Subject: PndTrack and LheTrack
Posted by StefanoSpataro on Wed, 24 Jun 2009 23:48:38 GMT
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Dear all,
I am proud to announce that now the output of lhetrack is stored inside "PndTrack" TClonesArrays.

The old PndTpcLheTrack now is called PndLheCandidate (and "LheCandidate" the corresponding TCA), but the output is also stored inside a TCA called "LheTrack" filled with PndTrack objects. I foreseen the possibility that LheCandidate is not stored anymore inside the output file (when everything will be fixed).
I have also changed names of some classes, removing the "Tpc".

Feel free to use the code. Still the kalmantask and the correlation part should be updated.

I have a comment: I think it would be "good" to have inside FairTrackPar some funtions returning: P Pt Pp Theta Phi in the master frame. Because it is very nasty to write a lot of code simply to know the (q/qp) or the theta (much more complicated)of one PndTrack.
Which are your opinions about?

Subject: Re: PndTrack and LheTrack
Posted by Mohammad Al-Turany on Thu, 25 Jun 2009 13:36:50 GMT
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Hi Stefano,

that is great, but can you please propagate these changes to the AnalysisTools and the tutorials! they do not compile anymore:

error: PndTpcLheTrack.h: No such file or directory
error: PndTpcLhePoint.h: No such file or directory

thanks!

Mohammad

Subject: Re: PndTrack and LheTrack
Posted by StefanoSpataro on Thu, 25 Jun 2009 14:02:56 GMT
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Hi,
I had updated the code but I had forgotten to commit the changes also in those two packages.

Let me remind everybody that, if you want to continue using the old PndTpcLheTrack functions, you have to substitute PndTpcLheTrack with PndLheCandidate, for the class name, and PndTpcLheTrack with LheCandidate, for the TCA name.

Now charmtask and analysistools should be fine.

Subject: Re: PndTrack and LheTrack
Posted by StefanoSpataro on Mon, 29 Jun 2009 15:02:38 GMT
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Dear all,
I have fallen into two considerations, while converting my lhetrack code inside PndTrack scheme.

The object PndTrackCand is stored inside PndTrack. But had we agreed that the PndTrackcand should be stored inside its own TClonesArray, and then PndTrack should point to it storing just an index? Or do I remember badly?

Another thing, I have seen in PndTrack there are no fRefIndex or similar data members, to store the index of some preliminary object. In my case, once I am storing the tracks coming out from genfit, I would like also to store an index refering to the prefit Track with lhe helix fit. Of course, if the PndTrackCand are stored in their TCA, I should just use that index (not existing at the moment). If PndTrackIndex is inside PndTrack, I still need this new integer.

For the moment I will add this index, I would like hearing comments about this point.

Regards

Subject: Re: PndTrack and LheTrack
Posted by StefanoSpataro on Mon, 29 Jun 2009 16:35:34 GMT
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Dear all,
after some fights (and I won!), now even genfit tracks using lhetrack are written as PndTrack.

This means that in the file one can find, as TClonesArray:

LheTrack -> lhe prefit (helix)
LheGenTrack -> genfit refitted tracks

Both are TCA made of PndTrack, as agreed.

There is still the PndTrackCand issue to solve, and of the ref index. At the moment no index is stored inside the PndTrack.

Now, some considerations:

It would be also interesting to agree on a "flag" scheme, considering that the PndTrack stores a fFlag, and that we all should use the same values. Any suggestions? From genfit I have seen the flag is always 0, but maybe because this is the initialization value (that I have set in PndTrack).
And I have seen that half the tracks I have have NDF = 0 (even if there is some value of

momentum inside). This is another quite interesting point to understand.
Moreover, in PndTrack we are storing the PidHipothesis (I suppose from the genfit fit), then maybe this info zould be propagated from the kalman task to the outgoing Track object, in order to fill also this variable.

And it would be nice if the output of the kalman fitter, exceptions, and reco hits, could be reduced a lot, depending on the Verbose flag. I think there is too much unwanted I/O, and this could also slow down a bit the reconstruction, producing also big log files.

Regards

Subject: PndTrackID
Posted by StefanoSpataro on Wed, 01 Jul 2009 16:51:18 GMT
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Dear all,
the object PndTrackID is now inside svn (pnddata/TrackData), and it is already produced by the lhetrack tasks, implemented in between the code lines of PndLheTrackFitter::Info4Fit.

Subject: Re: PndTrack and LheTrack
Posted by I. Atar on Tue, 28 Jul 2009 13:59:26 GMT
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Hi Stefano,

I use tutorials/analysis-lhetrack and have a problem with TCandidate. you have done some changes in lhetrack. this can be relevant for me.

Thanks

leila

Subject: Re: PndTrack and LheTrack
Posted by StefanoSpataro on Tue, 28 Jul 2009 14:31:48 GMT
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Hello,
yes, the new structure of LheTrack affects the MicroWriter.
However, soon the Writer will be replaced by a new code, which will be able to read PndTrack data.
I suppose Klaus will try to fix the writer. Meanwhile I suggest you to go back to some older version of the code.
