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Subject: Re: Crash in PndTpcRiemannTrackingTask  
Posted by [Dima Melnychuk](#) on Thu, 14 Jul 2011 08:25:34 GMT  
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Hi,

I checked TPC performance for eta\_c reconstruction after latest update of PndTpcRiemannTrackingTask.

I used kaon hypothesis in tpc reconstruction macro

```
tpcSPR->SetPDG(321);  
tpcSPR->SetMCPid(false);
```

and eta\_c peak appeared back but efficiency is still low in comparison with STT (5.4-5.9% for TPC vs 20-29% for STT).

So with 2000 events multiplicity of charged tracks:

And maximum efficiency we can expect is 54%.

Mass distribution for phi and eta\_c (using 4C-fit) efficiency - 5.9%

Mass distribution for phi and eta\_c (using vertex fit) efficiency - 5.4%

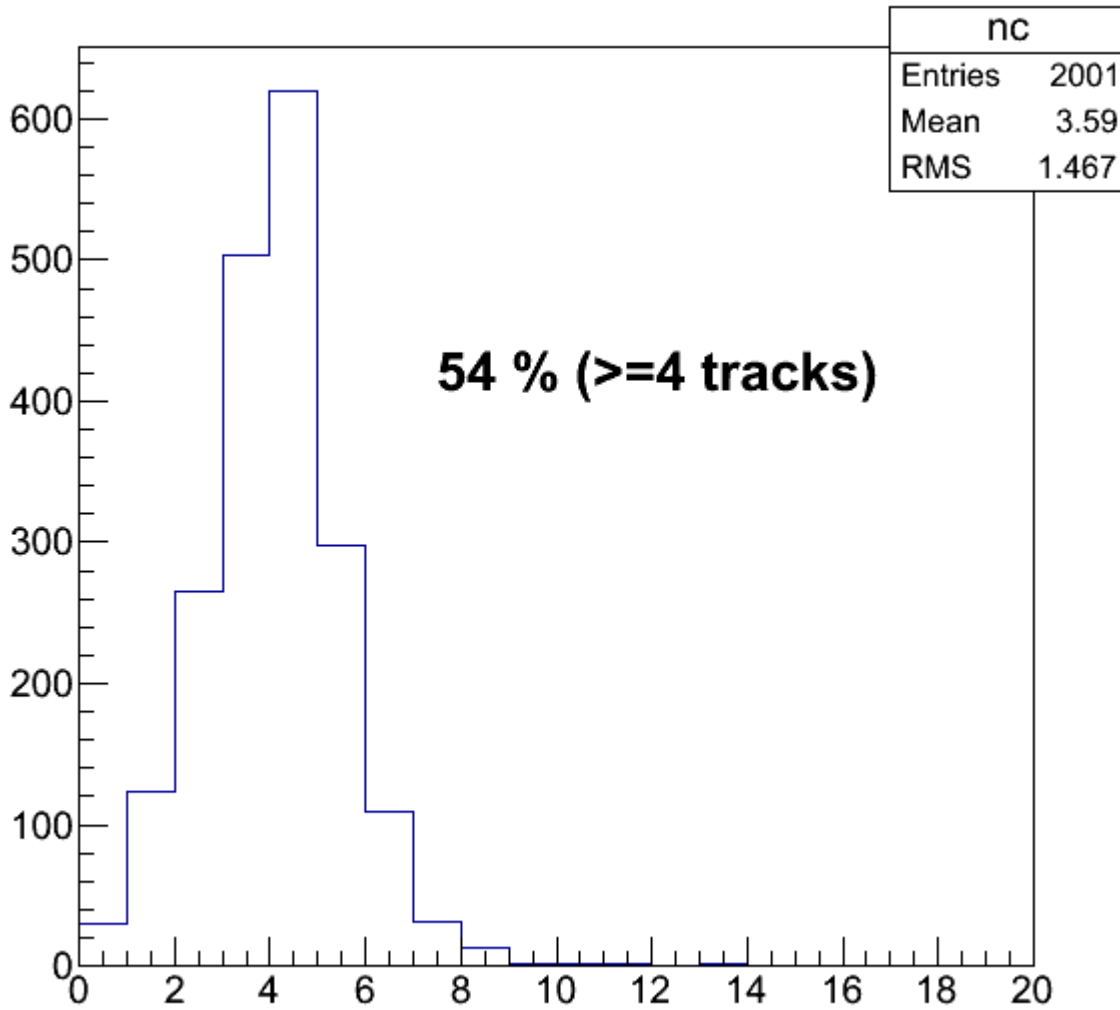
Efficiencies in principle depend on cuts on chi2 of the fit and can be increased, but the 4-times difference between TPC and STT is with the same cuts.

