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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 ( $20^\circ < \theta < 120^\circ$ ), 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):

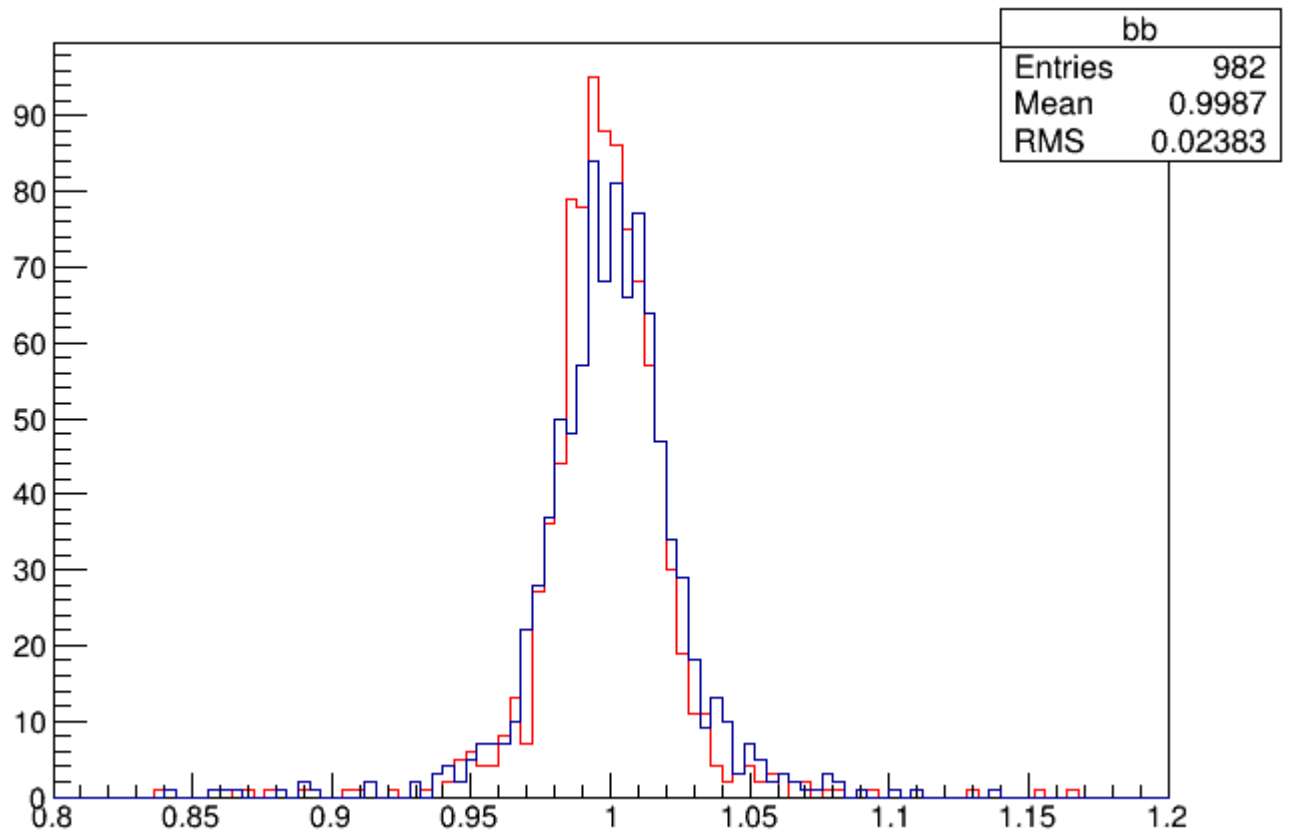
The results are similar, then the track representation seems to work. The results are better for GeaneTrackRep.

I did not check yet the forward tracking.

### File Attachments

1) [compl.gif](#), downloaded 1408 times

-1./(SttMvdGemGenTrack.fTrackParamFirst.fQp) {SttMvdGemGenTrack.fFlag>0}



2) [comp05.gif](#), downloaded 1255 times

-1./(SttMvdGemGenTrack.fTrackParamFirst.fQp) {SttMvdGemGenTrack.fFlag>0}

