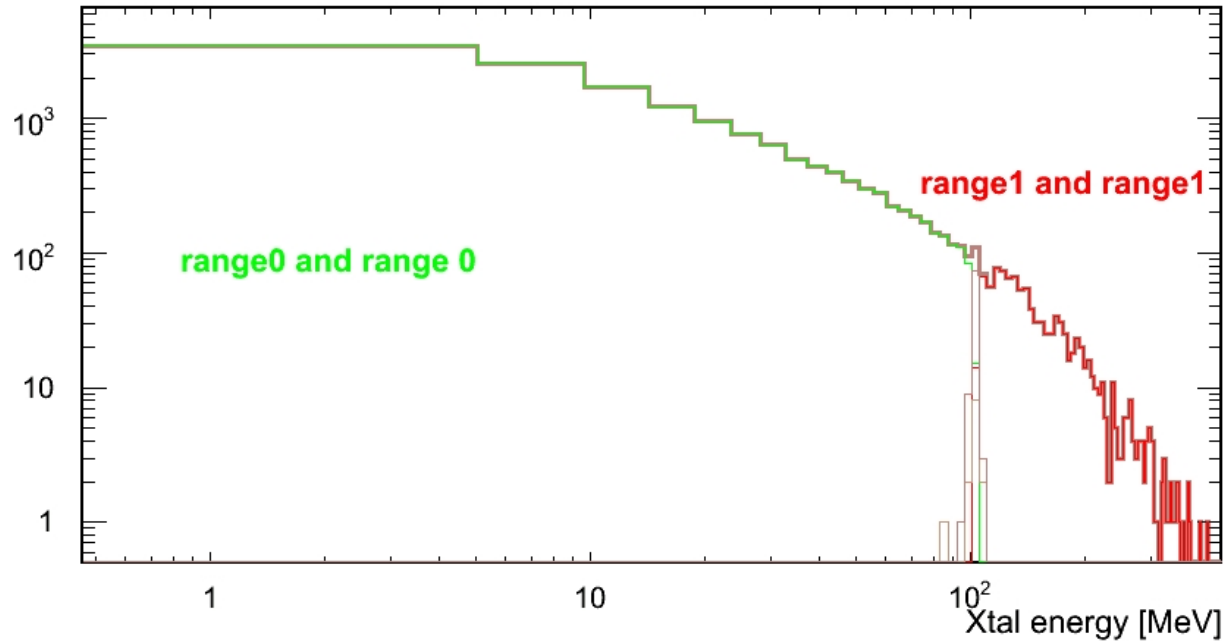


## *CAL data/mc comparisons on Bremsstrahlung runs*

Energy range behaviour (run 1181)

CAL profile (run 1181)

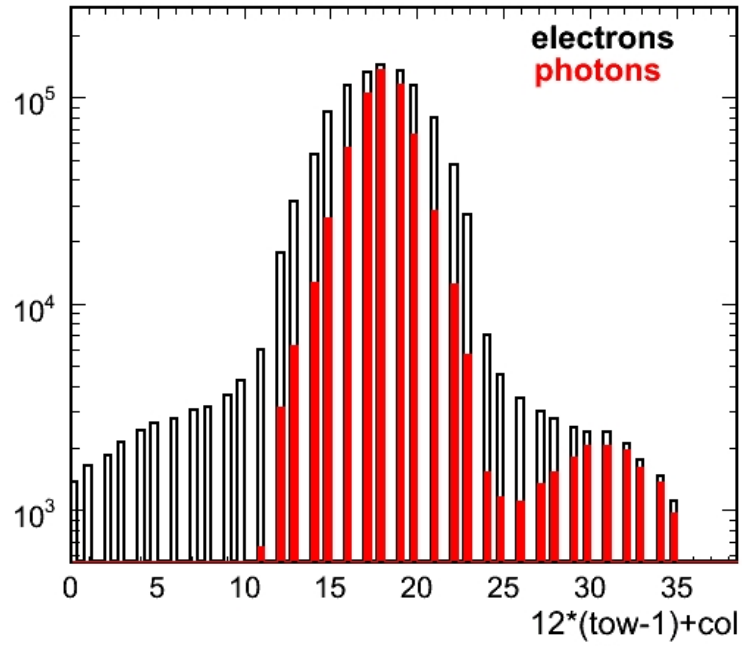
Compare thick/thin converted bremsstrahlung spectra with MC.  
runs 1181,1182,1183 2.5 GeV, 192k evts after cuts (svactuple), MC  
run 128, 29k evts passing cuts



