Subject: Re: Update on eta_c reconstruction with STT and TPC
Posted by Gianluigi Boca on Fri, 29 Jul 2011 12:33:49 GMT

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Hi Dima,
I was still working on the Cleanup code for Stt in the last days.
Maybe you run with some non-final version and that's the cause of this sudden 15.6%
efficiency.

So last night I put the final version (...yes, right   ) of the Stt PR+Cleanup code in svn. I hope
the efficiency for Stt returns to the previous values.

Also I updated all the analysis Macros (run_reco_stt_evt.C and
run_reco_stt_mix.C) for all the physics channels (eta_c,
llbar, npipi, psi3770) by adding the following line necessary
to activate the Cleanup code :

  SttMvdTracking->Cleanup();

Please notice that in the non-mixing Macros (run_reco_stt_evt.C)
this line is COMMENTED OUT for the time being, because I would like to see if possible, if
there are problems with the various analysis and no Cleanup.

If everything is fine, then activating the Cleanup should be beneficial even for the non-mixed
events (it rejectes spurious tracks) even though I would expect a bit of a lowering in the
reconstruction efficiency.

Lia has also updated the run_reco_stt_evt.C and run_reco_stt_mix.C adding the task of the
extrapolation to the Gem region.
She is also checking the last details today. By tonight let's say at 20:00 all the Macro should be
ready and can be used on the Grid. She will send aroung a message on the Forum when
dona.

Tschuess an alle

Gianluigi

Dima Melnychuk wrote on Fri, 29 July 2011 00:36Hi Stefano,

I also would like to clarify the question of data production on GRID.

But comming to TPC vs STT efficieny.
TPC efficiency = 28.9% (using vertex fit)
STT efficiency with GRID data =26.4% with all tracks and 23.7% with requirement of at least
one STT hit in track.

STT efficiency with latest trunk version (2000 events) = 15.6%
(with requirement of at least one STT hit).
But I have no idea if the work on STT code is finished?
So I suppose that STT signal data should also be reproduced but the question is if to
reproduce them together with TPC or later?

For TPC data reproduction in addition to tpc directory, genfit and RKTrackRep in GenfitTools/trackrep should be updated to rev 370 and updated tpc reco macros should be used.

And coming to the question of reconstruction of fully mixed events. I do not know how realistic is to expect to produce them by 5-7 August (the date when the GRID will be off), but without knowing when the code will be ready, there is still the question if the available DPM data should be used or they also needs to be reproduced. At least for TPC there were recent modifications related to clustering, which is the part of digitization, and I suppose TPC expert should define how important they are for DPM data which will be used for mixing.

Dima