
Subject: Re: Detector materials with radiation length not equal to zero
Posted by [Raghav Kunnawalkam](#) on Thu, 15 Mar 2012 21:34:08 GMT
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Hi Mohammad

I followed it the way it was described in the panda detector case and when i run my macro, i am generating the branch RadLen and its corresponding leaves, but there is nothing inside them. They are all blank.

I tried to see what i am doing different from the panda example and i just cant make out the problem.

```
rad_complete_stt(Int_t nEvents = 1, TString SimEngine = "TGeant3", Float_t mom = 7.24)
{
```

```
//set the name of output file and etc...
```

```
//load libraries
```

```
Double_t BeamMomentum =15.0;
```

```
// ----- Create simulation run -----
FairRunSim* run = new FairRunSim();
run->SetName("TGeant3"); // Transport engine
// fRun->SetBeamMom(BeamMomentum);
```

```
// here it does not let me set the beam momentum even though it is defined in the class
FairRunSim. Maybe thats the issue here. i am running a beam whit no momentum.
```

```
run->SetOutputFile(outFile); // Output file
FairRuntimeDb* rtdb = run->GetRuntimeDb();
// -----
```

```
// ----- Create media -----
```

```
run->SetMaterials("media.geo");//materials
//-----
```

```
// ----- Tell the detector to calculate the radiation length -----
```

```
run->SetRadLenRegister(kTRUE);
```

```
// -----
```

```
// ----- Runtime database -----
```

```
Bool_t kParameterMerged = kTRUE;
FairParRootFileIo* parOut = new FairParRootFileIo(kParameterMerged);
```

```

// FairParAsciiFilelo* parOut = new FairParAsciiFilelo();
parOut->open(parFile.Data());
rtdb->setOutput(parOut);
rtdb->saveOutput();
rtdb->print();

//create geometry, modules and detectors.

// ----- Create PrimaryGenerator -----
FairPrimaryGenerator* primGen = new FairPrimaryGenerator();
run->SetGenerator(primGen);

FairBoxGenerator* boxGen = new FairBoxGenerator(0, 10); // 13 = muon; 1 = multipl.
// the 0 here represents geantino.
boxGen->SetPtRange(mom,mom); // GeV/c
boxGen->SetPhiRange(0., 360.); // Azimuth angle range [degree]
boxGen->SetThetaRange(0., 0.); // Polar angle in lab system range [degree]
boxGen->SetXYZ(0., 0., 0.); // mm o cm ??
primGen->AddGenerator(boxGen);

// ----- Run initialisation -----

run->Init();

// ----- Start run -----

run->Run(nEvents);
// -----
run->CreateGeometryFile("data/geofile_rad_length.root");

// ----- Finish -----
timer.Stop();
Double_t rtime = timer.RealTime();
Double_t ctime = timer.CpuTime();
cout << endl << endl;
cout << "Macro finished succesfully." << endl;
cout << "Output file is " << outFile << endl;
cout << "Parameter file is " << parFile << endl;
cout << "Real time " << rtime << " s, CPU time " << ctime
<< "s" << endl << endl;
// ----- end of file
}

```

The panda example is pretty much the same except geometry definitions, but there is something inside its RadLen folder. I just dont understand the mistake i am making here. I have attached a picture of what my root file looks like and on the canvas you can see that there is nothing inside the leaf fradlen.

thanks a lot for all you help

Cheers
Raghav

File Attachments

1) [Screen Shot 2012-03-15 at 5.32.44 PM.png](#), downloaded 308 times

