
Subject: Segmentation Fault - MVD digitization
Posted by [Ankhi Roy](#) on Thu, 05 Jul 2012 11:30:19 GMT
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Hi,

I have installed pandaroot from the recent trunk version -

<https://subversion.gsi.de/fairroot/pandaroot/trunk>

After generating some simulated data I was trying to digitize MVD, but it is giving segmentation fault -

```
Warning in <TEnvRec::ChangeValue>: duplicate entry <Library.TVirtualMagField=Base
libFairTools.so libParBase.so libGeoBase.so libProof.so libGeomPainter.so libGeom.so
libVMC.so libEG.so libMathCore.so libPhysics.so libMatrix.so libTree.so libHist.so libRIO.so
libCint.so libCore.so> for level 0; ignored
```

```
FairRootManager::OpenOutFile("digi_mvd.root")
```

```
Info in <PndSdsHybridHitProducer::PndSdsHybridHitProducer>: MVD Hybrid Hit Producer
created, Parameters will be taken from RTDB
```

```
[INFO ] The input consists out of the following trees and files:
```

```
[INFO ] - cbmsim
```

```
[INFO ] - sim_mvd.root
```

```
[INFO ] Parameter and input file are available, Assure that basic info is there for the run!
```

```
[INFO ] The number of entries in chain is 5000
```

```
[INFO ] Branch: EventHeader. not found in Tree
```

```
[INFO ] Branch: EventHeader. not found in Tree
```

```
[INFO ] No event Header was found!!!
```

```
[INFO ] Branch: EventHeader. not found in Tree
```

```
[INFO ] Branch: EventHeader. not found in Tree
```

```
*****
```

```
initialisation for run id 1208523731
```

```
*****
```

```
Info in <TGeoManager::CloseGeometry>: Geometry loaded from file...
```

```
Info in <TGeoManager::SetTopVolume>: Top volume is cave. Master volume is cave
```

```
Info in <TGeoNavigator::BuildCache>: --- Maximum geometry depth set to 100
```

```
Info in <TGeoManager::Voxelize>: Voxelizing...
```

```
Info in <TGeoManager::CountLevels>: max level = 9, max placements = 36
```

```
Info in <TGeoManager::CloseGeometry>: 6165 nodes/ 93 volume UID's in FAIR geometry
```

```
Info in <TGeoManager::CloseGeometry>: -----modeler ready-----
```

```
Container FairBaseParSet initialized from ROOT file.
```

```
Info in (PndGeoHandling::Instance): Making a new instance using the framework.
```

```
Info in <PndMvdHybridHitProducer::SetParContainers>: done.
```

```
Info in <PndMvdStripHitProducer::SetParContainers()>: The container names list contains 10
entries
```

```
Info in <PndMvdStripHitProducer::SetParContainers()>: MVDPixelDigiPar
```

```
Info in <PndMvdStripHitProducer::SetParContainers()>: MVDStripDigiParRect
```

```
Info in <PndMvdStripHitProducer::SetParContainers()>: MVDStripDigiParTrap
```

```
Info in <PndMvdStripHitProducer::SetParContainers()>: MVDStripDigiParTD
```

```
Info in <PndMvdStripHitProducer::SetParContainers()>: MVDStripDigiParTS
```

```
Info in <PndMvdStripHitProducer::SetParContainers()>: MVDPixelTotDigiPar
```

Info in <PndMvdStripHitProducer::SetParContainers(>: MVDStripTotDigiParRect
Info in <PndMvdStripHitProducer::SetParContainers(>: MVDStripTotDigiParTrap
Info in <PndMvdStripHitProducer::SetParContainers(>: MVDStripTotDigiParTD
Info in <PndMvdStripHitProducer::SetParContainers(>: MVDStripTotDigiParTS
Info in <PndMvdStripHitProducer::SetParContainers>: done.

initialisation for run id 1208523731

MVDPixelDigiPar initialized from Ascii file
MVDPixelTotDigiPar initialized from Ascii file
MVDStripDigiParRect initialized from Ascii file
MVDStripDigiParTrap initialized from Ascii file
MVDStripDigiParTD initialized from Ascii file
MVDStripDigiParTS initialized from Ascii file
MVDStripTotDigiParRect initialized from Ascii file
MVDStripTotDigiParTrap initialized from Ascii file
MVDStripTotDigiParTD initialized from Ascii file
MVDStripTotDigiParTS initialized from Ascii file
PndFieldCreator::SetParm() 0x4a1f9d0

