Subject: PandaRoot volumes for forward spectrometer
Posted by Olaf Hartmann on Wed, 21 Dec 2011 14:28:21 GMT
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Dear all,

I'm looking for the (most detailed available) geometry descriptions in PandaRoot for the forward detectors. What I can find in the geometry folder is:

dch.geo/dch.root
dipole.geo
fsc.geo
ftofwall.root
fts.geo
muon_FS.root

Can someone of the detector groups comment which geometries are up to date and how to initialize them from the macro?

In general I think it would be a good idea to maintain a WIKI page where the different geometries for the detectors are explained and which moreover is updated as soon as someone implements something new.

Cheers
Olaf.

Subject: Re: PandaRoot volumes for forward spectrometer
Posted by StefanoSpataro on Wed, 21 Dec 2011 18:10:24 GMT
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Hi Olaf,
you can use the standard macro/pid/run_sim_sttcombi_pgun.C simulation macro.

If you want to have also forward Mdt, take out the "fast" part and put:

```
PndMdt *Muo = new PndMdt("MDT",kTRUE);
Muo->SetMdtMagnet(kTRUE);
Muo->SetBarrel("muon_TS_barrel_strip_v1_noGeo.root");
Muo->SetEndcap("muon_TS_endcap_strip_v1_noGeo.root");
Muo->SetForward("muon_Forward_strip_v1_noGeo.root");
Muo->SetMuonFilter("muon_MuonFilter_strip_v1_noGeo.root");
fRun->AddModule(Muo)
```

If you want to have the still untested bent pipe, uncomment the Pipe->SetGeometryFileName() line.

Subject: Re: PandaRoot volumes for forward spectrometer
Posted by Dmitry Morozov on Thu, 22 Dec 2011 09:26:01 GMT
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Hi Olaf,

Unfortunately, there is no usable macro for forward part inside repository.

I use the following geometry (part of the sim macro):

```
//------------------------  CAVE      -----------------

  FairModule *Cave= new PndCave("CAVE");
  Cave->SetGeometryFileName("pndcave.geo");
  fRun->AddModule(Cave);
  //------------------------  Magnet   -----------------
  FairModule *Magnet= new PndMagnet("MAGNET");
  //Magnet->SetGeometryFileName("FullSolenoid_V842.root");
  Magnet->SetGeometryFileName("FullSuperconductingSolenoid_v831.root");
  fRun->AddModule(Magnet);
  FairModule *Dipole= new PndMagnet("MAGNET");
  Dipole->SetGeometryFileName("dipole.geo");
  fRun->AddModule(Dipole);
//  ------------------------  Pipe     -----------------
  FairModule *Pipe= new PndPipe("PIPE");
  Pipe->SetGeometryFileName("beampipe_201112.root");
  fRun->AddModule(Pipe);
  //------------------------  STT       -----------------
  FairDetector *Stt= new PndStt("STT", kTRUE);
  Stt->SetGeometryFileName("straws_skewed_blocks_35cm_pipe.geo");
  fRun->AddModule(Stt);
  //------------------------  MVD       -----------------
  FairDetector *Mvd = new PndMvdDetector("MVD", kTRUE);
//  Mvd->SetGeometryFileName("Mvd-2.1_FullVersion.root");
  Mvd->SetGeometryFileName("Mvd-2.1_AddDisks_FullVersion.root");
  fRun->AddModule(Mvd);
  //------------------------  GEM       -----------------
  FairDetector *Gem = new PndGemDetector("GEM", kTRUE);
//  Gem->SetGeometryFileName("gem_3Stations.root");
  Gem->SetGeometryFileName("gem_4Stations.root");
  fRun->AddModule(Gem);
  //------------------------  EMC       -----------------
  PndEmc *Emc = new PndEmc("EMC",kTRUE);
  Emc->SetGeometryVersion(1);
  Emc->SetStorageOfData(kFALSE);
  fRun->AddModule(Emc);
  //------------------------  DRC       -----------------
  PndDrc *Drc = new PndDrc("DIRC", kTRUE);
  Drc->SetGeometryFileName("dirc_l0_p0.root");
  Drc->SetRunCherenkov(kFALSE);
  fRun->AddModule(Drc);
  //------------------------  DISC      -----------------
```

```
  PndDsk* Dsk = new PndDsk("DSK", kTRUE);
  Dsk->SetGeometryFileName("dsk.root");
  Dsk->SetStoreCerenkovs(kFALSE);
  Dsk->SetStoreTrackPoints(kFALSE);
  fRun->AddModule(Dsk);
  //------------------------  MDT       -----------------
  PndMdt *Muo = new PndMdt("MDT",kTRUE);
  Muo->SetBarrel("fast");
  Muo->SetEndcap("fast");
  Muo->SetMuonFilter("fast");
  Muo->SetMdtMagnet(kTRUE);
  Muo->SetMdtMFIron(kTRUE);
  fRun->AddModule(Muo);
  //------------------------  FTS       -----------------
  FairDetector *Fts= new PndFts("FTS", kTRUE);
  Fts->SetGeometryFileName("fts.geo");
  fRun->AddModule(Fts);
  //--------------------------  FTOF      -----------------
  FairDetector *FTof = new PndFtof("FTOF",kTRUE);
  FTof->SetGeometryFileName("ftofwall.root");
  fRun->AddModule(FTof);
============================================================
```

To have forward MDT use Sefano's suggestion.
Note, that default ftofwall.root from the svn might be overlapped with FSC. So I use my own ftofwall.root with shifted FTOF along z. You can create it using macro "macro/ftof/create_ftof_rootgeo.C"

Hope this helps.

Dmitry