

---

Subject: Using RKTrackRep in the Kalman  
Posted by [Stefano Spataro](#) on Tue, 23 Jul 2013 13:51:53 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

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.

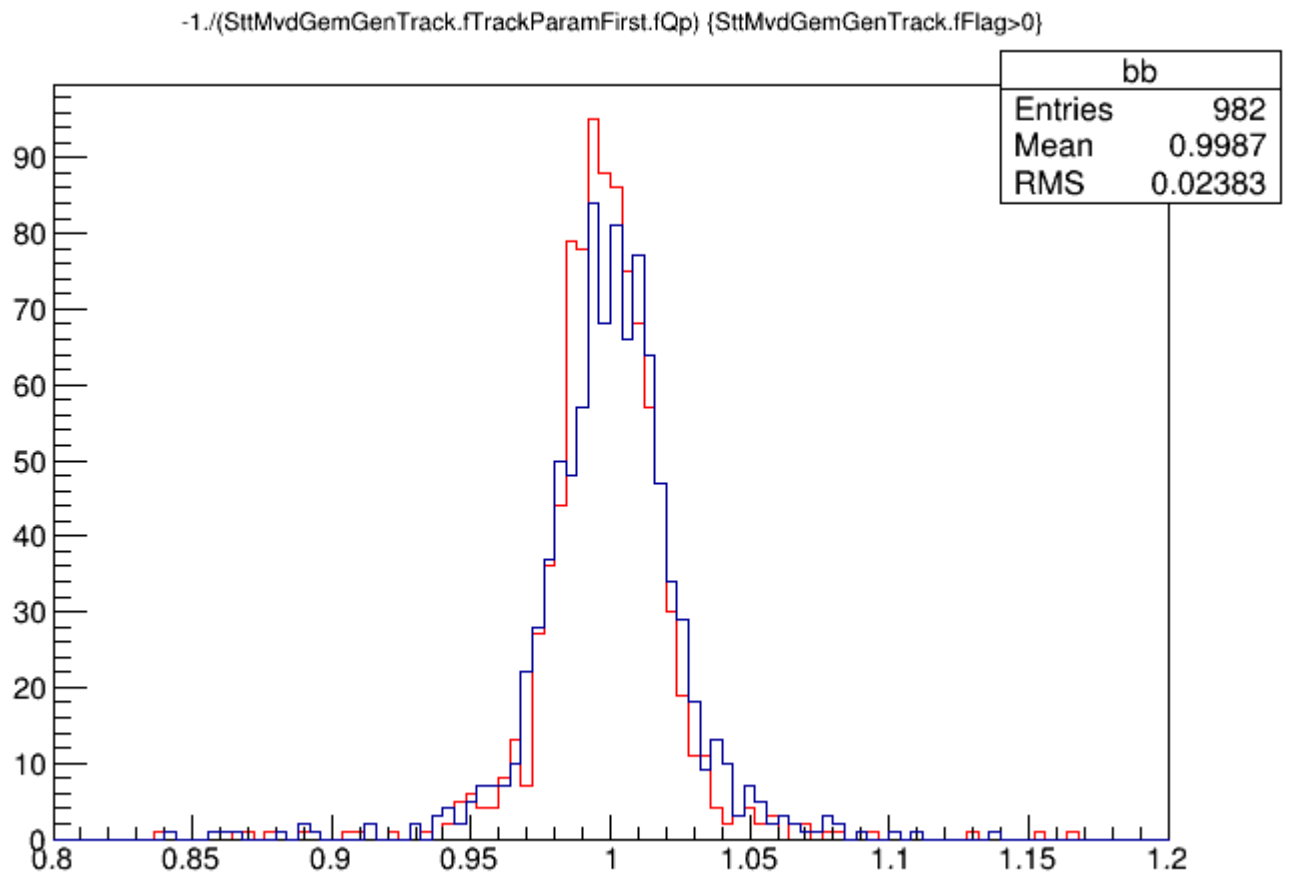
I did not check yet the forward tracking.

