Subject: emc cluster summary information (rev.2147)
Posted by Dima Melnychuk on Mon, 04 Feb 2008 10:53:39 GMT
View Forum Message <> Reply to Message

Hi all,

I have ported from Babar framework several classes for emc cluster summary information.

PndEmcClusterEnergySums - gives information on energy of central crystal, central 9 and 25 crystals and ratios between them.

PndEmcClusterDistances - radial and angular distances from specific digi to cluster centroid.

PndEmcClusterMoments - information on different cluster moments.

PndEmcXClMoments - cluster Zernike moments.

Macro reco_analys3.C demonstrates some capabilities of PndEmcClusterEnergySums, i.e. plots energy of cluster, energy of central crystal, 9 and 25 central crystals.

Best regards,
Dima

Subject: Re: emc cluster summary information (rev.2147)
Posted by M.Babai on Tue, 19 Feb 2008 13:22:17 GMT
View Forum Message <> Reply to Message

Hi all,

I'm trying to use these cluster properties to perform particle identification.

If I want to initialize a PndEmcXClMoments object, root starts to complain and produces's an error with the following message:
Wrong call for PndEmcStructure. It should be instantiated first with TGeoManager

And this is how I'm using this function:

```
//Select cluster
PndEmcCluster* cl = (PndEmcCluster*) cluster_array->At(idWithHighestEnergy);

 PndEmcXClMoments zmom = cl->Xmoments();
 .........
```

Any body, any idea, how to solve this?

Kind Wishes,
MB

Subject: Re: emc cluster summary information (rev.2147)
Posted by StefanoSpataro on Tue, 19 Feb 2008 15:43:19 GMT
View Forum Message <> Reply to Message

I think you should open in your macro even the sim_emc.root file, the one with the geometry.

Subject: Re: emc cluster summary information (rev.2147)
Posted by M.Babai on Tue, 19 Feb 2008 16:00:24 GMT
View Forum Message <> Reply to Message

I open the simulation file too, but the the error remains the same. .

Subject: Re: emc cluster summary information (rev.2147)
Posted by StefanoSpataro on Tue, 19 Feb 2008 16:18:02 GMT
View Forum Message <> Reply to Message

Maybe the lines:

```
TFile* fsim = new TFile("sim_emc.root");
TTree *tsim=(TTree *) fsim->Get("cbmsim");
PndEmcMapper *emcMap=PndEmcMapper::Instance(1);
```

could help. I had a similar prolem, and I solved it in this way.
Try and let me know.

Subject: Re: emc cluster summary information (rev.2147)
Posted by Dima Melnychuk on Tue, 19 Feb 2008 16:27:07 GMT
View Forum Message <> Reply to Message

Hi Mohammad,

2 remarks:

1) update the code to the rev. 2198, I made the correction in PndEmcXClMoments.cxx

2) You should instantiate PndEmcStructure before accessing PndEmcXClMoments.

```
TFile* fsim = new TFile("sim_emc.root");
TTree *tsim=(TTree *) fsim->Get("cbmsim");
PndEmcMapper *emcMap=PndEmcMapper::Instance(1);

TGeoManager *geoMan = (TGeoManager*) gROOT->FindObject("CBMGeom");
```

PndEmcStructure::Instance(geoMan);

Dima

Subject: Re: emc cluster summary information (rev.2147)
Posted by M.Babai on Wed, 20 Feb 2008 10:37:54 GMT
View Forum Message <> Reply to Message

Thank you for your replies.
this initialization seems to solve the problem

TGeoManager *geoMan = (TGeoManager*) gROOT->FindObject("CBMGeom");
PndEmcStructure::Instance(geoMan);

Kind Wishes,
MB.
