Subject: [FIXED] crash in run/sim_complete.C with Geant4
Posted by Maria Patsyuk on Tue, 14 Jan 2014 08:37:11 GMT
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Dear all,

with the updated svn (23427) I'm getting the following crash in run/sim_complete.C, when using it with Geant4. I've looked on my previous topics about errors in these macros - now my errors look differently from the previous ones that's why I'm posting them (again). The simulation macro is attached. The error looks like the following:

```
root -l sim_completeG.C
root [0]
Processing sim_completeG.C...
FairRootManager::OpenOutFile("sim_complete_small.root")
[INFO   ] Media file used : /u/mpatsyuk/PANDA/new_trunk/geometry/media_pnd.geo
Info in (PndGeoHandling::Instance): Making a new instance using the framework.
[INFO   ] ==============  FairRunSim: Initialising simulation run ==============
Info in <TGeoManager::TGeoManager>: Geometry FAIRGeom, FAIR geometry created
-I- FairGeoMedia  Read media
 -I container name PndEmcGeoPar
 -I container name PndEmcDigiPar
 -I container name PndEmcDigiNonuniformityPar

************************************************************
     initialisation for run id 1389687983
************************************************************
-I- FairRunTimeDB::InitContainer() PndSensorNamePar
[ERROR  ] init() PndSensorNamePar  not initialized
-I- FairRunTimeDB::InitContainer() PndEmcGeoPar
[ERROR  ] init() PndEmcGeoPar  not initialized
-I- FairRunTimeDB::InitContainer() PndEmcDigiPar
PndEmcDigiPar initialized from Ascii file
-I- FairRunTimeDB::InitContainer() PndEmcDigiNonuniformityPar
[ERROR  ] init() PndEmcDigiNonuniformityPar  not initialized
Error in <FairRuntimeDb::initContainers()>: Error occured during initialization
[INFO   ] PndFieldMap: Reading field map from ROOT file
/u/mpatsyuk/PANDA/new_trunk/input/TransMap.1500.root
[INFO   ] PndFieldMap: Reading field map from ROOT file
/u/mpatsyuk/PANDA/new_trunk/input/DipoleMap1.1500.root
[INFO   ] PndFieldMap: Reading field map from ROOT file
/u/mpatsyuk/PANDA/new_trunk/input/DipoleMap2.1500.root
[INFO   ] PndFieldMap: Reading field map from ROOT file
/u/mpatsyuk/PANDA/new_trunk/input/SolenoidMap1.root
[INFO   ] PndFieldMap: Reading field map from ROOT file
/u/mpatsyuk/PANDA/new_trunk/input/SolenoidMap2.root
[INFO   ] PndFieldMap: Reading field map from ROOT file
/u/mpatsyuk/PANDA/new_trunk/input/SolenoidMap3.root
[INFO   ] PndFieldMap: Reading field map from ROOT file
/u/mpatsyuk/PANDA/new_trunk/input/SolenoidMap4.root
Loading Geant4 global libraries ...Our Macro
 Loading Library libG4Tree
```

```
 Loading Library libG4FR
 Loading Library libG4GMocren
 Loading Library libG4visHepRep
 Loading Library libG4RayTracer
 Loading Library libG4VRML
 Loading Library libG4vis_management
 Loading Library libG4modeling
 Loading Library libG3toG4
 Loading Library libG4interfaces
 Loading Library libG4persistency
 Loading Library libG4analysis
 Loading Library libG4error_propagation
 Loading Library libG4readout
 Loading Library libG4physicslists
 Loading Library libG4run
 Loading Library libG4event
 Loading Library libG4tracking
 Loading Library libG4parmodels
 Loading Library libG4processes
 Loading Library libG4digits_hits
 Loading Library libG4track
 Loading Library libG4particles
 Loading Library libG4geometry
 Loading Library libG4materials
 Loading Library libG4graphics_reps
 Loading Library libG4intercoms
 Loading Library libG4global
 Loading Library libG4clhep
Loading VGM libraries ...
Loading g4root library ...
Loading libraries ... finished

************************************************************
 Geant4 version Name: geant4-09-06-patch-01    (1-February-2013)
                      Copyright : Geant4 Collaboration
                      Reference : NIM A 506 (2003), 250-303
                            WWW : http://cern.ch/geant4
************************************************************

Adding HadronPhysicsList QGSP_BERT_EMV
G4PhysListFactory::GetReferencePhysList <QGSP_BERT_EMV>  EMoption= 1
<<< Geant4 Physics List simulation engine: QGSP_BERT 4.0

<<< Reference Physics List QGSP_BERT_EMV is built

Adding ExtraPhysicsList optical
Adding SpecialPhysicsList stepLimiter+specialCuts+
Available UI session types: [ GAG, tcsh, csh ]
Visualization Manager instantiating with verbosity "warnings (3)"...
Geant4 has been created.
 -I g4Config() using g4conf  macro: /u/mpatsyuk/PANDA/new_trunk/gconfig/g4config.in
Seed for HepJamesRandom must be non-negative
```

```
Seed value supplied was -482490914
Using its absolute value instead
SetCuts Macro: Setting Processes..
SetCuts Macro: Setting cuts..
++++  TG4Warning:  ++++
    TG4G3CutVector::CheckCutValue:
    PPCUTM cut value 1 MeV is lower than 2*e_mass.
    The cut will be ignored.
++++++++++++++++++++++

Info in <TGeoManager::SetTopVolume>: Top volume is cave. Master volume is cave
Info in <TGeoNavigator::BuildCache>: --- Maximum geometry depth set to 100
<I> PndPipe - Using geometry
/u/mpatsyuk/PANDA/new_trunk/geometry/beampipe_201309.root
 -I container name PndGeoSttPar
-I- STT total number of tubes: 4542

 =======  DRC::  ConstructGeometry()  ========
 ============================================
Focusing = 0
 ============================================
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 <TGeoManager::CountLevels>: max level = 12, max placements = 4550
Info in <TGeoManager::CloseGeometry>: 125103 nodes/ 4112 volume UID's in FAIR geometry
Info in <TGeoManager::CloseGeometry>: ----------------modeler ready----------------
Converting Root geometry to Geant4 via VGM ...

-------- EEEE ------- G4Exception-START -------- EEEE -------
*** G4Exception : GeomSolids0002
      issued by : G4Polycone::G4Polycone()
Cannot create a Polycone with no contiguous segments.
        Segments are not contiguous !
        rMin[3] = 45 -- rMax[4] = 31
        rMin[4] = 30 -- rMax[3] = 46
*** Fatal Error In Argument *** core dump ***
-------- EEEE -------- G4Exception-END --------- EEEE -------


*** G4Exception: Aborting execution ***
```

