

Fermilab

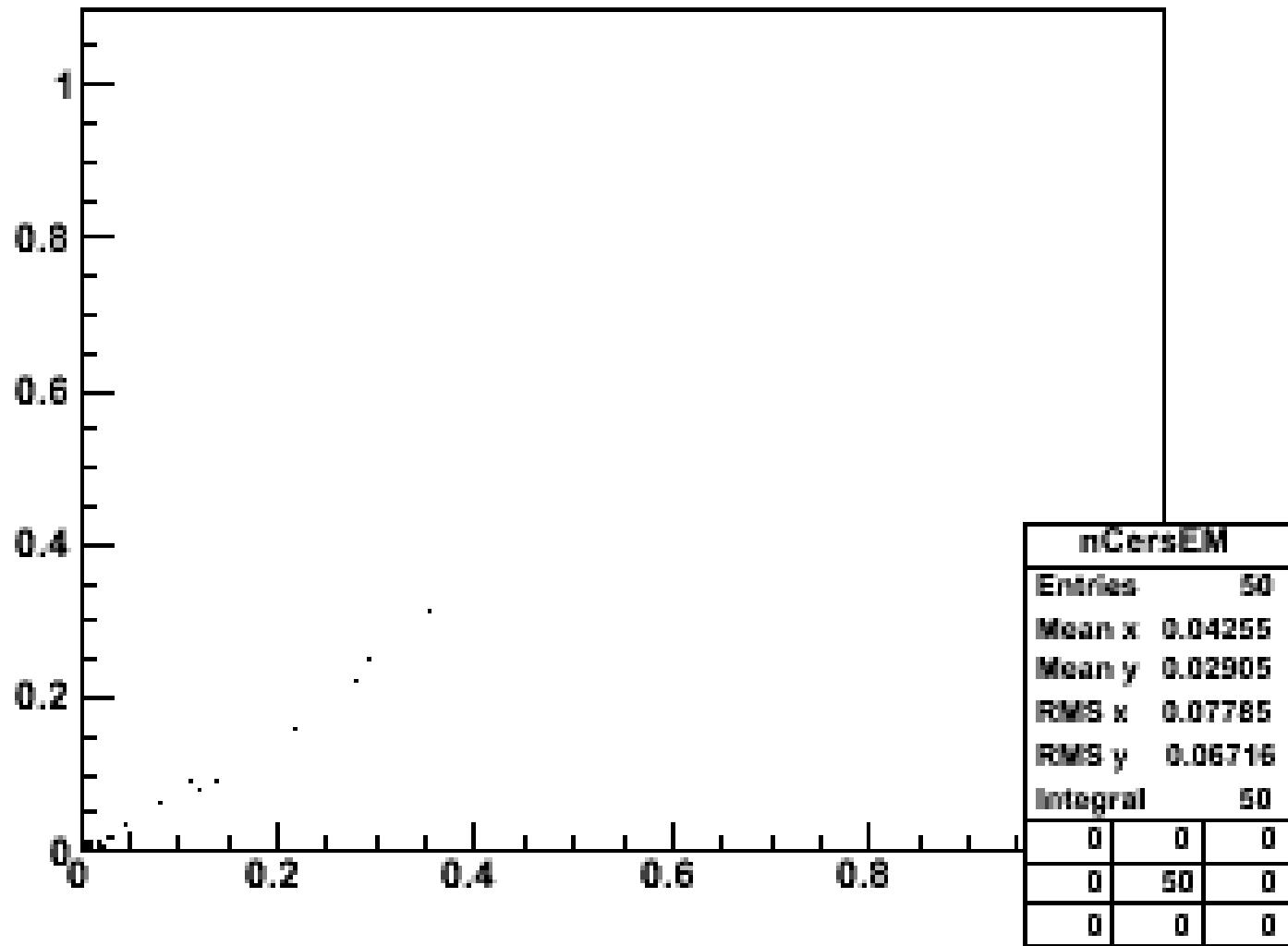
Weekly meeting

1st week - 06/03/11

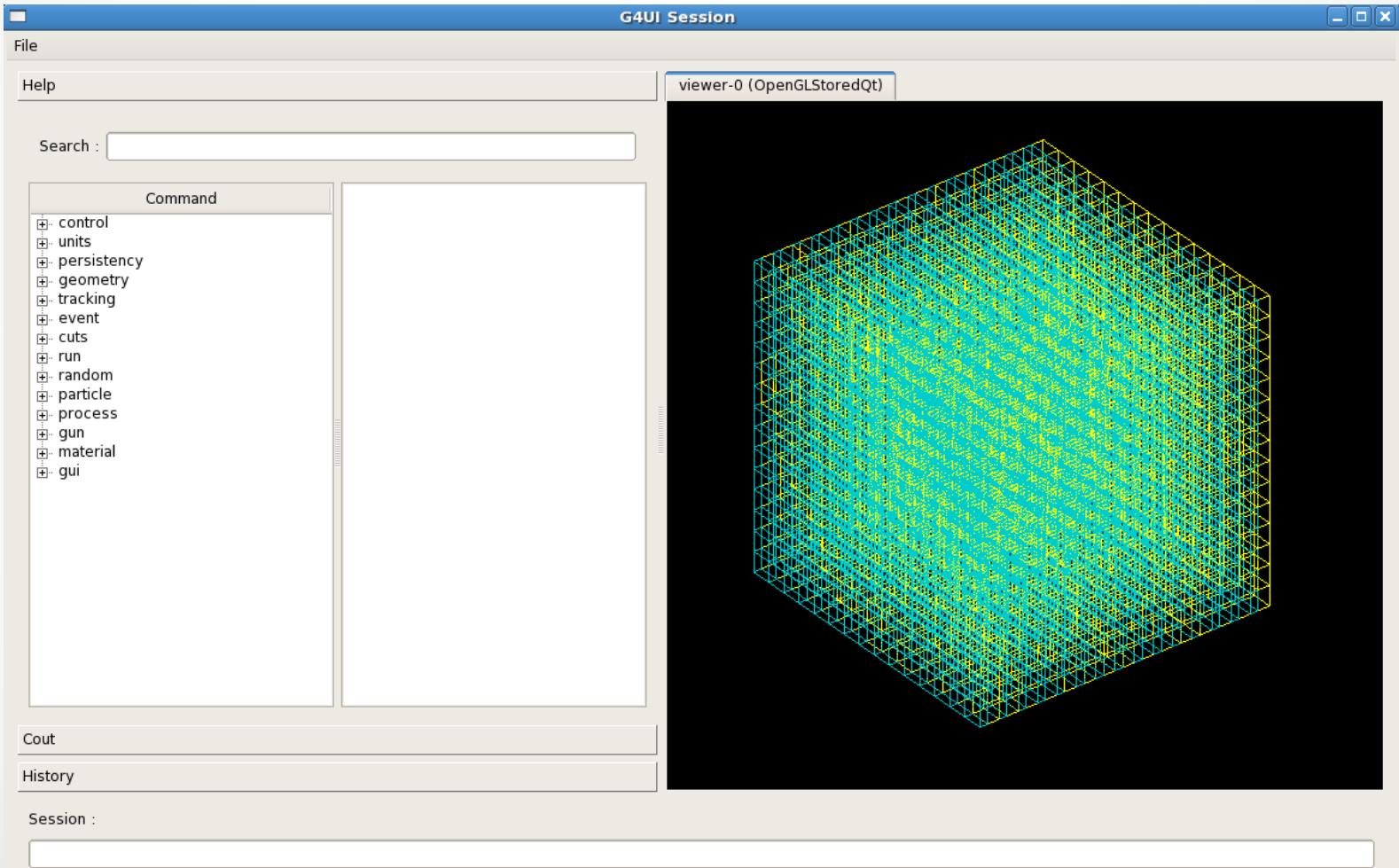
Edgar Nandayapa