initialisation for run id 1208523731

MVDPixelDigiPar initialized from Ascii file
MVDPixelTotDigiPar initialized from Ascii file
MVDStripDigiParRect initialized from Ascii file
MVDStripDigiParTrap initialized from Ascii file
MVDStripDigiParTD initialized from Ascii file
MVDStripDigiParTS initialized from Ascii file
MVDStripTotDigiParRect initialized from Ascii file
MVDStripTotDigiParTrap initialized from Ascii file
MVDStripTotDigiParTD initialized from Ascii file
MVDStripTotDigiParTS initialized from Ascii file
Container PndMultiFieldPar initialized from ROOT file.
OBJ: PndTransPar PndTransPar Trans. Field parameter container
OBJ: PndDipole1Par PndDipole1Par Dipole Field parameter container
OBJ: PndDipole2Par PndDipole2Par Dipole Field parameter container
OBJ: PndSolenoid1Par PndSolenoid1Par Solenoid 1st region parameter container
OBJ: PndSolenoid2Par PndSolenoid2Par Solenoid 2nd region parameter container
OBJ: PndSolenoid3Par PndSolenoid3Par Solenoid 3rd region parameter container
OBJ: PndSolenoid4Par PndSolenoid4Par Solenoid 4th region parameter container
[INFO] PndFieldMap: Reading field map from ROOT file
/home/ankhi/pandaroot/input/TransMap.1500.root
[INFO] PndFieldMap: Reading field map from ROOT file
/home/ankhi/pandaroot/input/DipoleMap1.1500.root
[INFO] PndFieldMap: Reading field map from ROOT file
/home/ankhi/pandaroot/input/DipoleMap2.1500.root
[INFO] PndFieldMap: Reading field map from ROOT file
/home/ankhi/pandaroot/input/SolenoidMap1.root
[INFO] PndFieldMap: Reading field map from ROOT file
/home/ankhi/pandaroot/input/SolenoidMap2.root

[INFO] PndFieldMap: Reading field map from ROOT file
/home/ankhi/pandaroot/input/SolenoidMap3.root

[INFO] PndFieldMap: Reading field map from ROOT file
/home/ankhi/pandaroot/input/SolenoidMap4.root

Info in <PndMvdHybridHitProducer::SetBranchNames>: Set Mvd Pixel names.
InBranchId: 1 for Branch: MVDPoint
OutBranchId: -1 for Branch: MVDPixelDigis

SDS Pixel Digitization Parameters:
fDimX (cm) = 0.01
fDimY (cm) = 0.01
Charge Threshold (e-) = 1000
Noise (ENC+Dispersion) (e-) = 200
Columns on FE = 110
Rows on FE = 116
Cluster search radius (channels) = 1.8
Charge cloud sigma (cm) = 0.000581
charge conv. (0:ideal, 1:TOT) = 1

Info in <PndMvdHybridHitProducer::Init()>: use TOT charge conversion

Tot parameter
charge time: 100 ns
const. current: 60 e/ns
threshold: 1000 e
clock frequency: 50 MHz

Info in <PndMvdHybridHitProducer::Init>: Intialisation successfull

InBranchId: 1 for Branch: MVDPoint
OutBranchId: -1 for Branch: MVDStripDigis

Info in <PndMvdStripHitProducer::SetCalculators()>: Create a Parameter Set for Rect sensors
Rect#

MVD Digitization Parameters:
Sensor type name is = Rect
Top Pitch = 0.013 cm
Bottom Pitch = 0.013 cm
Strip Angle (Top) = 1.5708rad = 90 deg
Skew Angle (Top->Bottom) = -1.5708rad = -90 deg
Top Anchor = (-3.3345,1.6705)
Bottom Anchor= (-3.3345,1.6705)
FE Channels = 128
Nr of Frontends (Top Side) = 4
Nr of Frontends (Bottom Side)= 2
Charge Threshold (e-) = 5000
Noise (ENC+Dispersion) (e-) = 1000
Charge cloud sigma = 0.000581 cm
charge conv. (0:ideal, 1:TOT) = 1
Frontend type name is = APV25
Clusterfinder Mode = 0
Clusterfinder Mean Algorithm = 0
Clusterfinder Search Radius: Channels = 2
Clusterfinder Search Radius: Time = 0
Top/Bottom Charge correlation cut = 12000

Info in <PndMvdStripHitProducer::SetCalculators()>: Create a Parameter Set for Trap sensors
Trap#

MVD Digitization Parameters:

Sensor type name is = Trap
Top Pitch = 0.00675 cm
Bottom Pitch = 0.00675 cm
Strip Angle (Top) = 1.4399rad = 82.5 deg
Skew Angle (Top->Bottom) = 0.261799rad = 15 deg
Top Anchor = (-1.72967,2.78327)
Bottom Anchor= (-1.72967,2.78327)
FE Channels = 128
Nr of Frontends (Top Side) = 4
Nr of Frontends (Bottom Side)= 4
Charge Threshold (e-) = 5000
Noise (ENC+Dispersion) (e-) = 1000
Charge cloud sigma = 0.000581 cm
charge conv. (0:ideal, 1:TOT) = 1
Frontend type name is = APV25
Clusterfinder Mode = 0
Clusterfinder Mean Algorithm = 0
Clusterfinder Search Radius: Channels = 2
Clusterfinder Search Radius: Time = 0
Top/Bottom Charge correlation cut = 12000

