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Subject: [FIXED]A crash in reco

Posted by [Yutie Liang](#) on Wed, 28 Apr 2010 07:57:02 GMT

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Hi,

I met one problem when run reconstruction algorithms.

I once printed out lots of informations and found that this is caused by some abnormal momentum,(like  $1e-346$ ...)

I have tried to modify FairTrackParP.cxx to discard this kind of events. But this is not a good solution.

Pls tell me if this has been solved.

Thanks

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

This is the entire stack trace of all threads:

=====

```
#0 0x007317a2 in _dl_sysinfo_int80 () from /lib/ld-linux.so.2
#1 0x01a34f13 in __waitpid_nocancel () from /lib/tls/libc.so.6
#2 0x019de7b9 in do_system () from /lib/tls/libc.so.6
#3 0x0017198d in system () from /lib/tls/libpthread.so.0
#4 0x009a7aa0 in TUnixSystem::Exec (this=0x9602790,
  shellcmd=0x21c07388 "/home/liang/fairroot/fairsoft/tools/root/etc/gdb-backtrace.sh 24010
1>&2") at core/unix/src/TUnixSystem.cxx:1978
#5 0x009a8290 in TUnixSystem::StackTrace (this=0x9602790)
  at core/unix/src/TUnixSystem.cxx:2188
#6 0x009a5d0f in TUnixSystem::DispatchSignals (this=0x9602790,
  sig=kSigFloatingException) at core/unix/src/TUnixSystem.cxx:1106
#7 0x009a3b25 in SigHandler (sig=kSigFloatingException)
  at core/unix/src/TUnixSystem.cxx:350
#8 0x009ab29e in sighandler (sig=8) at core/unix/src/TUnixSystem.cxx:3428
#9 <signal handler called>
#10 0x005fdd79 in std::ostream::operator<< () from /usr/lib/libstdc++.so.6
#11 0x059fe6f8 in FairTrackParP::FairTrackParP ()
  at /home/liang/fairroot/fairsoft/tools/root/include/TVector3.h:286
#12 0x02b3fb89 in PndLheTrackFitter::Info4Fit (this=0xa14fc78,
  track=0xee23480, idx=8)
  at /home/liang/trunk/lhetrack/PndLheTrackFitter.cxx:226
#13 0x02b3f1e6 in PndLheTrackFitter::Exec (this=0xa14fc78, option=0x2c861a0 "")
  at /home/liang/trunk/lhetrack/PndLheTrackFitter.cxx:145
#14 0x00916c72 in TTask::ExecuteTasks (this=0x9d3bcd8, option=0x2c861a0 "")
  at core/base/src/TTask.cxx:312
#15 0x00916a6d in TTask::ExecuteTask (this=0x9d3bcd8, option=0x2c861a0 "")
  at core/base/src/TTask.cxx:275
```

```

#16 0x02c273dc in FairRunAna::Run (this=0x9644690, Ev_start=0, Ev_end=2000)
  at /home/liang/trunk/base/FairRunAna.cxx:279
#17 0x02c5f552 in G__FairDict_669_0_5 (result7=0xbfebfcf0,
  funcname=0x96426f8 "\001", libp=0xbfeb2950, hash=0)
  at /home/liang/build/base/FairDict.cxx:9099
#18 0x00ed96a3 in Cint::G__ExceptionWrapper (
  funcp=0x2c5f49e <G__FairDict_669_0_5>, result7=0xbfebfcf0,
  funcname=0x96426f8 "\001", libp=0xbfeb2950, hash=0)
  at cint/cint/src/Api.cxx:385
#19 0x00f8d1a8 in G__execute_call (result7=0xbfebfcf0, libp=0xbfeb2950,
  ifunc=0x96426f8, ifn=0) at cint/cint/src/newlink.cxx:2332
#20 0x00f8d8c8 in G__call_cppfunc (result7=0xbfebfcf0, libp=0xbfeb2950,
  ifunc=0x96426f8, ifn=0) at cint/cint/src/newlink.cxx:2518
#21 0x00f6b957 in G__interpret_func (result7=0xbfebfcf0,
  funcname=0x9638c60 "Run", libp=0xbfeb2950, hash=309, p_ifunc=0x96426f8,
  funcmatch=1, memfunc_flag=1) at cint/cint/src/ifunc.cxx:5240
#22 0x00f50a14 in G__getfunction (item=0x9562c16 "Run(0,nEvents)",
  known3=0xbfec022c, memfunc_flag=1) at cint/cint/src/func.cxx:2423
#23 0x01054262 in G__getstructmem (store_var_type=112, varname=0x9560c88 "u",
  membername=0x9562c16 "Run(0,nEvents)", tagname=0x9583240 "fRun",
  known2=0xbfec022c, varglobal=0x110a540, objptr=2)
  at cint/cint/src/var.cxx:6591
#24 0x01047ece in G__getvariable (item=0x9562c10 "fRun->Run(0,nEvents)",
  known=0xbfec022c, varglobal=0x110a540, varlocal=0x0)
  at cint/cint/src/var.cxx:5222
#25 0x00f434c8 in G__getitem (item=0x9562c10 "fRun->Run(0,nEvents)")
  at cint/cint/src/expr.cxx:1882
#26 0x00f4185b in G__getexpr (expression=0x955b598 "fRun->Run(0,nEvents)")
  at cint/cint/src/expr.cxx:1464
#27 0x00fb6f4a in G__exec_function (statement=
0xbfec2510, pc=0xbfec254c,
  piout=0xbfec2544, plargestep=0xbfec2534, presult=0xbfec24e0)
  at cint/cint/src/parse.cxx:643
#28 0x00fc4e06 in G__exec_statement (mparen=0xbfec25b0)
  at cint/cint/src/parse.cxx:7083
#29 0x00f1b23c in G__exec_tempfile_core (
  file=0x95581e0 " /home/liang/trunk/tutorials/analysis/psi3770/data_1/./run_reco_tpccombi.
C ", fp=0x0) at cint/cint/src/debug.cxx:250
#30 0x00f1c8da in G__exec_tempfile (
  file=0x95581e0 " /home/liang/trunk/tutorials/analysis/psi3770/data_1/./run_reco_tpccombi.
C ") at cint/cint/src/debug.cxx:798
#31 0x00fd20d9 in G__process_cmd (
  line=0x96358d8 ".X
/home/liang/fairroot/fairsoft/tools/root/etc/plugins/TFile/P110_THDFSFile.C ",
  prompt=0x96059a4 "", more=0x960599c, err=0xbfec7cc,
  rslt=0xbfec7d0) at cint/cint/src/pause.cxx:3125
#32 0x00991fd6 in TCint::ProcessLine (this=0x9605980,
  line=0x96358d8 ".X
/home/liang/fairroot/fairsoft/tools/root/etc/plugins/TFile/P110_THDFSFile.C ",
  error=0xbfec404) at core/meta/src/TCint.cxx:419
#33 0x009923ab in TCint::ProcessLineSynch (this=0x9605980,
  line=0x96358d8 ".X

