
Subject: Problem with Geane (Error in "runRECO2.C")
Posted by [Aleksandra Biegun](#) on Tue, 29 Jan 2008 13:42:37 GMT
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Hello Andrea,

I tried to run example 2 from tutorial (after copied macra to
pandaroot/macro/geane/ directory and geometry files to pandaroot/geometry directory) and

runMC2.C and runDIGI2.C work fine,
but when I run runRECO2.C it works only for a while (like showed below)

```
...
1) parabolic parameters:
a = 0.00265293
b = -0.089093
c = 0.243596
digicounter: 18
n of hits: 29
MINUIT FIT 29
*****MINUIT*****
D SEED: 0.373852
PHI SEED: -0.381772
R SEED: 163.195
*****
PARAMETER DEFINITIONS:
NO. NAME      VALUE    STEP SIZE  LIMITS
 1 xc      1.51793e+02 1.00000e-01 -3.00000e+03
3.00000e+03
 2 yc      -6.09399e+01 1.00000e-01 -3.00000e+03
3.00000e+03
 3 r       1.63195e+02 1.00000e-01  0.00000e+00
3.00000e+03
xcstart: 151.793 ycstart: -60.9399 rstart: 163.195
xc: 188.181
yc: -68.2068
R: 200.281
FIT 4b *****
hitcounter: 29
```

and then I have such error:

```
1) parabolic parameters:
a = 0.00266855
b = -0.0616751
c = 0.00060633
digicounter: 15
```

```
*** Break *** floating point exception
Using host libthread_db library "/lib/libthread_db.so.1".
Attaching to program: /proc/10562/exe, process 10562
```

[Thread debugging using libthread_db enabled]
[New Thread -1225824064 (LWP 10562)]
0xffffe410 in __kernel_vsyscall ()
...

Do you know why?

Thanks in advance!

Kind regards,
Ola.

Subject: Re: Problem with Geane (Error in "runRECO2.C")
Posted by [Pablo Genova](#) on Tue, 29 Jan 2008 14:34:22 GMT
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Dear Alexandra,

it's difficult to say why you see that error, for instance I did not have it on my version!

It looks like an error inside the prefit algorithm: i. e. PndSttHelixTrackFitter class inside pandaroot/stt directory.

Searching for "1) parabolic parameters" ... I suspect that maybe the following :

```
if (determ != 0) {  
    matrixb.Invert();  
}
```

(line 971 of PndSttHelixTrackFitter.cxx) should be changed into

```
if (determ>0.00001) {bla bla;}
```

Or other similar errors that on our local version never showed up (division by 0? attempting to retrieve information from an empty pointer?), but it's difficult to find out the error without a code which shows the error itself!!

ciao, Pablo

Subject: Re: Problem with Geane (Error in "runRECO2.C")

Posted by [Ralf Kliemt](#) on Tue, 29 Jan 2008 14:34:52 GMT

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Hi Ola,

As general statement I'd suggest to see what the debugger says:

```
shell> gdb --args root.exe runRECO2.C
```

```
[gdb] run
```

```
... error & something
```

```
[gdb] bt
```

```
(backtracing of the segfault)
```

```
[gdb] q
```

I hope this helps...

Ralf.

Edit:

While trying a bit I had this bug in the runDIGI2.C:

Quote:...

-I- PndSttHitProducerIdeal: 83 SttPoints, 83 Hits created.

Program received signal SIGFPE, Arithmetic exception.

[Switching to Thread -1225852128 (LWP 32575)]

0xb6df94e7 in TStreamerInfo::WriteBufferAux<char**> (this=0x8beeac8, b=@0xa48ba50, arr=@0xbf878540, first=6, narr=83, eoffset=0, arrayMode=1)

at io/src/TStreamerInfoWriteBuffer.cxx:188

188 case TStreamerInfo::kDouble + kHaveLoop: WriteBasicTypeLoop(Double_t);
continue;

```
(gdb) bt
```

#0 0xb6df94e7 in TStreamerInfo::WriteBufferAux<char**> (this=0x8beeac8, b=@0xa48ba50, arr=@0xbf878540, first=6, narr=83, eoffset=0, arrayMode=1)

at io/src/TStreamerInfoWriteBuffer.cxx:188

#1 0xb6df2357 in TStreamerInfo::WriteBufferClones (this=0x8beeac8, b=@0xa48ba50, clones=0x8bc1f20, nc=83, first=6, eoffset=0) at io/src/TStreamerInfoWriteBuffer.cxx:788

#2 0xb5d8d908 in TBranchElement::FillLeaves (this=0xa49e288, b=@0xa48ba50) at tree/src/TBranchElement.cxx:1277

#3 0xb5d82b47 in TBranch::Fill (this=0xa49e288) at tree/src/TBranch.cxx:769

#4 0xb5d8dbb5 in TBranchElement::Fill (this=0xa49e288) at tree/src/TBranchElement.cxx:1043

