Subject: Microcandidates writing fails for large simulation file
Posted by Vishwajeet Jha on Wed, 08 Apr 2009 09:24:36 GMT
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Hi all,

I have a simulation which is split into many files because of large file size (>2 GB).

While using PndMicroWriter task with the writeMicro.C in /macro/fsim no Microcandidates are written, if more than one simulation file (that have been split) is included. I chain the files using AddFile from FairRunAna task.

Everything works well, if only the first of the split simulation file is included (Of course, with less number of events).

Regards,
Vishwajeet

Subject: Re: Microcandidates writing fails for large simulation file
Posted by asanchez on Wed, 08 Apr 2009 11:13:33 GMT
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Hi can you attach the file macro
you are using in order to understand
in detail what you are doing?

thanks
Alicia S.

Subject: Re: Microcandidates writing fails for large simulation file
Posted by Vishwajeet Jha on Wed, 08 Apr 2009 13:13:57 GMT
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Hi...

I have uploaded the simple macro which works when the split sim files are not added. (only the first file is used).

Vishwajeet

File Attachments
1) writeMicro.C, downloaded 447 times

Subject: Re: Microcandidates writing fails for large simulation file
Posted by asanchez on Wed, 08 Apr 2009 13:48:44 GMT
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Hi Vjha,

i think you should
add your digi/reco output file(infile)
after having added the corresponding simfile
so like that,

```
FairRunAna *fRunA= new FairRunAna();
  fRunA->SetInputFile(simfile); // your simulation file
  fRunA->AddFriend(infile); // your reco/digi output file
  fRunA->AddFile(simfile1);
  fRunA->AddFriend(infile); // your reco/digi output file
  fRunA->AddFile(simfile2);
  fRunA->AddFriend(infile); // your reco/digi output file

  fRunA->SetOutputFile(outfile.Data()); //your microcandidates output file
```

I have modified the writeMicro so that you can try now again.
tell me it is working.

best regrads
alicia

File Attachments

1) writeMicro.C, downloaded 471 times

Subject: Re: Microcandidates writing fails for large simulation file
Posted by Vishwajeet Jha on Wed, 08 Apr 2009 15:02:31 GMT
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Hi...

Thanks a lot ...
It works perfect.

VJ

Subject: Re: Microcandidates writing fails for large simulation file
Posted by StefanoSpataro on Fri, 05 Jun 2009 15:50:32 GMT
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Dear all,

it is not so clear to me why this procedure does not work in my case.
I have run the simulation, which produces two files: points_tpccombi.root and points_tpcombi_1.root.
Then digitization, one output file: digi_tpccombi.root.

At the end reconstruction, but I need also the MC information.
I have written:

```
FairRunAna *fRun= new FairRunAna();
fRun->SetInputFile("points_tpccombi.root");
fRun->AddFriend("digi_tpccombi.root");
fRun->AddFile("points_tpccombi_1.root");
fRun->AddFriend("digi_tpccombi.root");
fRun->SetOutputFile(outFile);
```

The first file is processed normally, but when the second file starts:

```
-I FairRootManager: switching to chained file: points_tpccombi_1.root
                    connected friends: digi_tpccombi.root
```

after few events I have a segmentation violation, related to the wrong coupling of the initial file and his friend.

Has somebody managed to handle different friend files in a reconstruction macro? And how?
It seems Alicia's method is not working for me (no idea why)
Thanks in advance.

Subject: Re: Microcandidates writing fails for large simulation file
Posted by asanchez on Fri, 05 Jun 2009 16:06:53 GMT
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Hi Stephano, can you please also send
the error message you get.?

In principle, i'm using the same procedure like you
and for me it is working.

regards
alicia

Subject: Re: Microcandidates writing fails for large simulation file
Posted by StefanoSpataro on Sat, 06 Jun 2009 06:32:32 GMT
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The error message does not come from base classes. For them everything is ok.
The error comes from the fact that I am using trackID of the simulation and friend file(hit->digi->point). Therefore, if the friend is not aligned to the other file, the trackid points to a not existing member of the TClonesArray.

Do you use such kind of information? Only in this case you can see the error.
At the moment I have no error message on this computer, on monday I could send it, but he meaning of the error is what I wrote before.

Subject: Re: Microcandidates writing fails for large simulation file
Posted by StefanoSpataro on Mon, 08 Jun 2009 13:37:54 GMT
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This is the error I got,
because the MVD trackID does not correspond to the effective MCTrack ID, and then it crashes.

