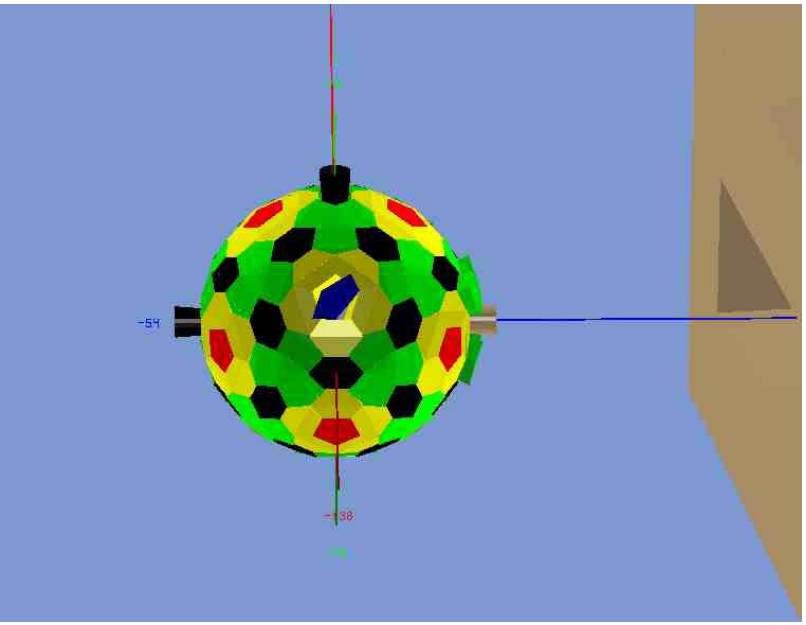
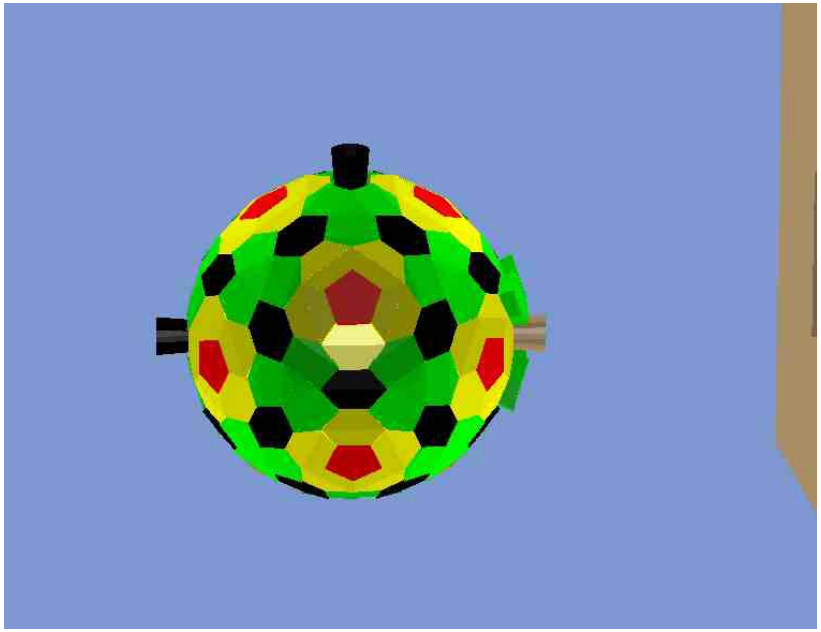
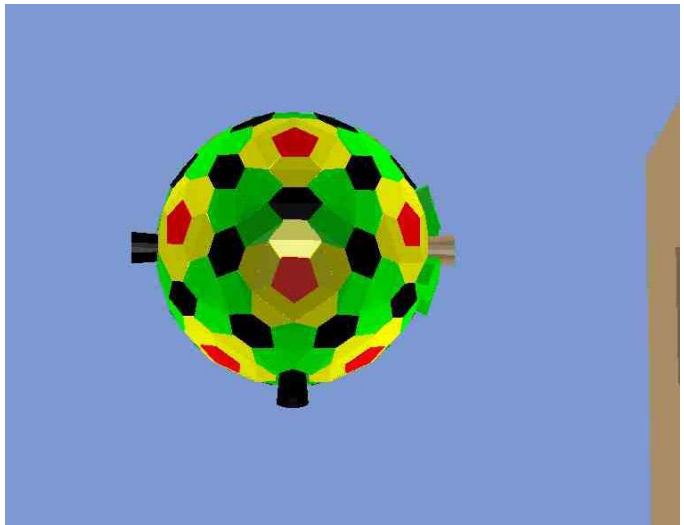
XBall geometry in r3broot

