
Subject: About FairGeanePro

Posted by [Jifeng Hu](#) on Thu, 10 Oct 2013 16:20:28 GMT

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Hi, All,

who has experiences of FairGeanePro propagation, please have a look at my usage and results, I think I got some wrong results.

For 2 GeV momentum pion from the origin (0,0,0), isotropically generated, the flying path is expected to be the EMC shower center position. To do that, the codes are listed (see also PndPidCorrelator.cxx):

```
0. Bool_t PndPidCorrelator::GetEmcInfo(FairTrackParH* helix, PndPidCandidate* pidCand) {
1. FairGeanePro *fProEmc = new FairGeanePro();
2. for (Int_t ee = 0; ee<emcEntries; ee++){
3.   PndEmcCluster *emcHit = (PndEmcCluster*)fEmcCluster->At(ee);
4.   TVector3 emcPos = emcHit->where();
5.   fProEmc->SetPoint(emcPos);
6.   fProEmc->PropagateToPCA(1, 1);
7.   FairTrackParH *fRes= new FairTrackParH();
8.   Bool_t rc = fProEmc->Propagate(helix, fRes, fPidHyp*pidCand->GetCharge()); // First
propagation at module
9.   if (!rc) continue;
10.  emcGLength = fProEmc->GetLengthAtPCA();
11. }
22.}
```

emcGLength is extracted as the flying path. see its distribution in barrel.eps for Barrel Calorimeter, and so on.

see the Panda TDR:

http://www-panda.gsi.de/archive/public/panda_tpr.pdf

the geometry tell us the flying path is wrong.

Someone can tell me where I incorrectly make use of FairGeanePro class.

File Attachments

- 1) [backward.eps](#), downloaded 421 times
 - 2) [forward.eps](#), downloaded 447 times
 - 3) [barrel.eps](#), downloaded 432 times
 - 4) [shashylik.eps](#), downloaded 448 times
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