
Subject: sigfault during EMC reco

Posted by [Dmitry Morozov](#) on Tue, 19 Feb 2008 09:12:30 GMT

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Dear EMC experts,

I have a segmentation violation when I try to reconstruct some clusters using reco_emc.C macro.

Here is exactly that I do:

I tried this on two machines with SL3 and SL4 - i see the same on both.

1) sim_emc.C to simulate some events with 1 GeV gammas, geometry file:

"emc_module1234.dat"(tried with others - same result) , geant 3 (with geant4 - the same).

Output: sim_emc.root - with no problems

2) hit_emc.C to get hits from points.

Output: hit_emc.root - with no problems

3) digi_emc.C to digitize the hits.

Output: digi_emc.root - with no problems

4) reco_emc.C to reconstruct clusters...

And here i get the following output:

```
[vfreez] /home/freez/fairroot/pandaroot/macro/emc > root reco_emc.C
*****
*                               *
*      W E L C O M E   t o   R O O T   *
*                               *
* Version  5.17/05  16 October 2007  *
*                               *
* You are welcome to visit our Web site  *
*      http://root.cern.ch           *
*                               *
*****
```

ROOT 5.17/05 (trunk@20369, De 05 2007, 06:02:00 on linux)

CINT/ROOT C/C++ Interpreter version 5.16.27, Oct 25, 2007

Type ? for help. Commands must be C++ statements.

Enclose multiple statements between {}.

root [0]

Processing reco_emc.C...

PSaid instance created... access via gSaid->f()

- RTDB container factory CbmBaseContFact

- RTDB container factory PndFieldContFact

- RTDB container factory PndPassiveContFact

- RTDB container factory PndEmcContFact

-I- CbmRunAna: Opening Input file: sim_emc.root

-I- CbmRunAna Input file: sim_emc.root is connected to friend: digi_emc.root

fRun->Init()

-I- CbmRunAna::Init :

sim_emc.root is connected with: digi_emc.root

Info in <TGeoManager::CloseGeometry>: Geometry loaded from file...

Info in <TGeoManager::SetTopVolume>: Top volume is cave. Master volume is cave

Info in <TGeoManager::Voxelize>: Voxelizing...

Info in <TGeoNavigator::BuildCache>: --- Maximum geometry depth set to 100

Info in <TGeoManager::CloseGeometry>: 17324 nodes/ 2181 volume UID's in CBM geometry

Info in <TGeoManager::CloseGeometry>: -----modeler ready-----

PndFieldCreator::SetParm()

create PndFieldPar container PndFieldPar

create PndFieldPar container PndSolenoidPar

create PndFieldPar container PndDipolePar

create PndFieldPar container PndTransPar

create PndFieldPar container PndConstPar

create PndFieldPar container PndMultiFieldPar

-I container name PndEmcDigiPar

-I container name PndEmcRecoPar

initialisation for run id 1459998032

Container CbmBaseParSet initialized from ROOT file.

Error in <PndFieldPar::init()>: PndFieldPar not initialized

Error in <PndSolenoidPar::init()>: PndSolenoidPar not initialized

Error in <PndDipolePar::init()>: PndDipolePar not initialized

Error in <PndTransPar::init()>: PndTransPar not initialized

Error in <PndConstPar::init()>: PndConstPar not initialized

Container PndMultiFieldPar initialized from ROOT file.

PndEmcDigiPar initialized from Ascii file

PndEmcRecoPar initialized from Ascii file

Error in <CbmRuntimeDb::initContainers()>: Error occurred during initialization

PndFieldCreator::createCbmField()

