Subject: Re: Problem with Root geometrys from CAD
Posted by Dima Melnychuk on Mon, 17 May 2010 14:59:10 GMT
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Hi Christian,

I could reproduce your problem, at least huge amount of warnings with

*** Particle reached max step number (10000). ***

```
*********************************************************************************************************
* G4Track Information:   Particle = gamma,   Track ID = 88,   Parent ID = 81
*********************************************************************************************************

Step#    X(mm)    Y(mm)    Z(mm) KinE(MeV)  dE(MeV) StepLeng TrackLeng  NextVolume ProcName
10002   -11.6   -22.2      990    0.703       0       0     1.07 CrystalType6a Transportation
10003   -11.6   -22.2      990    0.703       0       0     1.07       cave Transportation
10004   -11.6   -22.2      990    0.703       0       0     1.07 CrystalType6a Transportation
10005   -11.6   -22.2      990    0.703       0       0     1.07       cave Transportation
```

And I have a suspicion what could case it but I could not check it so far due to technical difficulties. So I suspect that problem is due to the representation of crystal geometry with TGeoArb8 and I would guess that replacement with TGeoTrap could help. The conversion between two shapes is straightforward (you can find it in PndEmcStructure.cxx), however I understand why the CadConvertor provides TGeoArb8.

I tried to convert the geometry from the root file you provided, but simulation results in error which I do not understand. So in my opinion it would make sense to try to obtain the geometry with TGeoTrap directly from the CadConvertor, but at the moment I have no idea how.

My suspicion is based on the fact that such a warning appears also for the backward endcap geometry where TGeoArb8 are used and not for barrel geometry with TGeoTrap.

That's all I can say at the moment.

Best regards,

Dima