Subject: Re: Time-based EMC simulation
Posted by StefanoSpataro on Fri, 13 Sep 2013 15:06:20 GMT
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Done! Now with the emc macro:

MacBook-Pro-di-Stefano:emc spataro$ pwd
/Users/spataro/apr13/pandaroot/macro/emc
MacBook-Pro-di-Stefano:emc spataro$ svn info
Path: .
URL: https://subversion.gsi.de/fairroot/pandaroot/trunk/macro/emc
Repository Root: https://subversion.gsi.de/fairroot
Repository UUID: 0381ead4-6506-0410-b988-94b70fbc4730
Revision: 21697
Node Kind: directory
Schedule: normal
Last Changed Author: dimam
Last Changed Rev: 21680
Last Changed Date: 2013-09-11 14:50:34 +0200 (Mer, 11 Set 2013)
MacBook-Pro-di-Stefano:emc spataro$ root -l sim_emc.C
root [0]
Processing sim_emc.C...
Error in <TClonesArray::SetClass>: called with a null pointer
FairRootManager::OpenOutFile("sim_emc.root")
[INFO] Media file used : /Users/spataro/apr13/pandaroot/geometry/media_pnd.geo
-I container name PndEmcGeoPar
[INFO] ============== FairRunSim: Initialising simulation run ==============
Info in <TGeoManager::TGeoManager>: Geometry FAIRGeom, FAIR geometry created
-I- FairGeoMedia Read media
-I container name PndEmcDigiPar
-I container name PndEmcDigiNonuniformityPar

****
initialisation for run id 1379084142
****
-I- FairRunTimeDB::InitContainer() PndEmcGeoPar
[ERROR] init() PndEmcGeoPar not initialized
-I- FairRunTimeDB::InitContainer() PndEmcDigiPar
PndEmcDigiPar initialized from Ascii file
-I- FairRunTimeDB::InitContainer() PndEmcDigiNonuniformityPar
[ERROR] init() PndEmcDigiNonuniformityPar not initialized
Error in <FairRuntimeDb::initContainers()>: Error occured during initialization
[INFO] PndFieldMap: Reading field map from ROOT file
/Users/spataro/apr13/pandaroot/input/TransMap.1500.root
[INFO] PndFieldMap: Reading field map from ROOT file
/Users/spataro/apr13/pandaroot/input/DipoleMap1.1500.root
[INFO] PndFieldMap: Reading field map from ROOT file
/Users/spataro/apr13/pandaroot/input/DipoleMap2.1500.root
[INFO] PndFieldMap: Reading field map from ROOT file
/Users/spataro/apr13/pandaroot/input/SolenoidMap1.root
[INFO] PndFieldMap: Reading field map from ROOT file
/Users/spataro/apr13/pandaroot/input/SolenoidMap2.root

```
[INFO   ] PndFieldMap: Reading field map from ROOT file
/Users/spataro/apr13/pandaroot/input/SolenoidMap3.root
[INFO   ] PndFieldMap: Reading field map from ROOT file
/Users/spataro/apr13/pandaroot/input/SolenoidMap4.root
[INFO   ] ---------- Standard Config is called ----------------------------------
Loading Geant3 libraries ...
