
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
