Subject: Usage of Dirc in concord with certain detectors Posted by donghee on Tue, 28 Jul 2009 15:33:14 GMT

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Dear Dirc experts,

The Dirc module must carefully be used in the MC simulation, if you really want to put dirc detector into full chain MC simulation e.g, any kind of physics analysis with all detectors.

When you introduce Dirc in your simulation, take care calling the Dirc class. You have to put PndDrc at the end of your script in runsimulation.C

If you can do for example like this, then should be filled all info. Quote:

```
FairDetector *Gem = new PndGemDetector("GEM", kTRUE);

FairDetector *Dch = new PndDchDetector("DCH", kTRUE);

FairDetector *Lumi = new PndLumi("Lumi", kTRUE);

PndDrc *Drc = new PndDrc("DIRC", kTRUE);
```

But if you ignore the postion of Drc, like following, then losing your task for GEM, Dch and Lumi.

Quote:

```
PndDrc *Drc = new PndDrc("DIRC", kTRUE);
FairDetector *Gem = new PndGemDetector("GEM", kTRUE);
FairDetector *Dch = new PndDchDetector("DCH", kTRUE);
FairDetector *Lumi = new PndLumi("Lumi", kTRUE);
```

I think that Dirc experts have to clean up this mess.

If you make the digitization procedure from differently produced simulation files, you can simply check what happen.

But I'm not sure whether it depends on the event topology.

I'm just guessing that some tracking is abandoned due to the Dirc part, then cannot goes to next detectors.

Quote:

```
*** GTRACK *** More than 10000 steps, tracking abandoned!
```

Maybe this should be some potential problem in the future.

Best wishes, Donghee Kang

Subject: Re: Usage of Dirc in concord with certain detectors Posted by StefanoSpataro on Tue, 28 Jul 2009 15:41:52 GMT

I have not understood why the simulation should be affected by the order of detectors.

Could you please show some sample, some plots, where you can see this effect?

In general the killed particles are just cherenkov photons reflected thousand of times inside the rods. And dch/gem/lumi are outside the dirc acceptance, then particles hitting the dirc will never enter inside those detectors.

Could you please give further informations?

Subject: Re: Usage of Dirc in concord with certain detectors Posted by donghee on Tue, 28 Jul 2009 16:11:32 GMT View Forum Message <> Reply to Message

Dear Dirc expert and Stefano,

I have tested to understand what is happening in the Dirc part.

I prepared two codes, one is including Dirc and other one is excluding Dirc during the simulation using runSim.C and runDigi.C

After digitization or hit producing, the final statistics in every part of any detectors are clearly different in two cases.

But in principle, the hit in MVD or TPC detector must be same, regardless of using Dirc.

The reason is following.

If the Dirc task failed in the running MC, all information are thrown away even though other detectors are correctly worked.

I can give you some number

without Dirc -> Entries of PndTpcDigi.fBits is 24577 with Dirc -> Entries of PndTpcDigi.fBits is 8844

These two numbers must be 24577 in any case.

That means, despite Dirc is incompetent to judge,

the statistics are greatly influenced by this wrong decision in the Dirc session.

This is apparently misconcept!!!

Best wishes, Donghee Kang

Subject: Re: Usage of Dirc in concord with certain detectors Posted by StefanoSpataro on Tue, 28 Jul 2009 16:18:49 GMT

Could you please send your macros, so that we can test them exactly?

Subject: Re: Usage of Dirc in concord with certain detectors Posted by Carsten Schwarz on Tue, 28 Jul 2009 18:23:41 GMT View Forum Message <> Reply to Message

Dear debuggers,

I'm listening carefully your discussion in order to fix the problem. I thought the exiting of GTRACKS refers only to photons. I'm grateful for every information.

Best regards Carsten (barrel-DIRC)

Subject: Re: Usage of Dirc in concord with certain detectors Posted by donghee on Wed, 29 Jul 2009 08:39:19 GMT View Forum Message <> Reply to Message

Dear PANDA colleague,

find attached the MC scripts and small mount of data produced by pseudo-DVCS events generator with exclusive electron + gamma + anti-proton particle.