Dima

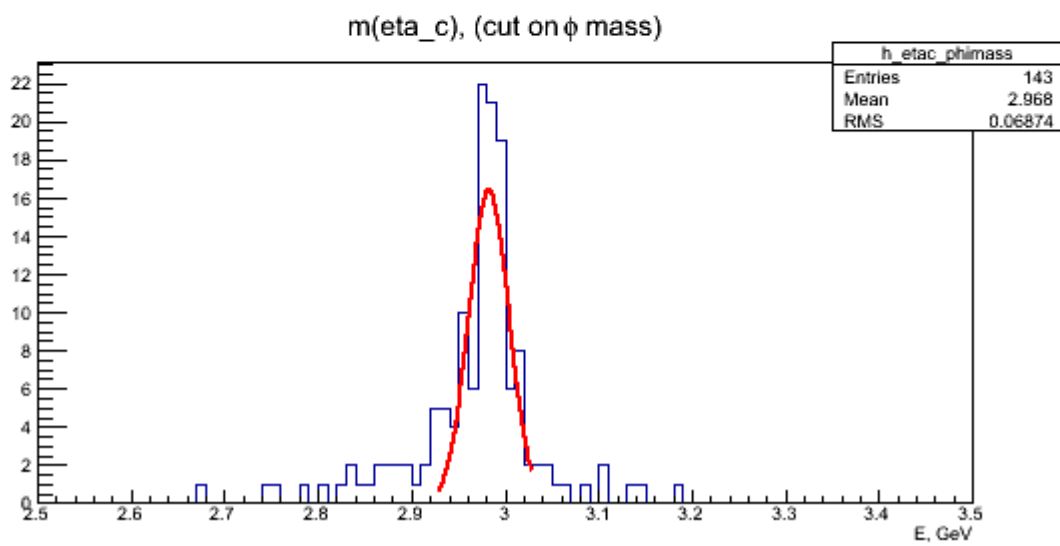
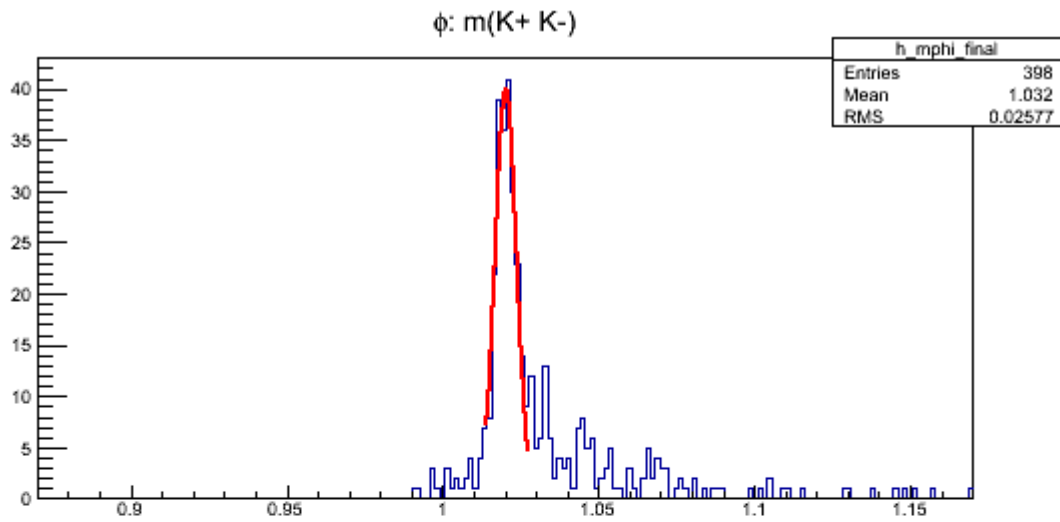
## File Attachments

1) [n\\_charged\\_tpc.png](#), downloaded 1146 times

# n charged



2) [m\\_etac\\_tpc.png](#), downloaded 1222 times



3) [m\\_eta\\_c\\_tpc\\_vtx.png](#), downloaded 1189 times

