Subject: New Solenoid and MVD
Posted by Tobias Stockmanns on Thu, 03 Apr 2008 13:35:49 GMT
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Dear pandaRooters,

I have added two new geometry files, one for the solenoid (without the Muon chambers) and one for the MVD.

Cheers,

Tobias

Subject: Re: New Solenoid and MVD
Posted by StefanoSpataro on Thu, 03 Apr 2008 16:42:18 GMT
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Hi Tobias,
I have tried to use your Solenoid.root file as input for the magnet geometry, and I get the following error:

Processing run_sim.C...
- RTDB container factory PndSttContFact
- RTDB container factory PndMuoContFact
- RTDB container factory PndDrcContFact
- RTDB container factory PndTofContFact
-I- CbmRun::SetMaterials() Media file used:
/home/spataro/dev/pandaroot/geometry/media_pnd.geo

============== CbmRunSim: Initialising simulation run ==============
Info in <TGeoManager::TGeoManager>: Geometry CBMGeom, CBM geometry created
-I- CbmGeoMedia Read media
CbmRunSim::Init() create visualisation manager
-I- PndFieldMap: Reading field map from ROOT file
/home/spataro/dev/pandaroot/input/TransMap.root
-I- PndFieldMap: Reading field map from ROOT file
/home/spataro/dev/pandaroot/input/DipoleMap.root
-I- PndFieldMap: Reading field map from ROOT file
/home/spataro/dev/pandaroot/input/SolenoidMap.root
Loading Geant3 libraries ...
Loading Geant3 libraries ... finished

MZSTOR. ZEBRA table base TAB(0) in /MZCC/ at adr 747956495 2C94E90F HEX

MZSTOR. Initialize Store 0 in /GCBANK/
with Store/Table at absolute adrs 748065341 747956495
HEX 2C96923D 2C94E90F
HEX 1A77A 0
relative adrs 108410 0
with 1 Str. in 2 Links in 5300 Low words in 4999970 words.

This store has a fence of 16 words.

MZLOGL. Set Log Level 0 for store 0
1***** GEANT Version 3.21/11 Released on 100298
0***** Correction Cradle Version 0.1100

MZDIV. Initialize Division Constant in Store 0
NW/NWMAX= 20004000000, MODE/KIND= 1 2
Division 20 initialized.

MZLINK. Initialize Link Area /GCLINK/ for Store 0 NL/NS= 20 20

MZLINK. Initialize Link Area /GCSLNK/ for Store 0 NL/NS= 100 100
-I- G3Config: Geant3 with TGeo has been created.
Physics cuts with script
/home/spataro/dev/pandaroot/gconfig/SetCuts.C
SetCuts Macro: Setting Processes..
SetCuts Macro: Setting cuts..
Info in <TGeoManager::SetTopVolume>: Top volume is cave. Master volume is cave
Info in <TGeoManager::CloseGeometry>: Geometry loaded from file...
Info in <TGeoManager::SetTopVolume>: Top volume is TOP. Master volume is TOP
Info in <TGeoManager::CloseGeometry>: Voxelization retrieved from file
Info in <TGeoNavigator::BuildCache>: --- Maximum geometry depth set to 100
Info in <TGeoManager::CloseGeometry>: 85 nodes/ 59 volume UID's in CAD to Root
Info in <TGeoManager::CloseGeometry>: ----------modeler ready----------
-W- WARNING in CbmModule::ExpandNode()! The volume Coilo1 Has no medium information.

Or better, it is a warning but after the program exits.
Maybe there are some problems with the media?

Subject: Re: New Solenoid and MVD
Posted by Tobias Stockmanns on Fri, 04 Apr 2008 08:05:52 GMT
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Hi Stefano,

it is nice to see that somebody uses the things one does .

I have updated the geometry in SVN and fixed the problem with the solenoid coils.

Ciao,

Tobias

Subject: Re: New Solenoid and MVD
Posted by StefanoSpataro on Fri, 04 Apr 2008 08:28:47 GMT
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Thanks a lot,
but now I have the following:

Material aluminium is not defined
Create Medium aluminium
 -W- WARNING in CbmModule::ExpandNode()! The volume BarrelYoke710 Has no medium information.

