
Subject: Problem with PndKinVtxFitter and Ks decays
Posted by [2dd180b0](#) on Wed, 28 Nov 2012 12:01:10 GMT
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Dear all,

I've come across a problem while trying to reconstruct the following decay:

$D^0 \rightarrow K^s \pi^+ \pi^-$, $K^s \rightarrow \pi^+ \pi^-$

The procedure I use is to first use PndKinVtxFitter to fit the $\pi^+ \pi^-$ from the K^s decay to a common vertex, and then use PndKinVtxFitter to combine the fitted K^s with another $\pi^+ \pi^-$ pair, to reconstruct the D^0 . The problem is that the fit to the $D^0 \rightarrow K^s \pi^+ \pi^-$ always returns nan for the χ^2 .

The fitting code I use is exactly analogous to that used by Marius to reconstruct $\psi(3770) \rightarrow D^+ D^-$, $D^{*-} \rightarrow K^{*-} \pi^+ \pi^-$, and we think that the problem is due to PndKinVtxFitter not being able to properly handle the neutral K^s candidate.

I've attached the analysis code and EvtGen decay file that I used for this analysis.

Best,
Sean

File Attachments

- 1) [psi3770.dec](#), downloaded 332 times
 - 2) [run_ana_dobbs.C](#), downloaded 341 times
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