
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 251 times
 - 2) [m_etac_tpc.png](#), downloaded 224 times
 - 3) [m_etac_tpc_vtx.png](#), downloaded 215 times
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