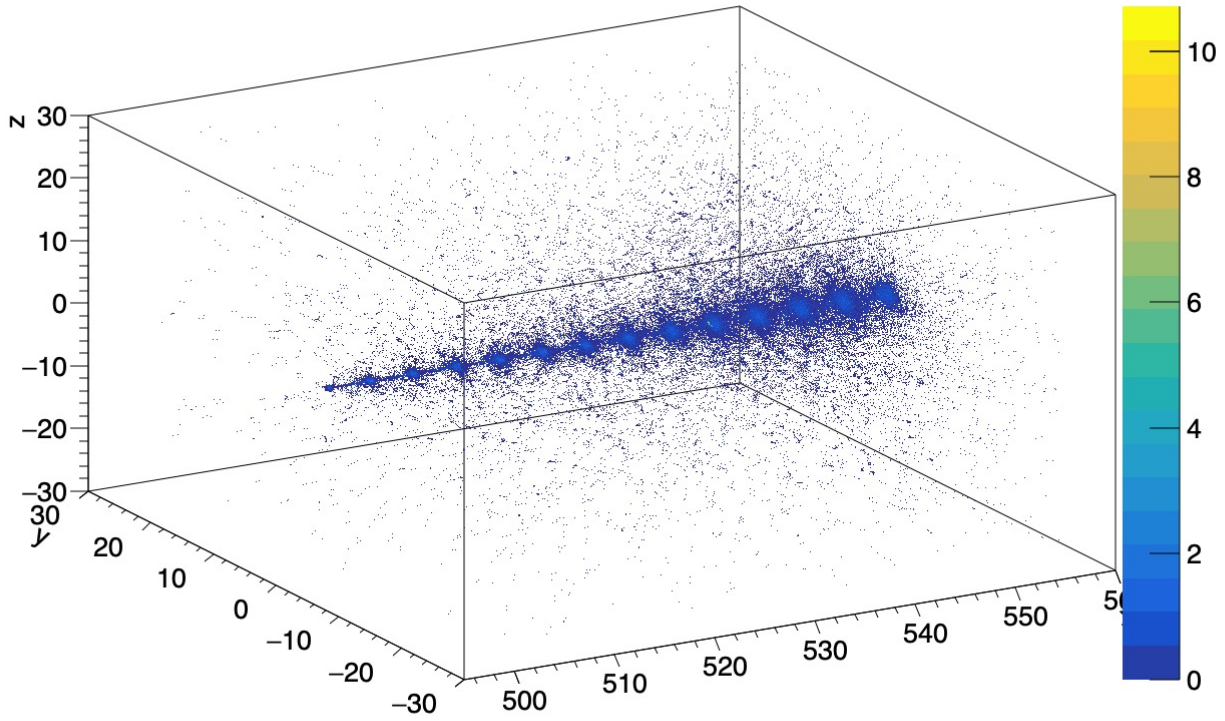
Shash sim
(molto preliminary)

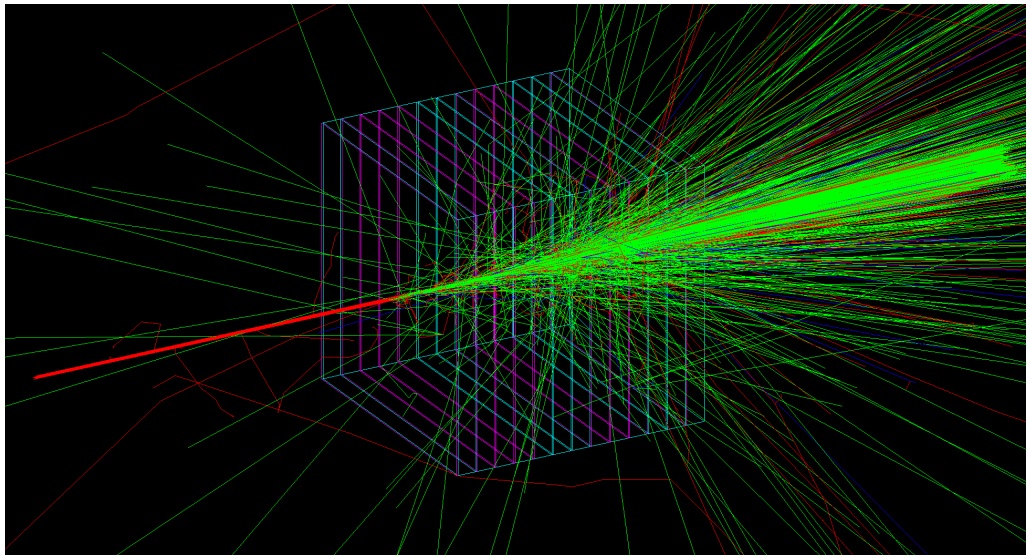


```
G4Element* elH = new G4Element("Hydrogen", "H", 1., 1.0079 * g/mole);
G4Element* elO = new G4Element("Oxygen", "O", 8., 16.0 * g/mole);
