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Subject: Re: Efficiency reduction of antiprotons above 20 degrees

Posted by [Karin Schönning](#) on Tue, 02 Dec 2014 12:25:04 GMT

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Hi again,

I ran the box generator at 1 GeV and 2 GeV, from 0 to 0 degrees in the lab angle, and at 2 GeV I first put the generator in the interaction point and then 20 cm away (in z) from the IP. One can not see any clear differences in structures, but there is a significant difference in the efficiency of protons with respect to antiprotons:

1 GeV, at IP: protons 89%, antiprotons 80%

2 GeV, at IP: protons 91%, antiprotons 82%

2 GeV, at (x,y,z) = (0,0,20): protons 69%, antiprotons 64%

In the attachment you can see the distributions theta vs p. Hopefully the file names are self-explanatory.

It is difficult to draw any conclusions from this except that there is indeed a difference between the proton and the antiproton efficiency. Here, it however looks like it is an overall effect.

I will shortly post some more plots from Lambda Lambdabar simulations because they tell a somewhat different story.

Cheers,  
/Karin

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### File Attachments

- 1) [th\\_p\\_boxp\\_1.pdf](#), downloaded 385 times
  - 2) [th\\_p\\_boxp\\_2.pdf](#), downloaded 394 times
  - 3) [th\\_p\\_boxp\\_2\\_20cm.pdf](#), downloaded 374 times
  - 4) [th\\_p\\_boxpbar\\_1.pdf](#), downloaded 394 times
  - 5) [th\\_p\\_boxpbar\\_2.pdf](#), downloaded 391 times
  - 6) [th\\_p\\_boxpbar\\_2\\_20cm.pdf](#), downloaded 418 times
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