Subject: Re: Charged Hits in Neutral List
Posted by Shyam Kumar on Wed, 10 Sep 2014 15:58:03 GMT
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Hi Lu,

I am also doing the same thing for the cut parameter optimization for Ftof, It will be useful in every case whichever algorithm I use. I have read in detail about it. I can give some idea what i understand stefano can tell whether it is correct.

Actually when a charged particle passes through medium and detector it deviates its actual trajectory (multiple scattering) so only from the actual hit it is very difficult to get the actual path. so kalman filter is used for this. It has three steps extrapolation, filtering, and smoothing. In the extrapolation we predict the theortical value and one is the measured hit on detector then in filtering we do the weighted mean of this to get kalman fitted value and then smoothing is used to get the true point.

So In my case Tof quality (as TofCut in all.par file) is the distance square of the measured position (actual hit) and extrapolated position(theortical predicted value) if it will be small then we will get the better result.

The all parameter is in all.par file
https://subversion.gsi.de/trac/fairroot/browser/pandaroot/release/dec13/ macro/params/all.par (412-428). EmC quality should be Emc12Cut in all.par in line 418.

Thank you
Shyam