#5 0xb5d8dd19 in TBranchElement::Fill (this=0x8bed3a0) at tree/src/TBranchElement.cxx:1068

#6 0xb5dd2d35 in TTree::Fill (this=0x8bcb08) at tree/src/TTree.cxx:3186

#7 0xb307dce4 in CbmRootManager::Fill (this=0x84b3f50) at /home/ralfk/Pandaroot/pandaroot/base/CbmRootManager.cxx:344

#8 0xb3084b95 in CbmRunAna::Run (this=0x84b3e00, Ev_start=0, Ev_end=1000) at /home/ralfk/Pandaroot/pandaroot/base/CbmRunAna.cxx:158

#9 0xb30c59d8 in G__CbmDict_530_0_5 (result7=0xbf888d8c, funcname=0x84b2340 "\001",

```
libp=0xbf8829e8, hash=0) at /home/ralfk/Pandaroot/build/base/CbmDict.cxx:9334
#10 0xb724b55b in Cint::G__ExceptionWrapper (funcp=0xb30c58ee
<G__CbmDict_530_0_5>, result7=0xbf888d8c, funcname=0x84b2340 "\001",
libp=0xbf8829e8, hash=0)
    at cint/src/Api.cxx:364
```

... etc.

I got around by using PndSttHitProducerReal instead of the ideal one. But then there was no bug with the runRECO2.C.

Ciao again, Ralf.

Subject: Re: Problem with Geane (Error in "runRECO2.C")
Posted by [Aleksandra Biegun](#) on Tue, 29 Jan 2008 15:32:28 GMT
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Hi Pablo, hi Ralf,

thank you for the answer.

Pablo, I changed what you suggested, but it is not this case.
When I use debugger (as Ralf suggested) I got info that the problem
is, indeed, in pandaroot/stt/PndSttHelixTrackFitter.cxx program, but connected with this $xc = xc - s$;
expression (line 1061).

1) parabolic parameters:

a = 0.00266855

b = -0.0616751

c = 0.00060633

digicounter: 15

Program received signal SIGFPE, Arithmetic exception.
[Switching to Thread -1226143552 (LWP 15181)]
0xb2b0f528 in PndSttHelixTrackFitter::Fit4b (this=0x8685428,
pTrack=0x8fe0bf0, pidHypo=2) at
/home/biegun/PANDA/fair/pandaroot/stt/PndSttHelixTrackFitter.cxx:1065
1061 $xc = xc - s$;

Could you, Pablo, look at it, please?

Thanks!

Greetings,
Ola.

Dear Ralf and Alexandra,

from the debugger's hints I see 2 critical points

Point 1

in line 1020, where there is

```
// center and radius
Double_t xcrot, ycrot, xc, yc, epsilon, R;
ycrot = 1/(2*a);
xcrot = -b/(2*a);
epsilon = -c*pow((1+(b*b)), -3/2);
R = epsilon + sqrt((xcrot*xcrot)+(ycrot*ycrot))
```

try to protect adding a

```
if(fabs(a)<0.000001) return 0; //
```

before ycrot calculation

Point2

in line 1070 there is:

```
Double_t d;
d = ((xc + yc) - R*(TMath::Cos(phi) + TMath::Sin(phi)))/(TMath::Cos(phi) + TMath::Sin(phi))
```

it might be for some reason that (TMath::Cos(phi) + TMath::Sin(phi)) goes to 0.

try to protect with a

```
Double_t d=-999;
if (fabs(TMath::Cos(phi) + TMath::Sin(phi))>0.00001) d= bla bla;
```

I guess - and hope! - that the second case is the right one.

I cannot try here since I do not see your seg fault, but let me know it I got the case!!!

good luck, Pablo

Subject: Re: Problem with Geane (Error in "runRECO2.C")
Posted by [Aleksandra Biegun](#) on Tue, 29 Jan 2008 16:27:40 GMT
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Hi Pablo,

for me, your suggestions did not help .
I have a problem still in the same place:

```
Program received signal SIGFPE, Arithmetic exception.  
[Switching to Thread -1226225472 (LWP 16062)]  
0xb2afb54e in PndSttHelixTrackFitter::Fit4b (this=0x86854b0, pTrack=0x8fe0c60, pidHypo=2)  
at /home/biegun/PANDA/fair/pandaroot/stt/PndSttHelixTrackFitter.cxx:1062  
1062      xc = xc - s;
```

Ciao,
Ola.

Subject: Re: Problem with Geane (Error in "runRECO2.C")
Posted by [Ralf Kliemt](#) on Tue, 29 Jan 2008 16:36:56 GMT
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Probably this line makes no sense after all since xc is set below without being used:

```
// translation  
xc = xc - s;  
// rotation  
xc = TMath::Cos(alpha)*xcrot - TMath::Sin(alpha)*ycrot;
```

Additionally xc is not set before, this should be avoided. So this might be the cause of the segfault and maybe it depends on the system how uninitialized variables are treated.

