
Subject: Geant4: problem with set seed and cuts
Posted by [Jerome Boucher](#) on Tue, 06 Oct 2009 11:52:09 GMT
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Hi,

I would like to run the same simulation using different seeds. In case of Geant3, the function `gRandom->SetSeed(seed)` works fine. Concerning Geant4, this function has no effect.

The following method has been also tried. In the file `gconfig/g4config.in`, a line has been added:

```
/random/resetEngineFrom full_path/seed.rnd
```

The file `seed.rnd` contains the seed value.

If I put 200345, I obtain:

Geant4 has been created.

```
-l g4Config() using g4conf macro: /vol0/jerome/soft/pandaroot/trunk/gconfig/g4config.in
```

```
----- HepJamesRandom engine status -----
```

```
Initial seed = 200345
```

```
u[] = 0.174685 0.883674 0.958512 0.690013 0.0250537 0.142294 0.783649 0.356081  
0.214774 0.69287 0.700302 0.465109 0.22215 0.768752 0.461089 0.397602 0.522215  
0.121546 0.960227 0.510892 0.0116568 0.0286447 0.238777 0.585219 0.780612 0.709182  
0.082106 0.828601 0.61446 0.0798209 0.688002 0.00978529 0.370831 0.376435 0.710184  
0.864017 0.167338 0.21114 0.349235 0.522479 0.943713 0.0702708 0.778742 0.639458  
0.506555 0.151751 0.990123 0.564688 0.430497 0.889832 0.995398 0.725368 0.710512  
0.0550886 0.0540335 0.0159176 0.728379 0.947141 0.34922 0.20551 0.351029 0.672539  
0.118976 0.655784 0.195375 0.0380308 0.293556 0.237497 0.79723 0.158375 0.029761  
0.602215 0.616657 0.995638 0.734827 0.943425 0.130007 0.277064 0.306344 0.973337  
0.183926 0.547536 0.914344 0.666572 0.210074 0.300351 0.83602 0.267525 0.248549  
0.533332 0.1754 0.299529 0.538308 0.555472 0.283894 0.485254 0.222273
```

```
c = 0.0216029, cd = 0.456233, cm = 1
```

```
i97 = 96, u[i97] = 0.222273
```

```
j97 = 32, u[j97] = 0.370831
```

So the seed seems to be loaded. But, doing two simulations using different seeds, results are identical.

Concerning the cuts, I tried to modify the cut (`gconfig/SetCut.C` file) from 1 MeV to 100 KeV. But this new value is not taken into account.

Someone has an idea where I'm wrong?

best regards

Jerome