
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):

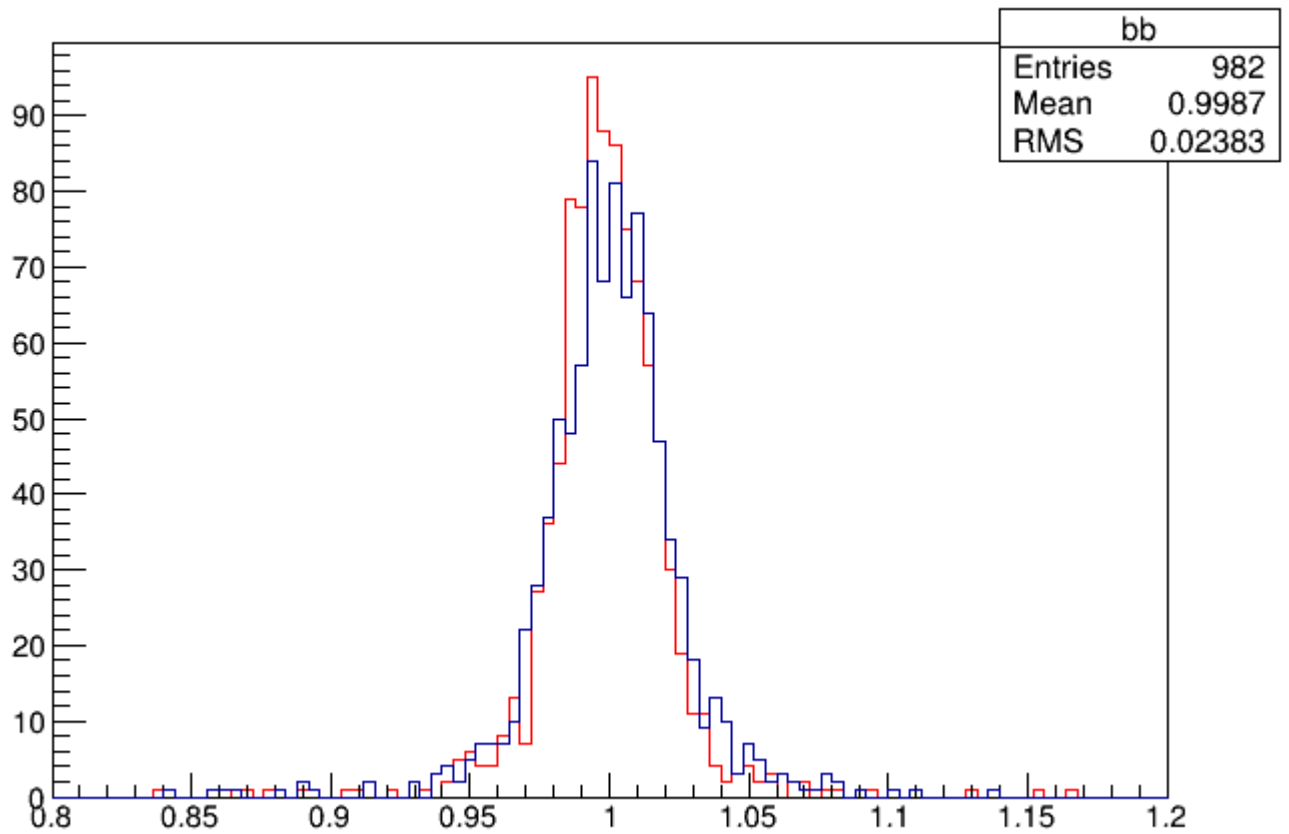
The results are similar, then the track representation seems to work. The results are better for GeaneTrackRep.

I did not check yet the forward tracking.