Anti-proton goes to very forward direction, responding detector should be dch or lumi and partly gem. electron has mostly an opposite direction, i.e, backward direction.

Gamma is distributed in the forward and central part of spectrometer.

There are 2 main scripts as you can expect: runMC.C and runDigi.C Quote:

pandaroot/macro>tar -xvzf dvcs.tar.gz pandaroot/macro>root runMC.C pandaroot/macro>root runDigi.C

I would like to confirm two things.

At First:

In the runMC.C, the Dirc part is located at the end in order to store all detector infomation. If you move dirc part into the middle part of the runMC script, then the MC info. of detectors, which are calling below the dirc part, could not record anymore when you go to digitization.

The output can produce but content should be empty!

Therefore I suggested that you have to put Dirc part at the end of script.

Second:

As I already mentioned.

If you try to run simulation and digitization without Dirc and with Dirc, you can find the different result in both output.

Please open your digi output, and have a look any detector info.

Both statistics should be different.

Best wishes, Donghee Kang

File Attachments

1) dvcs.tar.gz, downloaded 394 times

Subject: Re: Usage of Dirc in concord with certain detectors Posted by StefanoSpataro on Thu, 06 Aug 2009 12:58:58 GMT

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Hello,

I have tried to study this behaviour.

First I have run tutorials/lhetrack/run_sim_tpccombi_pgun.C"(100,13,1)" with the standard macro, where Drc is at the end, and everything was running fine.

Than I have moved the Drc part just before Tpc, almost at the beginning, and after 10 events I have a crash in geometry (TGeoNode::Safety).

This is the backtrace:

Toggle Spoiler

root [0] .x run_sim_tpccombi_pgun.C(200,13,1)

Note: File "/home/stefano/july08/cbuild/lib/libDrc.so" already loaded

- RTDB container factory PndPidContFact
- -I- FairRun::SetMaterials() Media file used:

/home/stefano/july08/pandaroot/geometry/media_pnd.geo

- I - PndMvdDetector: fListOfSensitives contains:

Disk-Sensor

Barrel-Sensor

PixelActive

StripActive

StripSensor

SensorActiveArea

StripActive

PixelActive

---> _new_ Forward End-Cap has been used:

