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Subject: Re: Update on eta\_c reconstruction with STT and TPC

Posted by [Dima Melnychuk](#) on Fri, 29 Jul 2011 13:03:27 GMT

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Hi,

I have several additional comments concerning eta\_c reconstruction efficiency.

1. First comment is related to worse reconstruction efficiency for STT.

I used the rev. 12894, which includes the latest commit from Gianluigi available in svn from the 27.07 23:15.

It didn't include latest update from Lia, which only affected PndSecondaryTrackFinder.cxx.

For data which I produced yesterday with the trunk the mass distribution for eta\_c and phi without any cuts look like:

whereas for the data on grid

So the left tail for eta\_c distribution increased significantly, but it's still possible that it's a statistical fluctuation.

Especially looking at the final plots for new data:

and grid data:

they are very similar. So I could expect that with higher statistics, efficiency still could increase.

2. Second comment is related to ideal pid for tpc Riemann. I checked eta\_c reconstruction with both pion and kaon hypothesis in riemann and results are very close (here the mass cuts are slightly tighter than for efficiency reported in previous post), i.e

Efficiency | sigma(eta\_c) | sigma(phi)

pion:

27.04% | 11.74 MeV | 3.61 MeV

kaon:

27.29% | 11.94 MeV | 3.55 MeV

So using working ideal pid wouldn't change the results much.

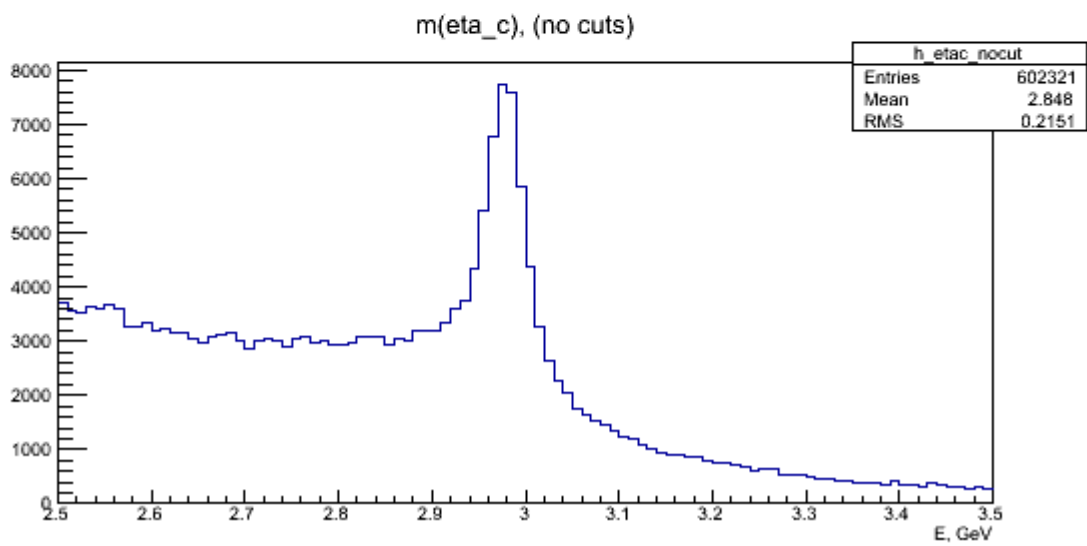
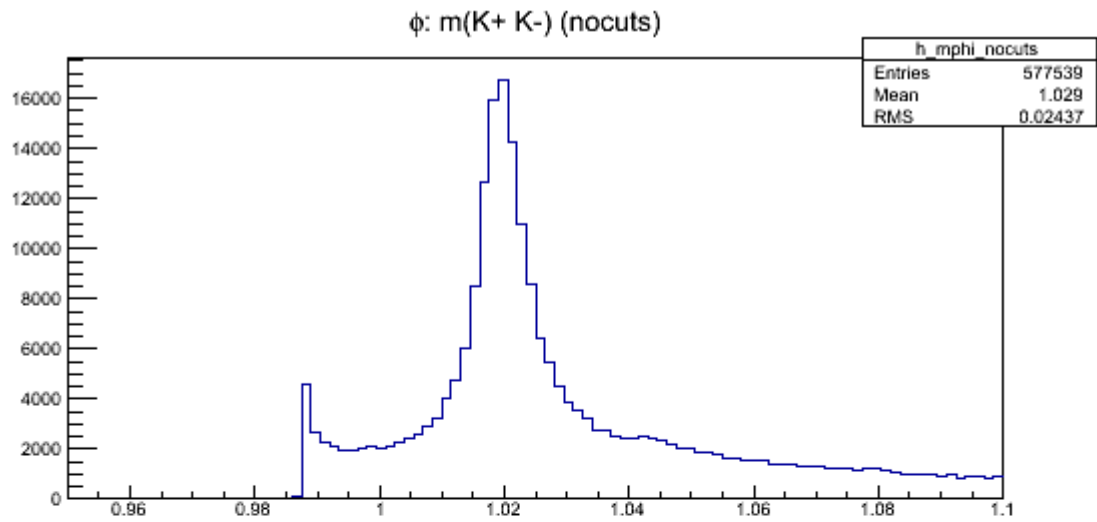
Dima

