
Subject: RiemannTrackFinder crash.

Posted by [Lia Lavezzi](#) on Wed, 06 Jul 2011 10:15:27 GMT

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Hi riemann experts,

here is the crash I forgot to post yesterday, in the PndMvdRiemannTrackFinder part, or, better, in PndRiemannTrack.

I am sorry to bother you again with crashes, but as I told in the other post I can bring almost no reconstruction to a good end at the moment.

Thank you in advance,

Lia.

*** Break *** floating point exception

=====
There was a crash (kSigFloatingException).

This is the entire stack trace of all threads:

=====
#0 0xffffe424 in __kernel_vsyscall ()
#1 0xb63068c3 in __waitpid_nocancel () from /lib/libc.so.6
#2 0xb62a3963 in do_system () from /lib/libc.so.6
#3 0xb63e457b in system () from /lib/libpthread.so.0
#4 0xb7139231 in TUnixSystem::Exec (this=0x80711c0,
shellcmd=0x1421e590 "/home/lavezzi/fairsoft5/tools/root/etc/gdb-backtrace.sh 22927
1>&2")
at /home/lavezzi/fairsoft5/tools/root/core/unix/src/TUnixSystem.cxx:2036
#5 0xb7139a3d in TUnixSystem::StackTrace (this=0x80711c0)
at /home/lavezzi/fairsoft5/tools/root/core/unix/src/TUnixSystem.cxx:2265
#6 0xb71375d7 in TUnixSystem::DispatchSignals (this=0x80711c0,
sig=kSigFloatingException)
at /home/lavezzi/fairsoft5/tools/root/core/unix/src/TUnixSystem.cxx:1162
#7 0xb7135785 in SigHandler (sig=kSigFloatingException)
at /home/lavezzi/fairsoft5/tools/root/core/unix/src/TUnixSystem.cxx:362
#8 0xb713ccef in sighandler (sig=8)
at /home/lavezzi/fairsoft5/tools/root/core/unix/src/TUnixSystem.cxx:3552
#9 <signal handler called>
#10 0xb22007f8 in PndRiemannTrack::PndRiemannTrack (this=0xbfcd2bd8)
at /home/lavezzi/test_dev/may11/PndTools/riemannfit/PndRiemannTrack.h:42
#11 0xb10cfa04 in PndMvdRiemannTrackFinder::GetStartTracks (
this=0xbfcd3868)
at /home/lavezzi/test_dev/may11/mvd/MvdTracking/PndMvdRiemannTrackFinder.cxx:305
#12 0xb10cde4a in PndMvdRiemannTrackFinder::FindTracks (this=0xbfcd3868)
at /home/lavezzi/test_dev/may11/mvd/MvdTracking/PndMvdRiemannTrackFinder.cxx:108
#13 0xb10c9735 in PndMvdRiemannTrackFinderTask::Exec (this=0x8a7a930,
opt=0xb34d39c0 "")
at
/home/lavezzi/test_dev/may11/mvd/MvdTracking/PndMvdRiemannTrackFinderTask.cxx:127
#14 0xb70be5c9 in TTask::ExecuteTasks (this=0x808c778,
option=0xb34d39c0 "")
at /home/lavezzi/fairsoft5/tools/root/core/base/src/TTask.cxx:312
#15 0xb70be3df in TTask::ExecuteTask (this=0x808c778, option=0xb34d39c0 "")

```

at /home/lavezzi/fairsoft5/tools/root/core/base/src/TTask.cxx:275
#16 0xb342ab99 in FairRunAna::Run (this=0x8638a38, Ev_start=0, Ev_end=2000)
  at /home/lavezzi/test_dev/may11/base/FairRunAna.cxx:272
#17 0xb347dd84 in G__FairDict_883_0_5 (result7=0xbfcd1a8,
  funcname=0x808ad10 "", libp=0xbfcd4b64, hash=0)
  at /home/lavezzi/test_dev/may11/cbuild/base/FairDict.cxx:13242
#18 0xb68e083e in Cint::G__ExceptionWrapper (
  funcp=0xb347dc93 <G__FairDict_883_0_5(G__value*, char const*, G__param*, int)>,
  result7=0xbfcd1a8, funcname=0x808ad10 "", libp=0xbfcd4b64, hash=0)
  at cint/cint/src/Api.cxx:393
#19 0xb69a89f6 in G__execute_call (result7=0xbfcd1a8, libp=0xbfcd4b64,
  ifunc=0x808ad10, ifn=0) at cint/cint/src/newlink.cxx:2406
#20 0xb69a9250 in G__call_cppfunc (result7=0xbfcd1a8, libp=0xbfcd4b64,
  ifunc=0x808ad10, ifn=0) at cint/cint/src/newlink.cxx:2610
#21 0xb69854ec in G__interpret_func (result7=0xbfcd1a8,
  funcname=0x807f0a0 "Run", libp=0xbfcd4b64, hash=309,
  p_ifunc=0x808ad10, funcmatch=1, memfunc_flag=1)
  at cint/cint/src/ifunc.cxx:5795
#22 0xb6961d68 in G__getfunction (item=0x807c30e "Run(0,nEvents)",
  known3=0xbfce269c, memfunc_flag=1) at cint/cint/src/func.cxx:2665
#23 0xb6a83144 in G__getstructmem (store_var_type=112, varname=...,
  membername=0x807c30e "Run(0,nEvents)", memnamesize=2147483647,
  tagname=0x807cb18 "fRun", known2=0xbfce269c, varglobal=0xb6b46280,
  objptr=2) at cint/cint/src/var.cxx:6804
#24 0xb6a7529f in G__getvariable (item=0x807c308 "fRun->Run(0,nEvents)",
  known=0xbfce269c, varglobal=0xb6b46280, varlocal=0x0)
  at cint/cint/src/var.cxx:5390
#25 0xb6951f7d in G__getitem (item=0x807c308 "fRun->Run(0,nEvents)")
  at cint/cint/src/expr.cxx:1906
#26 0xb694fae6 in G__getexpr (expression=0x809a148 "fRun->Run(0,nEvents)")
  at cint/cint/src/expr.cxx:1488
#27 0xb69d8e32 in G__exec_function (statement=..., pc=0xbfce4514,
  piout=0xbfce4510, plargestep=0xbfce4508, presult=0xbfce4490)
  at cint/cint/src/parse.cxx:645
#28 0xb69e9416 in G__exec_statement (mparen=0xbfce4774)
  at cint/cint/src/parse.cxx:7372
#29 0xb6925489 in G__exec_tempfile_core (
  file=0x8099940
"/home/lavezzi/test_dev/may11/macro/stability/muons/prod5/./run_reco_stt_evt.C", fp=0x0) at
cint/cint/src/debug.cxx:265
#30 0xb6926db3 in G__exec_tempfile (
  file=0x8099940
"/home/lavezzi/test_dev/may11/macro/stability/muons/prod5/./run_reco_stt_evt.C") at
cint/cint/src/debug.cxx:813
#31 0xb69f73a4 in G__process_cmd (
  line=0x83c7fe8 ".x
/home/lavezzi/test_dev/may11/macro/stability/muons/prod5/./run_reco_stt_evt.C",
prompt=0x8073984 "", more=0x807397c,
  err=0xbfce57e4, rslt=0xbfce57b0) at cint/cint/src/pause.cxx:3170
#32 0xb70f5fba in TCint::ProcessLine (this=0x8073950,
  line=0x83c7fe8 ".x
/home/lavezzi/test_dev/may11/macro/stability/muons/prod5/./run_reco_stt_evt.C",