Could you please help me with it?

Best regards,
Maria

File Attachments

1) sim_completeG.C, downloaded 514 times

Subject: Re: crash in run/sim_complete.C with Geant4
Posted by Mohammad Al-Turany on Tue, 14 Jan 2014 09:56:05 GMT
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Hi Maria,

I run your macro with Dec13 fairsoft and latest trunk in PANDA and all went smoothly! I try it on MAC OS and GSI linux and it woked with out any problem.

On the GSI cluster Dec13 is already installed, you just need to set your SIMPATH to

/cvmfs/fairroot.gsi.de/fairsoft/dec13

cheers,

Mohammad

Subject: Re: crash in run/sim_complete.C with Geant4
Posted by StefanoSpataro on Tue, 14 Jan 2014 13:58:08 GMT
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Are you sure you did not change your g4Config.C?

Subject: Re: crash in run/sim_complete.C with Geant4
Posted by Maria Patsyuk on Tue, 14 Jan 2014 14:25:20 GMT
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You are right, Stefano,

for our detector we usually set

TrackSecondariesFirst false

and

```
TG4RunConfiguration* runConfiguration
    = new TG4RunConfiguration("geomRootToGeant4",
"QGSP_BERT_EMV+optical","stepLimiter+specialCuts+specialControls");
```

if I set trackSecondariesFirst = true and use option "geomRoot", than it runs...

Thank you!

Subject: Re: crash in run/sim_complete.C with Geant4
Posted by StefanoSpataro on Tue, 14 Jan 2014 14:28:30 GMT
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I believe the geomRootToGeant4 option is the faulty one:

```
-------- EEEE ------- G4Exception-START -------- EEEE -------
 *** G4Exception : GeomSolids0002
 issued by : G4Polycone::G4Polycone()
 Cannot create a Polycone with no contiguous segments.
 Segments are not contiguous !
 rMin[3] = 45 -- rMax[4] = 31
 rMin[4] = 30 -- rMax[3] = 46
 *** Fatal Error In Argument *** core dump ***
 -------- EEEE -------- G4Exception-END --------- EEEE -------
```