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Subject: Re: Revised CbmGeaneUtil, CbmGeanePro and CbmTrackParP.  
Posted by [Sebastian Neubert](#) on Fri, 06 Jun 2008 14:56:06 GMT

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Hi Lia!

Christian and me are working on the genfit Kalman Filter with the GeaneTrackRep. We have verified that genfit and the kalman are working correctly with the LSLTrackRep.

With GeaneTrackRep we get a strange behaviour. The bug could be in the interface between GeaneTrackRep -- TrackParP -- Geane.

What we observe is, that after we have made the first update of the covariance matrix in the Kalman Filter Update Step in the following Prediction Step there is a change of sign in some of the correlations in the covariance matrix. This subsequently leads to a divergence of the momentum parameter.

Could you maybe check if the off-diagonals in the covariance matrix are calculated correctly in TrackParP!?

Are there any conditions, that the covariance matrix must satisfy in order to be "physical"? (Apart from being diag).

Cheers! Sebastian.

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