I found this on line 1061 and 636, too.

Ralf.

Subject: Re: Problem with Geane (Error in "runRECO2.C")
Posted by [Aleksandra Biegun](#) on Tue, 29 Jan 2008 17:48:49 GMT
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Hi Pablo,

as Ralf noticed, maybe this expresion $xc = xc - s$; is not really important and gives an error, so I commented 2 lines where $xc = xc - s$; was in the pandaroot/stt/PndSttHelixTrackFitter.cxx and the runRECO2.C macro finally works and finished succesfully .

Could you look at it if it is correct?

Thanks,
Ola.

ps. now, time for next macros

Subject: Re: Problem with Geane (Error in "runRECO2.C")
Posted by [asanchez](#) on Tue, 29 Jan 2008 18:07:37 GMT
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Dear Alexandra, Pablo and Ralf,

i can run runRECO2.C without problems
but iwhen i try to run

runGEANE2.C

i get the following error message according to gdb

```
lxi006:geane>gdb --args root.exe runGEANE2.C
GNU gdb 6.3-debian
Copyright 2004 Free Software Foundation, Inc.
GDB is free software, covered by the GNU General Public License, and you are
welcome to change it and/or distribute copies of it under certain conditions.
Type "show copying" to see the conditions.
There is absolutely no warranty for GDB. Type "show warranty" for details.
This GDB was configured as "i386-linux"...Using host libthread_db library
"/lib/libthread_db.so.1".
```

```
(gdb) run
Starting program: /misc/cbmsoft/Debian3.1/201107/tools/root_r20930/bin/root.exe
runGEANE2.C
[Thread debugging using libthread_db enabled]
[New Thread 16384 (LWP 485)]
*****
*                                     *
*   W E L C O M E to 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, Nov 21 2007, 16:19:00 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 runGEANE2.C...

Any idea?

Alicia.

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

```
- RTDB container factory CbmBaseContFact
- RTDB container factory PndFieldContFact
- RTDB container factory PndPassiveContFact
- RTDB container factory PndSttContFact
- RTDB container factory CbmPlaneContFact
-l- CbmRunAna: Opening Input file: ex2.root
-l- CbmRunAna Input file: ex2.root is connected to friend: ex2d.root
-l- CbmRunAna Input file: ex2.root is connected to friend: ex2r.root
Info in <TGeoManager::TGeoManager>: Geometry Geometry, Geane geometry created
Info: TGeoManager::Import : Reading geometry from file: ex2.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>: 15949 nodes/ 2812 volume UID's in CBM geometry
Info in <TGeoManager::CloseGeometry>: -----modeler ready-----
Loading Geant3 libraries ...
Loading Geant3 libraries ... finished
```

MZSTOR. ZEBRA table base TAB(0) in /MZCC/ at adr 283908751 10EC1A8F HEX

MZSTOR. Initialize Store 0 in /GCBANK/

with Store/Table at absolute adrs 284017597 283908751

HEX 10EDC3BD 10EC1A8F

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 for Geane.

Energy straggling area parameter from user set to: 0.9996

Warning in <TGeoManager::CloseGeometry>: geometry already closed

Calculating cross section tables, see gphysi.dat for more information

Cross section calculation concluded successfully

-I- CbmMCApplication:: Monte carlo Engine Initialisation with TGeant3TGeo

I- CbmGeane::CbmGeane: Geane is Initialized

Warning in <TClass::TClass>: no dictionary for class PndBoxGenerator is available

-I- CbmRunAna::Init :

ex2.root is connected with: ex2d.root ex2r.root

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

initialisation for run id 608599272

Program received signal SIGSEGV, Segmentation fault.

[Switching to Thread 16384 (LWP 485)]

0x4049e58f in ROOT::delete_TObjArray () from

/misc/cbmsoft/Debian3.1/development/tools/root/lib/libCore.so.5.17

(gdb) bt

#0 0x4049e58f in ROOT::delete_TObjArray () from

/misc/cbmsoft/Debian3.1/development/tools/root/lib/libCore.so.5.17

#1 0x401f9d82 in TClass::Destructor (this=0x84bd7e0, obj=0x5b0d444c, dtorOnly=false) at meta/src/TClass.cxx:3381

#2 0x41008194 in TBufferFile::ReadFastArray (this=0xa062828, start=0xa10a3f4, cl=0x84bd7e0, n=1, isPreAlloc=false, streamer=0x0) at io/src/TBufferFile.cxx:1453

#3 0x41054f4f in TStreamerInfo::ReadBuffer<char*> (this=0x9f6a2e8, b=@0xa062828, arr=@0xbf899350, first=0, narr=1, eoffset=0, arrayMode=0) at io/src/TStreamerInfoReadBuffer.cxx:911

#4 0x4100cec0 in TBufferFile::ReadClassBuffer (this=0xa062828, cl=0x9f63f10, pointer=0xa10a1f8) at io/src/TBufferFile.cxx:3293

#5 0x45184020 in PndStt::Streamer (this=0xa10a1f8, R(bool)=@0xa062828) at /d/panda02/asanchez/fairroot_newPack/build/stt/PndSttDict.cxx:2169