(maybe we can talk via skype or evo, so that we can crosscheck all the small fixes).

Subject: Re: New Solenoid and MVD
Posted by StefanoSpataro on Tue, 08 Apr 2008 15:48:24 GMT
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Hi,
I have seen that if I run the MVD macro macro/mvd/runMvdSim.C (I have tried only 100 events) with the old geometry MVD14.root everything runs fine.

If I substitute the geometry namefile with the new one MVD_1.0_Pv-1.0_Sv-1.0.root, under Geant3 the macro runs fine as well.
But, when I try to quit ROOT with the .q command I have the following error (backtraced with gdb):

Toggle Spoiler
```
 **** GTRIGI: IEVENT=     99 IDEVT=     99 Random Seeds =       4357          0
CbmMCApplication::GeneratePrimaries()
-I CbmPrimaryGenerator: 6 primary tracks from vertex (0, 0, 0)
 **** GTRIGI: IEVENT=    100 IDEVT=    100 Random Seeds =       4357          0
CbmMCApplication::GeneratePrimaries()
-I CbmPrimaryGenerator: 6 primary tracks from vertex (0, 0, 0)
RuntimeDb: write container CbmBaseParSet
***  CbmBaseParSet written to ROOT file   version: 1
RuntimeDb: write container PndGeoPassivePar
***  PndGeoPassivePar written to ROOT file   version: 1
 ------------------------------------------------------------------------ --------
--------------  actual containers in runtime database  -------------------------
CbmBaseParSet                          Test class for parameter io
PndGeoPassivePar                        Passive Geometry Parameters
--------------  runs, versions  ------------------------------------------------
run id
  container                            1st-inp    2nd-inp    output
run: 1676608118
  CbmBaseParSet                         1676608118        -1         1
  PndGeoPassivePar                       1676608118        -1         1
--------------  input/output  --------------------------------------------------
first input: none
second input: none
output:
```

OBJ: CbmParRootFile MvdParams.root : 0 at: 0x856a318
Root file I/O MvdParams.root is open
detector I/Os: CbmGenericParIo
RealTime=18.706288 seconds, CpuTime=15.590000 seconds
root [1] .q

Program received signal SIGILL, Illegal instruction.
[Switching to Thread -1222731584 (LWP 8366)]
Error while running hook_stop:
Invalid type combination in ordering comparison.
0x086e0d70 in ?? ()
gdb> bt
#0 0x086e0d70 in ?? ()
#1 0xb7a4962a in TCollection::GarbageCollect () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#2 0xb7a520b7 in TObjArray::Delete () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#3 0xb6e5c39e in TGeoManager::~TGeoManager () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#4 0xb7a4962a in TCollection::GarbageCollect () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#5 0xb7a4ef56 in TList::Delete () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#6 0xb79fd6ac in TROOT::~TROOT () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#7 0xb79fd820 in __tcf_0 () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#8 0xb7244604 in __cxa_finalize () from /lib/libc.so.6
#9 0xb79bcb43 in __do_global_dtors_aux () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#10 0xb7df691c in _fini () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#11 0xb7fa5f4f in _dl_fini () from /lib/ld-linux.so.2
#12 0xb7244320 in exit () from /lib/libc.so.6
#13 0xb7a8afc6 in TUnixSystem::Exit () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#14 0xb749d177 in TRint::Terminate () from /d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#15 0xb79bfd1f in TApplication::ProcessLine () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#16 0xb749e285 in TRint::HandleTermInput () from
/d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#17 0xb749c7c5 in TTermInputHandler::Notify () from
/d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#18 0xb749ecb4 in TTermInputHandler::ReadNotify () from
/d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#19 0xb7a8d5eb in TUnixSystem::CheckDescriptors () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#20 0xb7a8e197 in TUnixSystem::DispatchOneEvent () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#21 0xb7a1811e in TSystem::InnerLoop () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#22 0xb7a1be2c in TSystem::Run () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#23 0xb79bea28 in TApplication::Run () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#24 0xb749e7d5 in TRint::Run () from /d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#25 0x08048e2b in main ()