Info in <PndMvdStripHitProducer::SetCalculators()>: Create a Parameter Set for TD sensors
TD#

MVD Digitization Parameters:

Sensor type name is = TD
Top Pitch = 0.005 cm
Bottom Pitch = 0.005 cm
Strip Angle (Top) = 1.5708rad = 90 deg
Skew Angle (Top->Bottom) = -1.5708rad = -90 deg
Top Anchor = (-0.9575,0.9575)
Bottom Anchor= (-0.9575,0.9575)
FE Channels = 128
Nr of Frontends (Top Side) = 3
Nr of Frontends (Bottom Side)= 3
Charge Threshold (e-) = 5000
Noise (ENC+Dispersion) (e-) = 1000
Charge cloud sigma = 0.000581 cm
charge conv. (0:ideal, 1:TOT) = 0
Frontend type name is = APV25
Clusterfinder Mode = 0
Clusterfinder Mean Algorithm = 0
Clusterfinder Search Radius: Channels = 2
Clusterfinder Search Radius: Time = 0
Top/Bottom Charge correlation cut = 1200

Info in <PndMvdStripHitProducer::SetCalculators()>: Create a Parameter Set for TS sensors
TS#

MVD Digitization Parameters:

Sensor type name is = TS
Top Pitch = 0.005 cm
Bottom Pitch = 1.92 cm
Strip Angle (Top) = 1.5708rad = 90 deg
Skew Angle (Top->Bottom) = -1.5708rad = -90 deg
Top Anchor = (-0.9575,0.9575)

Bottom Anchor= (0,0.9575)
FE Channels = 128
Nr of Frontends (Top Side) = 3
Nr of Frontends (Bottom Side)= 1
Charge Threshold (e-) = 5000
Noise (ENC+Dispersion) (e-) = 1000
Charge cloud sigma = 0.000581 cm
charge conv. (0:ideal, 1:TOT) = 0
Frontend type name is = APV25
Clusterfinder Mode = 0
Clusterfinder Mean Algorithm = 0
Clusterfinder Search Radius: Channels = 2
Clusterfinder Search Radius: Time = 0
Top/Bottom Charge correlation cut = 1200

Info in <PndMvdStripHitProducer::SetCalculators(>: Use Tot charge conversion for Rect sensors

Tot parameter

charge time: 100 ns
const. current: 60 e/ns
threshold: 5000 e
clock frequency: 50 MHz

Info in <PndMvdStripHitProducer::SetCalculators(>: Use Tot charge conversion for Trap sensors

Tot parameter

charge time: 100 ns
const. current: 60 e/ns
threshold: 5000 e
clock frequency: 50 MHz

Info in <PndMvdStripHitProducer::SetCalculators(>: Use Ideal charge conversion for TD sensors

Info in <PndMvdStripHitProducer::SetCalculators(>: Use Ideal charge conversion for TS sensors

-I- PndSdsStripHitProducer: Initialisation successfull with these parameters:

MVD Digitization Parameters:

Sensor type name is = Rect
Top Pitch = 0.013 cm
Bottom Pitch = 0.013 cm
Strip Angle (Top) = 1.5708rad = 90 deg
Skew Angle (Top->Bottom) = -1.5708rad = -90 deg
Top Anchor = (-3.3345,1.6705)
Bottom Anchor= (-3.3345,1.6705)
FE Channels = 128
Nr of Frontends (Top Side) = 4
Nr of Frontends (Bottom Side)= 2
Charge Threshold (e-) = 5000
Noise (ENC+Dispersion) (e-) = 1000
Charge cloud sigma = 0.000581 cm
charge conv. (0:ideal, 1:TOT) = 1
Frontend type name is = APV25
Clusterfinder Mode = 0
Clusterfinder Mean Algorithm = 0
Clusterfinder Search Radius: Channels = 2

Clusterfinder Search Radius: Time = 0
Top/Bottom Charge correlation cut = 12000
MVD Digitization Parameters:
Sensor type name is = Trap
Top Pitch = 0.00675 cm
Bottom Pitch = 0.00675 cm
Strip Angle (Top) = 1.4399rad = 82.5 deg
Skew Angle (Top->Bottom) = 0.261799rad = 15 deg
Top Anchor = (-1.72967,2.78327)
Bottom Anchor= (-1.72967,2.78327)
FE Channels = 128
Nr of Frontends (Top Side) = 4
Nr of Frontends (Bottom Side)= 4
Charge Threshold (e-) = 5000
Noise (ENC+Dispersion) (e-) = 1000
Charge cloud sigma = 0.000581 cm
charge conv. (0:ideal, 1:TOT) = 1
Frontend type name is = APV25
Clusterfinder Mode = 0
Clusterfinder Mean Algorithm = 0
Clusterfinder Search Radius: Channels = 2
Clusterfinder Search Radius: Time = 0
Top/Bottom Charge correlation cut = 12000

