
Subject: Re: problem in running demo/runMC.C

Posted by [Anonymous Poster](#) on Tue, 18 Mar 2008 10:13:26 GMT

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Hi Mohammad,

I changed the SIMPATH as you suggested but still the reciotasks/demo/runMC.C doesn't run for GEANT4 case. But it is running for GEANT3. If I put the option

fRun->SetName("TGeant4");

Then I got the following errors:

```
===== CbmRunSim: Initialising simulation run =====
Info in <TGeoManager::TGeoManager>: Geometry CBMGeom, CBM geometry created
-I- CbmGeoMedia Read media
Loading Geant4 granular libraries ...
Error in <TUnixSystem::DynamicPathName>: libG4OpenGL[.so | .sl | .dl | .a | .dll] does not
exist in ./misc/cbmsoft/Debian3.1/mar08/fairsoft/tools/root/lib:/misc/cbmsoft/D
ebian3.1/mar08/fairsoft/tools/root/lib:/usr/lib:/usr/X11R6/lib:/d/panda0
2/dipak/pndroot0308/build/lib:/usr/lib:/usr/X11R6/lib:/misc/cbmsoft/Debi
an3.1/mar08/fairsoft/tools/root/lib:/misc/cbmsoft/Debian3.1/mar08/fairso
ft/generators/lib:/misc/cbmsoft/Debian3.1/mar08/fairsoft/generators/lib:
/misc/cbmsoft/Debian3.1/mar08/fairsoft/transport/geant3/lib/tgt_linux:/m
isc/cbmsoft/Debian3.1/mar08/fairsoft/transport/geant4/lib/Linux-g++:/mis
c/cbmsoft/Debian3.1/mar08/fairsoft/transport/geant4_vmc/lib/tgt_linux:/m
isc/cbmsoft/Debian3.1/mar08/fairsoft/transport/vgm/lib:/misc/cbmsoft/Deb
ian3.1/mar08/fairsoft/cern/clhep/lib
Loading VGM libraries ...
Loading libraries ... finished
Info in <TGeoManager::SetTopVolume>: Top volume is cave. Master volume is cave
--- Building TPC Geometry ---
Material silicon is not defined
Create Medium silicon
Material carbon is not defined
Create Medium carbon
Info in <TGeoManager::CheckGeometry>: Fixing runtime shapes...
Info in <TGeoManager::CheckGeometry>: ...Nothing to fix
Info in <TGeoManager::CloseGeometry>: Counting nodes...
Info in <TGeoManager::Voxelize>: Voxelizing...
Info in <TGeoManager::CloseGeometry>: Building cache...
Info in <TGeoNavigator::BuildCache>: --- Maximum geometry depth set to 100
Info in <TGeoManager::CloseGeometry>: 9410 nodes/ 122 volume UID's in CBM geometry
Info in <TGeoManager::CloseGeometry>: -----modeler ready-----
Info in <TG4RootNavMgr::SetNavigator>: TG4RootNavigator created and registered to
G4TransportationManager
Running TVirtualMCApplication::ConstructGeometry
*****
Geant4 version Name: geant4-09-01 (14-December-2007)
Copyright : Geant4 Collaboration
Reference : NIM A 506 (2003), 250-303
WWW : http://cern.ch/geant4
*****
```

```

Info in <TG4RootNavMgr::Initialize>: Creating G4 hierarchy ...
Info in <TGeoManager::ConvertReflections>: Converting reflections in: CBMGeom - CBM
geometry ...
Info in <TGeoManager::ConvertReflections>: Done
==> GEANT4 materials created and mapped to TGeo ones...
==> GEANT4 physical volumes created and mapped to TGeo hierarchy...
### INFO: TG4RootDetectorConstruction::Construct() finished
TG4PostDetConstruction::Initialize
G4 Stat: instantiated 129 logical volumes
          331 physical volumes
Info in <TG4RootNavMgr::ConnectToG4>: ROOT detector construction class connected to
G4RunManager
Adding HadronPhysicsList QGSP_BERT_EMV

<<< Geant4 Physics List engine packaging library: PACK 5.4
<<< Geant4 Physics List simulation engine: QGSP_BERT_EMV 1.0

Adding OpticalPhysicsList
Adding SpecialPhysicsList
Debug mode is switched on.
Visualization Manager instantiating...
Visualization Manager initialising...
Registering graphics systems...

You have successfully registered the following graphics systems.
Current available graphics systems are:
  ASCIITree (ATree)
  DAWNFILE (DAWNFILE)
  G4HepRepFile (HepRepFile)
  G4HepRep (HepRepXML)
  RayTracer (RayTracer)
  VRML1FILE (VRML1FILE)
  VRML2FILE (VRML2FILE)

Registering model factories...

You have successfully registered the following model factories.
Registered model factories:
  drawByCharge
  drawByParticleID

Registered filter factories:
  None

Geant4 has been created.
-l g4Config() using g4conf macro:
/d/panda02/dipak/pndroot0308/pandaroot/gconfig/g4config.in
Physics cuts with script
/d/panda02/dipak/pndroot0308/pandaroot/gconfig/SetCuts.C
### Adding Neutron tracking cut for neutron
### cut value is 10 microseconds