```

#6 0x401fbe3a in TClass::Streamer (this=0x9f63f10, object=0xa10a1f8, b=@0xa062828) at
meta/src/TClass.cxx:4263
#7 0x4100a4c8 in TBufferFile::ReadObjectAny (this=0xa062828, clCast=0x826f598) at
io/src/TBufferFile.cxx:2241
#8 0x401d804d in TObjArray::Streamer (this=0xa51ad60, b=@0xa062828) at
cont/src/TObjArray.cxx:388
#9 0x401fbe3a in TClass::Streamer (this=0x84bd7e0, object=0xa51ad60, b=@0xa062828) at
meta/src/TClass.cxx:4263
#10 0x4100a4c8 in TBufferFile::ReadObjectAny (this=0xa062828, clCast=0x84bd7e0) at
io/src/TBufferFile.cxx:2241
#11 0x41050347 in operator>>>TObjArray> (buf=@0xa062828, obj=@0xa51acf4) at
TBuffer.h:347
#12 0x44f51d67 in CbmBaseParSet::Streamer (this=0xa51aca8, R(bool)=@0xa062828)
at /d/panda02/asanchez/fairroot_newPack/build/base/CbmDict.cxx:1919
#13 0x4103fd0d in TKey::Read (this=0x9f57708, obj=0xa51aca8) at io/src/TKey.cxx:943
#14 0x44e9fb50 in CbmDetParRootFileIo::read (this=0x9f57208, pPar=0xa51aca8)
at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmDetParRootFile
Io.cxx:53
#15 0x44ea321a in CbmGenericParRootFileIo::init (this=0x9f57208, pPar=0xa51aca8)
at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmGenericParRoot
FileIo.cxx:25
#16 0x44ea3cfe in CbmParGenericSet::init (this=0xa51aca8, inp=0x9f56ca0)
at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmParGenericSet.cxx:37
#17 0x44ea5abb in CbmParSet::init (this=0xa51aca8)
at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmParSet.cxx:43
#18 0x44eae710 in CbmRuntimeDb::initContainers (this=0x848f590)
at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmRuntimeDb.cxx: 393
#19 0x44eae25f in CbmRuntimeDb::initContainers (this=0x848f590, runId=608599272,
refId=-1, fileName=0x44fb2ea0 "")
at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmRuntimeDb.cxx: 344
#20 0x44f43684 in CbmRunAna::Init (this=0x84b2b30) at
/d/panda02/asanchez/fairroot_newPack/pandaroot/base/CbmRunAna.cxx:106
#21 0x44f7c230 in G__CbmDict_524_0_4 (result7=0xbf8a9730, funcname=0x84aebc8 "\001",
libp=0xbf8a3950, hash=0)
at /d/panda02/asanchez/fairroot_newPack/build/base/CbmDict.cxx:8867
#22 0x407c68ca in Cint::G__ExceptionWrapper (funcp=0x44f7c20a <G__CbmDict_524_0_4>,
result7=0xbf8a9730,
funcname=0x84aebc8 "\001", libp=0xbf8a3950, hash=0) at cint/src/Api.cxx:364
#23 0x408b5ec0 in G__call_cppfunc (result7=0xbf8a9730, libp=0xbf8a3950, ifunc=0x84aebc8,
ifn=0)
---Type <return> to continue, or q <return> to quit---
at cint/src/v6_newlink.cxx:512
#24 0x408996a3 in G__interpret_func (result7=0xbf8a9730, funcname=0xbf8a9330 "Init",
libp=0xbf8a3950, hash=404,
p_ifunc=0x84aebc8, funcmatch=1, memfunc_flag=1) at cint/src/v6_ifunc.cxx:5118
#25 0x40879b15 in G__getfunction (item=0xbf8ac2f6 "Init()", known3=0xbf8abb3c,
memfunc_flag=1) at cint/src/v6_func.cxx:2511
#26 0x4095fc20 in G__getstructmem (store_var_type=112, varname=0xbf8ab810 "basiclibs",
membername=0xbf8ac2f6 "Init()",
tagname=0xbf8aa070 "fRun", known2=0xbf8abb3c, varglobal=0x409eca00, objptr=2) at
cint/src/v6_var.cxx:6562
#27 0x40953ce4 in G__getvariable (item=0xbf8ac2f0 "fRun->Init()", known2=0xbf8abb3c,

```

