Subject: Re: Using Rho without MC info
Posted by Marcel Tiemens on Fri, 07 Aug 2015 14:33:40 GMT
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Thank you for that suggestion. A small update... I sort of managed to get it to work by disabling the "return kERROR" statement, so that the PidCorrelator doesn't stop when it doesn't find a track array, and commenting out the part in ConstructNeutralCandidate() that tries to match tracks. If I'm honest, I don't what kind of tracks it would need. Surely, for neutrals you don't need a complete track; the starting point (=interaction vertex) and end point (=EMC cluster position) should uniquely identify the track, right? Especially in this case it doesn't matter, since there is nothing in between. Perhaps it would be possible to use a Kalman filter or something to interpolate the "track", but I am no expert. The default clustering algorithm does something with the tracks, using

```
FairMultiLinkedData hitLinks =
theDigi->GetLinksWithType(FairRootManager::Instance()->GetBranchId("EmcHit"));
    for (Int_t j = 0; j < hitLinks.GetNLinks(); j++) {
        PndEmcHit* hit = (PndEmcHit*)fHitArray->At(hitLinks.GetLink(j).GetIndex());
   if(hit) cluster->AddTracksEnteringExiting(hit->GetTrackEntering(), hit->GetTrackExiting());
 else std::cout << "-E in PndEmcMakeCluster::Exec FairLink " << hitLinks.GetLink(i) << "to
EmcHit delivers null" << std::endl;
    }
```

However, as Philipp explained in his email (you were included there, Stefano), this part is not compatible with the new timebased simulation for the EMC.

Anyway, the analysis macro crashes after leaving my computer unresponsive for some 15 minutes with the message:

```
[INFO   ] The number of entries in the tree is 1000
[INFO   ] FairRootManager::ReadEvent(1): The tree has 1000 entries
evt 2
evt 3
evt 4
evt 5
evt 6
evt 7
evt 8
evt 9
evt 10
terminate called after throwing an instance of 'std::bad_alloc'
  what():  std::bad_alloc
```

It is of course very possible that I am at fault here; I'm only just learning this Rho stuff. I have both pi0's and eta's, which both decay to photons, but it should be possible to distinguish the two? Or do I need to do something special for that? Perhaps it is better if I share the file I use for the analysis, so you can take a look and tell me if I'm doing something stupid... Or if is has to do with the tracks part. ... Okay, maybe it wasn't that small of an update

File Attachments

1) emc_anatest.C, downloaded 530 times