MVD Digitization Parameters:
Sensor type name is = TD
Top Pitch = 0.005 cm
Bottom Pitch = 0.005 cm
Strip Angle (Top) = 1.5708rad = 90 deg
Skew Angle (Top->Bottom) = -1.5708rad = -90 deg
Top Anchor = (-0.9575,0.9575)
Bottom Anchor= (-0.9575,0.9575)
FE Channels = 128
Nr of Frontends (Top Side) = 3
Nr of Frontends (Bottom Side)= 3
Charge Threshold (e-) = 5000
Noise (ENC+Dispersion) (e-) = 1000
Charge cloud sigma = 0.000581 cm
charge conv. (0:ideal, 1:TOT) = 0
Frontend type name is = APV25
Clusterfinder Mode = 0
Clusterfinder Mean Algorithm = 0
Clusterfinder Search Radius: Channels = 2
Clusterfinder Search Radius: Time = 0
Top/Bottom Charge correlation cut = 1200

MVD Digitization Parameters:
Sensor type name is = TS
Top Pitch = 0.005 cm
Bottom Pitch = 1.92 cm
Strip Angle (Top) = 1.5708rad = 90 deg
Skew Angle (Top->Bottom) = -1.5708rad = -90 deg
Top Anchor = (-0.9575,0.9575)
Bottom Anchor= (0,0.9575)

FE Channels = 128
Nr of Frontends (Top Side) = 3
Nr of Frontends (Bottom Side)= 1
Charge Threshold (e-) = 5000
Noise (ENC+Dispersion) (e-) = 1000
Charge cloud sigma = 0.000581 cm
charge conv. (0:ideal, 1:TOT) = 0
Frontend type name is = APV25
Clusterfinder Mode = 0
Clusterfinder Mean Algorithm = 0
Clusterfinder Search Radius: Channels = 2
Clusterfinder Search Radius: Time = 0
Top/Bottom Charge correlation cut = 1200
[WARNING] Branch MVDStripDigis is already registered in WriteoutBufferMap
[WARNING] Branch MVDPixelDigis is already registered in WriteoutBufferMap

*** Break *** segmentation violation

```
=====
There was a crash.
This is the entire stack trace of all threads:
=====
#0 0x00007f8be6b0dc3e in waitpid () from /lib/x86_64-linux-gnu/libc.so.6
#1 0x00007f8be6a93f5e in ?? () from /lib/x86_64-linux-gnu/libc.so.6
```

It will be nice if someone tells me what is wrong with this.

Thank you very much.

Ankhi

#2 0x00007f8be79c10f7 in TUnixSystem::StackTrace()

File Attachments

1) [digi_mvd.C](#), downloaded 499 times

Subject: Re: Segmentation Fault - MVD digitization
Posted by [Ralf Kliemt](#) on Thu, 05 Jul 2012 17:29:44 GMT
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Hello Ankhi.

Could you please post the simulation macro, too? It would make it easier to trace that issue.
What exact revision of the PandaRoot trunk did you use (svn info will tell you).

Kind regards.
Ralf Kliemt

Subject: Re: Segmentation Fault - MVD digitization
Posted by [Ankhi Roy](#) on Fri, 06 Jul 2012 07:58:31 GMT
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Dear Ralf,

Yesterday Tobias told me that I should use different macro for simulation and digitization. Then it works nicely. Therefore it is not the problem of MVD digitization in pandaroot. I was using wrong macro.

Thanks a lot for your reply.

ankhi

Subject: Re: Segmentation Fault - MVD digitization
Posted by [Ankhi Roy](#) on Fri, 06 Jul 2012 08:18:06 GMT
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Hi Ralf,

I have attached the simulation macro.
Revision of pandaroot - 15921

svn info -

Path: .
URL: <https://subversion.gsi.de/fairroot/pandaroot/trunk>
Repository Root: <https://subversion.gsi.de/fairroot>
Repository UUID: 0381ead4-6506-0410-b988-94b70fbc4730
Revision: 15921
Node Kind: directory
Schedule: normal
Last Changed Author: mpatsyuk
Last Changed Rev: 15898
Last Changed Date: 2012-07-03 16:32:38 +0530 (Tue, 03 Jul 2012)

ankhi

File Attachments

1) [sim_mvd.C](#), downloaded 440 times
