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Subject: Re: Evtgen - prob>probmax

Posted by [MartinJGaluska](#) on Thu, 07 Jun 2012 12:24:36 GMT

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I have simulated 10 000 events each of  $J/\psi(2S) \rightarrow J/\psi \pi^+ \pi^-$  with PndEvtGenDirect and here are the counts of the "prob > probmax" warnings I get:

mass of  $\psi(2S)$  & VVPiPi ProbMax & # of "prob > probmax" messages

3.872 GeV & new code & 0

3.872 GeV & old code & 6111

3.68596 GeV & new code & 0

3.68596 GeV & old code & 0

(Sorry, I don't know how to properly format this.)

To sum up:

With the old code (hard-coded value of 0.08 for ProbMax in VVPiPi) I get no warnings for the  $\psi(2S)$  having its regular mass of 3.68596 GeV. I also do not get any warnings with the code that I have written.

When I change the  $\psi(2S)$  mass to 3.872 GeV, I get warnings in 6111 out of 10 000 events with the old code. All warnings disappear with the new code.

As an aside: I also tried to just hard-code a higher value for ProbMax (I chose 0.8) and when I ran the simulations, all warnings disappeared as well. However, I am not sure of the effect this value might have on the output of EvtGen. I am still waiting for my email to be answered by the Warwick group.