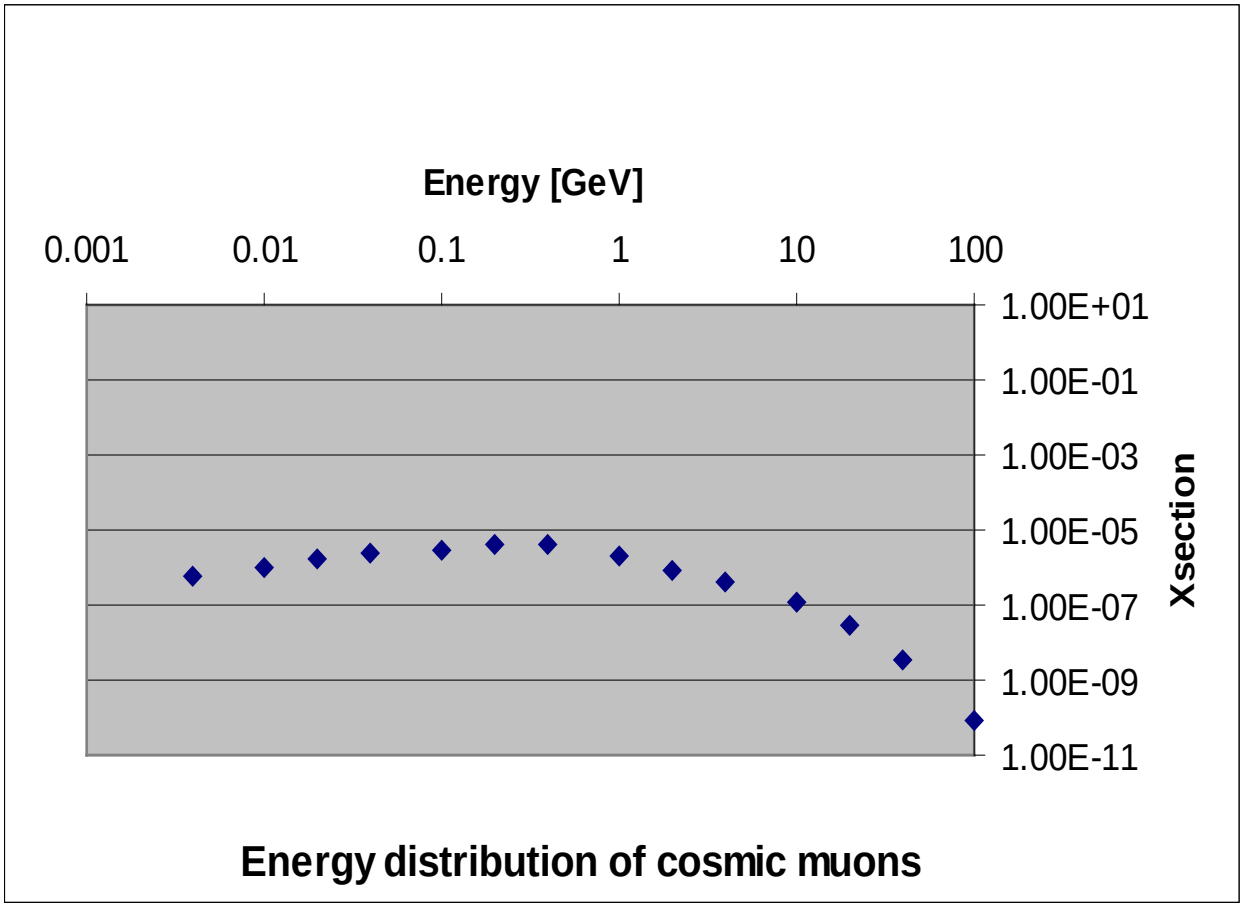






Also:
CsI in r3broot → NaI

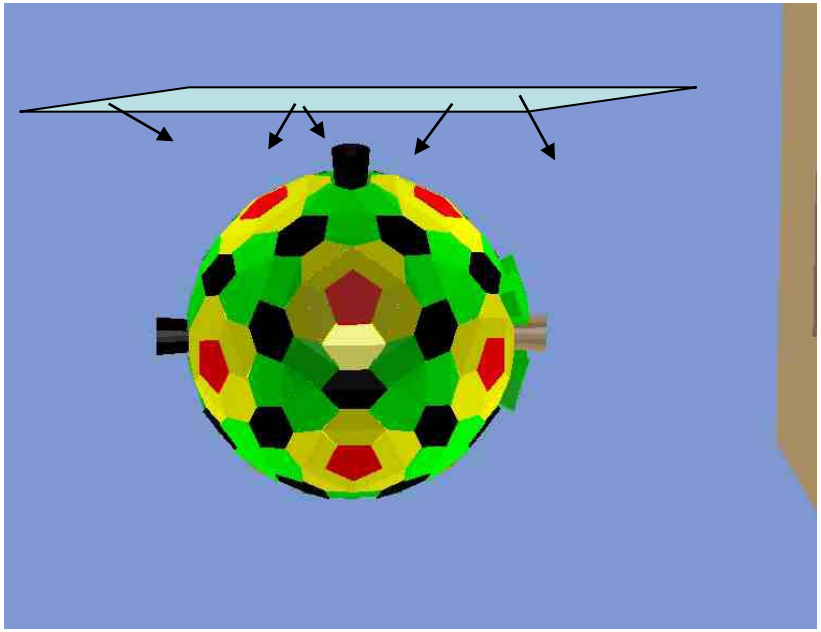
Cosmics event generator



From J.F Ziegler, NIM 191, 419 (1981)

Cosmics event generator

Random muons are generated on a plan above the XBall



