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Subject: No back propagation to IP for V\_0 reconstruction

Posted by [donghee](#) on Tue, 02 Dec 2014 14:29:32 GMT

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Hello,

I am looking for K\_s reconstruction with two different cases, when back propagation to IP is switched off and on case.

As a first attempt, a K\_s sample in the pbarp -> D<sup>0</sup>D<sup>0</sup>bar -> K\_s pi<sup>+</sup> pi<sup>-</sup> + X reaction are considered at c.m.s = 3.8 GeV.

In reco macro, one can control IP back propagation by

Quote:

```
recoKalman->SetTrackInBranchName("SttMvdGemTrack");
```

```
recoKalman->SetPropagateToIP(kFALSE);
```

```
recoKalmanFwd->SetTrackInBranchName("FtsIdealTrack");
```

```
recoKalmanFwd->SetPropagateToIP(kFALSE);
```

After track reconstruction, K\_s mass distributions are compared, no PID has been applied and same statistics are simulated.

MC truth matched mass distributions are plotted to see the size of efficiency.

Red histo is for the propagation turns on, the efficiency is found to be 0.406192

Blue histo is for the propagation turns off, the efficiency is 0.388105

"No back propagation" in track reconstruction doesn't help too much to repair V\_0 track.

For lambda case one suggest some improvement of lambda reconstruction, but I cannot see any significant advantage for K\_s case.

Best wishes,

Donghee

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## File Attachments

1) [test\\_mass\\_d04.jpg](#), downloaded 1326 times

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