Toggle Spoiler

```
-I FairRootManager: switching to chained file: points_tpccombi_1.root
                    connected friends: digi_tpccombi.root



  ***  Event # 1548
 =====   PndLheHitsMaker   =====
  Total number of hits for tracking:   133
Total number of tracks in TPC:     6
         Good tracks in TPC:     6
 Working with 133 hits
 found     4 tracks
finder    : Real Time = 639.05 seconds Cpu Time = 475.92 seconds
 =====   PndTpcLheTrackFitter   =====
 Number of tracks for fitting 4
 =====   PndLhePidMaker:  Number of tracks for pid 4


  ***  Event # 1549
 =====   PndLheHitsMaker   =====
  Total number of hits for tracking:   197
Total number of tracks in TPC:     2
         Good tracks in TPC:     2
 Working with 197 hits
 found     4 tracks
finder    : Real Time = 639.37 seconds Cpu Time = 476.10 seconds
 =====   PndTpcLheTrackFitter   =====
 Number of tracks for fitting 4
 =====   PndLhePidMaker:  Number of tracks for pid 4


  ***  Event # 1550
 =====   PndLheHitsMaker   =====

 *** Break *** segmentation violation
(no debugging symbols found)
```

```
Using host libthread_db library "/lib/tls/libthread_db.so.1".
Attaching to program: /proc/16332/exe, process 16332
(no debugging symbols found)...done.
[Thread debugging using libthread_db enabled]
[New Thread -1208371520 (LWP 16332)]
(no debugging symbols found)...done.
(no debugging symbols found)...done.
(no debugging symbols found)...done.
(no debugging symbols found)...done.
(no debugging symbols found)...done.
(no debugging symbols found)...done.
0x00ac17a2 in _dl_sysinfo_int80 ()
   from /lib/ld-linux.so.2
#1  0x003f94b3 in __waitpid_nocancel () from /lib/tls/libc.so.6
#2  0x003a2779 in do_system () from /lib/tls/libc.so.6
#3  0x0036798d in system () from /lib/tls/libpthread.so.0
#4  0x0067546f in TUnixSystem::Exec () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#5  0x0067aef9 in TUnixSystem::StackTrace () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#6  0x00677b3e in TUnixSystem::DispatchSignals () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#7  0x00677bcc in SigHandler () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#8  0x00676e11 in sighandler () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#9  <signal handler called>
#10 0x05bc1a2a in FairMCPoint::GetTrackID (this=0x0) at
/data00/spataro/july08/pandaroot/base/FairMCPoint.h:50
#11 0x037757aa in PndLheHitsMaker::GetMvdHits (this=0xb9314a8) at
/data00/spataro/july08/pandaroot/lhetrack/PndLheHitsMaker.cxx:419
#12 0x03777931 in PndLheHitsMaker::Exec (this=0xb9314a8, option=0x5bc7cc8 "") at
/data00/spataro/july08/pandaroot/lhetrack/PndLheHitsMaker.cxx:782
#13 0x0060f1ed in TTask::ExecuteTasks () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#14 0x0060efe9 in TTask::ExecuteTask () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#15 0x05b6c0c2 in FairRunAna::Run (this=0x8f0d220, Ev_start=0, Ev_end=2000) at
/data00/spataro/july08/pandaroot/base/FairRunAna.cxx:248
#16 0x05ba3b04 in G__FairDict_532_0_5 (result7=0xbfe2d1d0, funcname=0x8f0b288 "\001",
libp=0xbfe27380, hash=0) at /data00/spataro/july08/cbuild/base/FairDict.cxx:9067
#17 0x00b152e7 in Cint::G__ExceptionWrapper () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#18 0x00ba9497 in G__execute_call () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#19 0x00ba96fa in G__call_cppfunc () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#20 0x00b8af67 in G__interpret_func () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#21 0x00b79b28 in G__getfunction () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#22 0x00c5b055 in G__getstructmem () from
```

/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#23 0x00c52b3f in G__getvariable () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#24 0x00b5db2a in G__getitem () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#25 0x00b60abf in G__getexpr () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#26 0x00bd54ac in G__exec_statement () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#27 0x00b4bc6c in G__exec_tempfile_core () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#28 0x00b4cfc3 in G__exec_tempfile () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#29 0x00be97a1 in G__process_cmd () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCint.so.5.20
#30 0x006648d3 in TCint::ProcessLine () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#31 0x00664a54 in TCint::ProcessLineSynch () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#32 0x005ab5f3 in TApplication::ExecuteFile () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#33 0x005ab916 in TApplication::ProcessFile () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#34 0x005a993e in TApplication::ProcessLine () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#35 0x00238b39 in TRint::Run () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libRint.so.5.20

Subject: Re: Microcandidates writing fails for large simulation file
Posted by Florian Uhlig on Mon, 08 Jun 2009 13:40:50 GMT
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Hi stefano

Can you try the following (if not already tried).