---

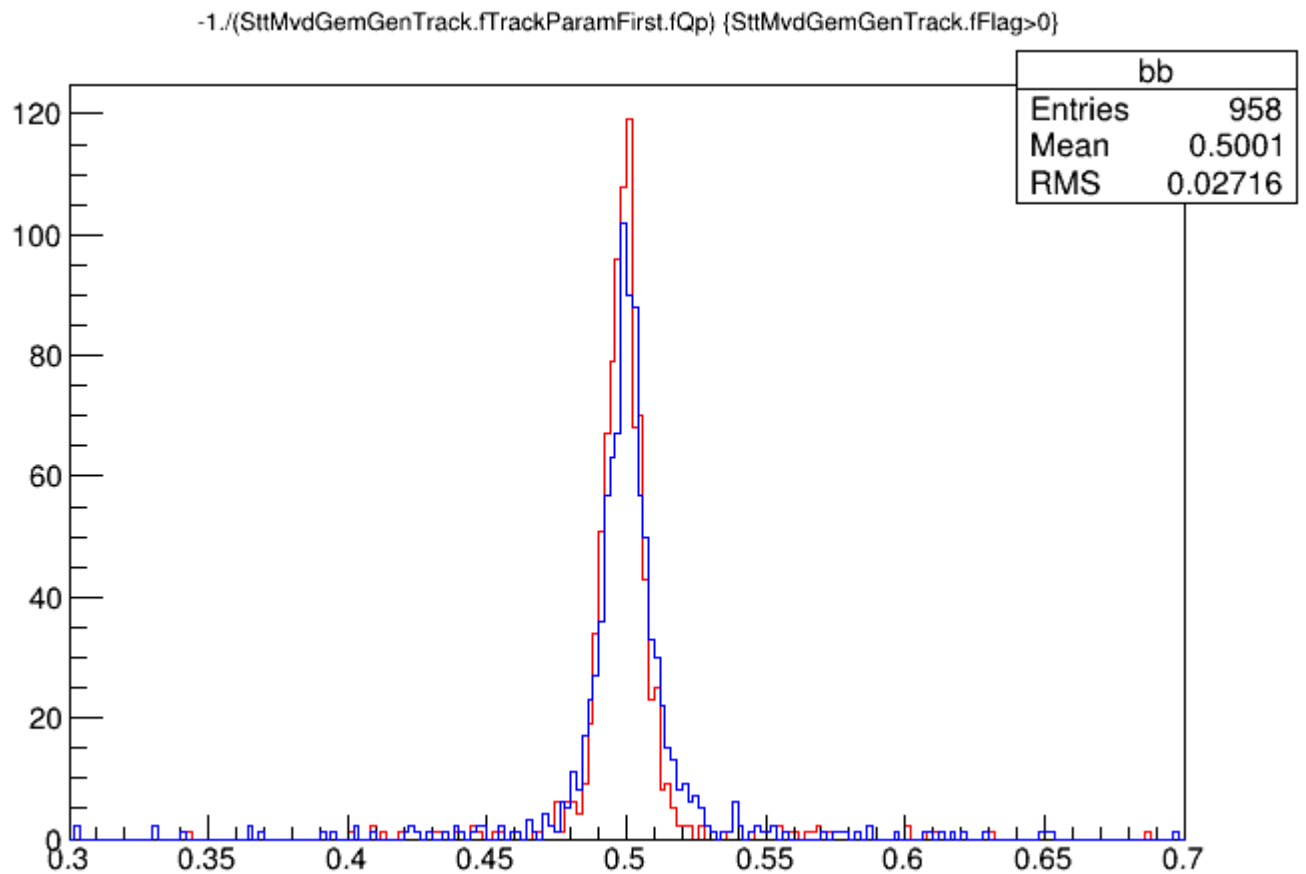
### File Attachments

1) [compl.gif](#), downloaded 924 times

---



2) [comp05.gif](#), downloaded 850 times



Subject: Re: Using RKTrackRep in the Kalman  
Posted by [Stefano Spataro](#) on Tue, 23 Jul 2013 14:54:19 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