Loading Geant3 libraries ... finished

 MZSTOR.  ZEBRA table base TAB(0) in /MZCC/ at adr    88041159     53F66C7 HEX

 MZSTOR.  Initialize Store  0  in /GCBANK/
        with Store/Table at absolute adrs    88191925    88041159
                                  HEX     541B3B5     53F66C7
                                  HEX       24B32           0
                        relative adrs      150322           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    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
Info in <TGeoNavigator::BuildCache>: --- Maximum geometry depth set to 100
fwendcap & bwendcap flags == 1 / 1

 ====== EMC 2)::  ConstructASCIIGeometry() ===
 ============================================
PndEmcReader: EMC geometry file ==
/Users/spataro/apr13/pandaroot/geometry/emc_module12.dat
Emc module = 1
********
Emc module = 2
********

 ====== EMC::  ConstructRootGeometry() m3a ===
 ============================================
File name = /Users/spataro/apr13/pandaroot/geometry/emc_module3_2012_new.root

 ====== EMC::  ConstructRootGeometry() m4a ===
 ============================================
fgeoName3:: /Users/spataro/apr13/pandaroot/geometry/emc_module4_StraightGeo24.4.root
```

```
File name Bw1=
/Users/spataro/apr13/pandaroot/geometry/emc_module4_StraightGeo24.4.root

 ====== EMC::  ConstructRootGeometry() m5a ===
 ============================================
fgeoName4:: /Users/spataro/apr13/pandaroot/geometry/emc_module5_fsc.root
File name Fsc= /Users/spataro/apr13/pandaroot/geometry/emc_module5_fsc.root
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 <TGeoManager::CountLevels>: max level = 5, max placements = 1496
Info in <TGeoManager::CloseGeometry>: 1833818 nodes/ 761 volume UID's in FAIR geometry
Info in <TGeoManager::CloseGeometry>: ----------------modeler ready----------------

**********************************************************
PndEmc::SetSpecialPhysicsCuts():
   using special physics cuts ...
**********************************************************
[INFO   ] Initialize Tasks-------------------------
 INITIALIZATION **********************
HitProducer has EnergyHitThreshold of 0.000001 GeV and Use_nonuniformity 0
-I- PndEmcHitProducer: Intialization successfull
[INFO   ] Simulation RunID: 1379084142

 Calculating cross section tables, see gphysi.dat for more information

 Cross section calculation concluded successfully
[INFO   ] Monte carlo Engine Initialisation  with : TGeant3TGeo
[INFO   ] ***  PndEmcGeoPar written to ROOT file   version: 1
[INFO   ] ***  PndEmcDigiPar written to ROOT file   version: 1
[INFO   ] ***  PndEmcDigiNonuniformityPar written to ROOT file   version: 1
[INFO   ] ***  FairBaseParSet written to ROOT file   version: 1
[INFO   ] ***  PndMultiFieldPar written to ROOT file   version: 1
[INFO   ] ***  PndGeoPassivePar written to ROOT file   version: 1
--------------------------------------------------------------------------------
--------------  actual containers in runtime database  -------------------------
PndEmcGeoPar                        Emc Geometry Parameters
PndEmcDigiPar                       Emc Digitalization Parameters
PndEmcDigiNonuniformityPar                  Emc Nonuniformity Parameters
FairBaseParSet                      class for parameter io
PndMultiFieldPar                    Multiple Field parameter container
PndTransPar                         Trans. Field parameter container
PndDipole1Par                       Dipole Field parameter container
PndDipole2Par                       Dipole Field parameter container
PndSolenoid1Par                       Solenoid 1st region parameter container
PndSolenoid2Par                       Solenoid 2nd region parameter container
PndSolenoid3Par                       Solenoid 3rd region parameter container
PndSolenoid4Par                       Solenoid 4th region parameter container
PndGeoPassivePar                        Passive Geometry Parameters
--------------  runs, versions  ------------------------------------------------
```

```
run id
  container                              1st-inp    2nd-inp    output
run: 1379084142
  PndEmcGeoPar                          1379084142        -1         1
  PndEmcDigiPar                                1         -1         1
  PndEmcDigiNonuniformityPar                1379084142        -1         1
  FairBaseParSet                        1379084142        -1         1