```

```
/home/liang/fairroot/fairsoft/tools/root/etc/plugins/TFile/P110_THDFSFile.C ",
error=0xbfecd404) at core/meta/src/TCint.cxx:486
#34 0x008917d9 in TApplication::ExecuteFile (
  file=0xbfecb3a3 "run_reco_tpccombi.C", error=0xbfecd404, keep=false)
  at core/base/src/TApplication.cxx:977
#35 0x00890ed0 in TApplication::ProcessFile (this=0x96331d0,
  file=0xbfecb3a3 "run_reco_tpccombi.C", error=0xbfecd404, keep=false)
  at core/base/src/TApplication.cxx:853
#36 0x00890dc7 in TApplication::ProcessLine (this=0x96331d0,
  line=0xbfecb3a0 ".x run_reco_tpccombi.C", sync=false, err=0xbfecd404)
  at core/base/src/TApplication.cxx:826
#37 0x00120100 in TRint::Run (this=0x96331d0, retrn=false)
  at core/rint/src/TRint.cxx:407
#38 0x08048df7 in main (argc=1, argv=0xbfecd4e4) at main/src/rmain.cxx:29
=====
```

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Subject: Re: A crash in reco  
Posted by [Stefano Spataro](#) on Wed, 28 Apr 2010 08:11:51 GMT  
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Hi,  
could you please add the following line in PndLheTrackFitter, so that I can see which numbers are giving problems?  
In particular, please add at line 220 (before if (ih==0)):

```
cout << ih << "\t" << track->GetCharge() << "\t" << x << "\t" << y << "\t" << z << "\t" << px <<
"\t" << py << "\t" << pz << endl;
```

So that I can try to guess what is going wrong at the track when the code is crashing. I have never seen such kind of error.