Statistics

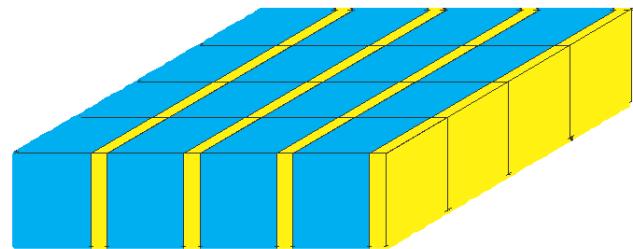
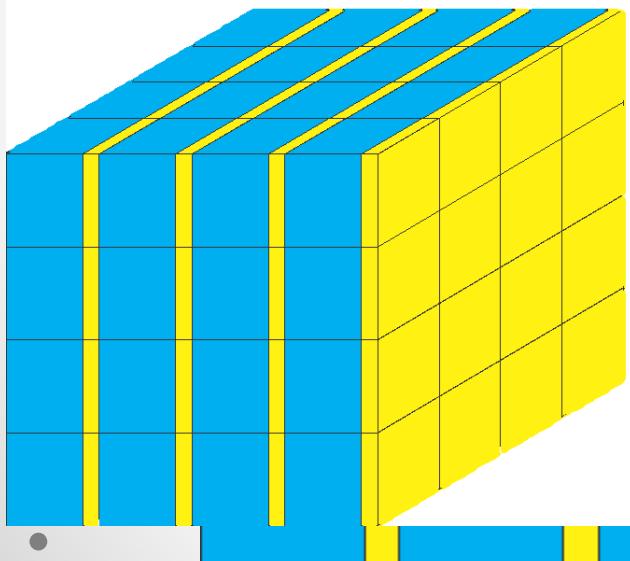
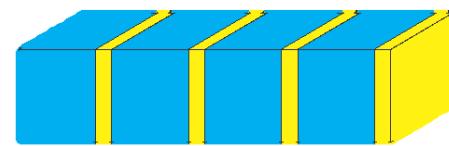
