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Subject: FairHit::SetPositionError

Posted by [MartinJGaluska](#) on Mon, 03 Mar 2014 17:57:59 GMT

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Dear all,

I am currently wondering if I should set the position error for FTS hits in the FTS pattern recognition. If so, how should the 3 numbers which I can set be interpreted? Uncorrelated standard deviations in cm?

Kind regards,  
Martin

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Subject: Re: FairHit::SetPositionError

Posted by [StefanoSpataro](#) on Tue, 04 Mar 2014 13:29:05 GMT

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Hi,

since the FtsHit does not store position but isochrone, the error should be only in this variable and not in the position. It makes no sense to put other values, I believe. And it is better to not rewrite the hit TClonesArray. In the past, for STT, we were creating SttHelixHit with XYZ position and error, but after we removed this information since of no use.

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Subject: Re: FairHit::SetPositionError

Posted by [MartinJGaluska](#) on Tue, 04 Mar 2014 16:22:14 GMT

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Thank you Stefano,

do I understand correctly that I should not set the position errors of the FTS hits? My idea was that my PndFtsTrackerTaskHough task sets the errors of each FTS hit according to the geometry of the corresponding FTS straw (read out from PndFtsTube) and my PndFtsHoughTrackCand class uses this information for setting the position error necessary for the FairTrackParP constructor when I create the PndTrack objects.

If I can set the position error of the hit in my tracking task PndFtsHoughTrackCand does not need to know about the FTS geometry. Otherwise I believe that I will have to pass a pointer to a TClonesArray (containing the pointers to PndFtsTube) from my PndFtsTrackerTaskHough to my PndFtsHoughTrackFinder class and then finally to the PndFtsHoughTrackCand class.

PS: I agree that the error on the isochrone is the most important value. However, from the point of view of PR I believed that a hit might be associated to the wrong track candidate and therefore, the geometry of the straw should define the error, but I might be wrong.

PPS: I didn't fully understand what you meant with "And it is better to not rewrite the hit TClonesArray."

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Subject: Re: FairHit::SetPositionError

Posted by [Stefano Spataro](#) on Wed, 05 Mar 2014 15:03:42 GMT

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You could create a new TClonesArray made of FtsHit, with a different name, and store the coordinates there. This TCA shouldn't be persistent and it will appear invisible in the output file, it will be transient only for your algorithm.

The original FTSHit TCA should not be overwritten, then.

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Subject: Re: FairHit::SetPositionError

Posted by [MartinJGaluska](#) on Wed, 05 Mar 2014 17:17:57 GMT

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Ok, I will not set the position error of the original FTS hits TCA.

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