Subject: Re: Official code for tracking TDR
Posted by Gianluigi Boca on Thu, 21 Apr 2011 11:51:15 GMT
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Stefano Spataro wrote on Thu, 21 April 2011 10:08Fine,
but I would like also to know what should stay inside the dpm background simulation and digitization. Only stt or also mvd? Up to which level? I suppose it is meaningless to run digitization also for emc or other detectors, considering that the bg file will be useful only for CT digi mixing. Am i right?

And another good question would be how much bg event one should run for each "signal" event. I.e., if I want to run 1000 physics events, how many dpm events should I run?

As far as the STT is concerned, in the dpm background simulation and digitization there should be Mvd and Stt.

As far as the TPC is concerned, there should be Mvd and TPC. Ask
please confirmation to the Muenich people.

IN PRINCIPLE for Stt the should be
20x10**6 x 200 x10**(-9) x 2 = 8 background events per physics event
[this is caused by the 20 MHz interaction rate in Panda and
the maximum drift time of 200 nsec in the Straws].

IN PRINCIPLE for the TPC, which I believe has a total volume drift time of 50 microsec, a similar calculation gives

20x10**6 x 50x10**(-6) = 1000 background events per physics event.

I say IN PRINCIPLE because if the bkg events are too many we may think of randomly reusing some of them.

Gianluigi