

Transporte en el detector: UrQMD en MPDroot

- Crear un directorio de trabajo y copiar los archivos de mpdroot al directorio
cp /NICA/MPDroot/mpdroot/macro/mpd/runMC.C workdir/
cp /NICA/MPDroot/mpdroot/macro/mpd/mpdloadlibs.C workdir/
cp /NICA/MPDroot/mpdroot/macro/mpd/geometry_stage1.C workdir/
- Copiar el archivo generado con UrQMD
cp /TuDirectorioGeneradorURQMD/test.f14 workdir/

runMC.C con eventos de UrQMD

Editor runMC.C:

- Inclure macros locales:

```
#include "mpdloadlibs.C"
```

```
#include "geometry_stage1.C"
```

- Definir el MC

```
#define URQMD
```

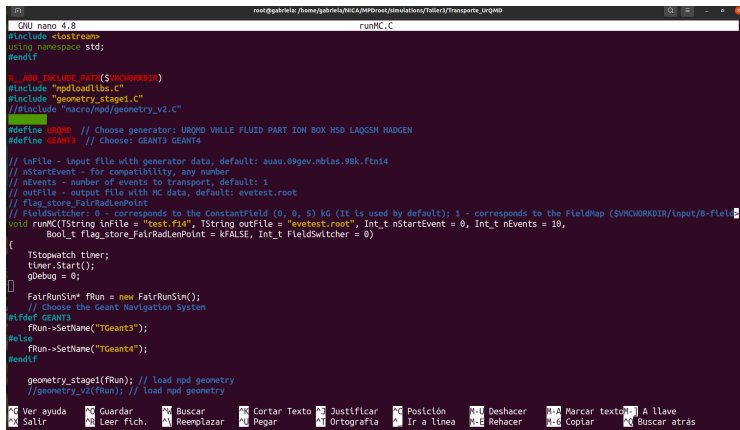
- Definir archivo de entrada, de salida y número de eventos

```
void runMC(TString inFile = "test.f14", TString outFile = "evetest.root", Int_t nStartEvent = 0,
Int_t nEvents = 10,
```

```
Bool_t flag_store_FairRadLenPoint = kFALSE, Int_t FieldSw itcher = 0)
```

- `$root runMC.C`

Corremos runMC.C con eventos de UrQMD



```
GNU nano 4.8 runMC.C
#include <iostream>
using namespace std;
#endif

#_ADD_INCLUDE_PATH($VHWORKDIR)
#include "npdloadlibs.C"
#include "geometry_stage1.C"
#include "macro/npd/geometry_v2.C"

#define URQMD // Choose generator: URQMD VHLLE FLUID PART ION BOX HSD LAQGSB HADGEN
#define GEANT3 // Choose: GEANT3 GEANT4

// inFile - input file with generator data, default: auau.09gev.mbias.98k.ftn14
// nStartEvent - for compatibility, any number
// nEvents - number of events to transport, default: 1
// outFile - output file with MC data, default: evetest.root
// flag_store_FairRadLenPoint
// FieldSwitcher: 0 - corresponds to the ConstantField (0, 0, 5) kG (It is used by default); 1 - corresponds to the FieldMap ($VHWORKDIR/input/B-field.C
void runMC(TString inFile = "test.f14", TString outFile = "evetest.root", Int_t nStartEvent = 0, Int_t nEvents = 10,
    Bool_t flag_store_FairRadLenPoint = kFALSE, Int_t FieldSwitcher = 0)
{
    TStopwatch timer;
    timer.Start();
    gDebug = 0;

    FairRunSim* fRun = new FairRunSim();
    // Choose the Geant Navigation System
    #ifdef GEANT3
        fRun->SetName("TGeant3");
    #else
        fRun->SetName("TGeant4");
    #endif

    geometry_stage1(fRun); // load npd geometry
    //geometry_v2(fRun); // load npd geometry

    Ver ayuda Guardar Buscar Cortar Texto Justificar Posición Deshacer Marcar texto A llave
    Salir Leer fich. Reemplazar Pegar Ortografía Ir a línea Rehacer Copiar Buscar atrás
```

Encender y apagar detectores: geometry_stage1.C

```

root@gabriela: /home/gabriela/NICA/MPDroot/Taller3/Introduccion
GNU nano 4.8 geometry_stage1.C
void geometry_stage1(FairRunSim *fRun)
{
    // Set Material file Name
    fRun->SetMaterials("media.geo");

    // Create and add detectors
    //-----
    FairModule *Cave= new FairCave("CAVE");
    Cave->SetGeometryFileName("cave.geo");
    fRun->AddModule(Cave);

    FairModule *Pipe= new FairPipe("PIPE");
    Pipe->SetGeometryFileName("pipe.geo");
    fRun->AddModule(Pipe);

    FairModule *Magnet= new FairMagnet("MAGNET");
    Magnet->SetGeometryFileName("magnet_v5.root");
    fRun->AddModule(Magnet);

    FairDetector *Ffd = new MpdFfd("FFD", kTRUE );
    Ffd->SetGeometryFileName("fffd_L180cm_v1_0.geo");
    // Ffd->SetGeometryFileName("ffd.geo");
    fRun->AddModule(Ffd);

    /*
    FairDetector *Tpc = new TpcDetector("TPC", kTRUE);
    Tpc->SetGeometryFileName("tpc_v8.root");
    fRun->AddModule(Tpc);

    FairDetector *Tof= new MpdTof("TOF", kTRUE );
    Tof->SetGeometryFileName("tof_v8.root");
    fRun->AddModule(Tof);
    */
}
    
```

Encender y apagar detectores: mpdloadlibs.C

```
GNU nano 4.8                                mpdloadlibs.C
gSystem->Load("libTrkBase");
gSystem->Load("libGeane");

/** Load MpdRoot libraries **/
// Base
gSystem->Load("libMpdBase");
gSystem->Load("libMCStack");
gSystem->Load("libMpdField");
gSystem->Load("libPassive");
gSystem->Load("libMpdGen");
// Hadgen
gSystem->Load("libHADGEN");
gSystem->Load("libTHadgen");
gSystem->Load("libMpdGeneralGenerator");

// Detectors
gSystem->Load("libtpc");
gSystem->Load("libToF");
gSystem->Load("libEtoF");
gSystem->Load("libEnc");
gSystem->Load("libZdc");
gSystem->Load("libStes");
gSystem->Load("libCpc");
gSystem->Load("libStrawECI");
gSystem->Load("libStrawendcap");
gSystem->Load("libRfd");
gSystem->Load("libbbb");
gSystem->Load("libMcord");

//Agregamos bebe
gSystem->Load("libbnd");
//gSystem->Load("libFsa");
//gSystem->Load("libBbc");
//gSystem->Load("libNDet");
//gSystem->Load("libbbs");
```