Cosmics event generator

In directory: r3broot/trunk/r3bgen (and NOT r3b/trunk/generators !!!)

R3BCosmicGenerator.cxx + R3BCosmicGenerator.h

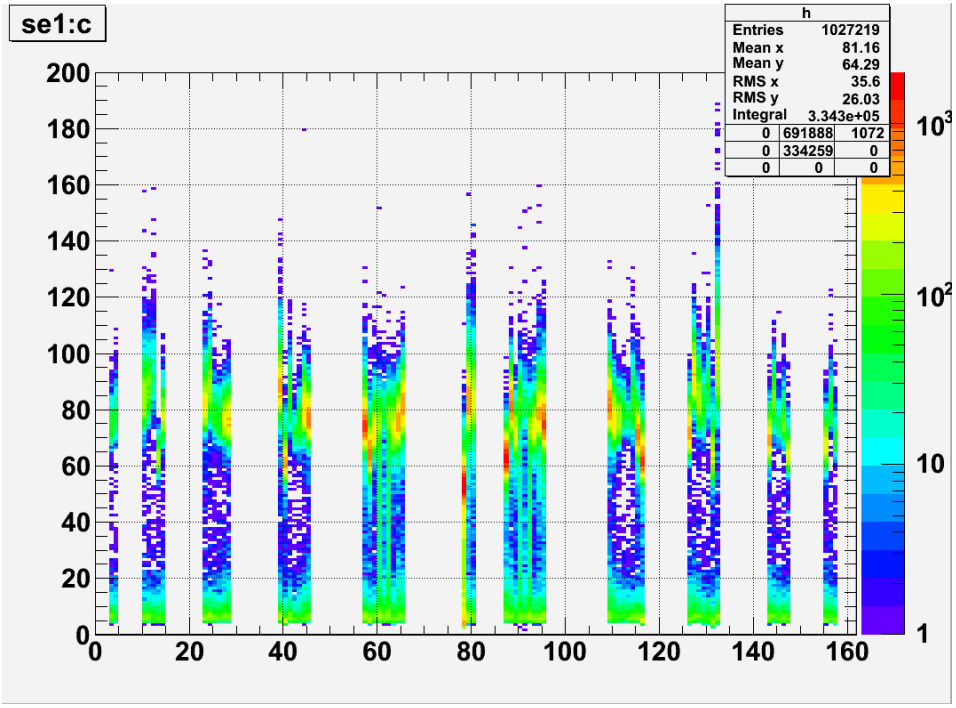
Arguments: R3BCosmicGenerator(pdgId, multipicity, Energy threshold)