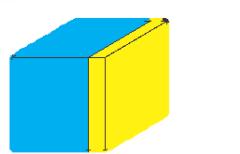
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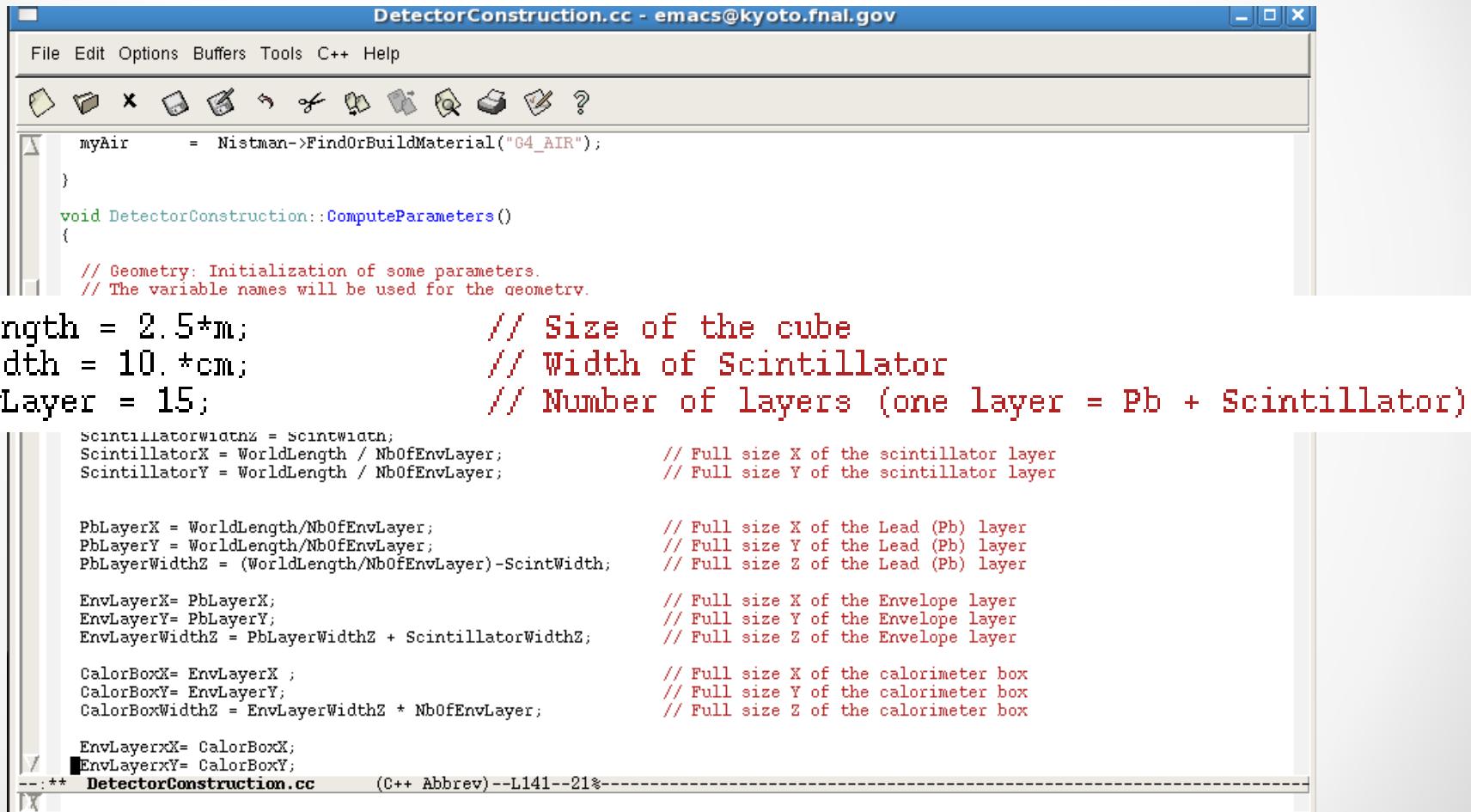
Geometry