/home/stefano/july08/pandaroot/geometry/emc module3new.root

MDT version used: torino

```
====== FairRunSim: Initialising simulation run ========
Info in <TGeoManager::TGeoManager>: Geometry FAIRGeom, FAIR geometry created
-I- FairGeoMedia Read media
FairRunSim::Init() create visualisation manager
-I- PndFieldMap: Reading field map from ROOT file
/home/stefano/july08/pandaroot/input/TransMap.root
-I- PndFieldMap: Reading field map from ROOT file
/home/stefano/july08/pandaroot/input/DipoleMap.root
-I- PndFieldMap: Reading field map from ROOT file
/home/stefano/july08/pandaroot/input/SolenoidMap.root
----- Standard Config is called -----
Loading Geant3 libraries ...
Loading Geant3 libraries ... finished
MZSTOR. ZEBRA table base TAB(0) in /MZCC/ at adr 764000863 2D89BA5F HEX
MZSTOR. Initialize Store 0 in /GCBANK/
     with Store/Table at absolute adrs 764109709 764000863
                      HEX 2D8B638D 2D89BA5F
                      HEX
                              1A77A
                                          0
                relative adrs
                               108410
                                           0
     with
            1 Str. in
                     2 Links in 5300 Low words in 4999970 words.
     This store has a fence of 16 words.
MZLOGL. Set Log Level 0 for store 0
1***** GEANT Version 3.21/11 Released on 100298
0***** Correction Cradle Version 0.1100
MZDIV. Initialize Division Constant in Store 0
     NW/NWMAX= 20004000000. MODE/KIND= 1 2
     Division 20 initialized.
MZLINK. Initialize Link Area /GCLINK/ for Store 0 NL/NS= 20
MZLINK. Initialize Link Area /GCSLNK/ for Store 0 NL/NS= 100 100
-I- G3Config: Geant3 with TGeo has been created.
SetCuts Macro: Setting Processes..
SetCuts Macro: Setting cuts..
Info in <TGeoManager::SetTopVolume>: Top volume is cave. Master volume is cave
Material aluminium is not defined
Create Medium aluminium
Material iron is not defined
Create Medium iron
===== DRC:: ConstructGeometry() ======
_____
DIRC min. radius = 50.35
DIRC max. radius = 53.0364
sob shift = -150
sob radius2 = 104.012
```

```
Info in <TGeoManager::CheckGeometry>: Fixing runtime shapes...
Info in <TGeoManager::CheckGeometry>: ...Nothing to fix
Info in <TGeoManager::CloseGeometry>: Counting nodes...
Info in <TGeoManager::Voxelize>: Voxelizing...
Info in <TGeoManager::CloseGeometry>: Building cache...
Info in <TGeoNavigator::BuildCache>: --- Maximum geometry depth set to 100
Info in <TGeoManager::CloseGeometry>: 566 nodes/ 110 volume UID's in FAIR geometry
Info in <TGeoManager::CloseGeometry>: ------modeler ready-----
--- Building TPC Geometry ---
Material silicon is not defined
Create Medium silicon
Material carbon is not defined
Create Medium carbon
fwendcap & bwendcap flags == 1 / 0
==== EMC 2):: ConstructASCIIGeometry() ===
PndEmcReader: EMC geometry file ==
/home/stefano/july08/pandaroot/geometry/emc_module1245.dat
Emc module = 1
Emc module = 2
*****
Emc module = 3
Emc module = 4
Emc module = 5
===== EMC:: ConstructRootGeometry() m3a ===
File name = /home/stefano/july08/pandaroot/geometry/emc_module3new.root
You do not provide a ROOT file
FairMCApplication::ConstructGeometry(): Now closing the geometry
Warning in <TGeoManager::CloseGeometry>: geometry already closed
-I- PndDrc: Switching OFF Cherenkov Propagation
-I- PndDrc: Intialization successfull
-I- Initializing PndMvdDetector()
  ************
   initialisation for run id 482956479
-I FairParSet::init() 2 0
Error in <FairBaseParSet::init()>: FairBaseParSet not initialized
-I FairParSet::init() 2 0
Error in <PndGeoPassivePar::init()>: PndGeoPassivePar not initialized
-I FairParSet::init() 2 0
Error in <PndTpcGeoPar::init()>: PndTpcGeoPar not initialized
-I FairParSet::init() 2 0
Error in <PndGeoTofPar::init()>: PndGeoTofPar not initialized
-I FairParSet::init() 2 0
```

