
Subject: Crash in reco-macro, PndSttMvdTracking.cxx produces segfault

Posted by [André Zambanini](#) on Tue, 24 Jul 2012 12:05:15 GMT

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During the computing week in Torino I encountered a problem with running macros. We should run the macros in 'macro/pid', but unfortunately I wasn't able to do so.

Running the macros 'run_sim_sttcombi_pgun.C' and 'run_digi_sttcombi.C' went through just fine, but with 'run_reco_sttcombi.C' a segmentation violation crashed the program:

Quote:-|- PndMCTrackAssociator::Init

[INFO] Branch: STTHitMix not found in Tree

[INFO] Branch: STTHitMix not found in Tree

-W- PndMCTrackAssociator::Init: Using STTHit array

[INFO] Branch: MVDHitsStripMix not found in Tree

[INFO] Branch: MVDHitsStripMix not found in Tree

-W- PndMCTrackAssociator::Init: Using MVDHitsStrip array

[INFO] Branch: MVDHitsPixelMix not found in Tree

[INFO] Branch: MVDHitsPixelMix not found in Tree

-W- PndMCTrackAssociator::Init: Using MVDHitsPixel

[INFO] The number of entries in chain is 10

Found Tracks: 21 in event no. 0

Track 0

EntryNr: 0

EntryNr: 0

EntryNr: 0

EntryNr: 0

EntryNr: 0

Track 1

EntryNr: 0

EntryNr: 0

EntryNr: 0

[same for tracks 2-19]

Track 20

EntryNr: 0

EntryNr: 0

EntryNr: 0

EntryNr: 0

*** Break *** segmentation violation

=====

There was a crash.

This is the entire stack trace of all threads:

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Thread 1 (process 34695):

#0 0x00007fff82fc1168 in wait4 ()

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#1 0x00007fff8c4255f5 in system ()
#2 0x00000001000d6ca8 in TUnixSystem::StackTrace ()
#3 0x00000001000d4ada in TUnixSystem::DispatchSignals ()
#4 <signal handler called>
#5 PndSttMvdTracking::EliminateSpuriousSZ (this=0x109e00000,
nPixelHitsinTrack=0x400735e5736ac382, ListPixelHitsinTrack=0x402211df773b3962,
nStripHitsinTrack=0x109e00d4a, ListStripHitsinTrack=0x109e06cd4,
nSkewHitsinTrack=0x109e00a2a, ListSkewHitsinTrack=0x4021880a31394ea5,
S=0x7fff5fba0308, ZED=0x7fff5fb9fc68, DriftRadius=0x7fff5fb9f5c8,
ErrorDriftRadius=0x7fff5fb9ef28, SchosenPixel=0x7fff5fadc9c8, SchosenStrip=0x7fff5fa194c8,
SchosenSkew=0x7fff5f880378, ZchosenPixel=0x7fff5f7bb7a8, ZchosenStrip=0x7fff5f6f82a8,
ZchosenSkew=0x7fff5f55f158, ErrorchosenPixel=0x7fff5f55c0e8,
ErrorchosenStrip=0x7fff5f55b148, ErrorchosenSkew=0x7fff5f559078,
KAPPA=3.2378592100206092e-319, F10=1.2598673968951787e-321, R=0,
MaxTurnofTracks=0) at PndSttMvdTracking.cxx:11845
#6 0x000000010822175d in PndSttMvdTracking::Exec (this=0x7fff5fbe1a50, opt=0x0) at
PndSttMvdTracking.cxx:2525
#7 0x000000010006d1b5 in TTask::ExecuteTasks ()
#8 0x000000010006cf04 in TTask::ExecuteTask ()
#9 0x00000001062fa45b in FairRunAna::Run (this=0x109e00000, Ev_start=0, Ev_end=0) at
FairRunAna.cxx:544
#10 0x000000010635ec65 in G__G__BaseDict_986_0_6 (result7=0x7fff5fbee150,
funcname=0x1063ac330 "", libp=0x400735e5736ac382, hash=2000370018) at
G__BaseDict.cxx:14831
#11 0x000000010083540f in Cint::G__ExceptionWrapper ()
#12 0x00000001008e7a8b in G__execute_call ()
#13 0x00000001008e8066 in G__call_cppfunc ()
#14 0x00000001008bb33f in G__interpret_func ()
#15 0x00000001008a469f in G__getfunction ()
#16 0x00000001009a9004 in G__getstructmem ()
#17 0x000000010099fd07 in G__getvariable ()
#18 0x00000001008996fe in G__getitem ()
#19 0x0000000100898753 in G__getexpr ()
#20 0x000000010091a0c6 in G__exec_statement ()
#21 0x00000001008797cd in G__exec_tempfile_core ()
#22 0x0000000100879a23 in G__exec_tempfile ()
#23 0x00000001009257e5 in G__process_cmd ()
#24 0x000000010009d882 in TCint::ProcessLine ()
#25 0x000000010009dd09 in TCint::ProcessLineSynch ()
#26 0x000000010000a70a in TApplication::ExecuteFile ()
#27 0x0000000100009dd1 in TApplication::ProcessLine ()
#28 0x0000000100f4a853 in TRint::Run ()
#29 0x0000000100000a3f in main ()
=====

```

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.

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#5 PndSttMvdTracking::EliminateSpuriousSZ (this=0x109e00000,
nPixelHitsinTrack=0x400735e5736ac382, ListPixelHitsinTrack=0x402211df773b3962,
nStripHitsinTrack=0x109e00d4a, ListStripHitsinTrack=0x109e06cd4,
nSkewHitsinTrack=0x109e00a2a, ListSkewHitsinTrack=0x4021880a31394ea5,
S=0x7fff5fba0308, ZED=0x7fff5fb9fc68, DriftRadius=0x7fff5fb9f5c8,
ErrorDriftRadius=0x7fff5fb9ef28, SchosenPixel=0x7fff5fadc9c8, SchosenStrip=0x7fff5fa194c8,
SchosenSkew=0x7fff5f880378, ZchosenPixel=0x7fff5f7bb7a8, ZchosenStrip=0x7fff5f6f82a8,
ZchosenSkew=0x7fff5f55f158, ErrorchosenPixel=0x7fff5f55c0e8,
ErrorchosenStrip=0x7fff5f55b148, ErrorchosenSkew=0x7fff5f559078,
KAPPA=3.2378592100206092e-319, FI0=1.2598673968951787e-321, R=0,
MaxTurnofTracks=0) at PndSttMvdTracking.cxx:11845
#6 0x000000010822175d in PndSttMvdTracking::Exec (this=0x7fff5fbe1a50, opt=0x0) at
PndSttMvdTracking.cxx:2525
#7 0x000000010006d1b5 in TTask::ExecuteTasks ()
#8 0x000000010006cf04 in TTask::ExecuteTask ()
#9 0x00000001062fa45b in FairRunAna::Run (this=0x109e00000, Ev_start=0, Ev_end=0) at
FairRunAna.cxx:544
=====

