Subject: Deterministic Annealing Filter and Kalman
Posted by StefanoSpataro on Wed, 30 Nov 2011 17:21:17 GMT
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Hi all,
I have tried to use the DAF inside genfit. In order to do this I had to update genfit to the 478 release (with the old 400 DAF crashes).

With DAF the planeId number should be given while in the previous code, inside the genfit adapters, it was set to 0. I have put a dummy value, using as plane id the position of the trackcandhit (this should be improved, but it is not my job).

The new code is inside the repository. In order to use the daf inside your reco macro you have to set in PndRecoKalmanTask:

recoKalman->SetDaf(kTRUE);

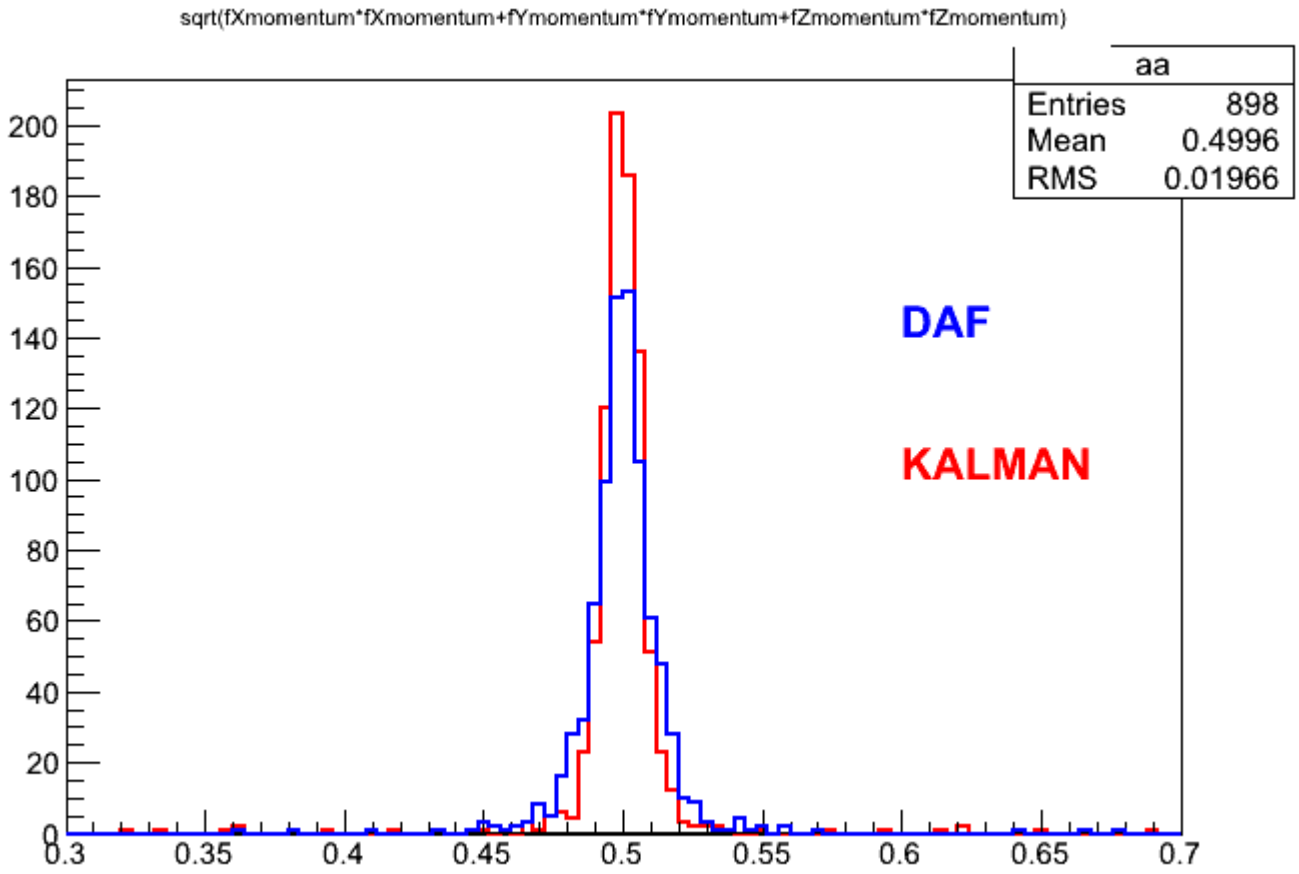
Nothing else. So everybody can use it.

I did a test, running 1000 muons at 0.5 GeV/c with STT. This is the momentum distribution after the normal kalman and after the Daf:

It seems that at present DAF is giving a slight worse resolution, while the efficiency is almost the same.

File Attachments

1) comp_dafkalman.gif, downloaded 1522 times


sqrt(fXmomentum*fXmomentum+fYmomentum*fYmomentum+fZmomentum*fZmomentum)
aa
Entries 898
Mean 0.4996
RMS 0.01966
DAF
KALMAN
200
180
160
140
120
100
80
60
40
20
0
0.3
0.35
0.4
0.45
0.5
0.55
0.6
0.65
0.7