File Attachments

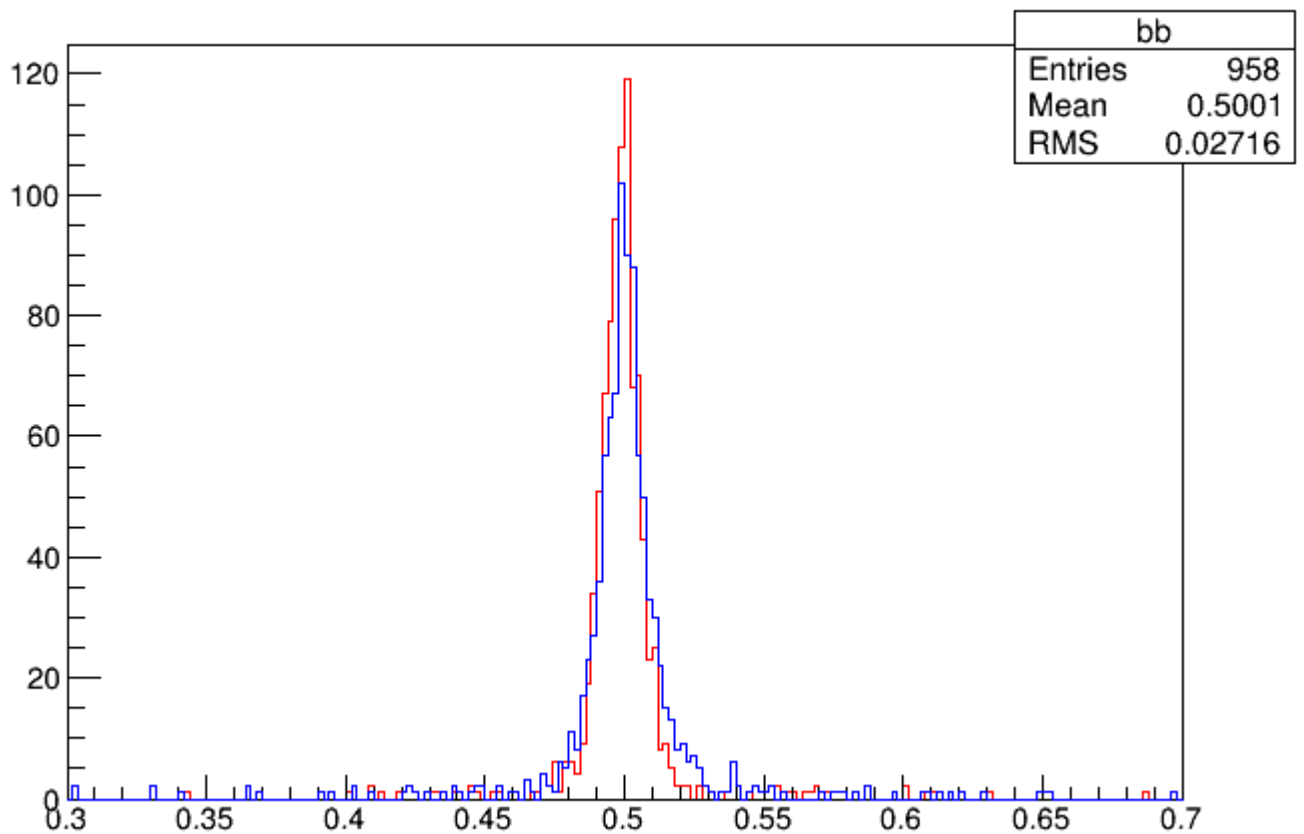
1) [compl.gif](#), downloaded 682 times

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



2) [comp05.gif](#), downloaded 630 times

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



Subject: Re: Using RKTrackRep in the Kalman
Posted by [Stefano Spataro](#) 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