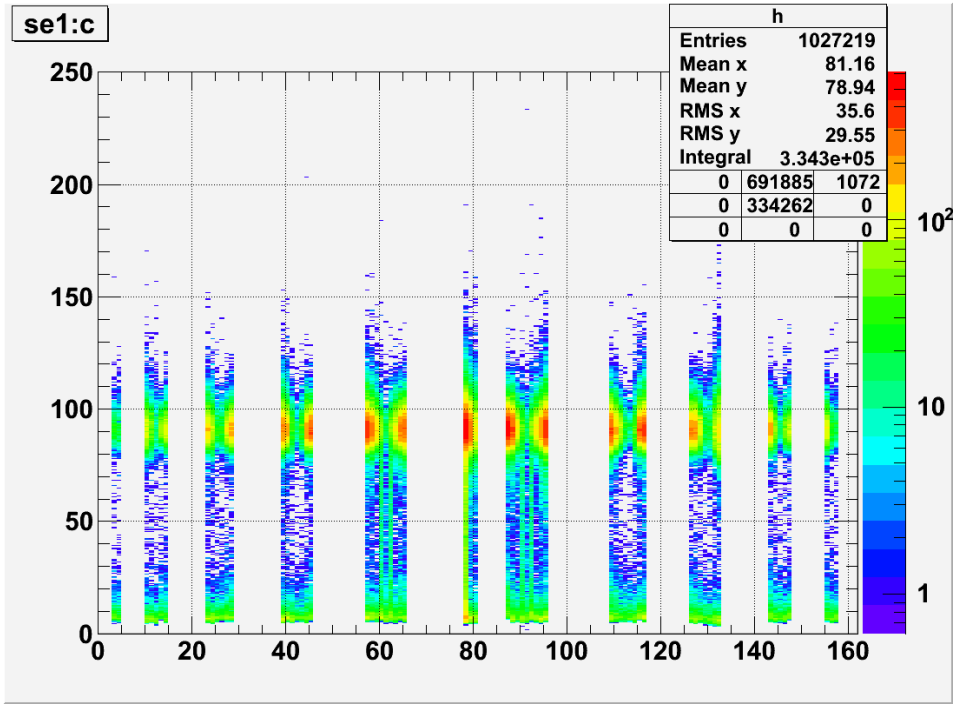
Functions: SetPDGType , SetMultiplicity, SetE_Threshold,
SetPhiRange, SetThetaRange, SetCosTheta,
SetXYZ, SetBoxXYZ

