Subject: geane propagate((CbmTrackParH *TStart, CbmTrackParP *TEnd, Int_t PDG) Posted by asanchez on Fri, 02 May 2008 10:00:40 GMT

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Hi to Geane experts,

I have a question concerning the function Propagate(CbmTrackParH *TStart, CbmTrackParP *TEnd, Int_t PDG)

I would like to calculate the length of a track provided either by genfit or by lhetrack. In genfit there is now the possibility to obtain the Length (from geane)of the track by using

prop = _geane->Propagate(&par,&result,_pdg); //211

double l=_geane->GetLengthAtPCA();

But i see that one should always be able to provide the pdg of the particle.

If one has already a fitted track, and has still access

to the track hits(first or last hit in the track),

is it possible to propagate to one volume(point, plane) by giving the track parameters and the position information, without giving the pdg code.

Thanks in advance

ALicia.

Subject: Re: geane propagate((CbmTrackParH *TStart, CbmTrackParP *TEnd, Int_t PDG) Posted by StefanoSpataro on Fri, 02 May 2008 10:04:44 GMT View Forum Message <> Reply to Message

You could give just a "standard" pid value, such as the pion one.

Subject: Re: geane propagate((CbmTrackParH *TStart, CbmTrackParP *TEnd, Int_t PDG) Posted by asanchez on Fri, 02 May 2008 10:37:58 GMT View Forum Message <> Reply to Message

Hi again,

i have checked the ertrack.F which is called in propagate(CbmtrackP, cbmtrackP, pdg) at CbmGeanePro.cxx and so far i have understood(please let me know if i'm wrong) the pdg code will be use to obtain information from the particle which will be used to do the propagation to a point, plane volume ,etc

let's assume that after the tracking, i have only tracks and i don't have pdg information any more. if i don't have the pdg of the particle, means that geane will not work??.

Is that the case? Is there any way to use ertrack only providing track parameters from the fit and the start and end position.?

Thanks ALicia.

Subject: Re: geane propagate((CbmTrackParH *TStart, CbmTrackParP *TEnd, Int_t PDG) Posted by Lia Lavezzi on Fri, 02 May 2008 13:10:03 GMT View Forum Message <> Reply to Message

Hi Alicia,

you need to give the PDG code to GEANE because otherwise GEANE does not know which particle it has to propagate through the detector. The tracking is made just like in the Monte Carlo (geant3) with all the random effects switched off, so GEANE needs to know the PDG code of the particle in order to propagate it with the correct energy loss and so on...

Pay attention to the fact that if you track a particle with the wrong PDG code GEANE results will not be reliable: it will calculate its predictions for the wrong particle.

For the moment I could suggest you to use the MC truth to get the PDG code of the tracks and use it for GEANE.

Ciao, Lia.

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