
Subject: PndKinVtxFitter

Posted by [Alexandr Zinchenko](#) on Tue, 12 Aug 2014 06:48:11 GMT

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Hello.

I was trying to apply a vertex constrained fit to a charmonium candidate (made of J/psi pi+ pi-)
The relevant analysis macro lines are as follows (based on tutorials/rho macros)

```
// *** combinatorics for J/psi -> mu+ mu-
jpsi.Combine(muplus, muminus);

// *** combinatorics for psi(2S) -> J/psi pi+ pi-
psi2s.Combine(jpsi, piplus, piminus);

// ***
// *** do VERTEX FIT (psi(2s))
// ***

for (j = psi2s.GetLength()-1; j >= 0; --j) {
    PndKinVtxFitter vtxfitter(psi2s[j]); // instantiate a vertex fitter
    vtxfitter.SetVerbose();
    vtxfitter.Fit();
}
```

The printout from PndKinVtxFitter code (activated by the verbosity flag) is:

```
Initial vertex Position is -0.00141313 -0.0154373 -0.0183913
iteration Number  0
vertex Position is -nan -nan -nan
chi2 in iteration -nan
iteration Number  1
vertex Position is -nan -nan -nan
...
```

Am I doing something wrong or the fitter does not work for such particle combination (1 neutral composite and 2 charged)?