Subject: [SOLVED] pp->K0s+X with V5.34
Posted by Jia-Chii Chen on Tue, 29 May 2012 13:45:20 GMT
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Dear Ingo,

I'm simulating a K0s cocktail for the correction of and comparison to the inclusive K0s in p+p at 3.5GeV. Until now I have been using 2 years old simulation based on V4.11, which look proper for all observables that have been studied.

For several reasons I wanted now to re-simulate my K0s cocktail but with the newer version 5.34 (this is the one, which is installed here in Munich). However, the first glimpse at the rapidity distribution dN/dy shows a shift of the gaussian towards beam rapidity. In version 4.11 it's symmetric with respect to mid-rapidty, as it should be. (Pictures can be downloaded.) Do you have an explanation for this?

For both versions similar macros have been used. The difference is just the way, how strange particles were included. For V4.11 I was using the missing_particle.dat file to include e.g. Sigma*. In V5.34 I'm using the command "makeDistributionManager()->Exec("strangeness:init")".

Thanks a lot for your help already!

With best regards,

Chii

File Attachments
1) K0S_dNdy_ExpPluto_v411.pdf, downloaded 592 times
2) K0S_dNdy_ExpPluto_v534.pdf, downloaded 618 times
3) Pluto_K0S_Cocktail_V1_Chii.cc, downloaded 647 times

Subject: Re: pp->K0s+X with V5.34
Posted by Ingo Fröhlich on Tue, 29 May 2012 14:52:55 GMT
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Dear Chii,

I downloaded your macro and have some questions and comments. There are several channels included, which seem to be selected via a case switch in your macro. Is the problem which you describe present in all channels? Furthermore, does the plot show all particles species, or only the reconstructed K0S?

I have found one typo already, "Sigma1385" must be "Sigma13850".

Lambda1520 and K0*896 are not yet part of the strangeness plugin. You can add similar lines like:

makeStaticData()->AddParticle(71,"Sigma1385+", 1.3828);
makeStaticData()->AddAlias("Sigma1385+","Sigma(1385)+");

makeStaticData()->SetParticleTotalWidth("Sigma1385+",0.0358);
makeStaticData()->SetParticleBaryon("Sigma1385+",1);
makeStaticData()->SetParticleLMass("Sigma1385+",1.2);
makeStaticData()->AddDecay("Sigma(1385)+ --> Lambda + pi+", "Sigma1385+", "Lambda,pi+", .8815);
makeStaticData()->AddDecay("Sigma(1385)+ --> Sigma+ + pi0", "Sigma1385+", "Sigma+, pi0", .05925);
makeStaticData()->AddDecay("Sigma(1385)+ --> Sigma0 + pi+", "Sigma1385+", "Sigma0, pi+", .05925);
into your macro after the call of the strangeness plugin.

Later we can add it into the Pluto code. This would be nice, to be compatible

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Subject: Re: pp->K0s+X with V5.34
Posted by Jia-Chii Chen on Wed, 30 May 2012 14:36:50 GMT
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Hi Ingo,

I'm sorry, there is nothing wrong with V5.34.
I found the mistake in the binning in my post-Pluto-analysis.

By the way, right now I don't need K*896, Sigma1385 or Lambda1520 for the K0s cocktail. But it's still good to know, that they are not automatically included and how to include them.

Thank you, however, for the fast response and sorry again.

Best regards,

Chii