Cosmics event generator

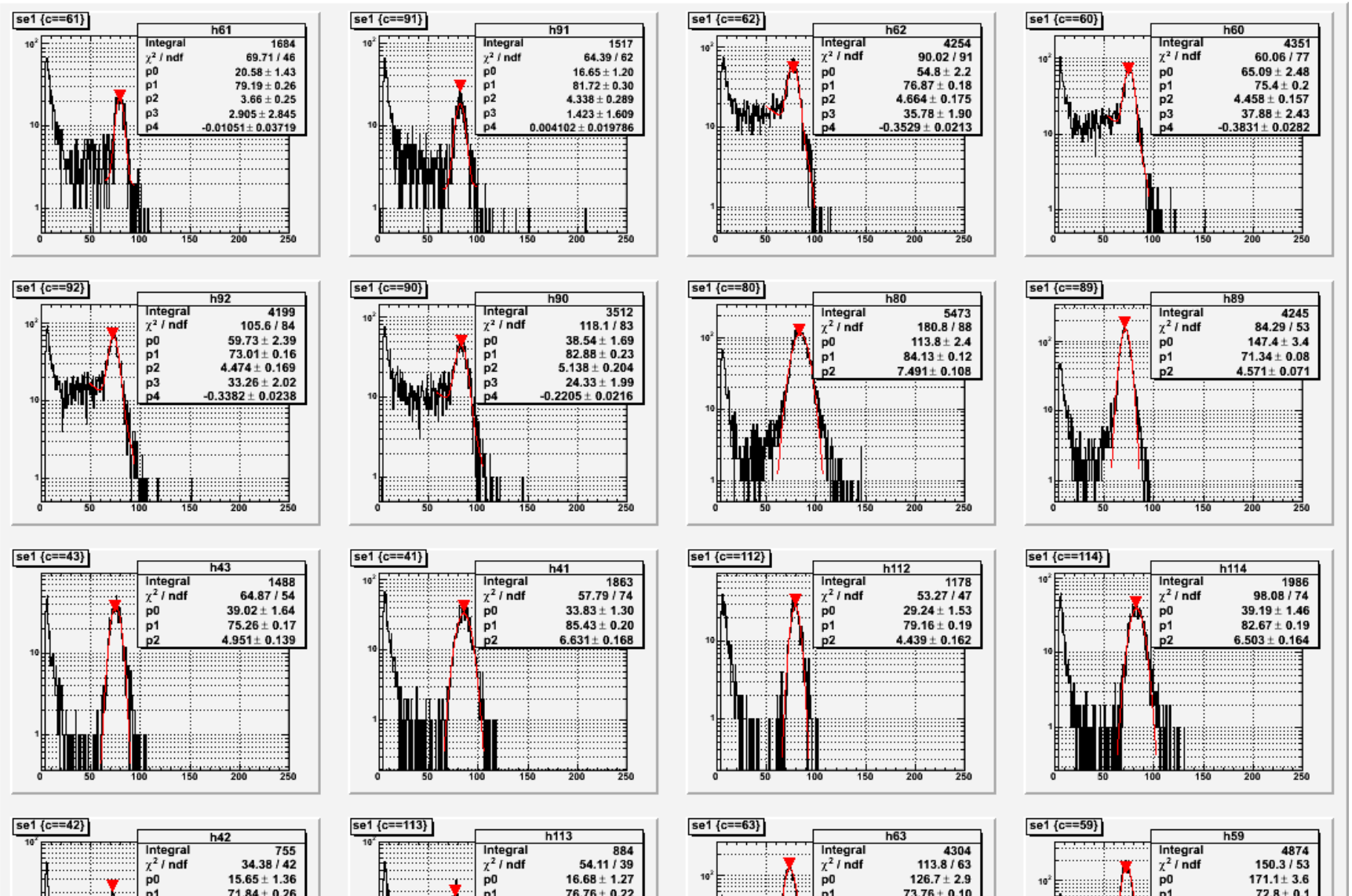
```
if (fGenerator.CompareTo("cosmic") == 0  ) {
  // 2- Define the Cosmic generator
  Double_t pdgId=13; // muons -
  Double_t theta1= 30.;  // polar angle distribution
  Double_t theta2= 150.;
  Double_t E_Threshold=.1; // in GeV
  R3BCosmicGenerator* CosmGen = new
R3BCosmicGenerator(pdgId, 1, E_Threshold);
  CosmGen->SetThetaRange (   theta1,   theta2);
  CosmGen->SetPhiRange   (180.,360.);
  CosmGen->SetBoxXYZ(-50.0, -50.0, 50.0, 50.0, 50.0);  //
(x1,z1,x2,z2,y) above Crystalball
  CosmGen->Init();
  // add the cosmic generator
  primGen->AddGenerator(CosmGen);
  }
```

