Subject: [FIXED] problem with Dirc - SciTil geometry?
Posted by Gianluigi Boca on Tue, 25 Sep 2012 18:05:27 GMT
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dear all,
when I simulate with the following macro :

```
{
  TStopwatch timer;
  timer.Start();
  gDebug=0;
  int verboseLevel = 0;
  Int_t nEvents = 10;

  //FileNames
  TString simOutput="MvdStt_Test.root";
  TString parOutput="MvdStt_Params.root";

  // Load basic libraries
  gROOT->Macro("$VMCWORKDIR/gconfig/rootlogon.C");
  gSystem->Load("libSciT");
  FairRunSim *fRun = new FairRunSim();

  // set the MC version used
  // ------------------------

  fRun->SetName("TGeant4");
  // Choose the Geant Navigation System

  fRun->SetOutputFile(simOutput);

  // Set Material file Name
  //----------------------
  fRun->SetMaterials("media_pnd.geo");

  // Create and add detectors
  //-------------------------

  FairModule *Cave= new PndCave("CAVE");
  Cave->SetGeometryFileName("pndcave.geo");
  fRun->AddModule(Cave);

  FairModule *Magnet= new PndMagnet("MAGNET");
  Magnet->SetGeometryFileName("FullSuperconductingSolenoid_v831.root");
  fRun->AddModule(Magnet);

  FairModule *Pipe= new PndPipe("PIPE");
  fRun->AddModule(Pipe);

  FairDetector *Mvd = new PndMvdDetector("MVD", kTRUE);
  Mvd->SetGeometryFileName("Mvd-2.1_FullVersion.root"); // only sensors, update follows
```

```
Mvd->SetVerboseLevel(verboseLevel);
fRun->AddModule(Mvd);

FairDetector *Stt= new PndStt("STT", kTRUE);
Stt->SetGeometryFileName("straws_skewed_blocks_35cm_pipe.geo");
fRun->AddModule(Stt);


PndEmc *Emc = new PndEmc("EMC",kTRUE);
Emc->SetGeometryVersion(1);
Emc->SetStorageOfData(kFALSE);
fRun->AddModule(Emc);


PndDrc *Drc = new PndDrc("DIRC", kTRUE);
Drc->SetGeometryFileName("dirc_l0_p0_updated.root");
Drc->SetRunCherenkov(kFALSE); // for fast sim Cherenkov -> kFALSE
fRun->AddModule(Drc);

FairDetector *SciT = new PndSciT("SCIT",kTRUE);
SciT->SetGeometryFileName("SciTil_Barrel_woPCB.root");
fRun->AddModule(SciT);


PndMdt *Muo = new PndMdt("MDT",kTRUE);
Muo->SetBarrel("fast");
Muo->SetEndcap("fast");
Muo->SetMuonFilter("fast");
Muo->SetMdtMagnet(kTRUE);
Muo->SetMdtMFIron(kTRUE);
fRun->AddModule(Muo);

FairDetector *Gem = new PndGemDetector("GEM", kTRUE);
Gem->SetGeometryFileName("gem_3Stations.root");
fRun->AddModule(Gem);

PndDsk* Dsk = new PndDsk("DSK", kTRUE);
Dsk->SetGeometryFileName("dsk.root");
Dsk->SetStoreCerenkovs(kFALSE);
Dsk->SetStoreTrackPoints(kFALSE);
fRun->AddModule(Dsk);

FairPrimaryGenerator* primGen = new FairPrimaryGenerator();
primGen->SmearVertexXY(kTRUE);
// set the X Y  coordinates of the beam and their smearing;
primGen->SetBeam(0., 0., 0.1, 0.1);  // <X>, <Y>, sigmaX, sigmaY.
fRun->SetGenerator(primGen);



 // Box Generator
FairBoxGenerator *fBox = new FairBoxGenerator(13, 1);  //1 (negative) muon events
```

```
    fBox->SetPRange(0.3,0.3);
    fBox->SetThetaRange(10,120);
    fBox->SetPhiRange(0.,360);
    fBox->SetCosTheta();
    primGen->AddGenerator(fBox);



  // Field Map Definition
  // --------------------
  // 1- Reading the new field map in the old format

 fRun->SetBeamMom(15);
  //---------------------Create and Set the Field(s)----------
  PndMultiField *fField= new PndMultiField("FULL");
  fRun->SetField(fField);

  fRun->SetStoreTraj(kTRUE); // toggle this for use with EVE
  fRun->SetRadLenRegister(kFALSE); // toggle for material budget study

   fRun->Init();



  // Fill the Parameter containers for this run
  //-------------------------------------------
  FairRuntimeDb *rtdb=fRun->GetRuntimeDb();
  Bool_t kParameterMerged=kTRUE;
  FairParRootFileIo* output=new FairParRootFileIo(kParameterMerged);
  output->open(parOutput.Data(),"RECREATE");
  rtdb->setOutput(output);

  // Transport nEvents
  // -----------------

  fRun->Run(nEvents);

  rtdb->saveOutput();
  rtdb->print();


  timer.Stop();
  Double_t rtime = timer.RealTime();
  Double_t ctime = timer.CpuTime();
  printf("RealTime=%f seconds, CpuTime=%f seconds\n",rtime,ctime);
}
```

I don't get any SciTil hits, but if I comment the line :

```
  Drc->SetGeometryFileName("dirc_l0_p0_updated.root");
```

I obtain the SciTil hits again. Is there a conflict between the
two geometries or am I doing something wrong?
Thanks Gianluigi

Subject: Re: problem with Dirc - SciTil geometry?
Posted by Maria Patsyuk on Mon, 29 Oct 2012 09:46:49 GMT
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Dear Gianluigi,

the problem with the Barrel DIRC overlapping with the SciTil is currently being solved, as it seems to be due to the SciTil and not the DIRC geometry.

By the way, the updated DIRC geometry dirc_l0_p0_updated.root, not overlapping with the tracking system (it also should not overlap with the SciTil) can be found now on svn.

Best regards,
Maria