Error in <PndGeoDrcPar::init()>: PndGeoDrcPar not initialized -I FairParSet::init() 2 0 Error in <PndGeoMdtPar::init()>: PndGeoMdtPar not initialized Error in <FairRuntimeDb::initContainers()>: Error occured during initialization -I- FairMCApplication -> simulation RunID: 482956479 Calculating cross section tables, see gphysi.dat for more information Cross section calculation concluded successfully -I- FairMCApplication:: Monte carlo Engine Initialisation with TGeant3TGeo create PndFieldPar container PndMultiFieldPar create PndFieldPar container PndTransPar create PndFieldPar container PndDipolePar create PndFieldPar container PndSolenoidPar RuntimeDb: write container FairBaseParSet *** FairBaseParSet written to ROOT file version: 2 RuntimeDb: write container PndGeoPassivePar *** PndGeoPassivePar written to ROOT file version: 2 RuntimeDb: write container PndTpcGeoPar *** PndTpcGeoPar written to ROOT file version: 2 RuntimeDb: write container PndGeoTofPar *** PndGeoTofPar written to ROOT file version: 2 RuntimeDb: write container PndGeoDrcPar RuntimeDb: write container PndGeoMdtPar RuntimeDb: write container PndMultiFieldPar *** PndMultiFieldPar written to ROOT file version: 2 RuntimeDb: write container PndTransPar RuntimeDb: write container PndDipolePar RuntimeDb: write container PndSolenoidPar ----- actual containers in runtime database -----FairBaseParSet Test class for parameter io PndGeoPassivePar **Passive Geometry Parameters** PndTpc Geometry Parameters PndTpcGeoPar PndGeoTofPar tof Geometry Parameters PndGeoDrcPar **Drc Geometry Parameters** PndGeoMdtPar **MDT Geometry Parameters** PndMultiFieldPar Multiple Field parameter container Trans. Field parameter container PndTransPar Dipole Field parameter container PndDipolePar Solenoid Field parameter container PndSolenoidPar ----- runs, versions ----run id container 1st-inp 2nd-inp output run: 482956479 FairBaseParSet 482956479 2 -1 PndGeoPassivePar 482956479 -1 PndTpcGeoPar 482956479 -1 2 PndGeoTofPar 2 482956479 -1 PndGeoDrcPar -1 -1 0