If I run it under Geant4, I have the following error just at the beginning, in the initialization of the

geometry:

Toggle Spoilerroot [0] .x runMvdSim.C
-I- CbmRun::SetMaterials() Media file used:
/home/spataro/dev/pandaroot/geometry/media_pnd.geo
- I - PndMvdDetector: fListOfSensitives contains:
Disk-Sensor
Barrel-Sensor
StripSensor
SensorActiveArea

============== CbmRunSim: Initialising simulation run ==============
Info in <TGeoManager::TGeoManager>: Geometry CBMGeom, CBM geometry created
-I- CbmGeoMedia Read media
CbmRunSim::Init() create visualisation manager
Loading Geant4 granular libraries ...
Loading VGM libraries ...
Loading libraries ... finished
Info in <TGeoManager::SetTopVolume>: Top volume is cave. Master volume is cave
Info in <TGeoManager::CloseGeometry>: Geometry loaded from file...
Info in <TGeoManager::SetTopVolume>: Top volume is TOP. Master volume is TOP
Info in <TGeoManager::CloseGeometry>: Voxelization retrieved from file
Info in <TGeoNavigator::BuildCache>: --- Maximum geometry depth set to 100
Info in <TGeoManager::CloseGeometry>: 6270 nodes/ 91 volume UID's in CAD to Root
Info in <TGeoManager::CloseGeometry>: ----------modeler ready----------
Material silicon is not defined
Create Medium silicon
Material carbon is not defined
Create Medium carbon
CbmMCApplication::ConstructGeometry() : Now closing the geometry
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::CloseGeometry>: 6331 nodes/ 34 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...

Cannot make material for volume: TOP
Aborting in CreateLogicalVolume()

*** G4Exception: Aborting execution ***

Program received signal SIGABRT, Aborted.
[Switching to Thread -1223378752 (LWP 8353)]
Error while running hook_stop:
Invalid type combination in ordering comparison.
0xffffe410 in __kernel_vsyscall ()
gdb> bt
#0 0xffffe410 in __kernel_vsyscall ()
#1 0xb71a3831 in raise () from /lib/libc.so.6
#2 0xb71a4ec9 in abort () from /lib/libc.so.6
#3 0xb43d68d8 in G4Exception (emessage=0xb1f2d3bc "Aborting in CreateLogicalVolume()")
at G4Exception.cc:50
#4 0xb1f24db4 in TG4RootDetectorConstruction::CreateG4LogicalVolume () from
/d/c0/cbmsoft/mar08/tools/root/lib/libG4root.so
#5 0xb1f256e6 in TG4RootDetectorConstruction::CreateG4PhysicalVolume () from
/d/c0/cbmsoft/mar08/tools/root/lib/libG4root.so
#6 0xb1f25983 in TG4RootDetectorConstruction::CreateG4PhysicalVolumes () from
/d/c0/cbmsoft/mar08/tools/root/lib/libG4root.so
#7 0xb1f25a86 in TG4RootDetectorConstruction::Construct () from
/d/c0/cbmsoft/mar08/tools/root/lib/libG4root.so
#8 0xb1f23a19 in TG4RootDetectorConstruction::Initialize () from
/d/c0/cbmsoft/mar08/tools/root/lib/libG4root.so
#9 0xb1f26eef in TG4RootNavMgr::Initialize () from
/d/c0/cbmsoft/mar08/tools/root/lib/libG4root.so
#10 0xb1ead93d in TG4RunManager::ConfigureRunManager (this=0x866fe28) at
TG4RunManager.cxx:221
#11 0xb1eaf170 in TG4RunManager (this=0x866fe28, runConfiguration=0x832d808) at
TG4RunManager.cxx:147
#12 0xb1eb23c5 in TGeant4 (this=0x866ae78, name=0x8523eb4 "TGeant4", title=0x8656444
"The Geant4 Monte Carlo", configuration=0x832d808) at TGeant4.cxx:142
#13 0xb1edbfb7 in G__geant4Cint_141_0_2 (result7=0xbf7c928c, funcname=0x8656c68
"\001", libp=0xbf7c57c4, hash=0x0) at
/.automount/iago.physik.uni-giessen.de/root/local/cbmsoft/fairsoft/trans
port/geant4_vmc.r331/source/../tmp/tgt_linux/geant4Cint.cxx:1223
#14 0xb745bb1a in Cint::G__ExceptionWrapper () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#15 0xb7533101 in G__call_cppfunc () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#16 0xb750defb in G__interpret_func () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#17 0xb74fd5e0 in G__getfunction () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#18 0xb752c7bc in G__new_operator () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#19 0xb74e17fe in G__getexpr () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#20 0xb74d0b7e in G__define_var () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#21 0xb7559820 in G__exec_statement () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#22 0xb750ed29 in G__interpret_func () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#23 0xb74fd63f in G__getfunction () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#24 0xb74dc512 in G__getitem () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#25 0xb74e2190 in G__getexpr () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18