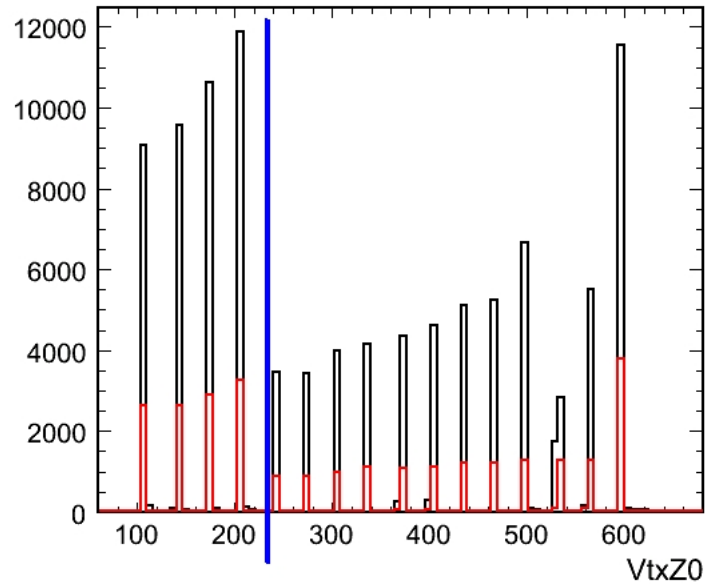
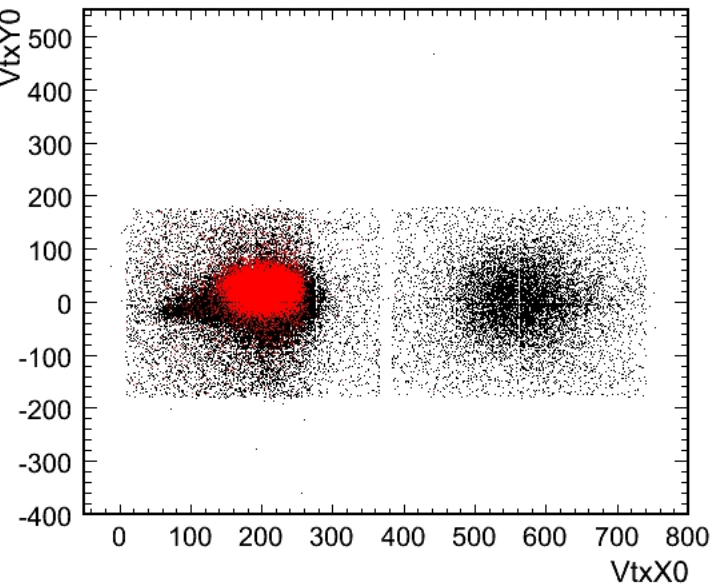
Energy estimation =  $\sqrt{e_{\text{plus}} \cdot e_{\text{minus}}}$

4 populations visible ( $\text{range} + [0,1] \cdot \text{range} - [0,1]$ )