```

The full copy of my macro output can be found here: <http://pastebin.com/0Py919MH>
At first I thought it is somehow related to this problem (Crash in reco macro:
"PndSttMvdTracking, nMvdPixelHitsinTrack[4] is 58 and it is > nmaxMvdPix), but the error
message is slightly different and applying the suggested change didn't change anything in the
result.

I have a fresh installation of PandaRoot with the july12 release:
andre@andre-macbook:~/Development/fairsoft/jan12/pandaroot_july12\$ svn info
Path: .
Working Copy Root Path: /Users/andre/Development/fairsoft/jan12/pandaroot_july12
URL: https://agoerres@subversion.gsi.de/fairroot/pandaroot/release/july12
Repository Root: https://agoerres@subversion.gsi.de/fairroot
Repository UUID: 0381ead4-6506-0410-b988-94b70fbc4730
Revision: 16248
Node Kind: directory
Schedule: normal
Last Changed Author: johan
Last Changed Rev: 16176
Last Changed Date: 2012-07-23 17:43:25 +0200 (Mo, 23 Jul 2012)

My compiler versions are:
andre@andre-macbook:~/Development/fairsoft/jan12/pandaroot_july12\$ gcc --version
i686-apple-darwin11-llvm-gcc-4.2 (GCC) 4.2.1 (Based on Apple Inc. build 5658) (LLVM build
2336.1.00)
Copyright (C) 2007 Free Software Foundation, Inc.

andre@andre-macbook:~/Development/fairsoft/jan12/pandaroot_july12\$ gfortran --version
GNU Fortran (GCC) 4.6.2 20111019 (prerelease)
Copyright (C) 2011 Free Software Foundation, Inc.

Does anyone has a clue, why it is not working? I'm a bit lost (espacially since I'm quite fresh to
the whole PandaRoot stuff).

Edit: Ah, sorry, I forgot. My OS is Mac OS X Lion, 10.7.4.
