Subject: Re: backward endcap time consuming
Posted by Dima Melnychuk on Thu, 06 May 2010 10:04:23 GMT

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Hi Dmitry,

It seems that I partially solved the problem with time consumption with EMC endcaps
simulation with root geometry.

The following lines of code in PndEmc::ProcessHits() were executed at each hit but results
were not used. However these calculation were rather time consuming.

```
244      Int_t daughtQuar = gMC->NofVolDaughters(namQuar);
245      Int_t daughtSub  = gMC->NofVolDaughters(namSub);
246      Int_t daughtBox  = gMC->NofVolDaughters(namBox);
247      Int_t daughtCrys = gMC->NofVolDaughters(namCrys);
```

Equivalent lines of code were for forward endcap also. So I have removed them with rev. 8554.
As a results simulations with Geant4, energy=0.7 GeV, theta=155 deg., phi=45 deg. were at
least 4 times faster.

To identify the problem I used callgrind profiler.

valgrind --tool=callgrind root.exe sim_emc.C

And the output can be viewed with kcachegrind.

Best regards,

Dima