Cosmics data

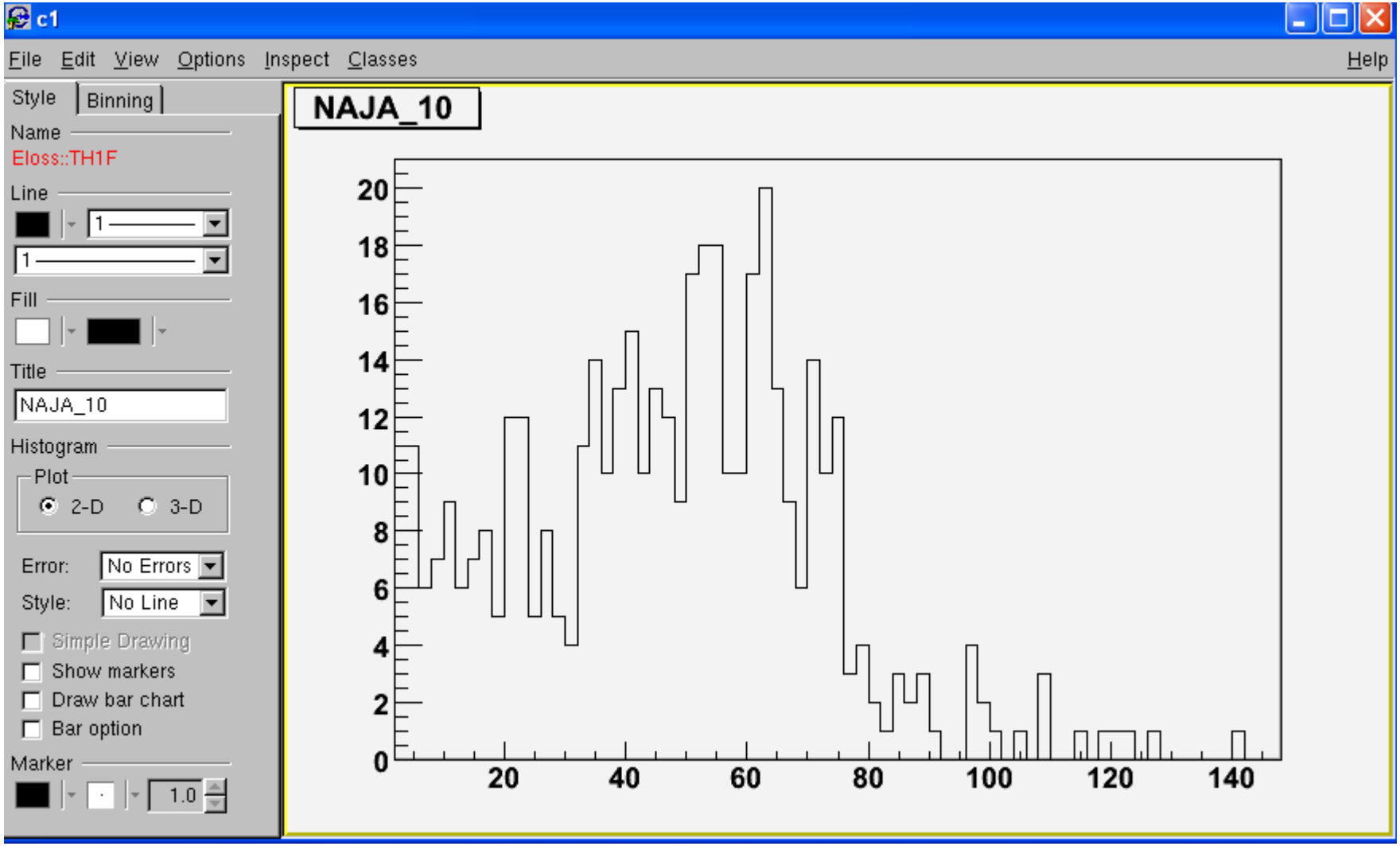




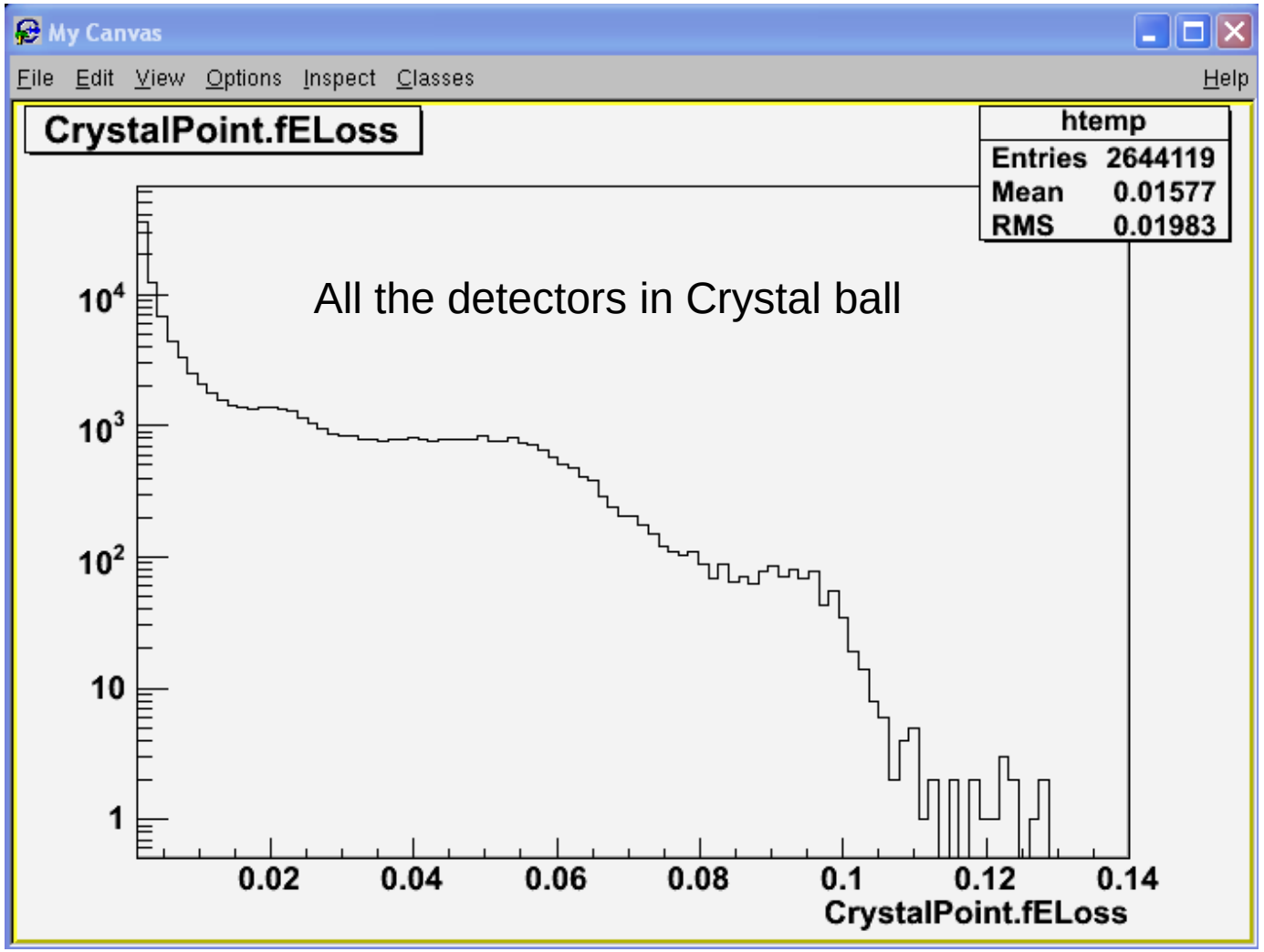