-1

482956479

2

-1

PndGeoMdtPar

PndMultiFieldPar

```
PndTransPar
                                   482956479
                                                    -1
                                                           0
 PndDipolePar
                                   482956479
                                                    -1
                                                            O
 PndSolenoidPar
                                                             0
                                    482956479
                                                    -1
------ input/output ------
first input: none
second input: none
output:
OBJ: FairParRootFile params_tpccombi.root : 0 at: 0xc19f2e8
Root file I/O params tpccombi.root is open
detector I/Os: FairGenericParlo
**** GTRIGI: IEVENT=
                          1 IDEVT=
                                       1 Random Seeds =
                                                                         0
                                                              4357
FairMCApplication::GeneratePrimaries()
-I FairPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)Event Time = 0(ns)
-I- PndStack: Filling MCTrack array...
-I- PndStack: Number of primaries
        Total number of particles = 2006
        Number of tracks in output = 1953
-I- PndStack: Updating track indizes.....stack and 8 collections updated.
**** GTRIGI: IEVENT=
                          2 IDEVT=
                                       2 Random Seeds =
                                                                         0
FairMCApplication::GeneratePrimaries()
-I FairPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)Event Time = 0(ns)
-I- PndStack: Filling MCTrack array...
-I- PndStack: Number of primaries
        Total number of particles = 1875
        Number of tracks in output = 1842
-I- PndStack: Updating track indizes.....stack and 8 collections updated.
**** GTRIGI: IEVENT=
                         3 IDEVT=
                                       3 Random Seeds =
                                                                         0
FairMCApplication::GeneratePrimaries()
-I FairPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)Event Time = 0(ns)
-I- PndStack: Filling MCTrack array...
-I- PndStack: Number of primaries
        Total number of particles = 1051
        Number of tracks in output = 1031
-I- PndStack: Updating track indizes.....stack and 8 collections updated.
**** GTRIGI: IEVENT=
                         4 IDEVT=
                                       4 Random Seeds =
                                                                         0
FairMCApplication::GeneratePrimaries()
-I FairPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)Event Time = 0(ns)
-I- PndStack: Filling MCTrack array...
-I- PndStack: Number of primaries
        Total number of particles = 2678
        Number of tracks in output = 2640
-I- PndStack: Updating track indizes.....stack and 8 collections updated.
**** GTRIGI: IEVENT=
                         5 IDEVT=
                                       5 Random Seeds =
                                                                         0
FairMCApplication::GeneratePrimaries()
-I FairPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)Event Time = 0(ns)
-I- PndStack: Filling MCTrack array...
-I- PndStack: Number of primaries
        Total number of particles = 1715
        Number of tracks in output = 1677
-I- PndStack: Updating track indizes.....stack and 8 collections updated.
**** GTRIGI: IEVENT=
                          6 IDEVT=
                                       6 Random Seeds =
                                                                         0
FairMCApplication::GeneratePrimaries()
```

```
-I FairPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)Event Time = 0(ns)
-I- PndStack: Filling MCTrack array...
-I- PndStack: Number of primaries
        Total number of particles = 2291
        Number of tracks in output = 2272
-I- PndStack: Updating track indizes.....stack and 8 collections updated.
**** GTRIGI: IEVENT=
                          7 IDEVT=
                                       7 Random Seeds =
                                                               4357
                                                                          0
FairMCApplication::GeneratePrimaries()
-I FairPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)Event Time = 0(ns)
-I- PndStack: Filling MCTrack array...
-I- PndStack: Number of primaries
        Total number of particles = 1541
        Number of tracks in output = 1504
-I- PndStack: Updating track indizes.....stack and 8 collections updated.
**** GTRIGI: IEVENT=
                          8 IDEVT=
                                       8 Random Seeds =
                                                                          0
FairMCApplication::GeneratePrimaries()
-I FairPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)Event Time = 0(ns)
-I- PndStack: Filling MCTrack array...
-I- PndStack: Number of primaries
        Total number of particles = 2451
        Number of tracks in output = 2408
-I- PndStack: Updating track indizes.....stack and 8 collections updated.
**** GTRIGI: IEVENT=
                          9 IDEVT=
                                       9 Random Seeds =
                                                               4357
                                                                          0
FairMCApplication::GeneratePrimaries()
-I FairPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)Event Time = 0(ns)
-I- PndStack: Filling MCTrack array...
-I- PndStack: Number of primaries
        Total number of particles = 1713
        Number of tracks in output = 1678
-I- PndStack: Updating track indizes.....stack and 8 collections updated.
**** GTRIGI: IEVENT=
                                        10 Random Seeds =
                         10 IDEVT=
                                                                4357
                                                                            0
FairMCApplication::GeneratePrimaries()
-I FairPrimaryGenerator: 1 primary tracks from vertex (0, 0, 0)Event Time = 0(ns)
Program received signal SIGSEGV, Segmentation fault.
[Switching to Thread -1208748352 (LWP 14287)]
0x031773c9 in TGeoNode::Safety () from /home/stefano/july08/tools/root/lib/libGeom.so
(gdb) bt
#0 0x031773c9 in TGeoNode::Safety () from /home/stefano/july08/tools/root/lib/libGeom.so
#1 0x031956f4 in TGeoShapeAssembly::Safety () from
/home/stefano/july08/tools/root/lib/libGeom.so
#2 0x031773fd in TGeoNode::Safety () from /home/stefano/july08/tools/root/lib/libGeom.so
#3 0x031717f9 in TGeoNavigator::Safety () from
/home/stefano/july08/tools/root/lib/libGeom.so
#4 0x03174c6f in TGeoNavigator::FindNextBoundary () from
/home/stefano/july08/tools/root/lib/libGeom.so
#5 0x0315a7f3 in TGeoManager::FindNextBoundary () from
/home/stefano/july08/tools/root/lib/libGeom.so
#6 0xb5fc7302 in gtnextTGeo () from
/home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so
#7 0xb5fc126d in gtnext_ () from
/home/stefano/july08/transport/geant3/lib/tgt linux/libgeant321.so
```

```
#8 0xb5eb55f7 in g3tmuon () from
/home/stefano/july08/transport/geant3/lib/tgt linux/libgeant321.so
#9 0xb5ebab57 in g3track () from
/home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so
#10 0xb5fc43ff in gutrak () from
/home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so
#11 0xb5ebb46d in gtreveroot_ () from
/home/stefano/july08/transport/geant3/lib/tgt linux/libgeant321.so
#12 0xb5fc442e in gutrev () from
/home/stefano/july08/transport/geant3/lib/tgt linux/libgeant321.so
#13 0xb5fafb9f in jumpt0 () from
/home/stefano/july08/transport/geant3/lib/tgt linux/libgeant321.so
#14 0xb5de0882 in g3trig_ () from
/home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so
#15 0xb5fbc776 in TGeant3::Gtrig () from
/home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so
#16 0xb5fc0dc5 in TGeant3::ProcessEvent () from
/home/stefano/july08/transport/geant3/lib/tgt linux/libgeant321.so
#17 0xb5fc0d12 in TGeant3::ProcessRun () from
/home/stefano/july08/transport/geant3/lib/tgt linux/libgeant321.so
#18 0x023cb954 in FairMCApplication::RunMC (this=0x9d21b00, nofEvents=200) at
/home/stefano/july08/pandaroot/base/FairMCApplication.cxx:229
#19 0x023e4d38 in FairRunSim::Run (this=0x9c96030, NStart=200, NStop=0) at
/home/stefano/july08/pandaroot/base/FairRunSim.cxx:289
#20 0x02417b63 in G FairDict 532 0 5 (result7=0xbfece2b0, funcname=0x9c94390 "\001".
libp=0xbfec8460, hash=0)
  at /home/stefano/july08/cbuild/base/FairDict.cxx:9071
#21 0x00dee2e7 in Cint::G__ExceptionWrapper () from
/home/stefano/july08/tools/root/lib/libCint.so.5.20
#22 0x00e82497 in G__execute_call () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#23 0x00e826fa in G__call_cppfunc () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#24 0x00e63f67 in G__interpret_func () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#25 0x00e52b28 in G__getfunction () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#26 0x00f34055 in G__getstructmem () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#27 0x00f2bb3f in G getvariable () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#28 0x00e36b2a in G__getitem () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#29 0x00e39abf in G__getexpr () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#30 0x00eae4ac in G__exec_statement () from
/home/stefano/july08/tools/root/lib/libCint.so.5.20
#31 0x00e65a8f in G__interpret_func () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#32 0x00e5296a in G__getfunction () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#33 0x00e36e74 in G getitem () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#34 0x00e39abf in G__getexpr () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#35 0x00e42dd0 in G calc internal () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#36 0x00ebfe34 in G process cmd () from /home/stefano/july08/tools/root/lib/libCint.so.5.20
#37 0x0095a8d3 in TCint::ProcessLine () from
/home/stefano/july08/tools/root/lib/libCore.so.5.20
#38 0x0095aa54 in TCint::ProcessLineSynch () from
/home/stefano/july08/tools/root/lib/libCore.so.5.20
#39 0x008a15f3 in TApplication::ExecuteFile () from
/home/stefano/july08/tools/root/lib/libCore.so.5.20
#40 0x008a1916 in TApplication::ProcessFile () from
```