```

varglobal=0x409eca00, varlocal=0x0)
  at cint/src/v6_var.cxx:5206
#28 0x4086b332 in G__getitem (item=0xbf8ac2f0 "fRun->Init()") at cint/src/v6_expr.cxx:1884
#29 0x40868e4a in G__getexpr (expression=0xbf8ad9c0 "fRun->Init()") at
cint/src/v6_expr.cxx:1470
#30 0x408dba67 in G__exec_function (statement=0xbf8ad9c0 "fRun->Init()", pc=0xbf8addec,
piout=0xbf8adde4,
  plargestep=0xbf8addd4, presult=0xbf8ad990) at cint/src/v6_parse.cxx:598
#31 0x408ea6ca in G__exec_statement (mparen=0xbf8ade70) at cint/src/v6_parse.cxx:6923
#32 0x40840c9a in G__exec_tempfile_core (
  file=0xbf8b6dc0 "
/d/panda02/asanchez/fairroot_newPack/pandaroot/macro/geane/./runGEANE2.C ", fp=0x0)
  at cint/src/v6_debug.cxx:251
#33 0x40842493 in G__exec_tempfile (
  file=0xbf8b6dc0 "
/d/panda02/asanchez/fairroot_newPack/pandaroot/macro/geane/./runGEANE2.C ") at
cint/src/v6_debug.cxx:798
#34 0x408f654c in G__process_cmd (line=0x406f4fc2 "l_3", prompt=0x80d127c "",
more=0x80d1274, err=0xbf8b763c,
  rslt=0xbf8b7640) at cint/src/v6_pause.cxx:3070
#35 0x401e404a in TCint::ProcessLine (this=0x80d1258, line=0x406f4fc2 "l_3",
error=0xbf8b9eb4) at meta/src/TCint.cxx:289
#36 0x401e4421 in TCint::ProcessLineSynch (this=0x80d1258, line=0x406f4fc2 "l_3",
error=0xbf8b9eb4)
  at meta/src/TCint.cxx:354
#37 0x40131531 in TApplication::ExecuteFile (file=0xbf8b7db3 "runGEANE2.C",
error=0xbf8b9eb4)
  at base/src/TApplication.cxx:897
#38 0x40130e00 in TApplication::ProcessFile (this=0x80f2bc8, file=0xbf8b7db3
"runGEANE2.C", error=0xbf8b9eb4)
  at base/src/TApplication.cxx:787
#39 0x40130d43 in TApplication::ProcessLine (this=0x80f2bc8, line=0xbf8b7db0 ".x
runGEANE2.C", sync=false, err=0xbf8b9eb4)
  at base/src/TApplication.cxx:760
#40 0x40d738c4 in TRint::Run (this=0x80f2bc8, retn=false) at rint/src/TRint.cxx:336
#41 0x08048ebe in main (argc=1, argv=0xbf8b9f74) at main/src/rmain.cxx:29
(gdb)

```

Subject: Re: Problem with Geane (Error in "runRECO2.C")

Posted by [asanchez](#) on Tue, 29 Jan 2008 18:47:07 GMT

[View Forum Message](#) <> [Reply to Message](#)

Dear Alexandra, Pablo and Ralf,

i can run runRECO2.C without problems
but iwhen i try to run

runGEANE2.C

i get the following error message according to gdb

```
lxi006:geane>gdb --args root.exe runGEANE2.C
```

```
GNU gdb 6.3-debian
```

```
Copyright 2004 Free Software Foundation, Inc.
```

```
GDB is free software, covered by the GNU General Public License, and you are  
welcome to change it and/or distribute copies of it under certain conditions.
```

```
Type "show copying" to see the conditions.
```

```
There is absolutely no warranty for GDB. Type "show warranty" for details.
```

```
This GDB was configured as "i386-linux"...Using host libthread_db library  
"/lib/libthread_db.so.1".
```

```
(gdb) run
```

```
Starting program: /misc/cbmsoft/Debian3.1/201107/tools/root_r20930/bin/root.exe
```

```
runGEANE2.C
```

```
[Thread debugging using libthread_db enabled]
```

```
[New Thread 16384 (LWP 485)]
```

```
*****
```

```
* *
```

```
* W E L C O M E to 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, Nov 21 2007, 16:19:00 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 runGEANE2.C...
```

```
Any idea?
```

```
Alicia.
```

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

```
- RTDB container factory CbmBaseContFact  
- RTDB container factory PndFieldContFact  
- RTDB container factory PndPassiveContFact  
- RTDB container factory PndSttContFact  
- RTDB container factory CbmPlaneContFact  
-I- CbmRunAna: Opening Input file: ex2.root  
-I- CbmRunAna Input file: ex2.root is connected to friend: ex2d.root  
-I- CbmRunAna Input file: ex2.root is connected to friend: ex2r.root  
Info in <TGeoManager::TGeoManager>: Geometry Geometry, Geane geometry created  
Info: TGeoManager::Import : Reading geometry from file: ex2.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>: 15949 nodes/ 2812 volume UID's in CBM geometry
Info in <TGeoManager::CloseGeometry>: -----modeler ready-----
Loading Geant3 libraries ...
Loading Geant3 libraries ... finished

