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Subject: tof barrel + TPC

Posted by [asanchez](#) on Tue, 17 Jul 2007 08:18:49 GMT

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Dear all,

I have already implemented a TOF barrel counter by following the TPR description. The time will be determined by smearing the time information( space point in detector) with a time resolution of 100 ps.

The problem is I have problems to commit it to the general pandaroot framework.

Anyway i have a question. I want to use the TPC in order to reconstruct the momemtum and the trayectory.

Is the TPC code so far developped to be used?

Can one of the experts tell me which are the steps to be followed if i want to use the tpc macro?

thanks a lot

Alicia S.

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Subject: Re: tof barrel + TPC

Posted by [Sebastian Neubert](#) on Tue, 17 Jul 2007 08:27:42 GMT

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Hi Alicia!

We are still working on the TPC reconstruction. One main limitation at the moment is, that we can only reconstruct paarticles which go under an angle of lets say not more than 70deg from the beam axis. This is due to the track parameterization we use. With GEANE this should be solved before september.

Furthermore the track finder at the moment only works for tracks coming from the IP. I am working on secondaries today.

Anyway you are invited to run the tpc reconstruction.

Have a look at macro/tpc/runReco.C and try to understand it before you run it. Feel free to aks any question!

Reconstruction at the moment is NOT an out-of-the-box tool. So expect to write your own scripts to utilize what you need.

And before you can run the reco do not forget to run the digitization!

Cheers! Sebastian.

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Subject: Re: tof barrel + TPC

Posted by [asanchez](#) on Thu, 19 Jul 2007 13:54:26 GMT

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Hi by using the tpc and tof together  
i got the following error by running the digi macro for tpc.

It seems to be related to a missing file for tpcGas,  
Is there the possibility to commit this missing file, or  
is it possible to generate it by using the tpc code?

thanks a lot  
Alicia.

PSaid instance created... access via gSaid->f()

- RTDB container factory CbmBaseContFact
- RTDB container factory CbmFieldContFact
- RTDB container factory CbmPassiveContFact
- RTDB container factory TpcContFact
- l- CbmRunAna: Opening Input file: test\_tofMC.root

Warning in <TStreamerInfo::BuildCheck>:

The StreamerInfo of class CbmModule read from file demoparams.root  
has the same version (=1) as the active class but a different checksum.  
You should update the version to ClassDef(CbmModule,2).  
Do not try to write objects with the current class definition,  
the files will not be readable.

Warning in <TStreamerInfo::BuildCheck>:

The StreamerInfo of class CbmDetector read from file demoparams.root  
has the same version (=1) as the active class but a different checksum.  
You should update the version to ClassDef(CbmDetector,2).  
Do not try to write objects with the current class definition,  
the files will not be readable.

Warning in <TClass::TClass>: no dictionary for class CbmEmc is available

Warning in <TClass::TClass>: no dictionary for class CbmGeoEmcPar is available

Warning in <TClass::TClass>: no dictionary for class CbmDrc is available

Warning in <TClass::TClass>: no dictionary for class CbmGeoDrcPar is available

Fatal in <TpcGas::TpcGas>: Input File is not found

aborting

Using host libthread\_db library "/lib/libthread\_db.so.1".

Attaching to program: /proc/1685/exe, process 1685

`system-supplied DSO at 0xffffe000' has disappeared; keeping its symbols.

done.

done.

[Thread debugging using libthread\_db enabled]

[New Thread 16384 (LWP 1685)]

done.

done.

done.

done.

done.  
done.  
done.  
done.  
done.  
0x419cb788 in waitpid () from /lib/libc.so.6  
#1 0x41a538c0 in \_\_DTOR\_END\_\_ () from /lib/libc.so.6  
#2 0x41964442 in do\_system () from /lib/libc.so.6  
#3 0x418dfc5f in system () from /lib/libpthread.so.0  
#4 0x402cc2a5 in TUnixSystem::Exec () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCore.so.5.14  
#5 0x402cc78a in TUnixSystem::StackTrace () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCore.so.5.14  
#6 0x4016ca04 in DefaultErrorHandler () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCore.so.5.14  
#7 0x4016cbf4 in ErrorHandler () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCore.so.5.14  
#8 0x4016ce09 in Fatal () from /misc/cbmsoft/Debian3.1/new/tools/root/lib/libCore.so.5.14  
#9 0x44bc2d1a in TpcGas (this=0x8fdaa00, Filename=@0xbfc01220, E=400) at  
/u/asanchez/fairroot\_prueba/pandaroot/tpc/TpcGas.cxx:52  
#10 0x44bc1b0b in TpcClusterizerTask (this=0x8feb2f8) at  
/u/asanchez/fairroot\_prueba/pandaroot/tpc/TpcClusterizerTask.cxx:42  
#11 0x44c200a2 in G\_\_tpcDict\_590\_0\_1 (result7=0xbfc0e9c0, funcname=0x8bcc798 "\001",  
libp=0xbfc0b410, hash=0)  
at /u/asanchez/fairroot\_prueba/build/tpc/tpcDict.cxx:4804  
#12 0x40927d5d in Cint::G\_\_ExceptionWrapper () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#13 0x409eb809 in G\_\_call\_cppfunc () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#14 0x409d8371 in G\_\_interpret\_func () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#15 0x409bd57f in G\_\_getfunction () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#16 0x409e9ba5 in G\_\_new\_operator () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#17 0x409a3c18 in G\_\_getexpr () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#18 0x409976ae in G\_\_define\_var () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#19 0x40a444f5 in G\_\_defined\_type () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#20 0x40a0de98 in G\_\_exec\_statement () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#21 0x40991416 in G\_\_exec\_tempfile\_core () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#22 0x40991743 in G\_\_exec\_tempfile () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#23 0x40a17d1d in G\_\_process\_cmd () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCint.so.5.14  
#24 0x40222b9d in TCint::ProcessLine () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCore.so.5.14  
#25 0x40222d3b in TCint::ProcessLineSynch () from

