Subject: Momentum dependence in tutorial/lhetrack
Posted by donghee on Wed, 06 May 2009 08:47:12 GMT
View Forum Message <> Reply to Message

Dear all,

I accept few suggestion from few experts of pandaroot simulaiton.
I'm working with the tpc+mvd scripts in tutorial/lhetrack/*.

My interesting event is exclusive photon, proton and electron in the final state from electron proton collision. This is a small(?) modification for panda physics. Please, don't argue about it. This is one of study.

Electron beam energy is 3 GeV to the backward direction in the spectrometer.
When I generate the event with initial beam momentum from 7.5 GeV/c to 14 GeV/c for proton, all scripts is working very fine.
I can reach to the final result. I mean that I can have simulation, digitization, as well as reconstruction files.

But if the beam energy exceed 15 GeV, the script run_digi_tpccombi.C give up the calculation at the first event.
This happens only in digitization level. Simulation part is ok!

I'm wondering that tpc+mvd trackfinder has some limitation for track momentum for outgoing proton, which is scattered proton to the direction of forward spectrometer.
It should have roughly 12 upto 15 GeV, since the event is purely exclusive.

I know there is an acceptance of polar angle, but I didn't see
the failure for 14 GeV/c proton in the digitization(or let say lhetrack finding process with tpc+mvd)

I'm trying to understand the reason.
Does anybody have some idea?

Thank you!
Best wishes,
Donghee Kang at Mainz University