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Subject: Re: forward endcap quest goes on  
Posted by [mpeliz](#) on Wed, 08 Jul 2009 12:58:32 GMT  
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Hello Irina,

as Bertram mentioned in his previous posting the shower in a crystal starts not at the surface, but inside the crystal.

This shift is taken into account in the digitization. We add 6.3 cm to the position of the crystal in direction of the crystal axis. Therefore the EmcDigi is shifted with respect to the EmcHit.

Taking into account the  $\cos(\theta)$  the observed shift in Ola's plots for digis and hits is consistent with that.

At the moment I do not understand the shift between the digi and the cluster position. I will carefully check.

However, for the reconstruction we usually don't care about the z-position. We should check the reconstructed theta and phi angle in addition. Therefore one should look to the difference of the cluster position (theta, phi) wrt to the corresponding MC truth angles. This is replacing the points in the bottom left picture in `points_g4_fwendcap_m3changed_fixed.png` by the cluster. Ola could you change your macro and do these plots, please? BTW, is the macro in SVN? If not, could you check it in? This would be helpful for understanding the plots in detail.

Cheers,  
Marc