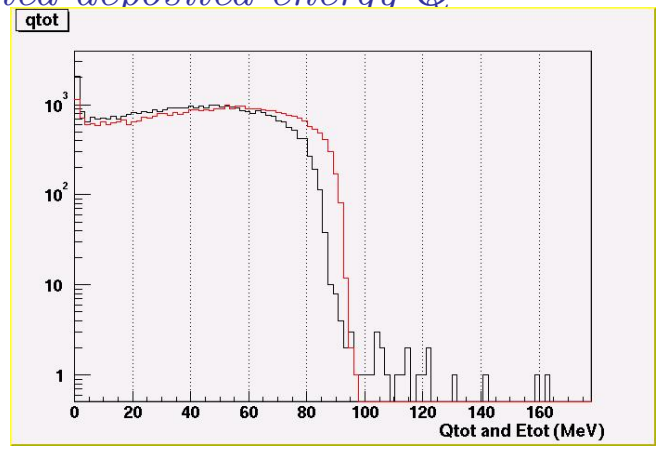
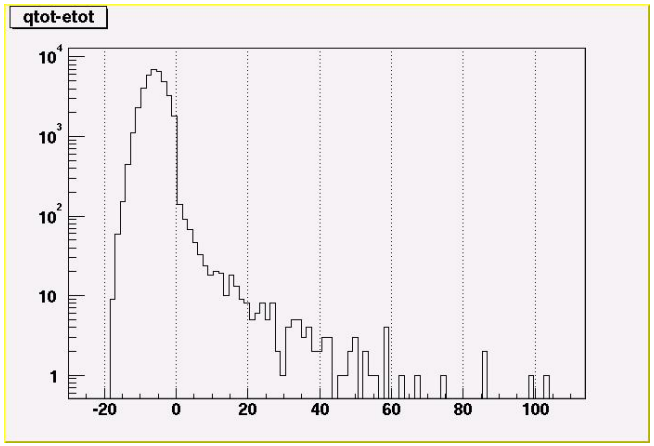
Deposited MC energy E and reconstructed deposited energy Q

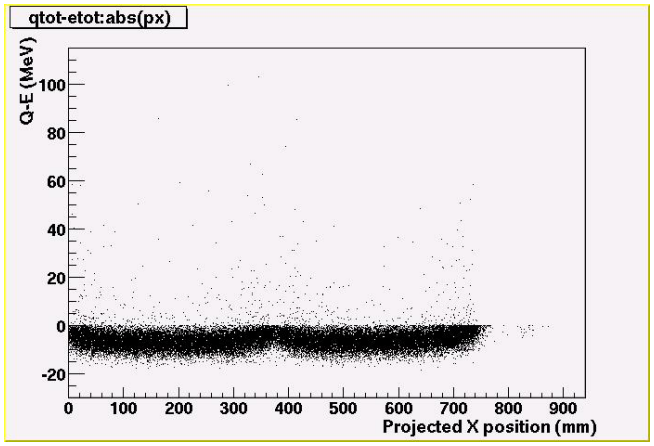
- E in red and Q in black for $E_\gamma = 100$ MeV at 0 degrees. Distributions are different and some events are reconstructed > 100 MeV! (0.4% of the events)

- Histogram of $Q - E$. There is an offset (reported by Xin and myself multiple times - do we correct that bias?) and differences that can reach 100 MeV

- $Q - E$ as a function of the projected position on the CAL. The events where the difference is significant seem to happen on the edges favoring the hypothesis of direct hits into diodes. Check the hypothesis with the ratio of digitized pulseheights u_i at both ends in each trigger.



