Subject: Re: Problem with Xi(1820) in EvtGen
Posted by Jennifer Pütz   on Mon, 02 Nov 2015 08:52:11 GMT

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Hi Stefano,

I tried out what happens, if I use the mass of 5.5 without the suggested patch. Going to higher pbarpsystem masses seems to fix the problem (see plot below).

This is similiar to the observations of the EvtGen guys.
If I understood them correct, the code of src/EvtGenBase/EvtMassAmp.cpp::amplitude() checks first, if the pbarpSystem mass is bigger than the sum of the mass of the daughters. In my case the masses of Xi(1820)- and Xi+ are 1.823 + 1.322 = 3.145 which is much higher than the mass of the pbarpSystem. This seems to cause - together with L!=0 - that the mass distribution is flat.

Best,

Jenny

File Attachments
1) XiMinus1820_Spin_3half_higher_pbarpSys_mass.png, downloaded 1095 times