Subject: D+ and D- vertex resolution from Psi analysis
Posted by donghee on Mon, 18 Jul 2011 15:12:40 GMT
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Dear all,

I have tried the test production with STT mode to see the quality of D+ and D- reconstruction. Total 0.5 M events was generated and D+ and D- was well reconstructed with combined STT.

Vertex distribtuions and mass distributions show the displacement and smearings can be correctly handled after reconstruction and using vertex fit, it seems that the resolution can be identified in the level of 0.15cm for x,y position, for z-position the resolution should be found roughly within ~0.38 cm.

But unfortunately, the vertex fit doesn't show good results for further reconstruction of psi3770.

So now I want to see the rate of correctly reconstructed psi with matching MC true information. In that case, 0.1 M event is too small to check the resolution of psi and each decay products. (an example is shown in the plot of Dmeson_mass_distribution at 3rd coloum)

I would like to ask you some amount of data samples for Psi3770(-> D+D-) analysis at gridka.

Currently 0.1 M events are given, but
at least factor 2 times more data (~0.2M) samples are required to test of it.
Is it possible to increase data sample during Psi3770 production?

Best wishes,
Donghee

File Attachments

1) Dmeson_mass_distribution.eps, downloaded 430 times
2) Dmeson_vertex_distribution.eps, downloaded 481 times
3) Dmeson_vertex_resolution.eps, downloaded 435 times