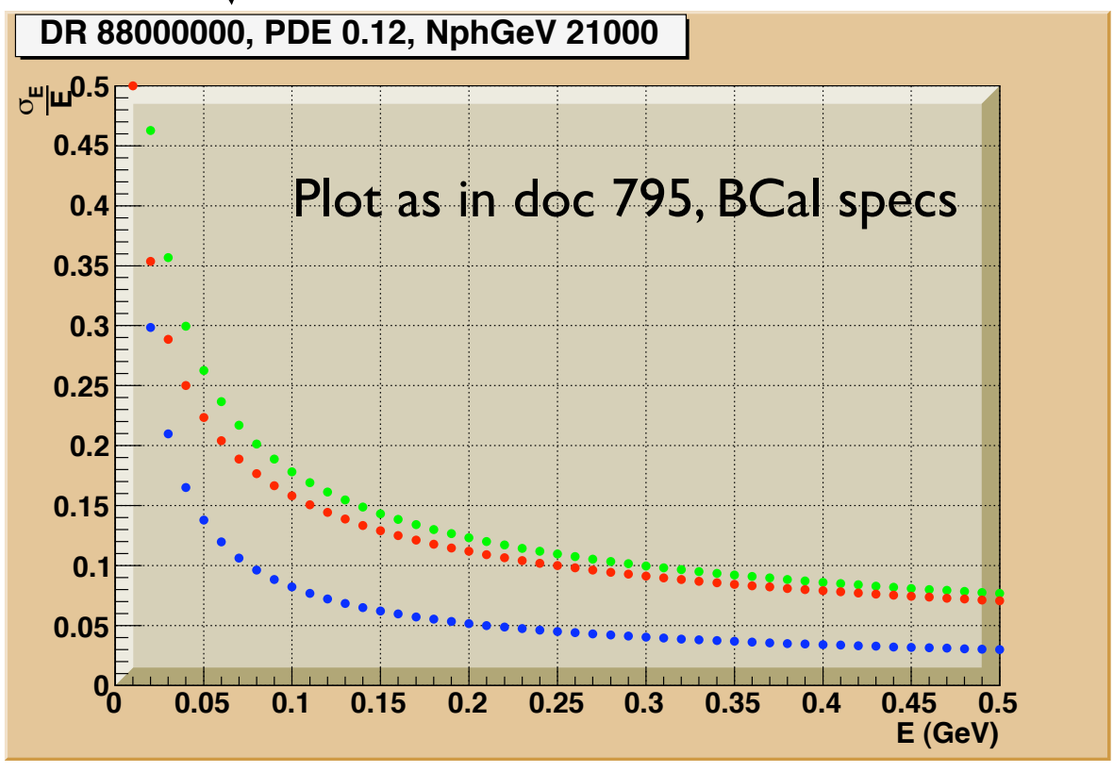
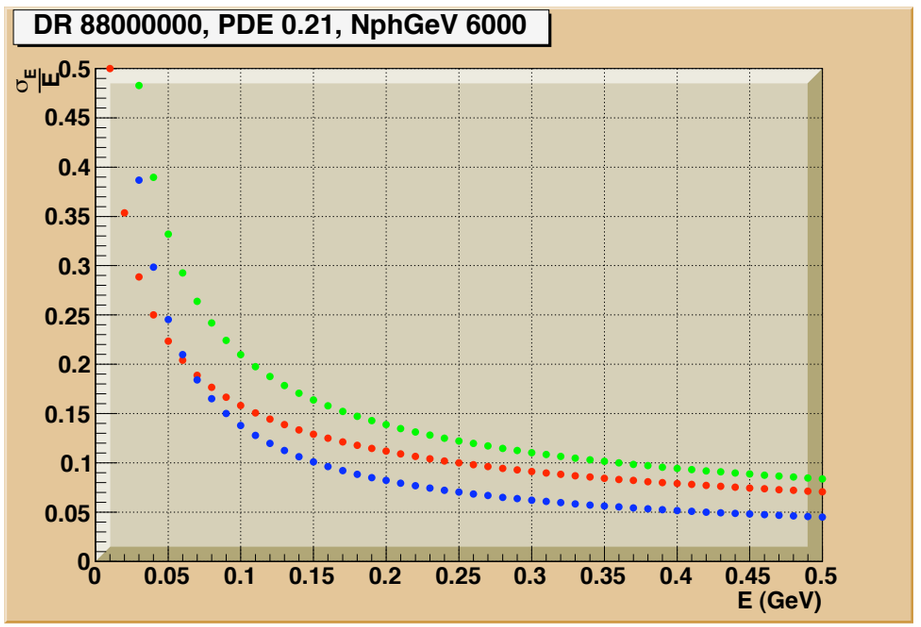


