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Subject: Re: Geane interface in PandaRoot  
Posted by [Andrea Fontana](#) on Thu, 21 Jun 2007 19:35:38 GMT  
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Dear All,

we have received the interface from Mohammad yesterday and are now working to integrate it with the new features that we developed with the old interface. So for now you will only find the standard Geane in svn, not yet, for instance, the propagation to the point of closest approach.

So, please, be aware of this!

I will update the files as soon as we are happy with the results that we now have with the old interface: only at this point I would expect meaningful results from the integration in genfit.

Moreover I will also prepare an example in the form of tutorial to show how to use extrapolate to closest in case of STT.

Coming to the questions from Sebastian:

- it is correct that  $x_{sc}$  in the SC system is zero, but also  $y_{sc}$  and  $z_{sc}$  are zero (see eq. 38 of our report and the whole section 5). What matters is that in the SC system the variations different from zero are:  $\delta y_{perp}$ ,  $\delta z_{perp}$  and  $\delta l_{perp}$  ( $l$  or  $s$  is the track length). In geane  $x$  is always along the momentum, but recently also Wittek has changed convention (see NIMA 566(2006)687): this is however only a convention without any consequence since only errors are treated. In the interface we will always maintain the old convention (along  $x$ ). Looking at the class `CbmTrackParH`, there is some redundancy as a few variables are useless: we plan to clean it up.

- the covariance matrix is a symmetric triangular 5x5 matrix, so it only has 15 independent components: the correspondance is again on our report, page 35. I send you in attachment 2 functions written by Alberto for the conversion.

- I agree on the const!

As we decided in Ferrara, we now are working to release as soon as possible the new interface to the Collaboration.

Best regards to all,  
Andrea

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### File Attachments

- 1) [FromMat25ToVec15.C](#), downloaded 612 times
  - 2) [FromVec15ToMat25.C](#), downloaded 515 times
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