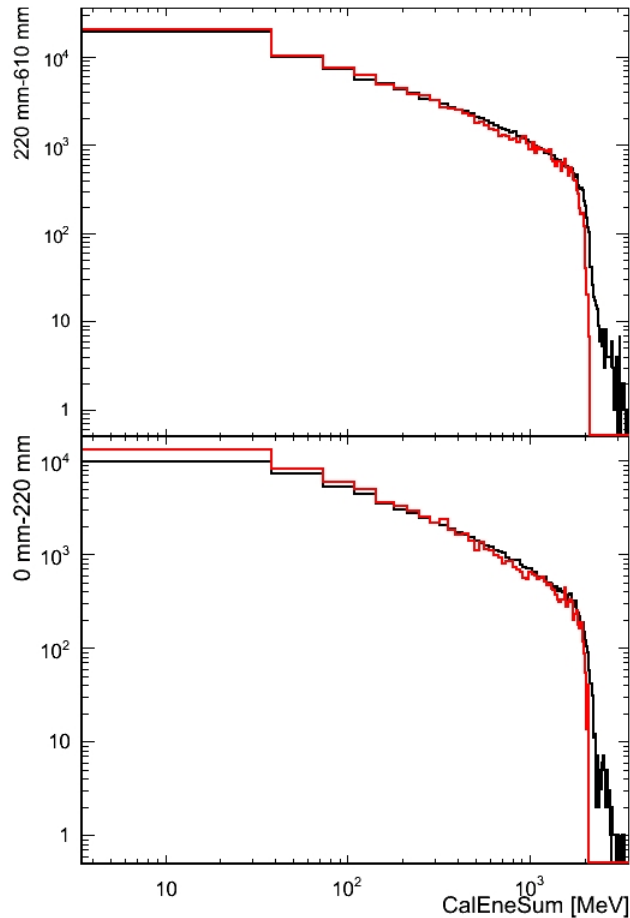
No signs of shaped noise



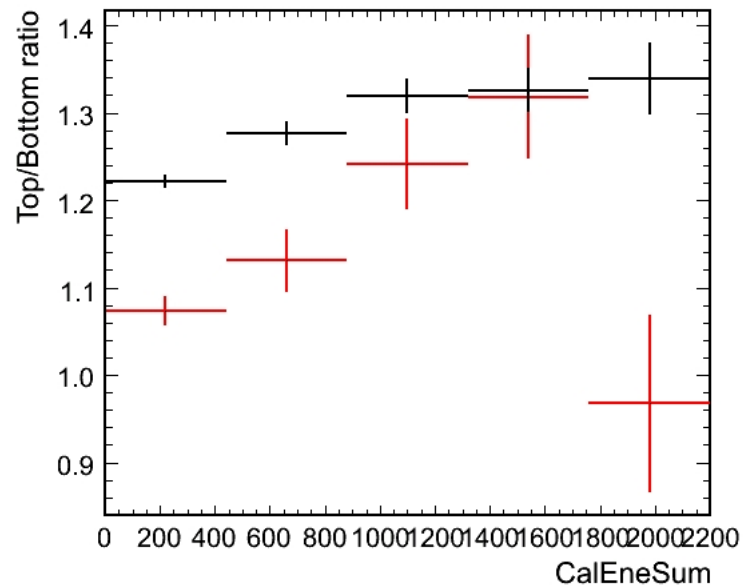
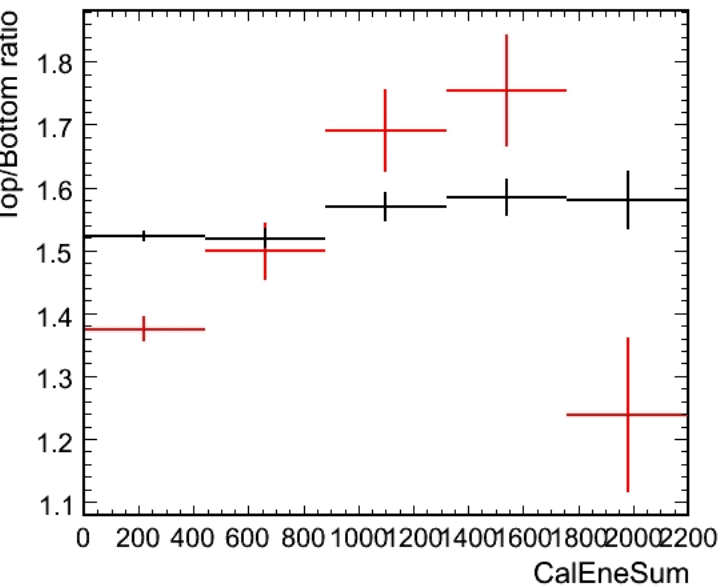
Column hits in CAL as beam check, reproduces nicely the TKR profile.



