
Subject: Barrel DIRC simulation in GEANT3 and GEANT4 became slow!

Posted by [Maria Patsyuk](#) on Wed, 27 Oct 2010 11:15:15 GMT

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Hello,

some time ago (I mean I update whole svn regularly, so after one of the updates) simultaion of barrel DIRC became really slow - in GEANT3 it is now 23 s/event and in GEANT4 it is 120(!!) s/event.

In the simulation I use only barrel DIRC detector (no Pipe) and shoot 3GeV pions from the origin, box generator has following parameters (the macro is /u/mpatsyuk/PANDA/trunk/macro/drc/work/sim_dirc.C):

```
FairBoxGenerator* boxGen = new FairBoxGenerator(211, 1);
boxGen->SetPRange(3.,3.);
boxGen->SetPhiRange(12., 12.1);
boxGen->SetThetaRange(75, 75);
boxGen->SetXYZ(0., 0., 0.);
```

The simulation used to be at least 6 s/event in GEANT3 with the same macro!

Since then we have slightly changed the geometry of barrel DIRC, but that should not matter..?

I would be grateful if you tell me how to speed up the simulation again (both in g3 and g4).

Subject: Re: Barrel DIRC simulation in GEANT3 and GEANT4 became slow!

Posted by [StefanoSpataro](#) on Tue, 02 Nov 2010 16:38:48 GMT

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Hi,

I would suggest to retrieve older versions of the drc package as well as "geometry", to understand exactly which revision number has increased the amount of computing time. The changes in geometry could affect the cpu time, if you have introduced many volumes or with some update in the media definition, but your numbers seem quite big.

Checking the svn updates I cannot see strong modifications which could affect the computing time, and in theory nothing was changed in the external packages... Are you using maybe GSI machines? Which external packages exactly? (etch32/etch64/lenny64?)

Subject: Re: Barrel DIRC simulation in GEANT3 and GEANT4 became slow!

Posted by [Maria Patsyuk](#) on Fri, 05 Nov 2010 14:10:20 GMT

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Thank you for the answer,

I'm using GSI mashines, like Ixi010 and Ixi012 and external packages etch32.