```

```

#### Hadron physics constructed.
G4Cerenkov::G4Cerenkov constructor
NOTE: this is now a G4VDiscreteProcess!
Required change in UserPhysicsList:
change: pmanager->AddContinuousProcess(theCerenkovProcess);
to:    pmanager->AddProcess(theCerenkovProcess);
        pmanager->SetProcessOrdering(theCerenkovProcess,idxPostStep);
#### Optical physics constructed.
#### Processes mapped to VMC controls ok.
#### Step limiter physics constructed.
#### User particles physics constructed.
#### Processes mapped to VMC codes ok.
-l- Initializing PndMvdDetector()
-l- CbmMCApplication -> simulation RunID: 6934679

```

GEANT4 Geometry statistics:

```

    129 logical volumes
    331 physical volumes
    10 materials
    10 user limits
    122 sensitive detectors

```

```

-l- CbmMCApplication:: Monte carlo Engine Initialisation with TGeant4
create PndFieldPar container PndConstPar
RuntimeDb: write container CbmBaseParSet
*** CbmBaseParSet written to ROOT file version: 2
RuntimeDb: write container PndGeoPassivePar
*** PndGeoPassivePar written to ROOT file version: 2
RuntimeDb: write container PndTpcGeoPar
*** PndTpcGeoPar written to ROOT file version: 2
RuntimeDb: write container PndConstPar
*** PndConstPar written to ROOT file version: 2

```

----- actual containers in runtime database -----

```

CbmBaseParSet          Test class for parameter io
PndGeoPassivePar       Passive Geometry Parameters
PndTpcGeoPar           PndTpc Geometry Parameters
PndConstPar            Const Field parameter container

```

----- runs, versions -----

run id	container	1st-inp	2nd-inp	output
run: 6934679				
	CbmBaseParSet	6934679	-1	2
	PndGeoPassivePar	6934679	-1	2
	PndTpcGeoPar	6934679	-1	2
	PndConstPar	6934679	-1	2

----- input/output -----

```

first input: none
second input: none
output:

```

OBJ: CbmParRootFile demo.param.root : 0 at: 0x9bfba58

Root file I/O demo.param.root is open

detector I/Os: CbmGenericParlo

phot: Total cross sections from Sandia parametrisation.

Sampling according PhotoElectric model

compt: Total cross sections has a good parametrisation from 10 KeV to (100/Z) GeV

Sampling according Klein-Nishina model

tables are built for gamma

Lambda tables from 100 eV to 100 GeV in 90 bins.

conv: Total cross sections has a good parametrisation from 1.5 MeV to 100 GeV for all Z;

sampling secondary e+e- according Bethe-Heitler model

tables are built for gamma

Lambda tables from 1.022 MeV to 100 GeV in 100 bins.

msc: Model variant of multiple scattering for e-

Lambda tables from 100 eV to 100 TeV in 120 bins.

LateralDisplacementFlag= 1 Skin= 0

Boundary/stepping algorithm is active with RangeFactor= 0.2 Step limit type 0

eloni: tables are built for e-

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Delta cross sections and sampling from MollerBhabha model

Good description from 1 KeV to 100 GeV.

