Subject: Lambda-Lambdabar model in EvtGen
Posted by donghee on Tue, 01 Apr 2014 23:09:45 GMT
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Hi,

To do more realistic MC simulation for lambda lambdabar production, I have a look the EvtLambdaLambdaBar.cpp.
Below 2.5 GeV the parameterization is not valid any more. I am wondering that this private model can be used with P_beam > 3GeV?

In DPM MC, anti-lambda would be boosted into the forward direction, that is reported by FTOP group report in last collaboration meeting.
I am wondering whether an effective way to have such effect within EvtGen and can control in generator level specially with EvtGen framework or not?

There are also three different models in EvtGen/Private with "", "HE" and "Pol", I guess some polarization effect can be controlled with some option.
Where can I find the instruction or reference for these Models.
Could you make some comment on that?

Best wishes,
Donghee

Subject: Re: Lambda-Lambdabar model in EvtGen
Posted by StefanoSpataro on Wed, 02 Apr 2014 06:57:48 GMT
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What does it mean that the EvtLambdaLambdaBar is not valid anymore below 2.5 GeV/c?

Subject: Re: Lambda-Lambdabar model in EvtGen
Posted by donghee on Wed, 02 Apr 2014 08:34:25 GMT
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Hi Stefano,

I misunderstood and misread the EvtLambdaLambdaBar code.
Above 2.5 GeV and below 2.5 GeV has only different parameterization, all pbar beam momentum ranges are correctly handled in the code.
The momentums in lambdabar and lambda simulation data are asymmetrically distributed as I expect.

However, I assume that EvtLambdaLambdaBarPol is the most advanced version for l lbar production. Is it correct?

Best regards,
Donghee

Subject: Re: Lambda-Lambdabar model in EvtGen
Posted by StefanoSpataro on Wed, 02 Apr 2014 09:00:35 GMT
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EvtLambdaLambdaBarPol works only for low momenta (< 2.5 GeV/c). It is setting also the spin density, which is not set in the EvtLambdaLambdaBar model.