OBJ: PndTransPar PndTransPar Trans. Field parameter container

OBJ: PndDipolePar PndDipolePar Dipole Field parameter container

OBJ: PndSolenoidPar PndSolenoidPar Solenoid Field parameter container

-I- PndFieldMap: Reading field map from ROOT file

/home/freez/fairroot/pandaroot/input/TransMap.root

-I- PndFieldMap: Reading field map from ROOT file

/home/freez/fairroot/pandaroot/input/DipoleMap.root

-I- PndFieldMap: Reading field map from ROOT file

/home/freez/fairroot/pandaroot/input/SolenoidMap.root

PndEmcMakeCluster::fDigiEnergyTresholdBarrel: 0.003

PndEmcMakeCluster::fDigiEnergyTresholdFWD: 0.003

PndEmcMakeCluster::fDigiEnergyTresholdBWD: 0.003

PndEmcMakeCluster::fDigiEnergyTresholdShashlyk: 0.003

Lilo cluster position method

-I- PndEmcMakeCluster: Initialization successful

DigiList length 11

*** Break *** segmentation violation
 Using host libthread_db library "/lib/tls/libthread_db.so.1".
 Attaching to program: /proc/5178/exe, process 5178
 [Thread debugging using libthread_db enabled]
 [New Thread -1208944960 (LWP 5178)]
 0x0080a7a2 in _dl_sysinfo_int80 () from /lib/ld-linux.so.2
 #1 0x00f4ed23 in __waitpid_nocancel () from /lib/tls/libc.so.6
 #2 0x00ef87a9 in do_system () from /lib/tls/libc.so.6
 #3 0x007f998d in system () from /lib/tls/libpthread.so.0
 #4 0x003138ce in TUnixSystem::Exec (this=0xa0c9138,
 #5 0x00313d82 in TUnixSystem::StackTrace (this=0xa0c9138) at
 unix/src/TUnixSystem.cxx:2012
 #6 0x00311bc7 in TUnixSystem::DispatchSignals (this=0xa0c9138,
 sig=kSigSegmentationViolation)
 at unix/src/TUnixSystem.cxx:974
 #7 0x0030fded in SigHandler (sig=kSigSegmentationViolation) at
 unix/src/TUnixSystem.cxx:340
 #8 0x00316ada in sighandler (sig=11) at unix/src/TUnixSystem.cxx:3226
 #9 <signal handler called>
 #10 0x01694ef6 in PndEmcTwoCoordIndex::itsXCoord (this=0x4006)
 at /home/freez/fairroot/pandaroot/emc/EmcTools/PndEmcTwoCoordIndex.h:56
 #11 0x016ba97a in PndEmcTwoCoordIndex::isNeighbour (this=0xc86b2a8, _tci=0x4006)
 at /home/freez/fairroot/pandaroot/emc/EmcTools/PndEmcTwoCoordIndex.cxx:74
 #12 0x0169478e in PndEmcDigi::isNeighbour (this=0xdcf8818, theDigi=0xdcf87a0)
 at /home/freez/fairroot/pandaroot/emc/EmcData/PndEmcDigi.cxx:203
 #13 0x01697c74 in PndEmcCluster::isInCluster (this=0xddb0b20, theDigi=0xdcf8818)
 at /home/freez/fairroot/pandaroot/emc/EmcData/PndEmcCluster.cxx:313
 #14 0x016c478a in PndEmcMakeCluster::Exec (this=0xa6d7038, opt=0x14a0070 "")
 at /home/freez/fairroot/pandaroot/emc/EmcReco/PndEmcMakeCluster.cxx:166
 #15 0x0029f83e in TTask::ExecuteTasks (this=0xa4adc80, option=0x14a0070 "") at
 base/src/TTask.cxx:298
 #16 0x0029f639 in TTask::ExecuteTask (this=0xa4adc80, option=0x14a0070 "") at
 base/src/TTask.cxx:261
 #17 0x0144129b in CbmRunAna::Run (this=0xa4adbe8, Ev_start=0, Ev_end=100)
 at /home/freez/fairroot/pandaroot/base/CbmRunAna.cxx:157
 #18 0x0147805c in G__CbmDict_530_0_5 (result7=0xbfe9d4b0, funcname=0xa4ac110 "\001",
 libp=0xbfe976d0, hash=0)
 at /home/freez/fairroot/build/base/CbmDict.cxx:9334
 #19 0x00887ce5 in Cint::G__ExceptionWrapper (funcp=0x1477fa8 <G__CbmDict_530_0_5>,
 result7=0xbfe9d4b0,
 funcname=0xa4ac110 "\001", libp=0xbfe976d0, hash=0) at cint/src/Api.cxx:364
 #20 0x00958813 in G__call_cppfunc (result7=0xbfe9d4b0, libp=0xbfe976d0, ifunc=0xa4ac110,
 ifn=0)
 at cint/src/v6_newlink.cxx:512
 #21 0x0093e269 in G__interpret_func (result7=0xbfe9d4b0, funcname=0xbfe9d0b0 "Run",
 libp=0xbfe976d0, hash=309,
 p_ifunc=0xa4ac110, funcmatch=1, memfunc_flag=1) at cint/src/v6_ifunc.cxx:5118
 #22 0x00924f20 in G__getfunction (item=0xbfea0466 "Run(0,nEvents)", known3=0xbfe9f87c,
 memfunc_flag=1)
 at cint/src/v6_func.cxx:2511
 #23 0x009effd3 in G__getstructmem (store_var_type=112, varname=0xbfe9f550 "(",
 membername=0xbfea0466 "Run(0,nEvents)",