MZSTOR. ZEBRA table base TAB(0) in /MZCC/ at adr 283908751 10EC1A8F HEX

MZSTOR. Initialize Store 0 in /GCBANK/
with Store/Table at absolute adrs 284017597 283908751
HEX 10EDC3BD 10EC1A8F
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 for Geane.
Energy straggling area parameter from user set to: 0.9996
Warning in <TGeoManager::CloseGeometry>: geometry already closed

Calculating cross section tables, see gphysi.dat for more information

Cross section calculation concluded successfully
-I- CbmMCApplication:: Monte carlo Engine Initialisation with TGeant3TGeo
I- CbmGeane::CbmGeane: Geane is Initialized
Warning in <TClass::TClass>: no dictionary for class PndBoxGenerator is available

-I- CbmRunAna::Init :
ex2.root is connected with: ex2d.root ex2r.root

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

initialisation for run id 608599272

Program received signal SIGSEGV, Segmentation fault.

[Switching to Thread 16384 (LWP 485)]

0x4049e58f in ROOT::delete_TObjArray () from

/misc/cbmsoft/Debian3.1/development/tools/root/lib/libCore.so.5.17

(gdb) bt

#0 0x4049e58f in ROOT::delete_TObjArray () from

/misc/cbmsoft/Debian3.1/development/tools/root/lib/libCore.so.5.17

#1 0x401f9d82 in TClass::Destructor (this=0x84bd7e0, obj=0x5b0d444c, dtorOnly=false) at meta/src/TClass.cxx:3381

#2 0x41008194 in TBufferFile::ReadFastArray (this=0xa062828, start=0xa10a3f4, cl=0x84bd7e0, n=1, isPreAlloc=false, streamer=0x0) at io/src/TBufferFile.cxx:1453

#3 0x41054f4f in TStreamerInfo::ReadBuffer<char**> (this=0x9f6a2e8, b=@0xa062828, arr=@0xbf899350, first=0, narr=1, eoffset=0, arrayMode=0) at io/src/TStreamerInfoReadBuffer.cxx:911

#4 0x4100cec0 in TBufferFile::ReadClassBuffer (this=0xa062828, cl=0x9f63f10, pointer=0xa10a1f8) at io/src/TBufferFile.cxx:3293

#5 0x45184020 in PndStt::Streamer (this=0xa10a1f8, R(bool)=@0xa062828) at /d/panda02/asanchez/fairroot_newPack/build/stt/PndSttDict.cxx:2169

#6 0x401fbe3a in TClass::Streamer (this=0x9f63f10, object=0xa10a1f8, b=@0xa062828) at meta/src/TClass.cxx:4263

#7 0x4100a4c8 in TBufferFile::ReadObjectAny (this=0xa062828, clCast=0x826f598) at io/src/TBufferFile.cxx:2241

#8 0x401d804d in TObjArray::Streamer (this=0xa51ad60, b=@0xa062828) at cont/src/TObjArray.cxx:388

#9 0x401fbe3a in TClass::Streamer (this=0x84bd7e0, object=0xa51ad60, b=@0xa062828) at meta/src/TClass.cxx:4263

#10 0x4100a4c8 in TBufferFile::ReadObjectAny (this=0xa062828, clCast=0x84bd7e0) at io/src/TBufferFile.cxx:2241

#11 0x41050347 in operator>><TObjArray> (buf=@0xa062828, obj=@0xa51acf4) at TBuffer.h:347

#12 0x44f51d67 in CbmBaseParSet::Streamer (this=0xa51aca8, R(bool)=@0xa062828) at /d/panda02/asanchez/fairroot_newPack/build/base/CbmDict.cxx:1919

#13 0x4103fd0d in TKey::Read (this=0x9f57708, obj=0xa51aca8) at io/src/TKey.cxx:943

#14 0x44e9fb50 in CbmDetParRootFileIo::read (this=0x9f57208, pPar=0xa51aca8)

at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmDetParRootFileIo.cxx:53

#15 0x44ea321a in CbmGenericParRootFileIo::init (this=0x9f57208, pPar=0xa51aca8)

at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmGenericParRootFileIo.cxx:25

#16 0x44ea3cfe in CbmParGenericSet::init (this=0xa51aca8, inp=0x9f56ca0)

at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmParGenericSet.cxx:37

#17 0x44ea5abb in CbmParSet::init (this=0xa51aca8)

at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmParSet.cxx:43

#18 0x44eae710 in CbmRuntimeDb::initContainers (this=0x848f590)