#26 0xb755aa59 in G__exec_statement () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#27 0xb74c8fb6 in G__exec_tempfile_core () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#28 0xb74c9236 in G__exec_tempfile_fp () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#29 0xb75645fb in G__process_cmd () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#30 0xb79c2636 in TCint::ProcessLine () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#31 0xb4ef570d in CbmMCApplication::InitMC (this=0x8560570, setup=0x863dc08
"/home/spataro/dev/pandaroot/gconfig/g4Config.C") at
/home/spataro/dev/pandaroot/base/CbmMCApplication.cxx:168
#32 0xb4f0852c in CbmRunSim::Init (this=0x8502fe8) at
/home/spataro/dev/pandaroot/base/CbmRunSim.cxx:145
#33 0xb4f4313d in G__CbmDict_531_0_4 (result7=0xbf80195c, funcname=0x8505210 "\001",
libp=0xbf7fde94, hash=0x0) at /home/spataro/dev/cmar08/base/CbmDict.cxx:9361
#34 0xb745bb1a in Cint::G__ExceptionWrapper () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#35 0xb7533101 in G__call_cppfunc () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#36 0xb750dc7c in G__interpret_func () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#37 0xb74fd5e0 in G__getfunction () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#38 0xb75c8d88 in G__getstructmem () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#39 0xb75bec4f in G__getvariable () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#40 0xb74dc47d in G__getitem () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#41 0xb74e2190 in G__getexpr () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#42 0xb755aa59 in G__exec_statement () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#43 0xb74c8fb6 in G__exec_tempfile_core () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#44 0xb74c9216 in G__exec_tempfile () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#45 0xb756a4ff in G__process_cmd () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#46 0xb79c2636 in TCint::ProcessLine () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#47 0xb79bd606 in TCint::ProcessLineSynch () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#48 0xb7924757 in TApplication::ExecuteFile () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#49 0xb7924c14 in TApplication::ProcessFile () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#50 0xb7922156 in TApplication::ProcessLine () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#51 0xb7400285 in TRint::HandleTermInput () from
/d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#52 0xb73fe7c5 in TTermInputHandler::Notify () from
/d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#53 0xb7400cb4 in TTermInputHandler::ReadNotify () from
/d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#54 0xb79ef5eb in TUnixSystem::CheckDescriptors () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#55 0xb79f0197 in TUnixSystem::DispatchOneEvent () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#56 0xb797a11e in TSystem::InnerLoop () from

/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#57 0xb797de2c in TSystem::Run () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#58 0xb7920a28 in TApplication::Run () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#59 0xb74007d5 in TRint::Run () from /d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#60 0x08048e2b in main ()

So maybe something is wrong somewhere.

Subject: Re: New Solenoid and MVD
Posted by Tobias Stockmanns on Wed, 09 Apr 2008 06:15:46 GMT
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Hi Stefano and Ralf,

I have updated the geometry of the MVD in the latest revision. The new root file does not contain a GeoManager as it is in the old root file. Maybe this is the reason for the strange behaviour of Geant4?

