
Subject: Re: Update on eta_c reconstruction with STT and TPC

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

[View Forum Message](#) <> [Reply to Message](#)

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

File Attachments

1) [m_nocuts_stt.png](#), downloaded 226 times

2) [m_nocuts_stt_new.png](#), downloaded 213 times

3) [m_phicut_stt_new.png](#), downloaded 234 times

4) [m_phicut_stt.png](#), downloaded 229 times