```

```

error=0xbfce83cc)
  at /home/lavezzi/fairsoft5/tools/root/core/meta/src/TCint.cxx:522
#33 0xb70f6513 in TCint::ProcessLineSynch (this=0x8073950,
  line=0x83c7fe8 ".x
/home/lavezzi/test_dev/may11/macro/stability/muons/prod5/./run_reco_stt_evt.C",
error=0xbfce83cc)
  at /home/lavezzi/fairsoft5/tools/root/core/meta/src/TCint.cxx:601
#34 0xb704db38 in TApplication::ExecuteFile (
  file=0xbfce6391 "run_reco_stt_evt.C", error=0xbfce83cc, keep=false)
  at /home/lavezzi/fairsoft5/tools/root/core/base/src/TApplication.cxx:1035
#35 0xb704d3e6 in TApplication::ProcessFile (this=0x8138ed0,
  file=0xbfce6391 "run_reco_stt_evt.C", error=0xbfce83cc, keep=false)
  at /home/lavezzi/fairsoft5/tools/root/core/base/src/TApplication.cxx:911
#36 0xb704d2a0 in TApplication::ProcessLine (this=0x8138ed0,
  line=0xbfce638e ".x run_reco_stt_evt.C", sync=false, err=0xbfce83cc)
  at /home/lavezzi/fairsoft5/tools/root/core/base/src/TApplication.cxx:884
#37 0xb6555c9b in TRint::Run (this=0x8138ed0, retrn=false)
  at /home/lavezzi/fairsoft5/tools/root/core/rint/src/TRint.cxx:402
#38 0x08049085 in main (argc=1, argv=0xbfce84f4)
  at /home/lavezzi/fairsoft5/tools/root/main/src/rmain.cxx:29
=====

