Subject: Re: Revised CbmGeaneUtil, CbmGeanePro and CbmTrackParP.
Posted by Lia Lavezzi on Mon, 09 Jun 2008 16:35:47 GMT
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Hi Sebastian,
I' m checking if I see the same behaviour in the STT case, but I don' t. Here is an example:

1) after the first kalman point, before the next prediction:

	0	1	2	3	4
0	0.001582	9.935e-05	3.01e-06	-5.364e-07	-2.429e-05
1	9.935e-05	0.0001191	-7.835e-05	-1.265e-05	0.0004208
2	3.01e-06	-7.835e-05	0.002611	4.307e-07	-0.02196
3	-5.364e-07	-1.265e-05	4.307e-07	0.0002249	-8.773e-07
4	-2.429e-05	0.0004208	-0.02196	-8.773e-07	1.31

2) after the prediction

	0	1	2	3	4
0	0.001582	0.00011	2.891e-06	-0.0001012	-2.728e-05
1	0.00011	0.0001211	-8.652e-05	-0.0001285	0.0005712
2	2.891e-06	-8.652e-05	0.002611	7.891e-05	-0.02447
3	-0.0001012	-0.0001285	7.891e-05	0.0003601	-0.0004655
4	-2.728e-05	0.0005712	-0.02447	-0.0004655	1.355

so no change in sign... I attach the modified version of GeaneTrackRep.cxx I use to this message (I wrote "CHECK" near to my changes, so they' re well recognizable), I don' t know if this can help. The trackbase and geane are the same as the repository ones (actually they are slightly different but the different should affect only the STT case).

Concerning the covariance matrices: in the extrapolation they are calculated directly into GEANE and their transformation between the different reference systems is handled by the CbmGeaneUtil routines, which have been checked applying the routine and its inverse routine successively and looking to find in output the same track parameters given as input; in the kalman filter step the only way to check their correctness is to check if the calculations are performed correctly: I don' t have any other way to see it the covariance matrices are ok, you can have a look to the values (if they are too big or too small you should notice it) and obviously the diagonal elements must be positive.

I will check again the code and I will also ask to Alberto Rotondi if he has some suggestion...
If I have some (good, I hope) news I will let you know
Lia.

File Attachments

1) GeaneTrackRep.cxx, downloaded 532 times