  PndMultiFieldPar                      1379084142        -1         1
  PndTransPar                           1379084142        -1         0
  PndDipole1Par                         1379084142        -1         0
  PndDipole2Par                         1379084142        -1         0
  PndSolenoid1Par                        1379084142        -1         0
  PndSolenoid2Par                        1379084142        -1         0
  PndSolenoid3Par                        1379084142        -1         0
  PndSolenoid4Par                        1379084142        -1         0
  PndGeoPassivePar                        1379084142        -1         1
-------------  input/output  ---------------------------------------------------
first Input:
Ascii I/O /Users/spataro/apr13/pandaroot/macro/params/emc.par is open
detector I/Os:  FairGenericParIo
second input: none
output:
OBJ: FairParRootFile simparams.root  : 0 at: 0x7fabe99ba3b0
Root file I/O simparams.root is open
detector I/Os:  FairGenericParIo
 **** GTRIGI: IEVENT=      1 IDEVT=      1 Random Seeds =       4357          0
[INFO   ] FairPrimaryGenerator: (Event 1) 1  primary tracks from vertex (0.000000, 0.000000,
0.000000 ) with beam gradiant (0.000000, 0.000000) Event Time = 0.000000 (ns)
 POINT EXECUTION **********
 **** GTRIGI: IEVENT=      2 IDEVT=      2 Random Seeds =       4357          0
[INFO   ] FairPrimaryGenerator: (Event 2) 1  primary tracks from vertex (0.000000, 0.000000,
0.000000 ) with beam gradiant (0.000000, 0.000000) Event Time = 0.000000 (ns)
 POINT EXECUTION **********
 **** GTRIGI: IEVENT=      3 IDEVT=      3 Random Seeds =       4357          0
[INFO   ] FairPrimaryGenerator: (Event 3) 1  primary tracks from vertex (0.000000, 0.000000,
0.000000 ) with beam gradiant (0.000000, 0.000000) Event Time = 0.000000 (ns)
 POINT EXECUTION **********
 **** GTRIGI: IEVENT=      4 IDEVT=      4 Random Seeds =       4357          0
[INFO   ] FairPrimaryGenerator: (Event 4) 1  primary tracks from vertex (0.000000, 0.000000,
0.000000 ) with beam gradiant (0.000000, 0.000000) Event Time = 0.000000 (ns)
 POINT EXECUTION **********
 **** GTRIGI: IEVENT=      5 IDEVT=      5 Random Seeds =       4357          0
[INFO   ] FairPrimaryGenerator: (Event 5) 1  primary tracks from vertex (0.000000, 0.000000,
0.000000 ) with beam gradiant (0.000000, 0.000000) Event Time = 0.000000 (ns)
 POINT EXECUTION **********
 **** GTRIGI: IEVENT=      6 IDEVT=      6 Random Seeds =       4357          0
[INFO   ] FairPrimaryGenerator: (Event 6) 1  primary tracks from vertex (0.000000, 0.000000,
0.000000 ) with beam gradiant (0.000000, 0.000000) Event Time = 0.000000 (ns)
 POINT EXECUTION **********
 **** GTRIGI: IEVENT=      7 IDEVT=      7 Random Seeds =       4357          0
[INFO   ] FairPrimaryGenerator: (Event 7) 1  primary tracks from vertex (0.000000, 0.000000,
0.000000 ) with beam gradiant (0.000000, 0.000000) Event Time = 0.000000 (ns)
```

```
 POINT EXECUTION ********************
 **** GTRIGI: IEVENT=      8 IDEVT=      8 Random Seeds =       4357          0
[INFO   ] FairPrimaryGenerator: (Event 8) 1  primary tracks from vertex (0.000000, 0.000000,
0.000000 ) with beam gradiant (0.000000, 0.000000) Event Time = 0.000000 (ns)
 POINT EXECUTION ********************
 **** GTRIGI: IEVENT=      9 IDEVT=      9 Random Seeds =       4357          0
[INFO   ] FairPrimaryGenerator: (Event 9) 1  primary tracks from vertex (0.000000, 0.000000,
0.000000 ) with beam gradiant (0.000000, 0.000000) Event Time = 0.000000 (ns)
 POINT EXECUTION ********************
 **** GTRIGI: IEVENT=     10 IDEVT=     10 Random Seeds =       4357          0
[INFO   ] FairPrimaryGenerator: (Event 10) 1  primary tracks from vertex (0.000000, 0.000000,
0.000000 ) with beam gradiant (0.000000, 0.000000) Event Time = 0.000000 (ns)
 POINT EXECUTION ********************
==========================================================
PndEmcHitProducer::FinishTask
**********************************************************
Read points # 6067
Produc hits# 265, threshold# 1e-06
Hits above threshhod#192
**********************************************************
RealTime=8.087632 seconds, CpuTime=5.430000 seconds
(int)52
root [1]
```

The same with Linux.
In reality before I had commented out PndEmc. This is the reason why I was not seeing such effect from PndEmc but from PndEmcHitProducer.