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Subject: Re: TpcRiemannTrackingTask - ideal PID now working - please rerun reconstruction

Posted by [Sverre Dørheim](#) on Tue, 02 Aug 2011 13:25:44 GMT

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Hi Lia

I implemented the printout in the PndPidTrackInfo.cxx:

```
helix->Print();
Bool_t rc = fPro0->Propagate(helix, fRes, fPidHyp*charge);
```

Here is the print out from the last track before the crash. The elements in the Covariance matrix seems very small.

```
0x2a09cd08
Position : (-1.9e+03, 6.5e+02, 1.5e+02)
Angles : Lambda = 0.018, Phi = -0.34
q/p = 1.2
fCovMatrix[0] = 0x2a09cd08 -1.2e+58
fCovMatrix[1] = 0x2a09cd08 6.3e+55
fCovMatrix[2] = 0x2a09cd08 1.7e+57
fCovMatrix[3] = 0x2a09cd08 -1.7e+60
fCovMatrix[4] = 0x2a09cd08 -6.1e+57
fCovMatrix[5] = 0x2a09cd08 -1.9e+53
fCovMatrix[6] = 0x2a09cd08 -3.3e+54
fCovMatrix[7] = 0x2a09cd08 5.9e+57
fCovMatrix[8] = 0x2a09cd08 2.7e+55
fCovMatrix[9] = 0x2a09cd08 -1.6e+56
fCovMatrix[10] = 0x2a09cd08 1.4e+59
fCovMatrix[11] = 0x2a09cd08 -2.1e+57
fCovMatrix[12] = 0x2a09cd08 -1.3e+62
fCovMatrix[13] = 0x2a09cd08 -2.1e+59
fCovMatrix[14] = 0x2a09cd08 -6.5e+57
```

```
*** Break *** floating point exception
```

```
=====
There was a crash (#7 0xb724ce3d in SigHandler(ESignals) ()).
```

```
This is the entire stack trace of all threads:
```

```
=====
#0 0xb777b424 in __kernel_vsyscall ()
#1 0xb660e003 in __waitpid_nocancel ()
   at ../sysdeps/unix/syscall-template.S:82
#2 0xb65afe63 in do_system (line=<value optimized out>)
   at ../sysdeps/posix/system.c:149
#3 0xb66cb3bd in system (
   line=0x28dc7f28 "
/nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
```

```

_5.28d_qt_custom_TH2Poly/etc/gdb-backtrace.sh 31010 1>&2")
  at pt-system.c:29
#4 0xb724733d in TUnixSystem::Exec(char const*) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#5 0xb724d91a in TUnixSystem::StackTrace() ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#6 0xb724cd2f in TUnixSystem::DispatchSignals(ESignals) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#7 0xb724ce3d in SigHandler(ESignals) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#8 0xb7243ee2 in sighandler(int) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#9 <signal handler called>
#10 0xb0c1ae9d in FairGeanePro::Propagate (this=0x2a4c7d18, TParam=0x2a09cd08,
  TEnd=0x2a4c7fc0, PDG=211)
  at /nfs/hicran/project/panda/SIM/sdorheim/Programming/pandaROOT/cleanTrunk/
geane/FairGeanePro.cxx:143
#11 0xb006cb33 in PndPidCorrelator::GetTrackInfo (this=0x9755bb0,
  track=0x287db218, pidCand=0x2b6112c0)
  at /nfs/hicran/project/panda/SIM/sdorheim/Programming/pandaROOT/cleanTrunk/
pid/PidCorr/PndPidTrackInfo.cxx:47
#12 0xb00626c1 in PndPidCorrelator::ConstructChargedCandidate (this=0x9755bb0)
  at /nfs/hicran/project/panda/SIM/sdorheim/Programming/pandaROOT/cleanTrunk/
pid/PidCorr/PndPidCorrelator.cxx:594
#13 0xb006211f in PndPidCorrelator::Exec (this=0x9755bb0, option=0xb36ff540 "")
  at /nfs/hicran/project/panda/SIM/sdorheim/Programming/pandaROOT/cleanTrunk/
pid/PidCorr/PndPidCorrelator.cxx:538
#14 0xb71cde78 in TTask::ExecuteTasks(char const*) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#15 0xb71cd15e in TTask::ExecuteTask(char const*) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#16 0xb36489d4 in FairRunAna::Run (this=0x8d4aaa8, Ev_start=0, Ev_end=1000)
  at /nfs/hicran/project/panda/SIM/sdorheim/Programming/pandaROOT/cleanTrunk/
base/FairRunAna.cxx:353
#17 0xb36a402d in G__FairDict_894_0_5 (result7=0xbfa4ce78,
  funcname=0x9519a88 "", libp=0xbfa42834, hash=0)
  at /nfs/hicran/project/panda/SIM/sdorheim/Programming/pandaROOT/cleanTrunk/
build/base/FairDict.cxx:13775
#18 0xb6ab8e97 in Cint::G__ExceptionWrapper(int (*)(G__value*, char const*, G__param*,
int), G__value*, char*, G__param*, int) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#19 0xb6b67c8f in G__execute_call ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so