at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmRuntimeDb.cxx: 393

#19 0x44eae25f in CbmRuntimeDb::initContainers (this=0x848f590, runId=608599272, refId=-1, fileName=0x44fb2ea0 "")

```

at /d/panda02/asanchez/fairroot_newPack/pandaroot/parbase/CbmRuntimeDb.cxx: 344
#20 0x44f43684 in CbmRunAna::Init (this=0x84b2b30) at
/d/panda02/asanchez/fairroot_newPack/pandaroot/base/CbmRunAna.cxx:106
#21 0x44f7c230 in G__CbmDict_524_0_4 (result7=0xbf8a9730, funcname=0x84aebc8 "\001",
libp=0xbf8a3950, hash=0)
at /d/panda02/asanchez/fairroot_newPack/build/base/CbmDict.cxx:8867
#22 0x407c68ca in Cint::G__ExceptionWrapper (funcp=0x44f7c20a <G__CbmDict_524_0_4>,
result7=0xbf8a9730,
funcname=0x84aebc8 "\001", libp=0xbf8a3950, hash=0) at cint/src/Api.cxx:364
#23 0x408b5ec0 in G__call_cppfunc (result7=0xbf8a9730, libp=0xbf8a3950, ifunc=0x84aebc8,
ifn=0)
---Type <return> to continue, or q <return> to quit---
at cint/src/v6_newlink.cxx:512
#24 0x408996a3 in G__interpret_func (result7=0xbf8a9730, funcname=0xbf8a9330 "Init",
libp=0xbf8a3950, hash=404,
p_ifunc=0x84aebc8, funcmatch=1, memfunc_flag=1) at cint/src/v6_ifunc.cxx:5118
#25 0x40879b15 in G__getfunction (item=0xbf8ac2f6 "Init()", known3=0xbf8abb3c,
memfunc_flag=1) at cint/src/v6_func.cxx:2511
#26 0x4095fc20 in G__getstructmem (store_var_type=112, varname=0xbf8ab810 "basiclibs",
membername=0xbf8ac2f6 "Init()",
tagname=0xbf8aa070 "fRun", known2=0xbf8abb3c, varglobal=0x409eca00, objptr=2) at
cint/src/v6_var.cxx:6562
#27 0x40953ce4 in G__getvariable (item=0xbf8ac2f0 "fRun->Init()", known2=0xbf8abb3c,
varglobal=0x409eca00, varlocal=0x0)
at cint/src/v6_var.cxx:5206
#28 0x4086b332 in G__getitem (item=0xbf8ac2f0 "fRun->Init()") at cint/src/v6_expr.cxx:1884
#29 0x40868e4a in G__getexpr (expression=0xbf8ad9c0 "fRun->Init()") at
cint/src/v6_expr.cxx:1470
#30 0x408dba67 in G__exec_function (statement=0xbf8ad9c0 "fRun->Init()", pc=0xbf8addec,
piout=0xbf8adde4,
plargestep=0xbf8addd4, presult=0xbf8ad990) at cint/src/v6_parse.cxx:598
#31 0x408ea6ca in G__exec_statement (mparen=0xbf8ade70) at cint/src/v6_parse.cxx:6923
#32 0x40840c9a in G__exec_tempfile_core (
file=0xbf8b6dc0 "
/d/panda02/asanchez/fairroot_newPack/pandaroot/macro/geane/./runGEANE2.C ", fp=0x0)
at cint/src/v6_debug.cxx:251
#33 0x40842493 in G__exec_tempfile (
file=0xbf8b6dc0 "
/d/panda02/asanchez/fairroot_newPack/pandaroot/macro/geane/./runGEANE2.C ") at
cint/src/v6_debug.cxx:798
#34 0x408f654c in G__process_cmd (line=0x406f4fc2 "I_3", prompt=0x80d127c "",
more=0x80d1274, err=0xbf8b763c,
rslt=0xbf8b7640) at cint/src/v6_pause.cxx:3070
#35 0x401e404a in TCint::ProcessLine (this=0x80d1258, line=0x406f4fc2 "I_3",
error=0xbf8b9eb4) at meta/src/TCint.cxx:289
#36 0x401e4421 in TCint::ProcessLineSynch (this=0x80d1258, line=0x406f4fc2 "I_3",
error=0xbf8b9eb4)
at meta/src/TCint.cxx:354
#37 0x40131531 in TApplication::ExecuteFile (file=0xbf8b7db3 "runGEANE2.C",
error=0xbf8b9eb4)
at base/src/TApplication.cxx:897
#38 0x40130e00 in TApplication::ProcessFile (this=0x80f2bc8, file=0xbf8b7db3

```

```
"runGEANE2.C", error=0xbf8b9eb4)
at base/src/TApplication.cxx:787
#39 0x40130d43 in TApplication::ProcessLine (this=0x80f2bc8, line=0xbf8b7db0 ".x
runGEANE2.C", sync=false, err=0xbf8b9eb4)
at base/src/TApplication.cxx:760
#40 0x40d738c4 in TRint::Run (this=0x80f2bc8, retn=false) at rint/src/TRint.cxx:336
#41 0x08048ebe in main (argc=1, argv=0xbf8b9f74) at main/src/rmain.cxx:29
(gdb)
```

Subject: Re: Problem with Geane (Error in "runRECO2.C")

Posted by [Ralf Kliemt](#) on Wed, 30 Jan 2008 10:20:43 GMT

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Hi Alicia,

It seems that there is something going on during the initialization of the parameter database. Maybe your par file is not there or broken? Did you copy the files from pandaroot/tutorial/geane/ex2 and recompile? It is hard to tell.