Look at varying number of photons as well





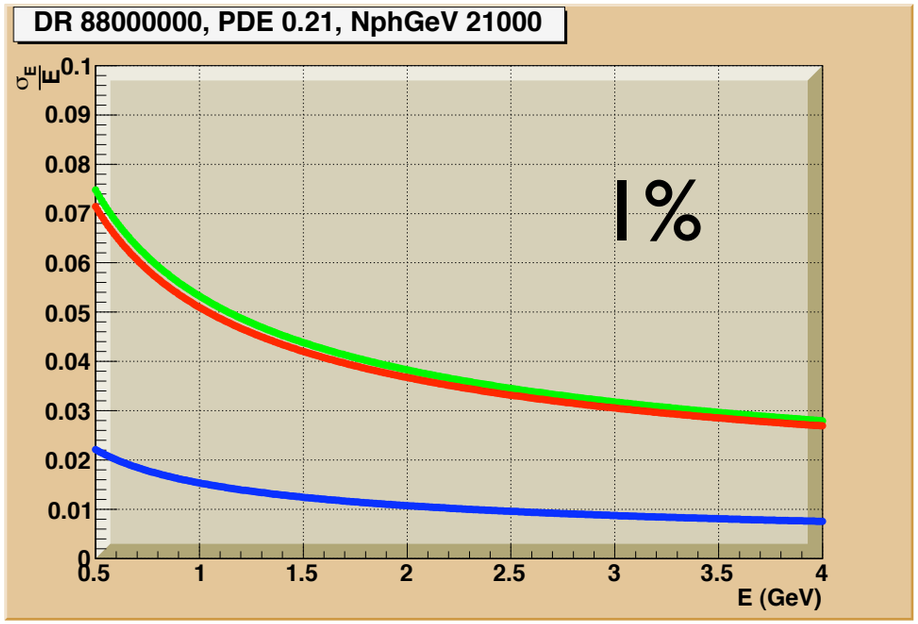


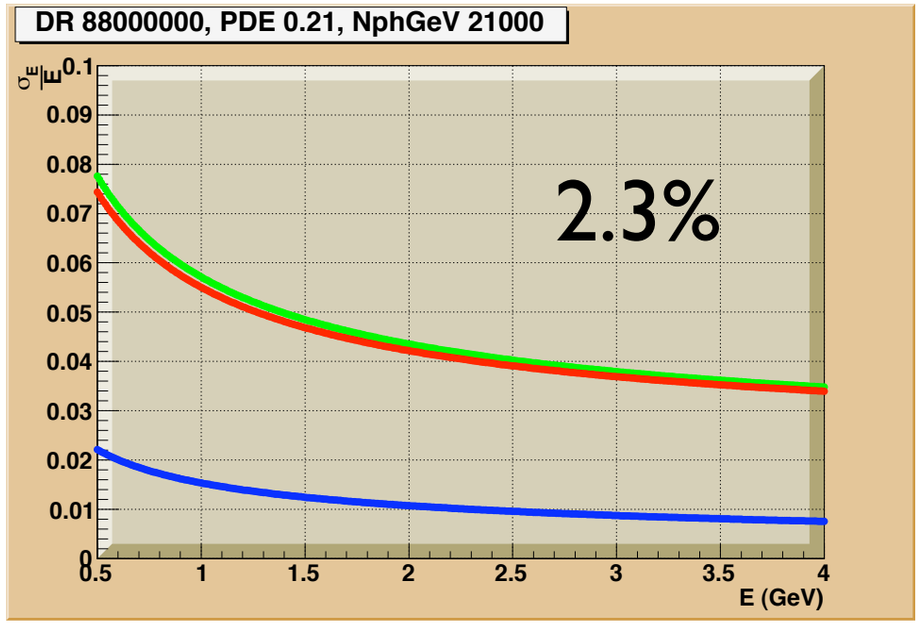


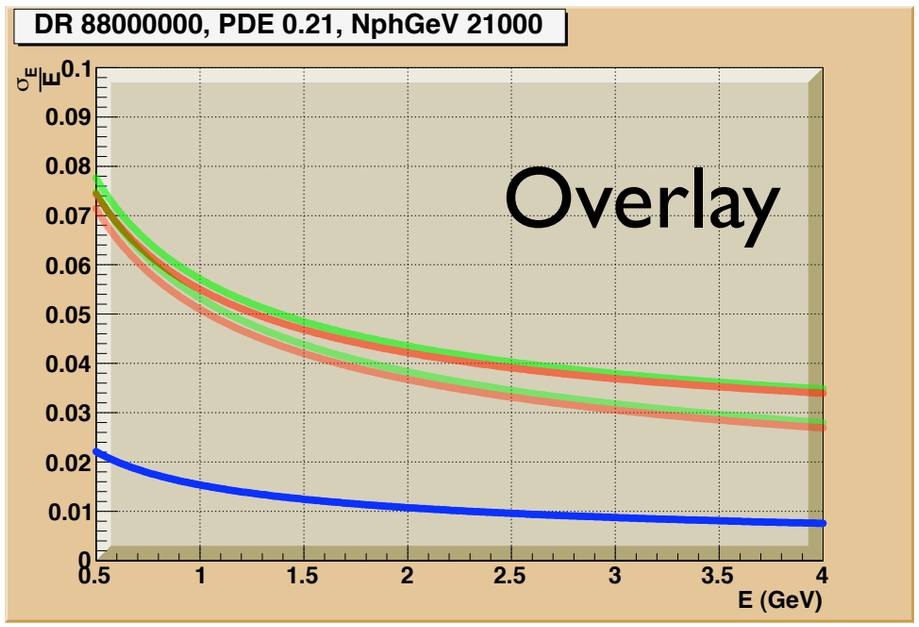
BCal readout specs doc 795:

