Subject: Regarding Pid by Stof+Ftof
Posted by Shyam Kumar on Wed, 06 Aug 2014 06:49:21 GMT
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Hi,
I am simulating kaons for the improvement the cuts and plots by Stof+Ftof. I was seeing very few kaons are detected as Ftof is at 7 m and stof is at 3.8 m approx.. So I am seeing very few kaons (less) in (band).

Thank You
Shyam

Subject: Re: Regarding Pid by Stof+Ftof
Posted by Klaus Götzen on Thu, 04 Sep 2014 05:16:29 GMT
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Hi Shyam,

I think the number of kaons you observe forward strongly depends on the channel you are studying. Could you provide some more details about your studies, perhaps also some plots with momentum and angular distributions of your kaons?

Best,
Klaus

Subject: Re: Regarding Pid by Stof+Ftof
Posted by Shyam Kumar on Thu, 04 Sep 2014 06:11:28 GMT
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Hi Klaus,
Thank you for reply , I am using dpm elastic and inelastic collisons at momentum 15.0 GeV/c, I have used the class PndPidFtofInfo.cxx which was for Ftof but I have changed it (written in comment "changed for stof") for Ftof+Stof by changing cut (code attached). I am optimizing pid for values of FtofCut and FTS3LastPlane I used in code. I am feeling problem that I am seeing pion band and proton band but not seeing any kaon band and also in mass square plot why?, In this plot I have used FTS3LastPlane =467 cm and FtofCut=36 cm^2.

File Attachments
1) Pidstof+Ftof.pdf, downloaded 352 times
2) mass2proton.pdf, downloaded 330 times
3) mass2pion.pdf, downloaded 334 times

Subject: Re: Regarding Pid by Stof+Ftof
Posted by Klaus Götzen on Thu, 04 Sep 2014 06:42:24 GMT
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Hi Shyam,

yes, it is known that DPM doesn't produce a high level of kaons. You should better use some signal channels comprising more kaons (e.g. phi, D mesons, Lambda_c baryons, etc) at different energies and study the improvement in efficiency when adding your detector. Considering a variation of channels it important to check for different kinematic situations. Under

https://subversion.gsi.de/trac/fairroot/browser/pandaroot/trunk/macro/so ftrig/decfiles
https://subversion.gsi.de/trac/fairroot/browser/pandaroot/trunk/macro/so ftrig/decfiles/mode_codes_softtrigger.txt

you can find various EvtGen decay files we used for our trigger studies.

Best,
Klaus

Subject: Re: Regarding Pid by Stof+Ftof
Posted by Shyam Kumar on Thu, 04 Sep 2014 06:55:27 GMT
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Hi,
I will do the study by using the decay channel. Is it possible by using box generator (using kaon pdg code) by restricting the angle theta by consideing the angular acceptance of detector.

Thank you
Shyam

Subject: Re: Regarding Pid by Stof+Ftof
Posted by Klaus Götzen on Thu, 04 Sep 2014 08:18:33 GMT
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Hi,

of course box generator is an option to shoot kaons forward. However this does not give you information about the fraction of kaons which occupy the forward phase space (if this is what you wanted to investigate). If you want to check separability of pions/kaons/protons in Ftof, box generator is clearly the better choice.

Best,
Klaus

Subject: Re: Regarding Pid by Stof+Ftof
Posted by Shyam Kumar on Thu, 04 Sep 2014 10:19:09 GMT
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Thanks Klaus,
I will do it using both options box generator and decay channel.