Ciao,

Tobias

Subject: Re: New Solenoid and MVD
Posted by StefanoSpataro on Wed, 09 Apr 2008 08:18:03 GMT
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Hi Tobias,
unfortunately now I have errors even with Geant3 in the event loop, after the first event:

Toggle Spoiler Cross section calculation concluded successfully
 -I- CbmMCApplication:: Monte carlo Engine Initialisation with TGeant3TGeo
 **** GTRIGI: IEVENT= 1 IDEVT= 1 Random Seeds = 4357 0
CbmMCApplication::GeneratePrimaries()
-I CbmPrimaryGenerator: 6 primary tracks from vertex (0, 0, 0)

 *** Break *** segmentation violation
Using host libthread_db library "/lib/libthread_db.so.1".
Attaching to program: /proc/22362/exe, process 22362
`system-supplied DSO at 0xffffe000' has disappeared; keeping its symbols.
[Thread debugging using libthread_db enabled]
[New Thread -1223345984 (LWP 22362)]
0xffffe410 in __kernel_vsyscall ()
#1 0xb720da03 in waitpid () from /lib/libc.so.6
#2 0xb71b8569 in strtold_l () from /lib/libc.so.6
#3 0xb72ae36d in system () from /lib/libpthread.so.0
#4 0xb79f2dad in TUnixSystem::Exec () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18

#5 0xb79f7a07 in TUnixSystem::StackTrace () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#6 0xb79f6a0f in TUnixSystem::DispatchSignals () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#7 0xb79f6acd in SigHandler () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#8 0xb79f0390 in sighandler () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#9 <signal handler called>
#10 0xb6e25eb9 in TGeoVoxelFinder::GetValidExtra () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#11 0xb6e2bece in TGeoVoxelFinder::GetNextCandidates () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#12 0xb6e26f4a in TGeoVoxelFinder::GetNextVoxel () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#13 0xb6e00a7c in TGeoShapeAssembly::DistFromOutside () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#14 0xb6e00c3e in TGeoShapeAssembly::DistFromOutside () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#15 0xb6e009a5 in TGeoShapeAssembly::DistFromOutside () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#16 0xb6dd9adb in TGeoNavigator::FindNextDaughterBoundary () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#17 0xb6ddd5e0 in TGeoNavigator::FindNextBoundary () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#18 0xb6dbe759 in TGeoManager::FindNextBoundary () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#19 0xb2f0ae26 in gtnextTGeo () at TGeant3TGeo.cxx:2285
#20 0xb2efe45a in gtnext_ () at TGeant3.cxx:6581
#21 0xb2da79af in g3thadr_ () at gthadr.F:258
#22 0xb2db325d in g3track_ () at gtrack.F:253
#23 0xb2f0fca7 in gutrak_ () at TGeant3gu.cxx:555
#24 0xb2db423a in gtreveroot_ () at gtreveroot.F:168
#25 0xb2f0fc77 in gutrev_ () at TGeant3gu.cxx:575
#26 0xb2ca38ac in g3trig_ () at gtrig.F:62
#27 0xb2f01cd7 in TGeant3::Gtrig (this=0x85d6088) at TGeant3.cxx:3153
#28 0xb2efe2bb in TGeant3::ProcessEvent (this=0x85d6088) at TGeant3.cxx:6256
#29 0xb2f02fc6 in TGeant3::ProcessRun (this=0x85d6088, nevent=100) at TGeant3.cxx:6226
#30 0xb4eff69b in CbmMCApplication::RunMC (this=0x855bb70, nofEvents=100) at
/home/spataro/dev/pandaroot/base/CbmMCApplication.cxx:187
#31 0xb4f11e4b in CbmRunSim::Run (this=0x85023e8, NStart=100, NStop=0) at
/home/spataro/dev/pandaroot/base/CbmRunSim.cxx:172
#32 0xb4f50917 in G__CbmDict_531_0_5 (result7=0xbfcd414c, funcname=0x8506e28 "\001",
libp=0xbfcd0684, hash=0) at /home/spataro/dev/cmar08/base/CbmDict.cxx:9374
#33 0xb7462b1a in Cint::G__ExceptionWrapper () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#34 0xb753a101 in G__call_cppfunc () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#35 0xb7514c7c in G__interpret_func () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#36 0xb75045e0 in G__getfunction () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#37 0xb75cfd88 in G__getstructmem () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#38 0xb75c5c4f in G__getvariable () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#39 0xb74e347d in G__getitem () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#40 0xb74e9190 in G__getexpr () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#41 0xb7561a59 in G__exec_statement () from

