
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 |
|-------|-------|-------|-------|-----------|---------|----------|-----------|------------------------------|
| 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