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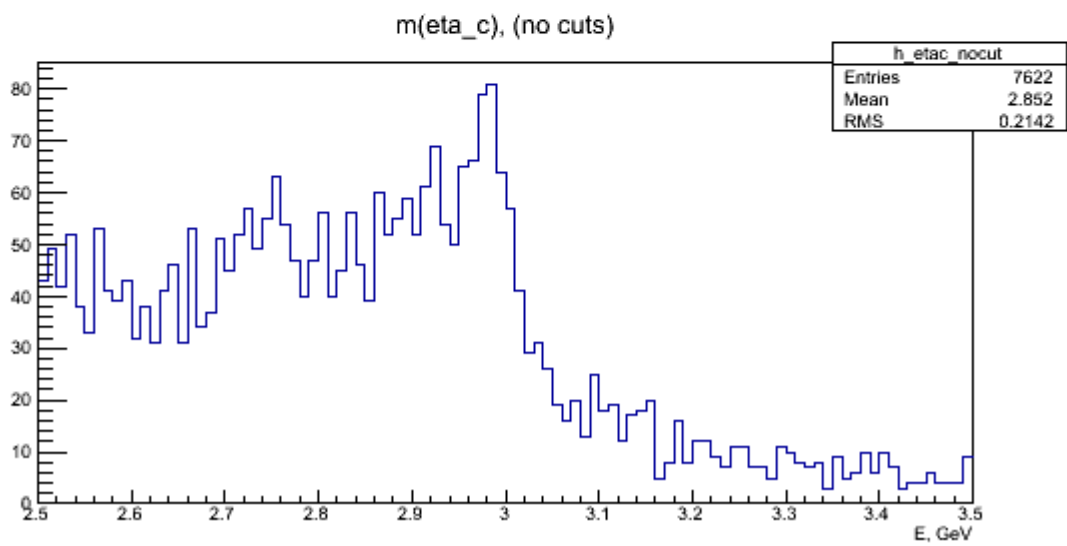
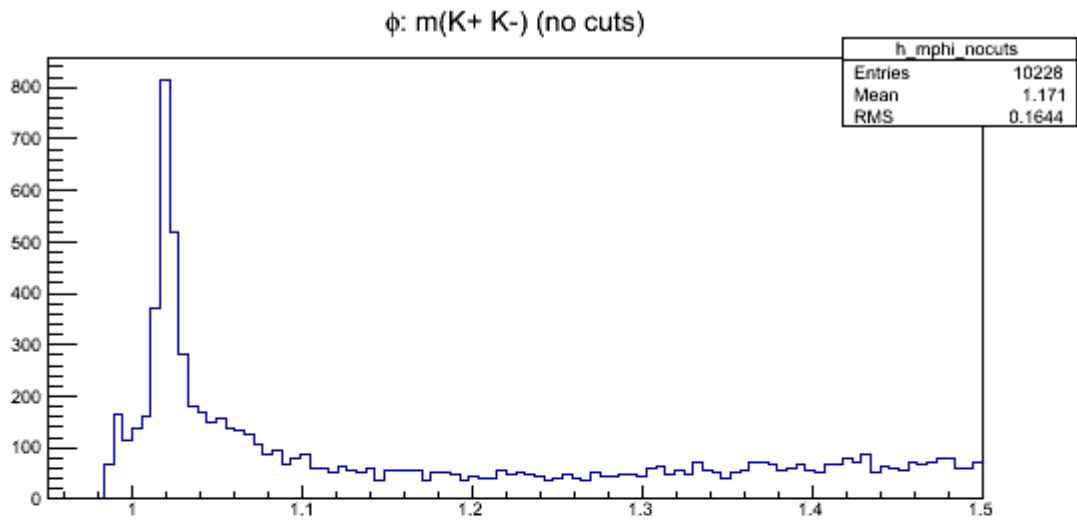
## File Attachments