/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#42 0xb74cffb6 in G__exec_tempfile_core () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#43 0xb74d0216 in G__exec_tempfile () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#44 0xb75714ff in G__process_cmd () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#45 0xb79c9636 in TCint::ProcessLine () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#46 0xb79c4606 in TCint::ProcessLineSynch () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#47 0xb792b757 in TApplication::ExecuteFile () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#48 0xb792bc14 in TApplication::ProcessFile () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#49 0xb7929156 in TApplication::ProcessLine () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#50 0xb7407635 in TRint::Run () from /d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#51 0x08048e2b in main ()
Root >

In Geant4 the geometry initialization works, but I have the same G3 error inside the event loop after the first event:

Toggle Spoiler
Run 0 start.
CbmMCApplication::GeneratePrimaries()
-I CbmPrimaryGenerator: 6 primary tracks from vertex (0, 0, 0)
>>> Event 0

Program received signal SIGSEGV, Segmentation fault.
[Switching to Thread -1222772544 (LWP 22395)]
Error while running hook_stop:
Invalid type combination in ordering comparison.
0xb6eb1eb9 in TGeoVoxelFinder::GetValidExtra () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
gdb> bt
#0 0xb6eb1eb9 in TGeoVoxelFinder::GetValidExtra () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#1 0xb6eb7ece in TGeoVoxelFinder::GetNextCandidates () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#2 0xb6eb2f4a in TGeoVoxelFinder::GetNextVoxel () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#3 0xb6e8ca7c in TGeoShapeAssembly::DistFromOutside () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#4 0xb6e8cc3e in TGeoShapeAssembly::DistFromOutside () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#5 0xb6e8c9a5 in TGeoShapeAssembly::DistFromOutside () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#6 0xb6e65adb in TGeoNavigator::FindNextDaughterBoundary () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#7 0xb6e695e0 in TGeoNavigator::FindNextBoundary () from
/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#8 0xb6e4a759 in TGeoManager::FindNextBoundary () from