G4Element* elC = new G4Element("Carbon", "C", 6., 12.011 * g/mole);
G4Material* pmma = new G4Material("PMMA", 1.19 * g/cm3, 3);
pmma->AddElement(elC, 5);
pmma->AddElement(elO, 2);
pmma->AddElement(elH, 8);

G4Material* lead = nist->FindOrBuildMaterial("G4_Pb");
```

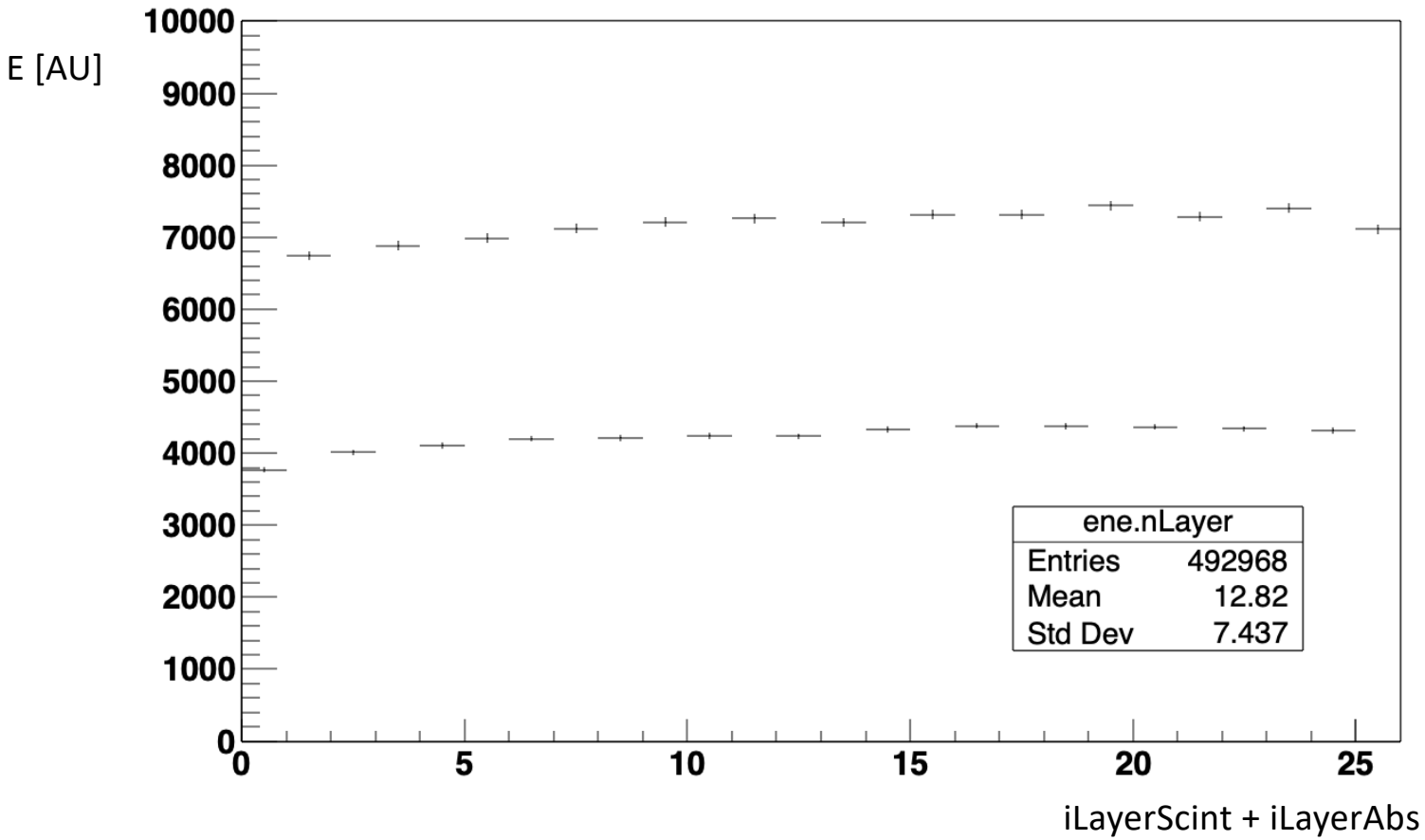
Materials: PMMA / Pb

Geometry

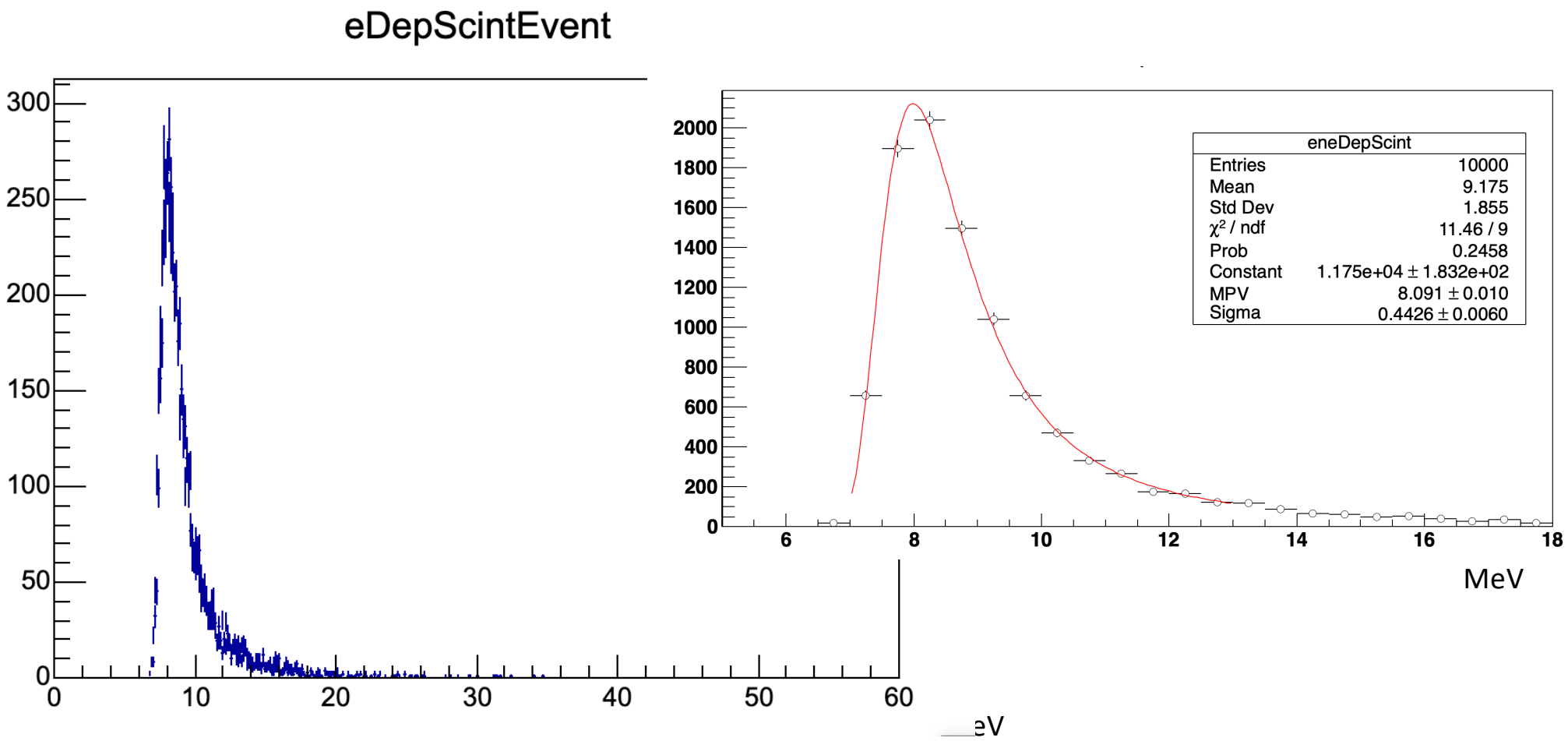
```
class Geometry
{
private: Config conf;

