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Subject: time ordering for PID contributions

Posted by [Klaus Föhl](#) on Mon, 02 Jul 2007 09:09:06 GMT

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Hello,

In my current macro-based simulations I do some simple analysis of hit patterns on detector elements, but I do not care yet when some external ingredients into the analysis become available.

A couple of months ago I heard about the requirement to provide a fast kaon trigger from the Cherenkov detectors. Implementation of the Endcap detector simulation has also started, and I feel that the simulation analysis to be implemented in PandaRoot should also reflect some of the online requirements.

For instance one could analyse the Endcap DIRC standalone and then combine results including covariance matrix with similar results from tracking. Standalone beta is poor, but the off-diagonal elements linking to vertex direction are large.

So this analysis could already be done without tracklets (I understand as being short straight stretches in a tracking detector nearby - to be extrapolated into the DIRC) being there yet.

Another question is how to seed the Cherenkov analysis. Some roughly defined punch-through points externally provided might already be enough. When would they be available? The alternative would be to do track-finding with the Cherenkov data, but beyond some ideas about the signature to look for no work has been done yet, and I cannot say how fast this will be compared to neighbouring devices.

So what I suggest is to think about the time-ordering and logical dependence of data analysis chunks across detectors.

Cheers

Klaus

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