Subject: Barrel DIRC in Geant 4 - Cherenkov photon propagation - [FIXED]
Posted by Jochen Schwiening on Tue, 14 Sep 2010 16:38:21 GMT
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Hi folks,
in an effort to study our frustrating problems with the photon gun usage in G3 (see Maria's post titled "Cherenkov photons generation") I tried to run our usual macro /macro/drc/sim_dirc.C using Geant 4. I enabled the optical process ("+optical" in the g4 config file) and ran a couple of events, looked at them with the event display.
I see that Cherenkov photons are produced but I also see that they are all lost/killed/absorbed as soon as they hit the first bar surface. I am attaching a screen snapshot showing a side view, a muon track producing many photons that all die as soon as the first surface is hit. It looks as if G4 doesn't know what to do with the photons, how to propagate them inside the material.
I should mention that I see an enormous number of warning messages
"Warning: G4MaterialPropertyVector::GetProperty==> attempt to Retrieve Property above range"
which may very well indicate a fatal problem - sadly, I don't know where to look to fix the issue.
It's the first time I tried G4 in PandaROOT and so far I only heard that the barrel DIRC "doesn't work" in G4. It'd be nice to change that.
Any ideas?
Thanks, Jochen

File Attachments

1) dirc_geant4_prop.png, downloaded 3669 times