public:

    const G4double worldSizeX = 2 * m;
    const G4double worldSizeY = 2 * m;
    const G4double worldSizeZ = 2 * m;

    const G4double tileThicknessAbsorb = 0.275 * mm;
    const G4double tileThicknessScint = 3 * mm;
    const G4double tileWidth = 55 * mm;
    const G4double tileHeight = tileWidth;
    const G4int caloLayers = 13;
    const G4double caloOriginX = 50 * cm;
```



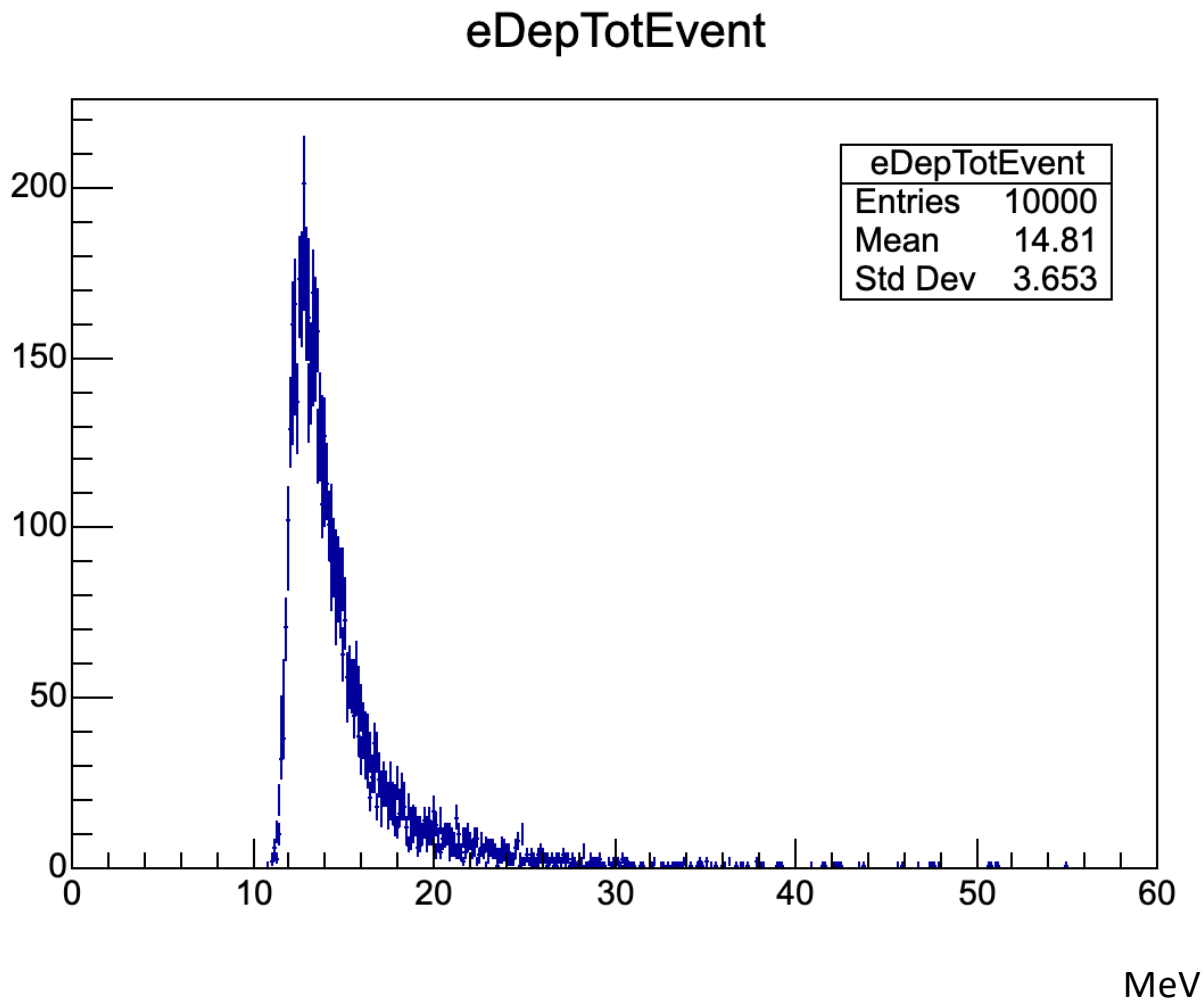