1) [m\\_nocuts\\_stt.png](#), downloaded 407 times

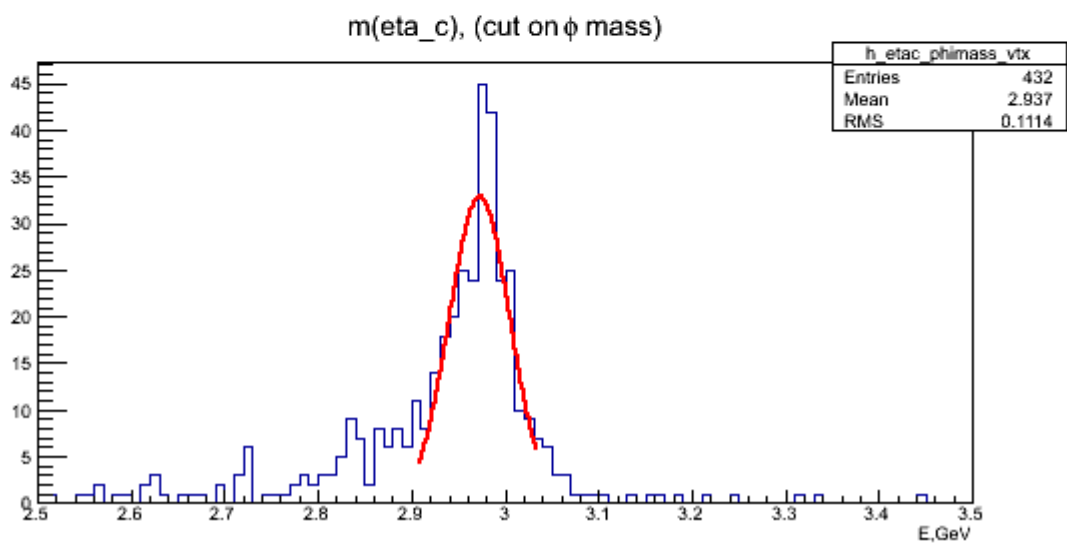
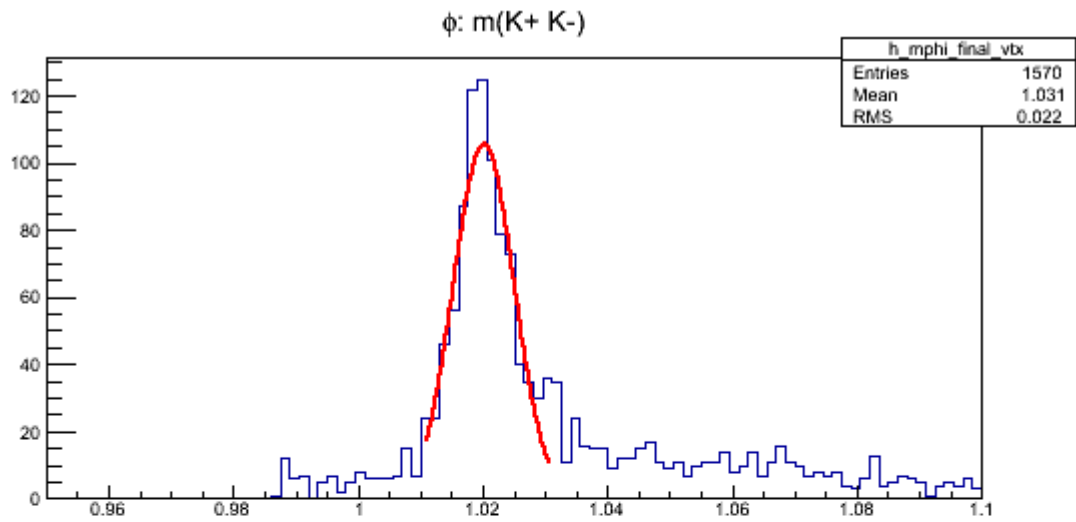
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2) [m\\_nocuts\\_stt\\_new.png](#), downloaded 506 times



3) [m\\_phicut\\_stt\\_new.png](#), downloaded 543 times



4) [m\\_phicut\\_stt.png](#), downloaded 539 times

