
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.