/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCore.so.5.14  
#26 0x4014c117 in TApplication::ProcessFile () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCore.so.5.14  
#27 0x4014b6bf in TApplication::ProcessLine () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libCore.so.5.14  
#28 0x417af33b in TRint::Run () from  
/misc/cbmsoft/Debian3.1/new/tools/root/lib/libRint.so.5.14  
#29 0x08048e64 in main ()  
lxi011:tpc>

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Subject: Re: tof barrel + TPC  
Posted by [StefanoSpataro](#) on Thu, 19 Jul 2007 13:59:51 GMT  
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The file is in the pandaroot/tpc directory.  
If I remember well, you have only to copy the files in the directory where you launch your digitization macro.

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Subject: Re: tof barrel + TPC  
Posted by [asanchez](#) on Thu, 19 Jul 2007 14:14:56 GMT  
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Ok and now where is the so called  
DevMap\_29-06-07\_E\_and\_B\_new\_fieldclass.dat

it is not includede in the /tpc directory.

cheers  
Alicia

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Subject: TPC dat file  
Posted by [asanchez](#) on Tue, 24 Jul 2007 07:41:04 GMT  
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Dear Sebastian,  
I have tried to run the digi macro  
but the file DevMap\_29-06-07\_E\_and\_B\_new\_fieldclass.dat  
is not included in the new revision.

there is any way to produce it, or has it to be committed by you?

thanks a lot

Alicia S.

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Subject: Re: TPC dat file  
Posted by [Sebastian Neubert](#) on Tue, 24 Jul 2007 11:27:51 GMT  
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Hi Alicia!

This file is only needed for special Simulations, where the space charge distortions are taken into account in the TPC. When this option is switched off in the drifterTask the digitization is supposed to run without this file.

However I do not know if Felix has programmed it that way.  
Felix, can you have a look at this, please!?

Alicia you can try to switch off the Distort option of the DrifterTask and see if it does work.

Cheers! Sebastian.

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Subject: Re: TPC dat file  
Posted by [asanchez](#) on Tue, 24 Jul 2007 12:11:30 GMT  
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Hi Sebastian,  
thanks a lot  
and gute Besserung.

Best regards  
Alicia.

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Subject: Re: TPC dat file  
Posted by [asanchez](#) on Tue, 31 Jul 2007 09:17:19 GMT  
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Daer all,  
could somebody from the TPC group tell me  
which momentum resolution are you expecting from  
the tracking?  
I mean for the reconstructed momentum.

thanks a lot  
alicia S.

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Subject: TPC dat file  
Posted by [asanchez](#) on Tue, 31 Jul 2007 12:12:39 GMT  
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Hi Sebastian, after having switch off the TpcDrifterTask  
i get this error

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is there any way to run the reco macro  
and obtain information about momentum reconstruction?

cheers Alicia.

```
Error in <CbmRuntimeDb::initContainers()>: Error occurred during initialization
CbmFieldCreator::createCbmField()
-E- CbmRootManager Branch: TpcDriftedElectron not found in Tree
Error in <TpcGemTask::TpcGemTask::Init>: DriftedElectron-array not found!
-E- CbmRootManager Branch: TpcAvalanche not found in Tree
Error in <TpcPadResponseTask::TpcPadResponseTask::Init>: Avalanche-array not found!
-E- CbmRootManager Branch: TpcSignal not found in Tree
Error in <TpcElectronicsTask::TpcElectronicsTask::Init>: Signal-array not found!
TpcClusterizer:: 10827 clusters created
Error: Can't call TpcGemTask::WriteHistograms() in current scope testdigi.C:121:
Possible candidates are...
(in TpcGemTask)
(in CbmTask)
*** Interpreter error recovered ***
```

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