/d/c0/cbmsoft/mar08/tools/root/lib/libGeom.so
#9 0xb1fbaf9f in TG4RootNavigator::ComputeStep () from
/d/c0/cbmsoft/mar08/tools/root/lib/libG4root.so
#10 0xb42224b8 in G4PropagatorInField::IntersectChord (this=0x9b9eed0,
StartPointA=@0xbf97c2c0, EndPointB=@0xbf97c2a8, NewSafety=@0xbf97c270,
LinearStepLength=@0xbf97c1e8, IntersectionPoint=@0xbf97c1f0) at
G4PropagatorInField.cc:1159
#11 0xb4225cc7 in G4PropagatorInField::ComputeStep (this=0x9b9eed0,
pFieldTrack=@0xbf97c428, CurrentProposedStepLength=123.90114966357788,
currentSafety=@0xbf97c6d8, pPhysVol=0x9bb2508) at G4PropagatorInField.cc:274
#12 0xb3de1acb in G4Transportation::AlongStepGetPhysicalInteractionLength
(this=0x9d54890, track=@0xa511570, currentMinimumStep=123.90114966357788,
currentSafety=@0xbf97c6d8, selection=0x9b9f824) at G4Transportation.cc:303
#13 0xb286db4b in G4VProcess::AlongStepGPIL (this=0x9d54890, track=@0xa511570,
previousStepSize=8.4302939110103079, currentMinimumStep=123.90114966357788,
proposedSafety=@0xbf97c6d8, selection=0x9b9f824) at G4VProcess.hh:425
#14 0xb286c5c1 in G4SteppingManager::DefinePhysicalStepLength (this=0x9b9f718) at
G4SteppingManager2.cc:223
#15 0xb2868bd6 in G4SteppingManager::Stepping (this=0x9b9f718) at
G4SteppingManager.cc:181
#16 0xb28772b5 in G4TrackingManager::ProcessOneTrack (this=0x9b9f6f0,
apValueG4Track=0xa511570) at G4TrackingManager.cc:126
#17 0xb274c2ec in G4EventManager::DoProcessing (this=0x9b9f6a8, anEvent=0x9bab6e0) at
G4EventManager.cc:185
#18 0xb274ca80 in G4EventManager::ProcessOneEvent (this=0x9b9f6a8,
anEvent=0x9bab6e0) at G4EventManager.cc:335
#19 0xb26f0103 in G4RunManager::DoEventLoop (this=0x9b9f5f8, n_event=0x64,
macroFile=0x0, n_select=0xffffffff) at G4RunManager.cc:235
#20 0xb26eea8a in G4RunManager::BeamOn (this=0x9b9f5f8, n_event=0x64, macroFile=0x0,
n_select=0xffffffff) at G4RunManager.cc:140
#21 0xb1f406b6 in TG4RunManager::ProcessRun (this=0x866f478, nofEvents=0x64) at
TG4RunManager.cxx:384
#22 0xb1f449d7 in TGeant4::ProcessRun (this=0x866a510, nofEvents=0x64) at
TGeant4.cxx:1140
#23 0xb4f8b69b in CbmMCApplication::RunMC (this=0x855fc18, nofEvents=0x64) at
/home/spataro/dev/pandaroot/base/CbmMCApplication.cxx:187
#24 0xb4f9de4b in CbmRunSim::Run (this=0x8502690, NStart=0x64, NStop=0x0) at
/home/spataro/dev/pandaroot/base/CbmRunSim.cxx:172
#25 0xb4fdc917 in G__CbmDict_531_0_5 (result7=0xbf98aaec, funcname=0x85070d0 "\001",
libp=0xbf987024, hash=0x0) at /home/spataro/dev/cmar08/base/CbmDict.cxx:9374
#26 0xb74eeb1a in Cint::G__ExceptionWrapper () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#27 0xb75c6101 in G__call_cppfunc () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#28 0xb75a0c7c in G__interpret_func () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#29 0xb75905e0 in G__getfunction () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#30 0xb765bd88 in G__getstructmem () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#31 0xb7651c4f in G__getvariable () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#32 0xb756f47d in G__getitem () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#33 0xb7575190 in G__getexpr () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#34 0xb75eda59 in G__exec_statement () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#35 0xb755bfb6 in G__exec_tempfile_core () from

/d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#36 0xb755c216 in G__exec_tempfile () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#37 0xb75fd4ff in G__process_cmd () from /d/c0/cbmsoft/mar08/tools/root/lib/libCint.so.5.18
#38 0xb7a55636 in TCint::ProcessLine () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#39 0xb7a50606 in TCint::ProcessLineSynch () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#40 0xb79b7757 in TApplication::ExecuteFile () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#41 0xb79b7c14 in TApplication::ProcessFile () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#42 0xb79b5156 in TApplication::ProcessLine () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#43 0xb7493285 in TRint::HandleTermInput () from
/d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#44 0xb74917c5 in TTermInputHandler::Notify () from
/d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#45 0xb7493cb4 in TTermInputHandler::ReadNotify () from
/d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#46 0xb7a825eb in TUnixSystem::CheckDescriptors () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#47 0xb7a83197 in TUnixSystem::DispatchOneEvent () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#48 0xb7a0d11e in TSystem::InnerLoop () from
/d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#49 0xb7a10e2c in TSystem::Run () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#50 0xb79b3a28 in TApplication::Run () from /d/c0/cbmsoft/mar08/tools/root/lib/libCore.so.5.18
#51 0xb74937d5 in TRint::Run () from /d/c0/cbmsoft/mar08/tools/root/lib/libRint.so.5.18
#52 0x08048e2b in main ()

So there is still something wrong.

Subject: Re: New Solenoid and MVD
Posted by Ralf Kliemt on Wed, 09 Apr 2008 12:28:03 GMT
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Hi Tobias and Stefano,

I cut out the volumes by hand from the file with the TGeoManager inside and I get the same errors as Stefano.
Somehow this doesn't work like this.
I noticed that there are many TDirectories in the file with the GeoManager, like two directories with materials and one even with transformations. Could this lead to confusions? Maybe to overlaps?