```

```

#20 0xb6b68b2a in G__call_cppfunc ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#21 0xb6b431a5 in G__interpret_func ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#22 0xb6b3067d in G__getfunction ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#23 0xb6c2c004 in G__getstructmem(int, G__FastAllocString&, char*, int, char*, int*,
G__var_array*, int) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#24 0xb6c21d09 in G__getvariable ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#25 0xb6b09618 in G__getitem ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#26 0xb6b0fc17 in G__getexpr ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#27 0xb6b97d74 in G__exec_statement ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#28 0xb6af50cd in G__exec_tempfile_core ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#29 0xb6af53bb in G__exec_tempfile ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#30 0xb6bac124 in G__process_cmd ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCint.so
#31 0xb7208dcb in TCint::ProcessLine(char const*, TInterpreter::EErrorCode*) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#32 0xb7208911 in TCint::ProcessLineSynch(char const*, TInterpreter::EErrorCode*) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#33 0xb7157e8a in TApplication::ExecuteFile(char const*, int*, bool) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#34 0xb71582dc in TApplication::ProcessFile(char const*, int*, bool) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#35 0xb715577f in TApplication::ProcessLine(char const*, bool, int*) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libCore.so
#36 0xb684b821 in TRint::Run(bool) ()
  from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
_5.28d_qt_custom_TH2Poly/lib/libRint.so

```

```
#37 0x08048eaf in main ()
#38 0xb658dc76 in __libc_start_main (main=0x8048e40 <main>, argc=7,
    ubp_av=0xbfa56224, init=0x8049040 <__libc_csu_init>,
    fini=0x8049030 <__libc_csu_fini>, rtdl_fini=0xb778a040 <_dl_fini>,
    stack_end=0xbfa5621c) at libc-start.c:228
#39 0x08048d71 in _start ()
=====
```

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 0xb0c1ae9d in FairGeanePro::Propagate (this=0x2a4c7d18, TParam=0x2a09cd08,
    TEnd=0x2a4c7fc0, PDG=211)
    at /nfs/hicran/project/panda/SIM/sdorheim/Programming/pandaROOT/cleanTrunk/
    geane/FairGeanePro.cxx:143
#11 0xb006cb33 in PndPidCorrelator::GetTrackInfo (this=0x9755bb0,
    track=0x287db218, pidCand=0x2b6112c0)
    at /nfs/hicran/project/panda/SIM/sdorheim/Programming/pandaROOT/cleanTrunk/
    pid/PidCorr/PndPidTrackInfo.cxx:47
#12 0xb00626c1 in PndPidCorrelator::ConstructChargedCandidate (this=0x9755bb0)
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    pid/PidCorr/PndPidCorrelator.cxx:594
#13 0xb006211f in PndPidCorrelator::Exec (this=0x9755bb0, option=0xb36ff540 "")
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#15 0xb71cd15e in TTask::ExecuteTask(char const*) ()
    from /nfs/hicran/project/panda/SIM/FAIRRoot/fairsoft_release_may11/tools/root
    _5.28d_qt_custom_TH2Poly/lib/libCore.so
#16 0xb36489d4 in FairRunAna::Run (this=0x8d4aaa8, Ev_start=0, Ev_end=1000)
    at /nfs/hicran/project/panda/SIM/sdorheim/Programming/pandaROOT/cleanTrunk/
    base/FairRunAna.cxx:353
=====
```

I hope it helps