Step function: finalRange(mm)= 1, dRoverRange= 0.8, integral: 1, fluct: 1

eBrem: tables are built for e-

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Total cross sections and sampling from StandBrem model (based on the EEDL data library)

Good description from 1 KeV to 100 GeV, log scale extrapolation above 100 GeV. LPM flag 1

eloni: tables are built for e+

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Delta cross sections and sampling from MollerBhabha model

Good description from 1 KeV to 100 GeV.

Step function: finalRange(mm)= 1, dRoverRange= 0.8, integral: 1, fluct: 1

eBrem: tables are built for e+

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Total cross sections and sampling from StandBrem model (based on the EEDL data library)

Good description from 1 KeV to 100 GeV, log scale extrapolation above 100 GeV. LPM flag 1

annihil: Sampling according eplus2gg model
tables are built for e+
Lambda tables from 100 eV to 100 TeV in 120 bins.

msc: Model variant of multiple scattering for proton
Lambda tables from 100 eV to 100 TeV in 120 bins.
LateralDisplacementFlag= 1 Skin= 0
Boundary/stepping algorithm is active with RangeFactor= 0.2 Step limit type 0

hloni: tables are built for proton
dE/dx and range tables from 100 eV to 100 TeV in 120 bins.
Lambda tables from threshold to 100 TeV in 120 bins.
Scaling relation is used from proton dE/dx and range.
Delta cross sections and sampling from BetheBloch model for scaled energy > 2 MeV
Parametrisation from Bragg for protons below.
Step function: finalRange(mm)= 1, dRoverRange= 0.2, integral: 1, fluct: 1

msc: Model variant of multiple scattering for Genericlon
LateralDisplacementFlag= 0 Skin= 0
Boundary/stepping algorithm is active with RangeFactor= 0.2 Step limit type 1

ionloni: tables are built for Genericlon
dE/dx and range tables from 100 eV to 100 TeV in 120 bins.
Lambda tables from threshold to 100 TeV in 120 bins.
Scaling relation is used from proton dE/dx and range.
Delta cross sections and sampling from BetheBloch model for scaled energy > 2 MeV
Parametrisation from Braggion for protons below. NuclearStopping 1

Stopping Power data for 8 ion/material pairs are used.
Step function: finalRange(mm)= 0.1, dRoverRange= 0.1, integral: 1, fluct: 1

hloni: tables are built for anti_proton
dE/dx and range tables from 100 eV to 100 TeV in 120 bins.
Lambda tables from threshold to 100 TeV in 120 bins.
Scaling relation is used from proton dE/dx and range.
Delta cross sections and sampling from BetheBloch model for scaled energy > 2 MeV
Parametrisation from Bragg for protons below.
Step function: finalRange(mm)= 1, dRoverRange= 0.2, integral: 1, fluct: 1

msc: Model variant of multiple scattering for mu+
Lambda tables from 100 eV to 100 TeV in 120 bins.
LateralDisplacementFlag= 1 Skin= 0
Boundary/stepping algorithm is active with RangeFactor= 0.2 Step limit type 0

muloni: tables are built for mu+
dE/dx and range tables from 100 eV to 100 TeV in 120 bins.
Lambda tables from threshold to 100 TeV in 120 bins.
Bether-Bloch model for E > 0.2 MeV, parametrisation of Bragg peak below,
radiative corrections for E > 1 GeV
Step function: finalRange(mm)= 1, dRoverRange= 0.2, integral: 1, fluct: 1

muBrems: tables are built for mu+

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Parametrised model

muPairProd: tables are built for mu+

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Parametrised model

muloni: tables are built for mu-

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Bethe-Bloch model for $E > 0.2$ MeV, parametrisation of Bragg peak below,
radiative corrections for $E > 1$ GeV

Step function: finalRange(mm)= 1, dRoverRange= 0.2, integral: 1, fluct: 1

muBrems: tables are built for mu-

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Parametrised model

muPairProd: tables are built for mu-

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Parametrised model

G4UHadronElasticProcess for neutron PDGcode= 2112 Elow(MeV)= 19 Elowest(eV)= 0

hloni: tables are built for pi+

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Scaling relation is used from proton dE/dx and range.

Delta cross sections and sampling from BetheBloch model for scaled energy > 0.297504
MeV

Parametrisation from Bragg for protons below.

Step function: finalRange(mm)= 1, dRoverRange= 0.2, integral: 1, fluct: 1

msc: Model variant of multiple scattering for pi-

Lambda tables from 100 eV to 100 TeV in 120 bins.

