Subject: Re: About Reconstruction
Posted by StefanoSpataro on Wed, 17 Jul 2013 15:36:47 GMT

Hi,
about track length from the interaction point to the EMC, you could take a look into the method I wrote for the tof in PndPidCorrelator::GetTofInfo. You can see there that you have a tofLength which is the sum of the two extrapolated parts, from ip to last point of the track, from last point of the track to tof. Geane has a function which calculates the path length, then it is very easy. If you don0t want to use geane, from the helix, in theory you could do the following: from the pt you can calculate the circle radius, and you have to add quadratically the "z" component. In this sense you have a lath length valid ONLY where the field is constant, i.e. it will not work in the endcap regions.

In theory the radius depends on the momentun and not on the particle type, then I believe one parametrization is enough. The only different thing is the energy loss for different particle, but I believe it will not change so much the path length.