Subject: Re: plane id in track candidate
Posted by Radoslaw Karabowicz on Tue, 23 Feb 2010 15:45:50 GMT

Hi,

I would like to focus in this post on the detectorID issue, as it is so close to the discussion I started ~2 weeks ago about the fDetectorType.

Assuming that we will all agree that we need a fast information on the plane id then the fDetectorId member of the FairHit class is the most intuitive place to get this information from. We could reserve there several bits for detector id, plane id, straw tube id for STT/DCH, side and strip number for GEM digi, and so on.

In order to have also information about the data type, the last 4 bits could be reserved for it. This could be set to either MC track, MC point, digi, cluster, hit, local track, global track or whatever you like. Of course, when the fDetectorId for track is created, then plane or even detectorId are useless, but the spared bits could be used for something else.

To summarize, we would have a 32 bit int, which could be divided into:
5 bits for the detectorId (31 possibilities, excluding 0, should be enough, 14 defined in PndDetectorList)
5 bits for the planeId (any detector needs more?)
18 bits for any detector specific stuff
4 bits for the data type (MC track, MC point, digi, cluster, hit, local track, global track or track candidate, track)

I would not like to introduce another integer into existing data structure. I think we should try to use what is already available.

yours,
radek