Subject: Digitization and Reconstruction in Fairroot to new detectors
Posted by Raghav Kunnawalkam on Wed, 27 Jun 2012 17:16:34 GMT

Hi All

I just understood today that if you have to do digitization to look at the detector response then you have to create a bunch of classes for its digitization and reconstruction. (like how it is given in pandaroot)

If we look at EMC in panda for example, it has a bunch of classes under EmcDigi, EmcReco, etc.. which i think are necessary for doing reconstruction.

I just followed the procedure given in the fairroot.gsi.de website for creating my own detector and i only have few classes like fairemca.cxx, fairemcacontfact.cxx, fairemcageo.cxx, fairemcageopar.cxx, fairemcapoint.cxx.
(if we say that i named my detector as Emca)
So if i need to do any sort of reconstruction on this particular detector which is actually my ElectroMagnetic CAlorimeter (EMCA), then i need all the classes present in /pandaroot/emc/ ?

I will work on getting the classes and renaming them and all that but i want to know if it is standard procedure.

Has anyone done reconstruction/ digitization from the very beginning so that they can tell me the steps to follow. I also know that i need to create a parameter file which has information for digi and reco. I went through some of the parameter files in /pandaroot/macro/params and i see that there are certain parameters for certain detectors and some others for other detectors. I want to know if there is like a manual of some sort telling me all the possible parameters and if there is like a default configuration that i can use for the time being.

Also i learnt from Florian today that i can do a "simple smearing" of the MCPoint, as a first step. But i dont know how to go about doing that in my digi macro. Is there an example or something like that available online in the repository?

Thanks a lot guys.
Cheers
Raghav