```

The lines below might hint at the cause of the crash.
If they do not help you then please submit a bug report at
<http://root.cern.ch/bugs>. Please post the ENTIRE stack trace
from above as an attachment in addition to anything else
that might help us fixing this issue.

```

=====
#10 0xb22007f8 in PndRiemannTrack::PndRiemannTrack (this=0xbfcd2bd8)
  at /home/lavezzi/test_dev/may11/PndTools/riemannfit/PndRiemannTrack.h:42
#11 0xb10cfa04 in PndMvdRiemannTrackFinder::GetStartTracks (
  this=0xbfcd3868)
  at /home/lavezzi/test_dev/may11/mvd/MvdTracking/PndMvdRiemannTrackFinder.cxx:305
#12 0xb10cde4a in PndMvdRiemannTrackFinder::FindTracks (this=0xbfcd3868)
  at /home/lavezzi/test_dev/may11/mvd/MvdTracking/PndMvdRiemannTrackFinder.cxx:108
#13 0xb10c9735 in PndMvdRiemannTrackFinderTask::Exec (this=0x8a7a930,
  opt=0xb34d39c0 "")
  at
/home/lavezzi/test_dev/may11/mvd/MvdTracking/PndMvdRiemannTrackFinderTask.cxx:127
#14 0xb70be5c9 in TTask::ExecuteTasks (this=0x808c778,
  option=0xb34d39c0 "")
  at /home/lavezzi/fairsoft5/tools/root/core/base/src/TTask.cxx:312
#15 0xb70be3df in TTask::ExecuteTask (this=0x808c778, option=0xb34d39c0 "")
  at /home/lavezzi/fairsoft5/tools/root/core/base/src/TTask.cxx:275
#16 0xb342ab99 in FairRunAna::Run (this=0x8638a38, Ev_start=0, Ev_end=2000)
  at /home/lavezzi/test_dev/may11/base/FairRunAna.cxx:272
=====

```

Subject: Re: RiemannTrackFinder crash.

Posted by [Tobias Stockmanns](#) on Wed, 06 Jul 2011 10:45:10 GMT

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Dear Lia,

I have uploaded a new version of PndRiemannTrack with some division through zero protection. Can you test it, if it works?

Cheers,

Tobias

Subject: Re: RiemannTrackFinder crash.

Posted by [Lia Lavezzi](#) on Wed, 06 Jul 2011 13:31:52 GMT

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Hi Tobias,

unfortunately the crash is still there, also with the updated code

Since it is a very strange crash, I think it might be due to some uninitialized variables of PndRiemannTrack.

I made a test by adding an initialization to the variables when missing, like this (the values I put may be wrong, since I don't know what the various variables are meant to be, I just put there a value to have them all initialized):

```
PndRiemannTrack::PndRiemannTrack() :  
fn(3),fav(3),fc(0),fcovPlane(4,4),fjacRXY(3,4),fcovRXY(3,3),fVerbose(0),  
fFitDone(false),fSZFitDone(false),fErrorCalcDone(false),fweight(0),ftref  
it(false),fVertexCut(0.5),fm(0),ft(0),fmError(0),ftError(0),fChi2(0),fStartAlpha(0),fStopAlpha(0)  
{  
  fHits.clear();  
}
```

and the crash is not there anymore... I don't know if this might help.

Cheers,

Lia.

Subject: Re: RiemannTrackFinder crash.

Posted by [Tobias Stockmanns](#) on Wed, 06 Jul 2011 15:02:27 GMT

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Dear Lia,

I have uploaded a new version of PndRiemannTrack with the correct initialization of the variables. It seems that some compilers (like mine) is doing it automatically and others not which causes crashes.

I hope it works now.

Cheers,

Tobias

Subject: Re: RiemannTrackFinder crash.
Posted by [Lia Lavezzi](#) on Wed, 06 Jul 2011 16:48:19 GMT
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Hi Tobias,

I updated the code and rerun all the reconstructions which were crashing in riemann track and I think I can say that the riemann crash is solved! (indeed I have a low energy test which is still running but the others at 1 GeV/c did not crash in the riemann anymore).

Thank you very much!

Lia.

Subject: Re: RiemannTrackFinder crash.
Posted by [Tobias Stockmanns](#) on Tue, 12 Jul 2011 15:22:18 GMT
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Dear TDR simulators,

the missing initialization of the variables in PndRiemannTrack was also added in may11 release.

Cheers,

Tobias