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tagname=0xbfe9ddb0 "fRun", known2=0xbfe9f87c, varglobal=0xa7a5a0, objptr=2) at
cint/src/v6_var.cxx:6562
#24 0x009e5a74 in G__getvariable (item=0xbfea0460 "fRun->Run(0,nEvents)",
known2=0xbfe9f87c, varglobal=0xa7a5a0,
varlocal=0x0) at cint/src/v6_var.cxx:5206
#25 0x00918bd9 in G__getitem (item=0xbfea0460 "fRun->Run(0,nEvents)") at
cint/src/v6_expr.cxx:1884
#26 0x00917248 in G__getexpr (expression=0xbfea1b50 "fRun->Run(0,nEvents)") at
cint/src/v6_expr.cxx:1470
#27 0x0097b9c6 in G__exec_function (statement=0xbfea1b50 "fRun->Run(0,nEvents)",
pc=0xbfea1f7c, piout=0xbfea1f74,
plargestep=0xbfea1f64, presult=0xbfea1b20) at cint/src/v6_parse.cxx:598
#28 0x009878df in G__exec_statement (mparen=0xbfea1fe0) at cint/src/v6_parse.cxx:6923
#29 0x008f532c in G__exec_tempfile_core (file=0xbfeaa9e0
"/home/freez/fairroot/pandaroot/macro/emc./reco_emc.C", fp=0x0)
at cint/src/v6_debug.cxx:251
#30 0x008f6890 in G__exec_tempfile (file=0xbfeaa9e0
"/home/freez/fairroot/pandaroot/macro/emc./reco_emc.C")
at cint/src/v6_debug.cxx:798
#31 0x0099259d in G__process_cmd (line=0x72871d "lobal_36", prompt=0xa0cc144 "",
more=0xa0cc13c, err=0xbfeab24c,
rslt=0xbfeab250) at cint/src/v6_pause.cxx:3070
#32 0x002dbfb2 in TCint::ProcessLine (this=0xa0cc120, line=0x72871d "lobal_36",
error=0xbfeadab4) at meta/src/TCint.cxx:289
#33 0x002dc354 in TCint::ProcessLineSynch (this=0xa0cc120, line=0x72871d "lobal_36",
error=0xbfeadab4)
at meta/src/TCint.cxx:354
#34 0x002283f9 in TApplication::ExecuteFile (file=0xbfeab9b3 "reco_emc.C",
error=0xbfeadab4)
at base/src/TApplication.cxx:897
#35 0x00227ca9 in TApplication::ProcessFile (this=0xa0e9d80, file=0xbfeab9b3 "reco_emc.C",
error=0xbfeadab4)
at base/src/TApplication.cxx:787
#36 0x00227be5 in TApplication::ProcessLine (this=0xa0e9d80, line=0xbfeab9b0 ".x
reco_emc.C", sync=false, err=0xbfeadab4)
at base/src/TApplication.cxx:760
#37 0x0079ee40 in TRint::Run (this=0xa0e9d80, retrn=false) at rint/src/TRint.cxx:336
#38 0x08048de3 in main (argc=1, argv=0xbfeadb94) at main/src/rmain.cxx:29
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```

I can see that it crashes at the line

```
#10 0x01694ef6 in PndEmcTwoCoordIndex::itsXCoord (this=0x4006)
at /home/freez/fairroot/pandaroot/emc/EmcTools/PndEmcTwoCoordIndex.h:56
```

but it does not look strange to me....

Could anybody help me this that?

Thank you.
Dmitry.