Build a CAL deposited energy hist for conversions occuring in thick, thin layers ( $0 < VtxZ0 < 220\text{mm}$ ,  $220 < VtxZ0 < 610\text{mm}$ ).

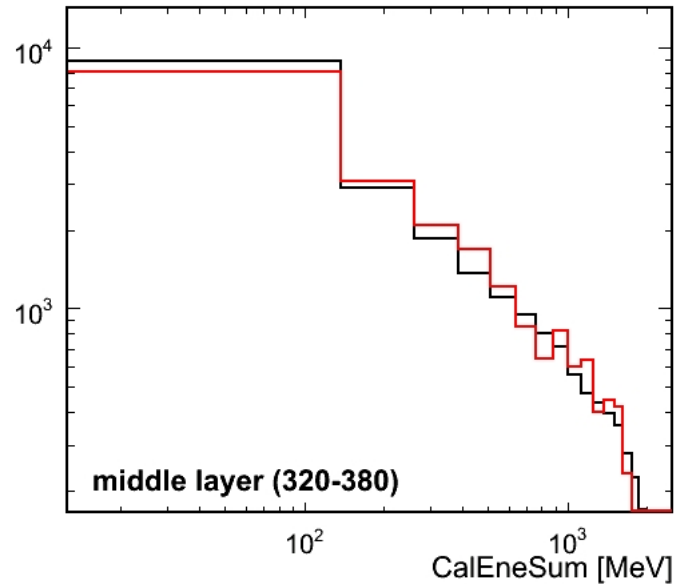
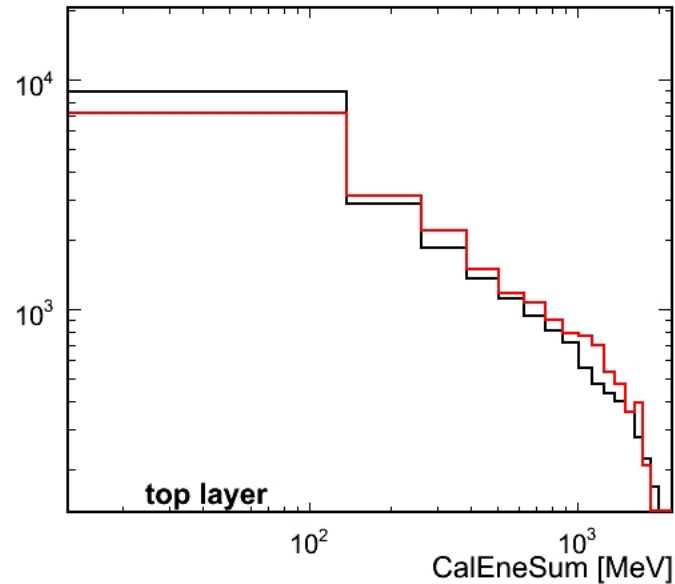


Log plots hide the elephant with a mouse - ratio of Top/Bottom histograms.



Upward trend, fractional energy deposit in CAL becomes less dependent on vertex height when the energy increases. MC errors large but slight disagreement with data.

Remove top layer from the ratio: improved comparison.



Data and MC CAL energy deposition, for VtxZ0 in or above top layer, or middle layer.

Next: compare CAL deposited energy widths for different TKR depths in small  $\gamma$  energy range (important for Likelihood recon).