/home/stefano/july08/tools/root/lib/libCore.so.5.20 #41 0x0089f93e in TApplication::ProcessLine () from /home/stefano/july08/tools/root/lib/libCore.so.5.20 #42 0x00630e8a in TRint::HandleTermInput () from /home/stefano/july08/tools/root/lib/libRint.so.5.20 #43 0x0062f4e0 in TTermInputHandler::Notify () from /home/stefano/july08/tools/root/lib/libRint.so.5.20 #44 0x0063177e in TTermInputHandler::ReadNotify () from /home/stefano/july08/tools/root/lib/libRint.so.5.20 #45 0x00969dfa in TUnixSystem::CheckDescriptors () from /home/stefano/july08/tools/root/lib/libCore.so.5.20 #46 0x0096e01c in TUnixSystem::DispatchOneEvent () from /home/stefano/july08/tools/root/lib/libCore.so.5.20 #47 0x008f78b4 in TSystem::InnerLoop () from /home/stefano/july08/tools/root/lib/libCore.so.5.20 ---Type <return> to continue, or q <return> to quit---#48 0x008f767b in TSystem::Run () from /home/stefano/july08/tools/root/lib/libCore.so.5.20 #49 0x0089fafa in TApplication::Run () from /home/stefano/julv08/tools/root/lib/libCore.so.5.20 #50 0x0062fc5e in TRint::Run () from /home/stefano/july08/tools/root/lib/libRint.so.5.20 #51 0x08048d5a in main ()