Geometry



Geometry



The screenshot shows an Emacs window titled "DetectorConstruction.cc - emacs@kyoto.fnal.gov". The window contains C++ code for detector construction, specifically for a calorimeter. The code defines variables for world length, scintillator width, and the number of layers. It then calculates the dimensions for the scintillator, lead, and envelope layers, as well as the calorimeter box. The code uses comments to describe each calculation. The Emacs interface includes a menu bar, toolbar, and status bar at the bottom.

```
myAir      = Nistman->FindOrBuildMaterial("G4_AIR");
}

void DetectorConstruction::ComputeParameters()
{
    // Geometry: Initialization of some parameters.
    // The variable names will be used for the geometry.

WorldLength = 2.5*m;                      // Size of the cube
ScintWidth = 10.*cm;                       // Width of Scintillator
NbOfEnvLayer = 15;                         // Number of layers (one layer = Pb + Scintillator)

ScintillatorWidthZ = ScintWidth;
ScintillatorX = WorldLength / NbOfEnvLayer;           // Full size X of the scintillator layer
ScintillatorY = WorldLength / NbOfEnvLayer;           // Full size Y of the scintillator layer

PbLayerX = WorldLength/NbOfEnvLayer;                // Full size X of the Lead (Pb) layer
PbLayerY = WorldLength/NbOfEnvLayer;                // Full size Y of the Lead (Pb) layer
PbLayerWidthZ = (WorldLength/NbOfEnvLayer)-ScintWidth; // Full size Z of the Lead (Pb) layer

EnvLayerX= PbLayerX;                            // Full size X of the Envelope layer
EnvLayerY= PbLayerY;                            // Full size Y of the Envelope layer
EnvLayerWidthZ = PbLayerWidthZ + ScintillatorWidthZ; // Full size Z of the Envelope layer

CalorBoxX= EnvLayerX ;                         // Full size X of the calorimeter box
CalorBoxY= EnvLayerY ;                         // Full size Y of the calorimeter box
CalorBoxWidthZ = EnvLayerWidthZ * NbOfEnvLayer; // Full size Z of the calorimeter box

EnvLayerxX= CalorBoxX;
EnvLayerxY= CalorBoxY;

--:-- ** DetectorConstruction.cc      (C++ Abbrev) --L141--21%--
```