Ralf.

Subject: Re: Problem with Geane (Error in "runRECO2.C")

Posted by [Aleksandra Biegun](#) on Wed, 30 Jan 2008 12:19:47 GMT

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Hello,

I also have a problem with running runGEANE2.C macro and it looks like a quite obvious error, see below:

```
I- CbmGeane::CbmGeane: Geane is Initialized
Error: Symbol CbmGeaneTrT is not defined in current scope
runGEANE2.C:33:
Error: Symbol CbmGeaneTrT is not defined in current scope
runGEANE2.C:33:
Error: type CbmGeaneTrT not defined
FILE:/home/biegun/PANDA/fair/pandaroot/macro/geane/./runGEANE2.C
LINE:33
Warning: Automatic variable CbmGeaneTrT*tr is allocated
runGEANE2.C:33:
Error: Undeclared variable CbmGeaneTrT*tr runGEANE2.C:33:
*** Interpreter error recovered ***
```

but somehow I can't find the place in pandaroot/ or build/ directories, where I should change something.

I added to pandaroot/CMakeList.cxx add_subdirectory(GeaneEx)

and copied all directory from pandaroot/tutorials/ex2/GeaneEx/ to pandaroot/ directory, macros are copied to pandaroot/macro/geane/ (as Antrea showed at KVI workshop last week), CbmGeaneTrT.* are in pandaroot/GeaneEx/ directory, so should be fine, but somehow these classes from pandaroot/GeaneEx/ are not visible.

In pandaroot/GeaneEx/Makefile.am I added the CbmGeaneTrT.cxx class, but it does not work as well.

Could someone tell me what I forgot about, please?

Best wishes,
Ola.

Subject: Re: Problem with Geane (Error in "runRECO2.C")

Posted by [asanchez](#) on Wed, 30 Jan 2008 12:26:17 GMT

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Hi Ola i think you should copy the GeaneEx at tutorial/geane/ex2/GeaneEx to your GeaneEx in your pandaroot directory, and then come back to build/GeaneEx and make install.

At least that is what i have done but anyway i get another errors.
so let me know what are getting.

best regards
alicia.

Subject: Re: Problem with Geane (Error in "runRECO2.C")

Posted by [StefanoSpataro](#) on Wed, 30 Jan 2008 12:32:41 GMT

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I think it should be better if a wiki page with all the precise steps (such as: first copy X, than copy Y, than compile , etc...) could be written in wiki, with everything working (apart from code problems such as floating point exceptions and so on), in order to be sure that the procedure is correct, and that people trying the next months will be also able to run everything without attending to the "live" tutorial.

Subject: Re: Problem with Geane (Error in "runRECO2.C")

Posted by [Lia Lavezzi](#) on Wed, 30 Jan 2008 13:48:59 GMT

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Hi Aleksandra and all others,

actually the line: `xc = xc - s` is wrong. It should be `xcrot = xcrot - s`. I just uploaded a corrected version of `PndSttHelixTrackFitter.cxx` on the svn repository, so you only have to update your stt directory to get it.

Sorry for the bug, and thank you for pointing it out.

Since $s = 0.001$, so it is very small, you will obtain almost the same results with the new corrected code and with your present code where you commented the wrong line out.

Hope everything works fine,
Ciao,
Lia.

Subject: Re: Problem with Geane (Error in "runRECO2.C")
Posted by [Aleksandra Biegun](#) on Thu, 31 Jan 2008 09:19:40 GMT
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Hi Lia,

there is a bug in PndSttHelixTrackFitter.cxx program,
could you check it, please.

Thanks a lot!

Ciao,
Ola.

Subject: Re: Problem with Geane (Error in "runRECO2.C")
Posted by [Lia Lavezzi](#) on Thu, 31 Jan 2008 13:58:48 GMT
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Hi Ola,
can you give me some more details?
Does the code crash again? I checked the code on my computer and it compiles and runs without problems, so I would ask you if you can post the error or the debugger output, please.

Ciao,
Lia.

Subject: Re: Problem with Geane (Error in "runRECO2.C")
Posted by [Aleksandra Biegun](#) on Thu, 31 Jan 2008 14:02:33 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Lia,

I am sorry, this time was my mistake.

Regards,
Ola.

Subject: Re: Problem with Geane (Error in "runRECO2.C")
Posted by [Lia Lavezzi](#) on Thu, 31 Jan 2008 14:35:51 GMT
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> I am sorry, this time was my mistake.
Ok, don' t worry, I' m happy that it works fine now...

But what about the other problem with runGEANE2.C, where it did not find CbmGeaneTrT...
did you solve it?

Lia.
