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Subject: Lambda Lambdabar simulations

Posted by [Karin Schönning](#) on Tue, 15 Apr 2014 10:10:22 GMT

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Yesterday's meeting (which I regret I could not follow to the end) triggered some discussion on the Lambda Lambdabar channel and in particular the acceptance in the forward direction. Donghee has suggested it may be improved if the requirement of all four final state particles being reconstructed in the final state. This is probably true but I don't think this is the reason for the discrepancy with the physics book results (or the thesis of Sohie Grape where the details are given). Sophie required all final state particles (but no particle ID), vertex fit of both Lambda and Lambdabar, mass cuts of the same and also a tree fit for  $p\bar{p} \rightarrow \text{Lambdabar Lambda}$ . On the other hand, pandaroot was not used for these results but only the old, BABAR based framework. It is of course much less realistic but I would be surprised if it causes something as significant as the forward acceptance. I am also looking into the Lambdabar Lambda channel now and will check if I reproduce Donghee's findings.

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