Many thanks.

---

Subject: Re: A crash in reco  
Posted by [Yutie Liang](#) on Wed, 28 Apr 2010 08:27:57 GMT  
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Hi,

```
fTpcMode: 2 fTpcInput->GetEntriesFast(): 456
Total number of hits for tracking: 547
Total number of tracks in TPC: 11
  Good tracks in TPC: 10
Working with 547 hits
```

```
found 10 tracks
finder : Real Time = 0.02 seconds Cpu Time = 0.02 seconds
===== PndLheTrackFitter =====
Number of tracks for fitting 10
0 -1 2.044 0.3243 3.818 0.5207 0.08796 1.001
99 -1 38.21 15.25 78.62 0.4312 0.3048 1.001
0 -1 -2.173 -0.2928 -2.416 0.3777 0.03825 0.4113
84 -1 -40.40 7.976 -45.49 0.3282 -0.1909 0.4113
0 1 1.805 -1.170 -3.569 0.4999 -0.3447 1.048
87 1 29.21 -29.33 -71.78 0.3310 -0.5090 1.048
0 1 -1.806 1.376 -3.739 -0.5719 0.4413 1.208
95 1 -28.48 29.98 -69.43 -0.4004 0.6012 1.208
0 -1 15.42 4.959 53.65 0.2641 0.1197 1.218
74 -1 39.10 28.17 195.8 0.1250 0.2616 1.218
0 -1 8.203 -25.15 87.15 0.1244 -0.2236 0.9518
40 -1 34.24 -45.56 213.5 0.2468 -0.06747 0.9518
0 1 19.23 -43.06 161.1 -0.1886 0.1631 0.7016
4 1 31.21 -50.30 200.7 -0.2321 0.09128 0.7016
0 1 7.694 -29.94 120.9 -0.1262 0.1438 0.6066
11 1 51.52 16.08 -178.8 0.1498 -0.1190 0.6066
0 1 -49.33 -17.66 188.4 -1.491e+04 -5335. -1.463e-09
```

\*\*\* Break \*\*\* floating point exception

```
=====
There was a crash (kSigFloatingException).
This is the entire stack trace of all threads:
=====
```

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Subject: Re: A crash in reco  
Posted by [Stefano Spataro](#) on Wed, 28 Apr 2010 08:56:20 GMT  
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Please update your lhetrack package,  
it should be fixed now (hopefully).

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Subject: Re: A crash in reco  
Posted by [Yutie Liang](#) on Wed, 28 Apr 2010 09:27:51 GMT  
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where is FairMultiLinkedData.h?

[ 72%] Generating LheTrackDict.cxx, LheTrackDict.h  
Error: cannot open file "FairMultiLinkedData.h"

```
/home/liang/trunk/lhetrack/PndLheCandidate.h:16:  
Error: class,struct,union or type FairMultiLinkedData not defined  
/home/liang/trunk/lhetrack/PndLheCandidate.h:25:  
Warning: Error occurred during reading source files  
Error: Illegal pointer operation (tovalue) :0:  
Error: Illegal pointer operation (tovalue) :0:  
Error: Illegal pointer operation (tovalue) :0:  
Warning: Error occurred during dictionary source generation  
!!!Removing /home/liang/build/lhetrack/LheTrackDict.cxx  
/home/liang/build/lhetrack/LheTrackDict.h !!!  
Error: /home/liang/fairroot/fairsoft/tools/root/bin/rootcint: error loading headers...  
make[2]: *** [lhetrack/LheTrackDict.cxx] Fehler 1  
make[1]: *** [lhetrack/CMakeFiles/LheTrack.dir/all] Fehler 2  
make: *** [all] Fehler 2
```

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Subject: Re: A crash in reco  
Posted by [Stefano Spataro](#) on Wed, 28 Apr 2010 09:31:16 GMT  
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I think you should update the whole trunk. Maybe you have a version of the code without the implementation of the MultiLinkData

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Subject: Re: A crash in reco  
Posted by [Yutie Liang](#) on Wed, 28 Apr 2010 10:04:46 GMT  
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seems okay now.

thanks

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Subject: Re: A crash in reco  
Posted by [Stefano Spataro](#) on Wed, 28 Apr 2010 14:28:45 GMT  
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Good!  
Could you please edit the first message, putting a [FIXED] before the title?  
Thanks.

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