
Subject: Re: Bug in Geane?

Posted by [Lia Lavezzi](#) on Mon, 05 May 2008 15:53:53 GMT

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Hi Christian,

the problem can be solved defining your own step size.

You have to define a "vacuum2" material in the geometry/media_pnd.geo file after AUTONULL, setting your own values, for example:

```
vacuum2      1 1.e-16 1.e-16 1.e-16
              0 1 30. .001
              0.1 0.05 0.0001 0.00001
```

0

with a maximum angle due to the field of 0.1 degree and a maximum step = 0.05. (obviously you can change and tune these values, this is just an example that should work).

With these values, re-running also the simulation, after runTest.C it results:

```
| 0 |
-----
0 | -0.5
1 | 0.004244
2 | -0.00244
3 | 0.004343
4 | -0.002343
```

which seems reasonable.

This happens because with manual stepping you force GEANE to make small steps. On the contrary, if you don't fix manual stepping, GEANE makes very large steps in vacuum and it "does not find" the plane: this happens since you are using a "virtual" plane, not a physical one. If you want you can also try leaving the automatic steps and creating a physical detector plane with the same geometry (same origin, same orientation in space) of your virtual plane: in that case everything works fine because geant is forced to do a step on the plane, where the track enters the new material (I tried it with Susanna this morning and it works)...

Anyway, the correct solution is the choice of manual stepping, so please tell us if it works for you...

Ciao,
Lia & Susanna.