Quote:
FairRunAna *fRun= new FairRunAna();
fRun->SetInputFile("points_tpccombi.root");
fRun->AddFile("points_tpccombi_1.root");
fRun->AddFriend("digi_tpccombi.root");
fRun->SetOutputFile(outFile);

Ciao

Florian

Subject: Re: Microcandidates writing fails for large simulation file
Posted by StefanoSpataro on Mon, 08 Jun 2009 13:44:58 GMT
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In this case the error is at the beginning:

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```
-I- FairRunAna::Init :
points_tpccombi.root  is connected with:

Warning in <TGeoManager::Init>: Deleting previous geometry: FAIRGeom/FAIR geometry
Info in <TGeoManager::CloseGeometry>: Geometry loaded from file...
Info in <TGeoManager::SetTopVolume>: Top volume is cave. Master volume is cave
Info in <TGeoManager::Voxelize>: Voxelizing...
Info in <TGeoManager::CloseGeometry>: 464536 nodes/ 1290 volume UID's in FAIR geometry
Info in <TGeoManager::CloseGeometry>: ----------------modeler ready----------------
PndFieldCreator::SetParm()
create PndFieldPar container PndFieldPar
create PndFieldPar container PndSolenoidPar
create PndFieldPar container PndDipolePar
create PndFieldPar container PndTransPar
create PndFieldPar container PndConstPar
create PndFieldPar container PndMultiFieldPar
 -I container name PndLheCorrPar

************************************************************
    initialisation for run id 878383098
************************************************************
-I- PndMvdDetector: fListOfSensitives contains:
        Disk-Sensor
        Barrel-Sensor
        PixelActive
        StripSensor
        SensorActiveArea
        StripActive
        PixelActive

 *** Break *** segmentation violation
(no debugging symbols found)
Using host libthread_db library "/lib/tls/libthread_db.so.1".
Attaching to program: /proc/16370/exe, process 16370
(no debugging symbols found)...done.
[Thread debugging using libthread_db enabled]
[New Thread -1208072512 (LWP 16370)]
(no debugging symbols found)...done.
(no debugging symbols found)...done.
(no debugging symbols found)...done.
(no debugging symbols found)...done.
(no debugging symbols found)...done.
(no debugging symbols found)...done.
0x00ac17a2 in _dl_sysinfo_int80 ()
   from /lib/ld-linux.so.2
```

#1 0x00a174b3 in __waitpid_nocancel () from /lib/tls/libc.so.6
#2 0x009c0779 in do_system () from /lib/tls/libc.so.6
#3 0x0098598d in system () from /lib/tls/libpthread.so.0
#4 0x0045f46f in TUnixSystem::Exec () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#5 0x00464ef9 in TUnixSystem::StackTrace () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#6 0x00461b3e in TUnixSystem::DispatchSignals () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#7 0x00461bcc in SigHandler () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#8 0x00460e11 in sighandler () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#9 <signal handler called>
#10 0x01f072a8 in delete_PndGeoTofPar (p=0xea763) at
/data00/spataro/july08/cbuild/tof/PndTofDict.cxx:524
#11 0x00431384 in TClass::Destructor () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libCore.so.5.20
#12 0x06df780e in TBufferFile::ReadFastArray () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libRIO.so
#13 0x06e82dc5 in TStreamerInfo::ReadBuffer<char**> () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libRIO.so
#14 0x06dfac1f in TBufferFile::ReadClassBuffer () from
/data00/spataro/july08/tools/root_v5.20.00/lib/libRIO.so

but it is not clear to me why it is in TOF dictionary.

At the beginning:

-I- FairRunAna: Opening Input file: points_tpccombi.root
-I- FairRunAna Adding input file: points_tpccombi_1.root
-I- FairRunAna Input file: points_tpccombi_1.root is connected to friend: digi_tpccombi.root

It is like only the added file is friend of the... "friend".

Subject: Re: Microcandidates writing fails for large simulation file
Posted by asanchez on Mon, 08 Jun 2009 14:42:41 GMT
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Hi Stephano,
try to do the following,

by doing the same procedure as before in your macro,
FairRunAna *fRun= new FairRunAna();
fRun->SetInputFile("points_tpccombi.root");
fRun->AddFriend("digi_tpccombi.root");
fRun->AddFile("points_tpccombi_1.root");

fRun->AddFriend("digi_tpccombi.root");
fRun->SetOutputFile(outFile);

go to your task and
add before calling FairMCPoint::GetTrackID(),

if pointer(your pointer to PndMvdPoint) is zero
then continue;

then you will be able to run it completely.

good luck.

ALicia.

Subject: Re: Microcandidates writing fails for large simulation file
Posted by StefanoSpataro on Mon, 08 Jun 2009 14:55:44 GMT
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In this way of course it works (or better, it does not crash), but this is not the solution but just cheating.
If I do this the analysis related to the second file will have the information completely screwed up, it makes no sense.

Subject: Re: Microcandidates writing fails for large simulation file
Posted by asanchez on Mon, 08 Jun 2009 15:06:48 GMT
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I don't think
it is a problem related to how are you
adding your files but on how are you sorting hits id's.

regards
Alicia.

Subject: Re: Microcandidates writing fails for large simulation file
Posted by StefanoSpataro on Mon, 08 Jun 2009 16:14:34 GMT
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The code works perfectly for the first file, 1500 events, with good results, and always if there is only one file. And it is not sorting TCA, whose structure is not touched at all.