Ralf.

Subject: Re: New Solenoid and MVD
Posted by Tobias Stockmanns on Thu, 10 Apr 2008 14:23:55 GMT
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Dear pandaRooters,

I have fixed the geometry file for the MVD. It runs now (at my system) with the standard MVD simulation macro. The name of the Geometry is MVD_v1.0.root.

Cheers,

Tobias

Subject: Re: New Solenoid and MVD
Posted by StefanoSpataro on Thu, 10 Apr 2008 14:35:26 GMT
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Hi Tobias,
thanks for the fix. Now it can be downloaded with both G3 and G4, without crashes.

P.S. What was the problem?

Subject: Re: New Solenoid and MVD
Posted by Tobias Stockmanns on Thu, 10 Apr 2008 14:56:27 GMT
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I have used a geometry which could not be translated. This should not create a problem but nonetheless it did. So I just deleted these structures out of the STEP file. I will now try to understand, why they caused this crash.

Ciao,

Tobias

Subject: Re: New Solenoid and MVD
Posted by StefanoSpataro on Fri, 11 Apr 2008 10:16:07 GMT
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Hi,
if you want to use the last MVD geometry for the data challenge, please write "yes" here as soon as possible.

Subject: Re: New Solenoid and MVD
Posted by Tobias Stockmanns on Fri, 11 Apr 2008 14:16:40 GMT

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Yes

Subject: Re: New Solenoid and MVD
Posted by Ralf Kliemt on Fri, 11 Apr 2008 14:22:08 GMT
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Please be careful about the digitization. It should work on the updated geometry, but one new feature are the trapezoid strip sensors in the forward disks.
Using the parameters as they are now it should work, but I have not checked it yet.

If you plan to only run the Geant simulation without digi&reco, then you'll get a definate "yes" fom me, too.

Ralf.

Subject: Re: New Solenoid and MVD
Posted by StefanoSpataro on Fri, 11 Apr 2008 14:31:51 GMT
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We plan to run complete reco, so it is better to use for the moment the old stuff.
We do not have the time to recheck everything right now.

Subject: Re: New Solenoid and MVD
Posted by Tobias Stockmanns on Fri, 11 Apr 2008 14:32:14 GMT
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Ralf is right, for the digitization and reconstruction I have to modify the hardcoded pixel dimensions and chip sizes.

This will take till Monday because I am today not in the institute.
The program should not crash but the results for the digitization have to be fixed afterwards if this is not done.

Another fix which is necessary is to set the right name for the sensitive volumes in PndMvdDetector. There one has to add "StripActive" and "PixelActive" to the list of sensitive volumes in the constructor. Ralf, can you fix this?

Cheers and a nice weekend

Tobias

Subject: Re: New Solenoid and MVD
Posted by Ralf Kliemt on Fri, 11 Apr 2008 15:19:08 GMT
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Sensor names fixed.

Ralf.

Subject: New Solenoid in svn
Posted by StefanoSpataro on Mon, 05 May 2008 09:50:56 GMT
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Dear all,
after some debugging done by Tobias (I was his "Guinea pig"...), now the geometry of the solenoid is working, the file is FullSolenoid.root.

Considering that this is just the solenoid part, I have added inside the geometry directory a file dipole.geo with only the dipole part.

In order to use these files you have to substitute your "magnet" part in your simulation macro with the following code lines:

```
CbmModule *Magnet= new PndMagnet("MAGNET");
Magnet->SetGeometryFileName("FullSolenoid.root");
fRun->AddModule(Magnet);

CbmModule *Dipole= new PndMagnet("MAGNET");
Dipole->SetGeometryFileName("dipole.geo");
fRun->AddModule(Dipole);
```

And this will be the result, with all the detectors:

Toggle Spoiler

As you can see there is an overlap between the old target pipe and the new solenoid, in order to solve this we need drawings of the new pipe, but at the moment this is not of fundamental importance.

Thanks to Tobias for the time he spent into this geometry conversion.

File Attachments

1) FullSolenoid.png, downloaded 1427 times