Cosmics data



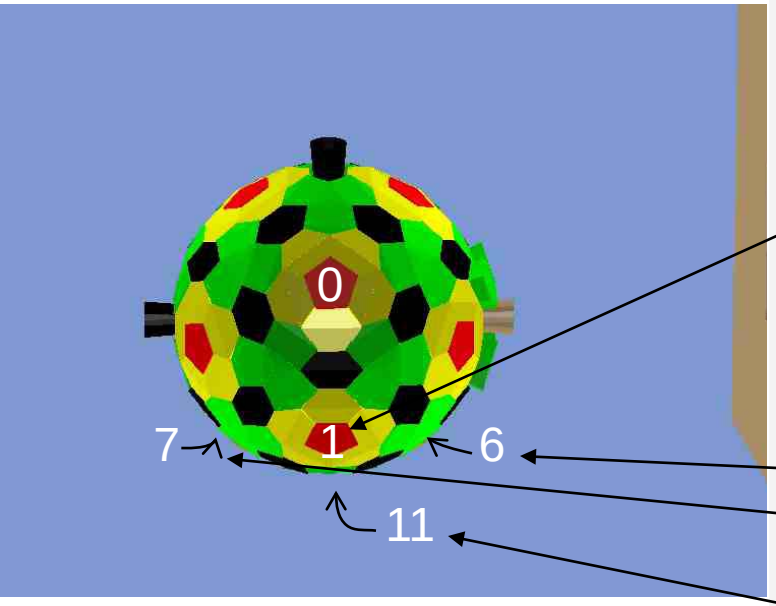
Cosmics simulations

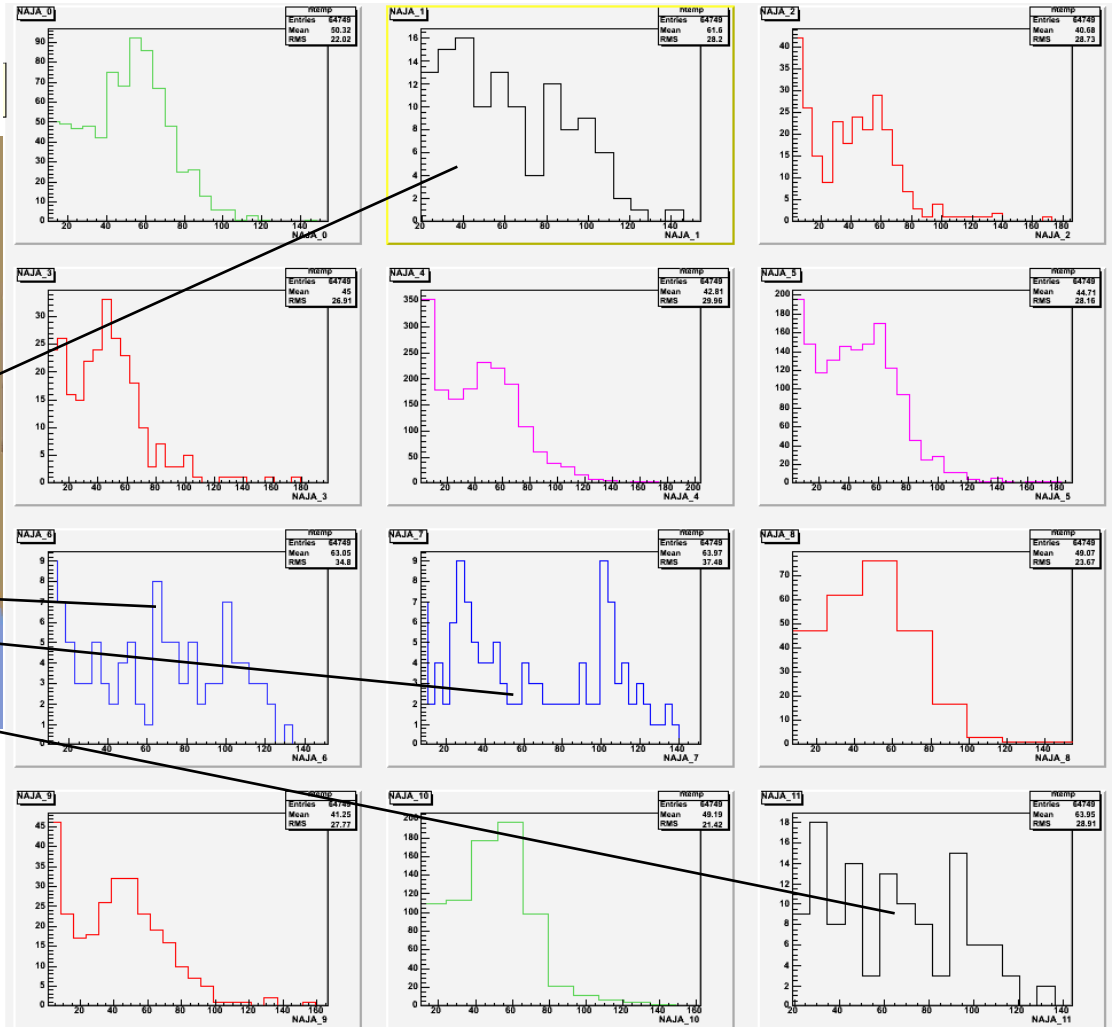


Cosmics simulations



NAJA detectors response to cosmics





NAJA #1,#11,#6 & #7 are at the bottom.