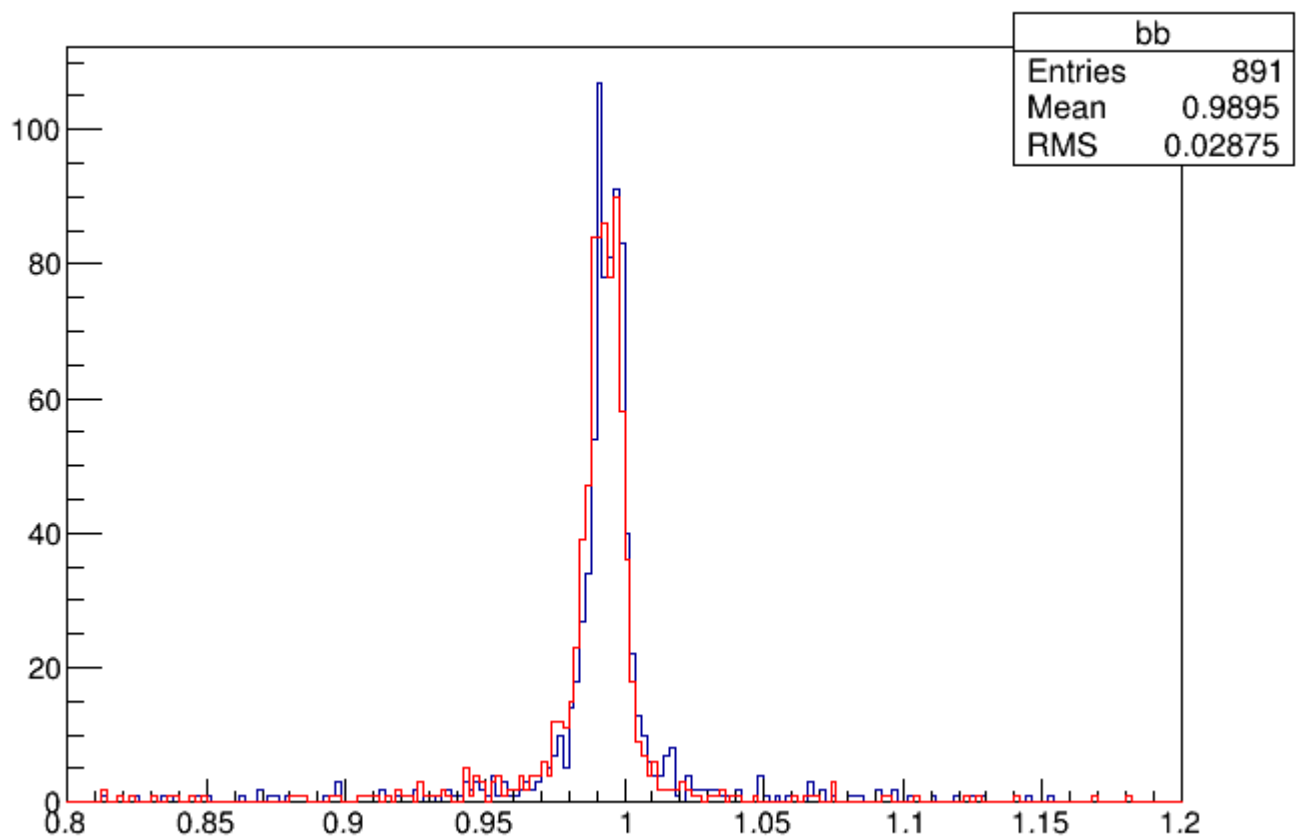
4 GeV/c

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

File Attachments

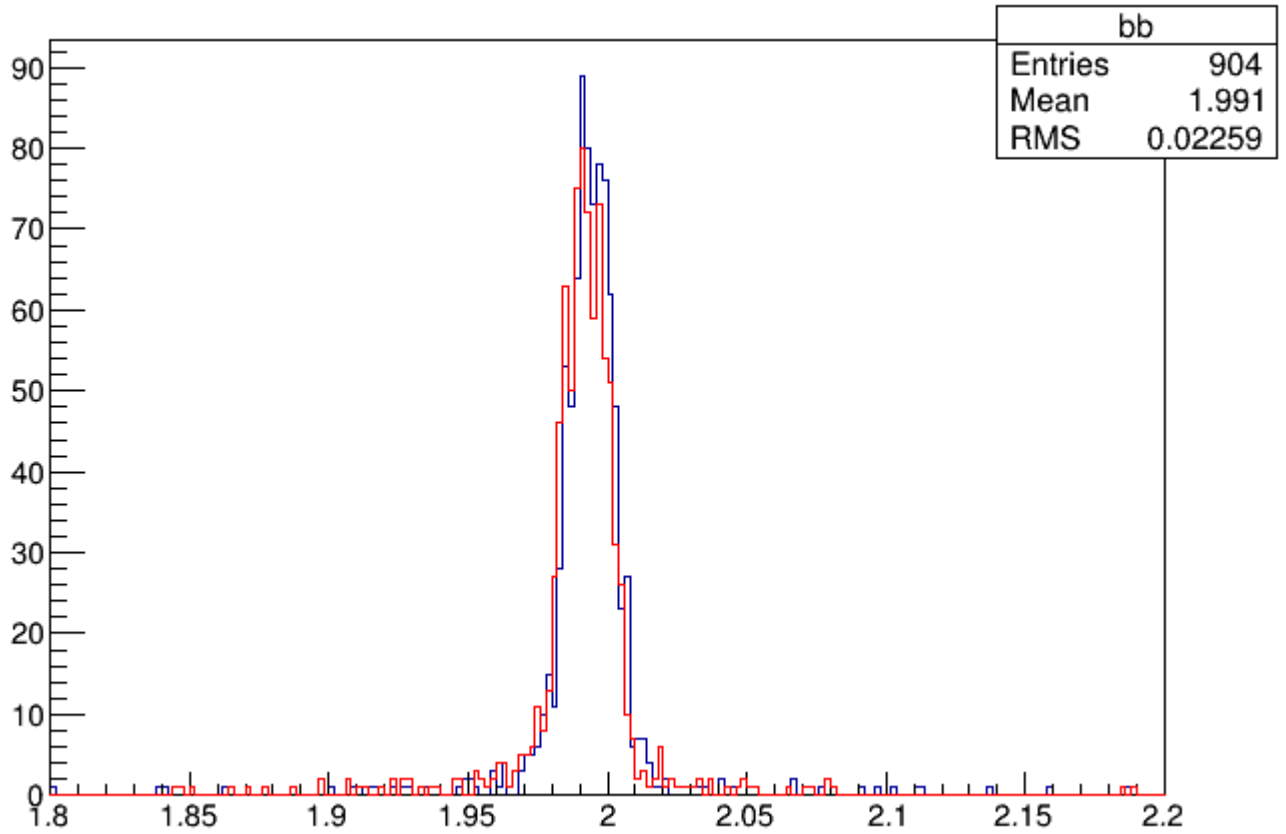
1) [compfwd1.gif](#), downloaded 591 times

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



2) [compfwd2.gif](#), downloaded 607 times

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



3) [compfwd4.gif](#), downloaded 608 times

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

