
Subject: Re: Tracking uncertainties

Posted by [Stefano Spataro](#) on Thu, 11 Jul 2013 15:28:15 GMT

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Hi Ralf,

few technical comments from my side.

First, you choose not the perfect channel, since you produce electrons which undergo to bremsstrahlung, and their tails are not gaussian. I would suggest to analyse the channel with $J/\psi \rightarrow \mu^+ \mu^-$, to avoid such problems.

Second, as coordinates and momentum of the first params, I would suggest to do something different: you could take the first hit, from the hit you go to the point, and from the point you retrieve the monte Carlo position and momentum. You can take a look into `macro/pid/check_trackcand.C` to see what I did some time ago to explore the coordinates of all the hits, but you need to take only the first hit. In this way you avoid the geometric systematics.

Third, I would suggest to select only candidates with fitted track parameters (`GetFitStatus() > 0`), and to be sure that they are coming from the same detector, i.e. the first hit should be on the `mvd` pixel. If not, your resolution plots could be the sum of different detectors with different errors, and a bit misleading. I would separate also barrel tracks from forward tracks.

Hope it helps somehow. I did not check your code or plots yet.