I have checked also fwd tracker, with muons at 1, 2, 4 GeV/c.  
red GeaneTrackRep, blue RKTrackRep:

1 GeV/c

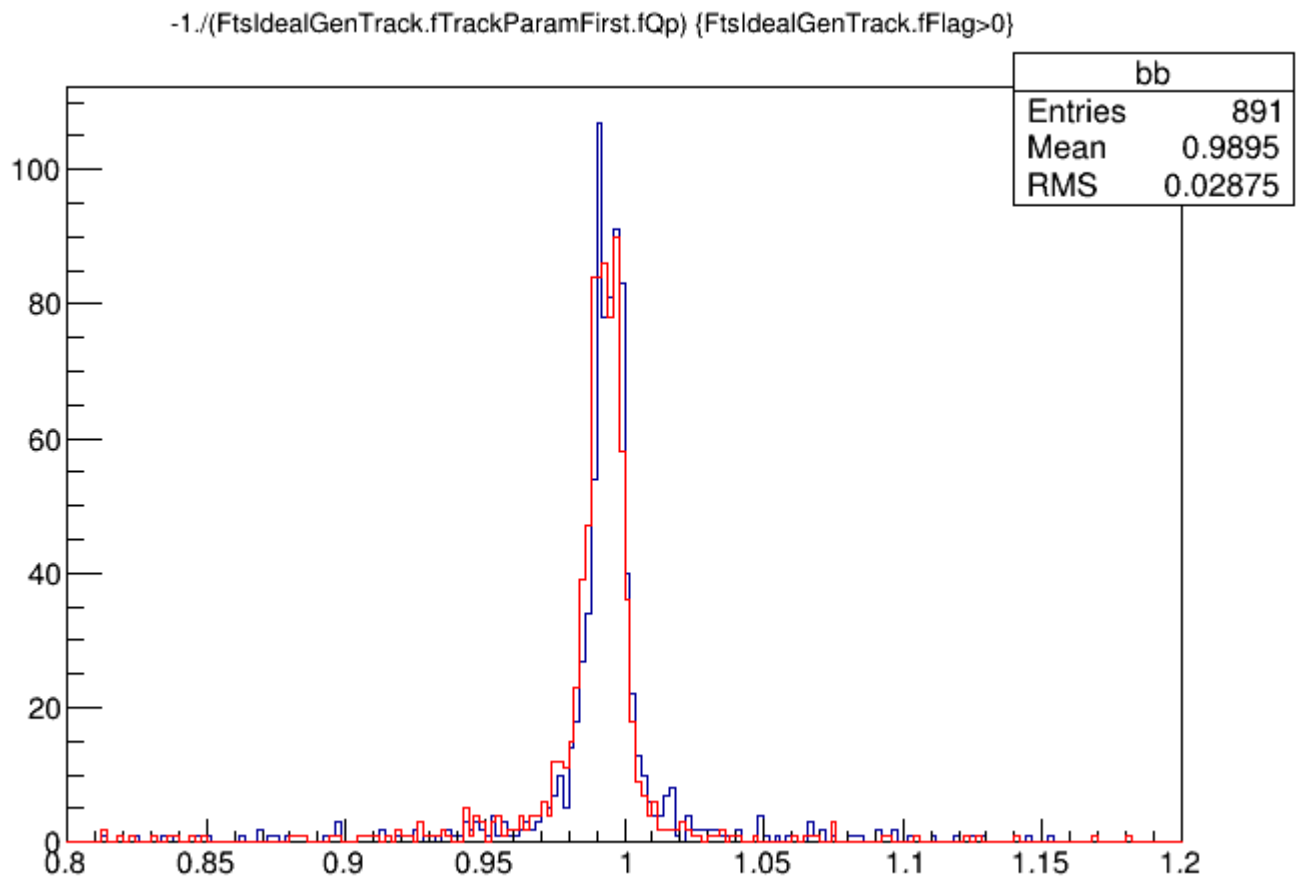
2 GeV/c

4 GeV/c

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

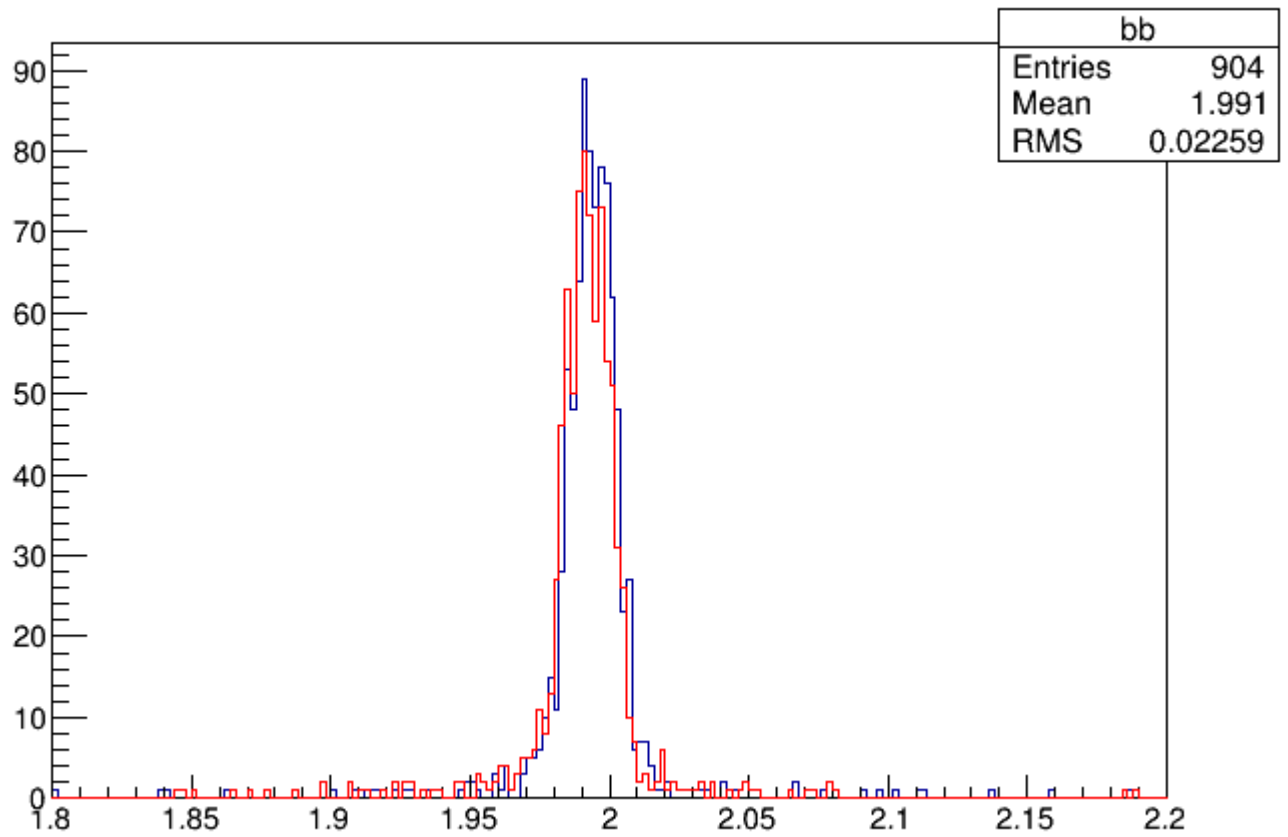
### File Attachments

1) [compfwd1.gif](#), downloaded 786 times



2) [compfwd2.gif](#), downloaded 811 times

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



3) [compfwd4.gif](#), downloaded 808 times

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

