Subject: Re: TPC dE/dx
Posted by Felix Boehmer on Wed, 09 Mar 2011 12:53:54 GMT
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Hi Stefano,

Quote:I know, this was just the first test, but it seems somehow to work and it is very fast. Using track extrapolation would improve a bit the resolution (even if I would not aspect huge improvements), but it will take much more computing time. I will see if I will be able to implement this updated version, however at least we have now a starting point working with PndTrack/PndPidCandidate.

this is surely nice for a first test. However, the improvement are not going to be small!
First of all, for low-momentum tracks the error you make by assuming a linear distance of clusters compared to the true helical track become significant. Secondly, one has to think about the (large!) effects of the clustering itself. What is the best measure for energy loss between the center of masses of two clusters, for instance? Not necessarily the amplitude of the second cluster! Here one probably needs to go back to the single digis! (I think this is how we implemented it in the task anyway). Stepping along the fitted track in fixed intervals, summing up all the single digis amplitudes is probably the best solution.

What I want to convey is that the problem is quite complex, and I expect LARGE systematic differences between your method and a more involved implementation. There is a reason why we still don't have something nice and easy to use

Cheers

Felix