Subject: PndEventReader
Posted by Tobias Stockmanns on Mon, 13 Dec 2010 17:04:08 GMT
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Dear pandaRooters,

looking into the run_ana_tpccombi.C macro of the charmonium tutorial I realized that it breaks with our standard method of using tasks in our macros.
The PndEventReader operates directly on the tree and many nice features of the tasks are not available. I think that this is a serious problem which we should fix.

Is someone maybe already working on this topic?

Cheers,

Tobias

Subject: Re: PndEventReader
Posted by Ralf Kliemt on Mon, 13 Dec 2010 17:17:24 GMT
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Hi Tobias.

Could you please try PndAnalysis instead?
I attatched a sample macro.

Ralf

File Attachments
1) analyse.C, downloaded 386 times

Subject: Re: PndEventReader
Posted by Klaus Götzen on Tue, 14 Dec 2010 09:53:10 GMT
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Hi Tobias,

could you specify a bit in detail which features you are referring to? I think although the solution proposed by Ralf (PndAnalysis) uses the FairRootManager it nevertheless is not a task.

Some time ago I took a look to running analysis task-based, but it seemed to be significantly slower then using PndEventReader or PndAnalysis - most likely it was related to too many open branches.

But I'll have to take a closer look to it again I admit.

Cheers,

Klaus

Subject: Re: PndEventReader
Posted by Tobias Stockmanns on Tue, 14 Dec 2010 10:38:08 GMT
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Hi Klaus,

to clarify a bit my problem I am going to explain what I wanted to do:
I simulated a K+ Pi- Pi- at a fixed vertex to test how good I could reconstruct this vertex with the MVD. I used three TCandidateLists one with "KaonVeryLoosPlus" and two with "PionVeryLooseMinus" and combined them. Unfortunately I get a lot of wrong combinatorics.

To bypass this problem I tried to use the FairLinks to get the MC information for the tracks and just create three TCandidates. To extract the MC information for the MicroCandidates works very well within a task but to put this into a macro is some work.

You are right that the tasks are slower because they need some time to load in all the libraries and the geometry and the databases but they give you the full functionality of the framework and allow you to combine the analysis task with other tasks like the MC matching.

I would prefer to have both options.

Cheers,

Tobias

Subject: Re: PndEventReader
Posted by Klaus Götzen on Tue, 14 Dec 2010 10:48:48 GMT
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Hi Tobias,

ok, I get the point. What I planned for that purpose was actually to do the MC-match using the FairLinks in advance in the task writing out the PndPidCandidates (how in detail still has to be defined). This would, besides true PID, ideally include information about mother and daughters to have access to the complete decay tree.

That at least would make it possible to allow a very straight forward use of MC match in analysis without necessity for the user to access the FairLink structures himself.

Cheers,
Klaus

Subject: Re: PndEventReader

Posted by StefanoSpataro on Tue, 14 Dec 2010 13:47:30 GMT
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However,
at the moment it is possible to use the "fast" mc truth stored in the Candidate, without links. In order to have fast results.
About the use if FairLink in the TCandidate, I suppose this requires some hardcoding to make it work, isn't it?

Subject: Re: PndEventReader
Posted by Klaus Götzen on Tue, 14 Dec 2010 14:38:26 GMT
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Hi Stefano,

I didn't think about integrating FairLink in TCandidate, more like doing the same as Tobias to retrieve the MC match information and store that one (hardcoded, e.g. the 3 best matches with probabilities) in the PndPidCandidate. This either can be accessed via TCandidate.GetMicroCandidate(), or it can be directly integrated in the TCandidate interface as new member variables and methodes (like it is done up to know with just one MC truth index).

Cheers,
Klaus