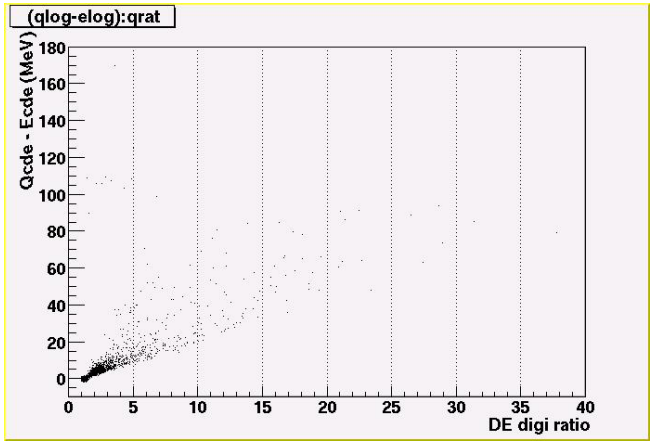


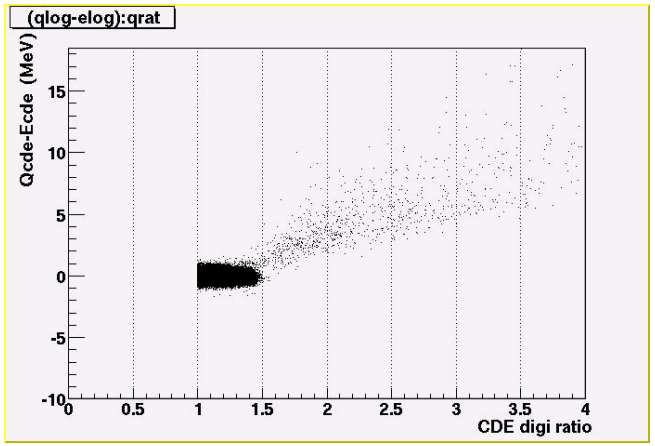


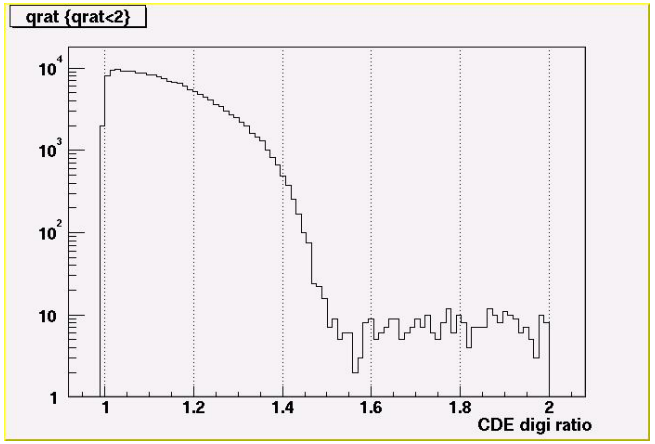
- $q - e$ is the difference in energy at the CDE level for all the CDE's in a trigger. A tail is visible when plotted against the ratio of the digitized signals on each end (the ratio is the biggest signal over the smallest).

- Zoom from the previous plot. The tail starts around a ratio of 1.4.

- Histogram of the ratios where a break is also visible around 1.4. The idea is not to reject those events with a ratio > 1.5 but to take the smallest signal in that CDE and correct for the attenuation expected for the length of 1 CDE (0.65, should be CDE dependent). This has to be applied to 4% of the events between 0° and 32°.



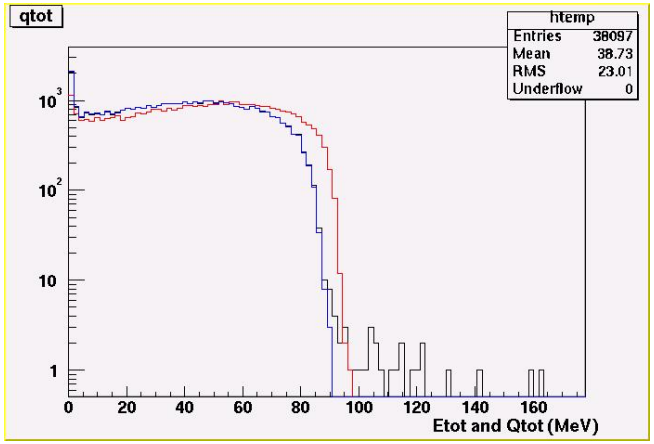


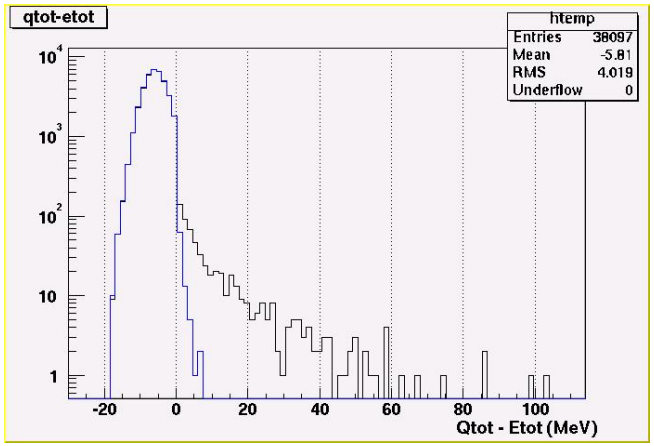


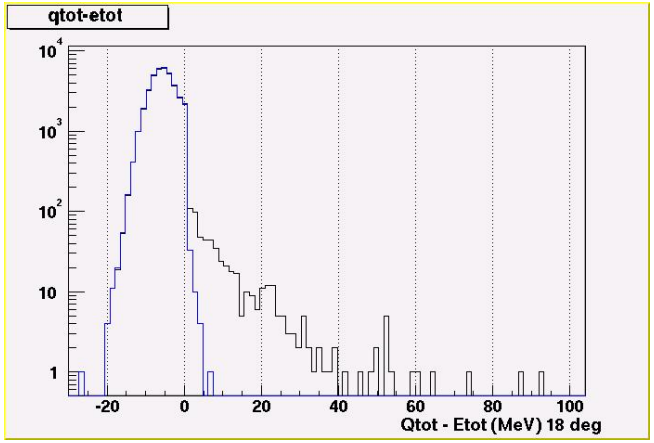
- With that correction implemented, the Q now has no $>$ 100 MeV events anymore

- $Q - E$ looks more reasonable now too

- $Q - E$ at 18° E_γ=100 MeV







- $Q - E$ at 32° E_γ=100 MeV