LateralDisplacementFlag= 1 Skin= 0

Boundary/stepping algorithm is active with RangeFactor= 0.2 Step limit type 0

hloni: tables are built for pi-

dE/dx and range tables from 100 eV to 100 TeV in 120 bins.

Lambda tables from threshold to 100 TeV in 120 bins.

Scaling relation is used from proton dE/dx and range.

Delta cross sections and sampling from BetheBloch model for scaled energy > 0.297504
MeV

Parametrisation from Bragg for protons below.

Step function: finalRange(mm)= 1, dRoverRange= 0.2, integral: 1, fluct: 1

===== Table of registered couples =====

Index : 0 used in the geometry : Yes recalculation needed : No
Material : air
Range cuts : gamma 1 mm e- 1 mm e+ 1 mm
Energy thresholds : gamma 990 eV e- 990 eV e+ 990 eV
Region(s) which use this couple :
DefaultRegionForTheWorld

Index : 1 used in the geometry : Yes recalculation needed : No
Material : vacuum
Range cuts : gamma 1 mm e- 1 mm e+ 1 mm
Energy thresholds : gamma 990 eV e- 990 eV e+ 990 eV
Region(s) which use this couple :
DefaultRegionForTheWorld

Index : 2 used in the geometry : Yes recalculation needed : No
Material : steel
Range cuts : gamma 1 mm e- 1 mm e+ 1 mm
Energy thresholds : gamma 20.8323 keV e- 1.31192 MeV e+ 1.23361 MeV
Region(s) which use this couple :
DefaultRegionForTheWorld

Index : 3 used in the geometry : Yes recalculation needed : No
Material : Al+Be
Range cuts : gamma 1 mm e- 1 mm e+ 1 mm
Energy thresholds : gamma 4.45676 keV e- 496.074 keV e+ 478.087 keV
Region(s) which use this couple :
DefaultRegionForTheWorld

Index : 4 used in the geometry : Yes recalculation needed : No
Material : iron
Range cuts : gamma 1 mm e- 1 mm e+ 1 mm
Energy thresholds : gamma 20.8323 keV e- 1.28002 MeV e+ 1.21851 MeV
Region(s) which use this couple :
DefaultRegionForTheWorld

Index : 5 used in the geometry : Yes recalculation needed : No
Material : aluminium
Range cuts : gamma 1 mm e- 1 mm e+ 1 mm
Energy thresholds : gamma 6.88731 keV e- 596.68 keV e+ 568.011 keV
Region(s) which use this couple :
DefaultRegionForTheWorld

Index : 6 used in the geometry : Yes recalculation needed : No
Material : copper
Range cuts : gamma 1 mm e- 1 mm e+ 1 mm
Energy thresholds : gamma 24.6072 keV e- 1.39521 MeV e+ 1.31192 MeV
Region(s) which use this couple :
DefaultRegionForTheWorld

Index : 7 used in the geometry : Yes recalculation needed : No
Material : TPCmixture

Range cuts : gamma 1 mm e- 1 mm e+ 1 mm
Energy thresholds : gamma 990 eV e- 990 eV e+ 990 eV
Region(s) which use this couple :
DefaultRegionForTheWorld

Index : 8 used in the geometry : Yes recalculation needed : No
Material : silicon
Range cuts : gamma 1 mm e- 1 mm e+ 1 mm
Energy thresholds : gamma 6.88731 keV e- 540.718 keV e+ 521.113 keV
Region(s) which use this couple :
DefaultRegionForTheWorld

Index : 9 used in the geometry : Yes recalculation needed : No
Material : carbon
Range cuts : gamma 1 mm e- 1 mm e+ 1 mm
Energy thresholds : gamma 3.29462 keV e- 568.011 keV e+ 554.196 keV
Region(s) which use this couple :
DefaultRegionForTheWorld

=====
Run 0 start.
-l CbmPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)
>>> Event 0

*** Break *** floating point exception
Using host libthread_db library "/lib/libthread_db.so.1".
Attaching to program: /proc/9774/exe, process 9774
Failed to read a valid object file image from memory.
done.
done.
[Thread debugging using libthread_db enabled]
[New Thread 16384 (LWP 9774)]
done.
done.
done.
done.
done.
done.
done.
done.