Subject: Using RKTrackRep in the Kalman
Posted by StefanoSpataro on Tue, 23 Jul 2013 13:51:53 GMT
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Dear all,
I added the possibility to use different track representations in the Kalman Filter/Daf.
By default GeaneTrackRep is used (tracrep = 0).

If you modify your reco macro adding the following line:

recoKalman->SetTrackRep(1);

you can use RKTrackRep (tracrep = 1).

I have done quick studies simulating 1000 muons in the central tracker (20° < theta < 120°), mvd+stt+gem.

At 1 GeV/c, reconstructed momentum distribution (red GeaneTrackRep, blue RKTrackRep):

At 0.5 GeV/c, reconstructed momentum distribution (red GeaneTrackRep, blue RKTrackRep):

The results are similar, then the track representation seems to work. The results are better for GeaneTrackRep.

I did not check yet the forward tracking.

File Attachments
1) comp1.gif, downloaded 566 times
2) comp05.gif, downloaded 517 times

Subject: Re: Using RKTrackRep in the Kalman
Posted by StefanoSpataro on Tue, 23 Jul 2013 14:54:19 GMT
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I have checked also fwd tracker, with muons at 1, 2, 4 GeV/c.
red GeaneTrackRep, blue RKTrackRep:

1 GeV/c

2 GeV/c

4 GeV/c

In this case RKTrackRep seems to provide a bit better results than Geane.

File Attachments

1) compfwd1.gif, downloaded 484 times
2) compfwd2.gif, downloaded 502 times
3) compfwd4.gif, downloaded 487 times