Then I have tried to move it between TPC and MVD, and now the error is in TGeoNavigator::FindNextDaughterBoundary:

Toggle Spoiler Program received signal SIGSEGV, Segmentation fault. [Switching to Thread -1208604992 (LWP 14523)] 0x02c86f47 in TGeoNavigator::FindNextDaughterBoundary () from /home/stefano/july08/tools/root/lib/libGeom.so (gdb) bt #0 0x02c86f47 in TGeoNavigator::FindNextDaughterBoundary () from /home/stefano/july08/tools/root/lib/libGeom.so #1 0x02c8aa90 in TGeoNavigator::FindNextBoundary () from /home/stefano/july08/tools/root/lib/libGeom.so #2 0x02c707f3 in TGeoManager::FindNextBoundary () from /home/stefano/july08/tools/root/lib/libGeom.so #3 0xb517f302 in gtnextTGeo () from /home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so #4 0xb517926d in gtnext_ () from /home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so #5 0xb506d5f7 in g3tmuon () from /home/stefano/july08/transport/geant3/lib/tgt linux/libgeant321.so #6 0xb5072b57 in g3track () from /home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so #7 0xb517c3ff in gutrak () from /home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so #8 0xb507346d in gtreveroot_() from /home/stefano/july08/transport/geant3/lib/tgt linux/libgeant321.so #9 0xb517c42e in gutrev_ () from /home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so #10 0xb5167b9f in jumpt0 () from

/home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so
#11 0xb4f98882 in g3trig_ () from
/home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so
#12 0xb5174776 in TGeant3::Gtrig () from
/home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so
#13 0xb5178dc5 in TGeant3::ProcessEvent () from
/home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so
#14 0xb5178d12 in TGeant3::ProcessRun () from
/home/stefano/july08/transport/geant3/lib/tgt_linux/libgeant321.so
#15 0x024fb954 in FairMCApplication::RunMC (this=0x8ffebe8, nofEvents=200) at
/home/stefano/july08/pandaroot/base/FairMCApplication.cxx:229
#16 0x02514d38 in FairRunSim::Run (this=0x8f73120, NStart=200, NStop=0) at
/home/stefano/july08/pandaroot/base/FairRunSim.cxx:289
#17 0x02547b63 in G__FairDict_532_0_5 (result7=0xbff30b50, funcname=0x8f71480 "\001", libp=0xbff2ad00, hash=0)

I have removed the pipe, thinking about some overlap between it and the DIRC, but without improvements. I have removed all the detectors, and then the simulation runs. Once I put inside all the detectors one by one (keeping dirc at the top after cave), at emc I have again the crash.

Then, we have some problems with geometry, maybe some conflict between dirc and emc, but I am not sure. What is strange is that the crash depends on the order of detectors. Expert should maybe take a look, trying to understand what is going wrong.

I have done all my tests with geant3 and old external packages. I will try tpo see what will happen with the new ones.

Subject: Re: Usage of Dirc in concord with certain detectors Posted by asanchez on Thu, 06 Aug 2009 14:27:59 GMT View Forum Message <> Reply to Message

Hi stephano, so far i remember, the Dirc geometry is a full cylinder without gap to place the pellet pipe. Maybe the problem is due to this fact.

regards Alicia.

Subject: Re: Usage of Dirc in concord with certain detectors Posted by StefanoSpataro on Thu, 06 Aug 2009 15:02:40 GMT

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If I remember well, Carsten has modified the geometry to avoid the overlap with the pipe. It should not be the case.

Subject: Re: Usage of Dirc in concord with certain detectors Posted by StefanoSpataro on Thu, 06 Aug 2009 17:52:36 GMT View Forum Message <> Reply to Message

I have tried also with july09 external packages, the same problem in geometry appears.