term, or "floor" term, b, are detector non-uniformity and calibration uncertainty. At present, we take b=1% which is typical for many calorimeters and seems to have been achieved in our beam test last fall. The third term c is due to electronic noise

BCal NIM says b=2.3%



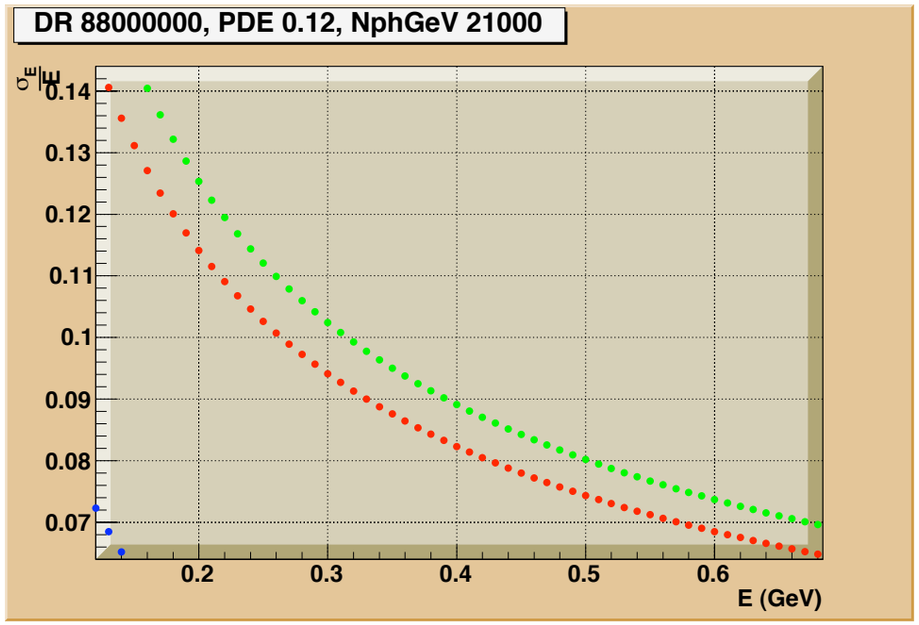




Also, this term should be added to equation 5 for completeness

Compare to BCal prototype data

Replicate NIM paper pretty well with
PDE*NphGeV = 0.12 * 21000
(using a=0.050 and b=0.023)



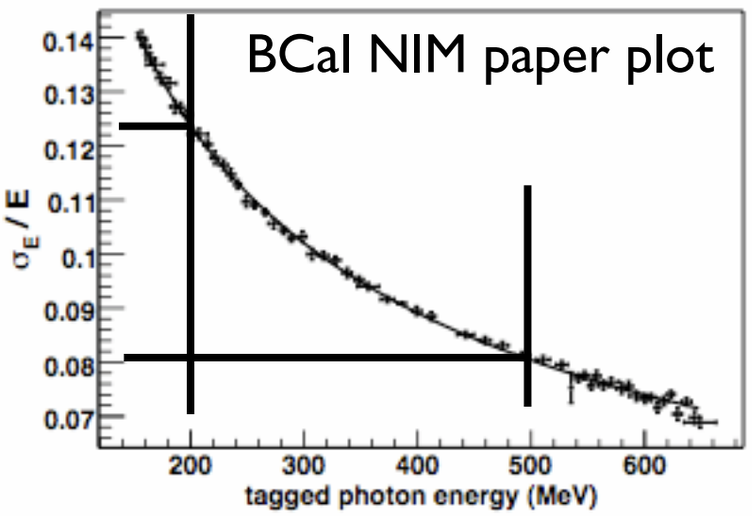


Fig. 11. Energy resolution vs. E_{BEAM} for photons for $\theta = 90^{\circ}$ and $z = 0$ cm. The fit gives $\sigma_E/E = 5.4\%/\sqrt{E(\mathrm{GeV})} \oplus 2.3\%$. The fit of Fig. 10 corresponds to the 40^{th} datum from the right (19^{th} from the left) in this figure.

Can scale by capture efficiency, light collection efficiency, and quantum efficiency and predict final performance?

Relies strongly on correct value of "a" parameter (depends on angle?)