
Subject: Re: Hole geometry

Posted by [Stefano Spataro](#) on Fri, 15 Jun 2007 12:00:31 GMT

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Hi,

I was just trying to understand if the response in energy is OK or not, I have the feeling something is going wrong somewhere in the energy reconstruction, even because I am not so confident on the media.

In each case the reason of my large hole is quite simple. In order to have everything a bit faster and to follow the same code style of the endcaps, I created 1/4 of the fsc and then reflect it three times. So what was an asymmetric hole became something symmetric and larger, in the fsc.dat and emc_module12345.dat.

If the detector is asymmetric, I think one should think about something else.

In each case in PandaRoot the definition of the beampipe is coming from the file PndGeom/beamtargetpipe.xml of the fast reco framework, and there it is straight. If there is somewhere the tilted beampipe definition (xml file) then I can implement even that design, but I was not able to find it in the repository.

About the fsc geometry, it is too slow at the moment and one cannot plot it in a fast way. The reason is that each crystal corresponds to 300 layers, then 600 volumes (one per absorber, one per scintillator), and this number has to be multiplied by the number of crystals (28 X 14) -> 235.200 volumes. This is very heavy to load and to plot. I discussed with Mohammad and there is a way to increase the speed. Maybe we can discuss about it in Dubna.

In each case, at the moment the clusterization algorithm works with a symmetric design of the fsc->large hole, and putting the asymmetric one will require a bit of time (a complete redesign of the Mapper functions). For the moment I would prefer to not touch it, or at least before having also the other beampipe.

So, at the moment for the merged code we can use only the large hole symmetric hole, or I could reduce it and put the smaller one, or I could even close everything. Just tell me what do you prefer.