mu- → 20 GeV → 1e4 events → longitudinal profile



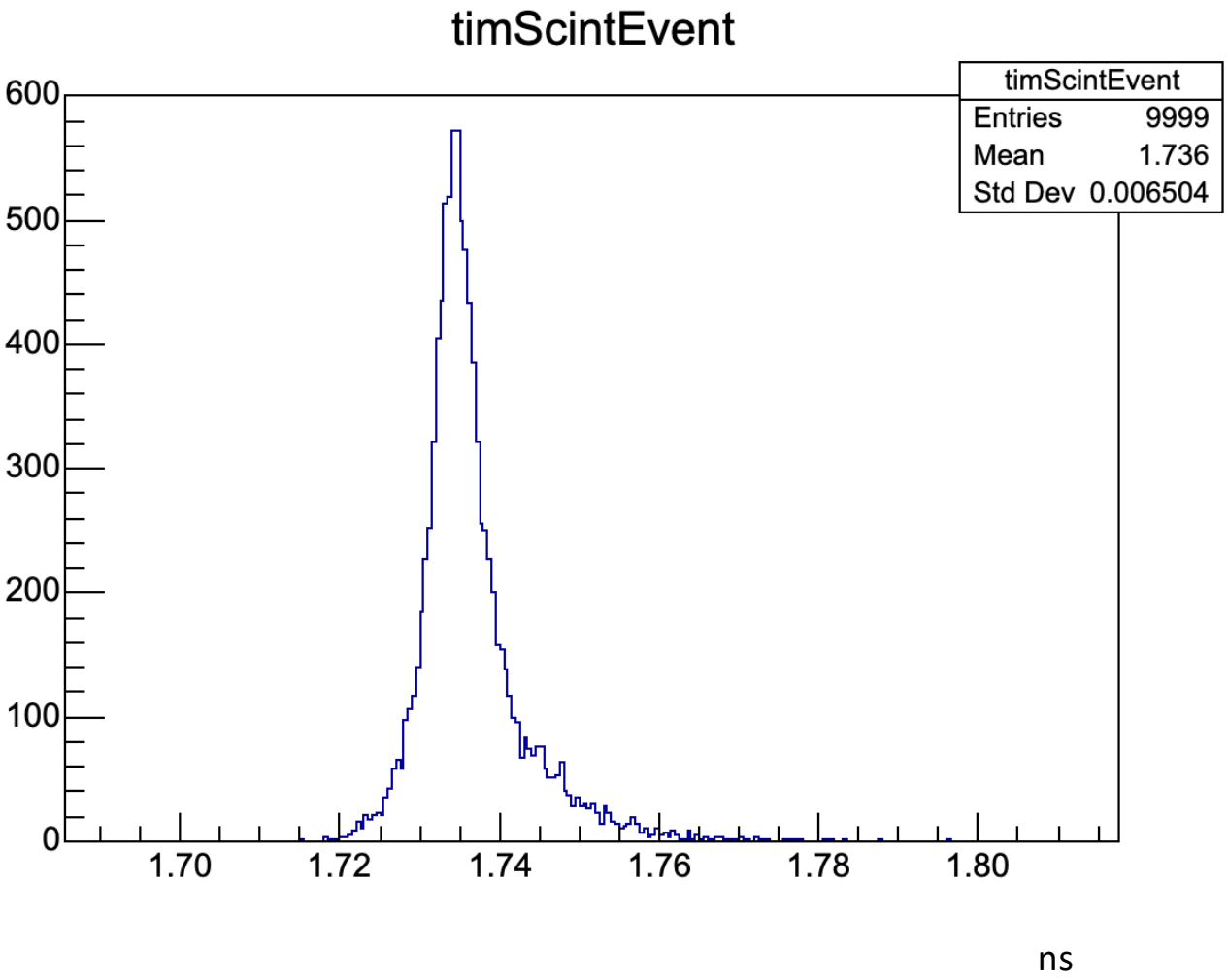
mu- → 20 GeV → 1e4 events → eneScintillator_AllLayers



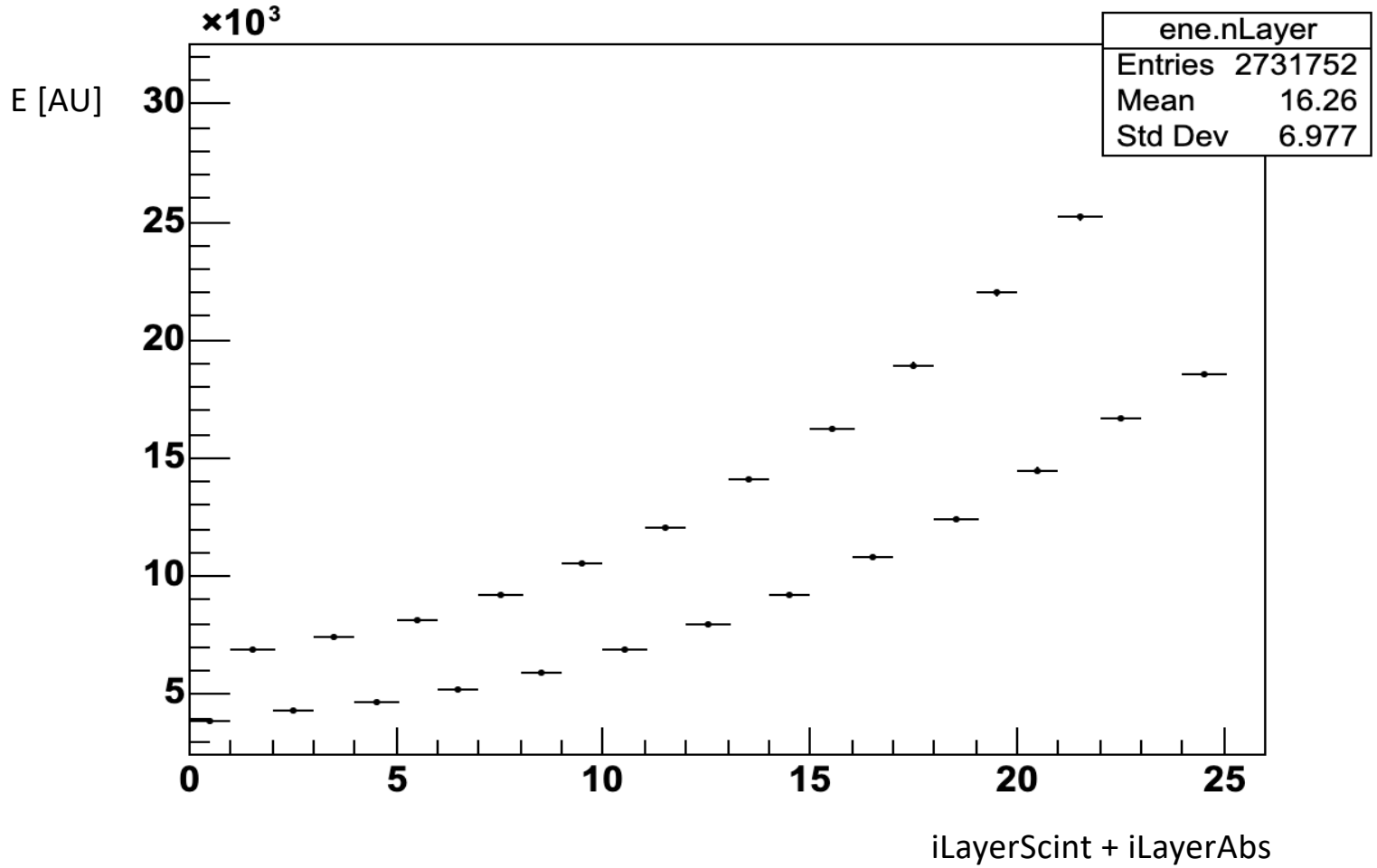
mu- → 20 GeV → 1e4 events → eneDepTot



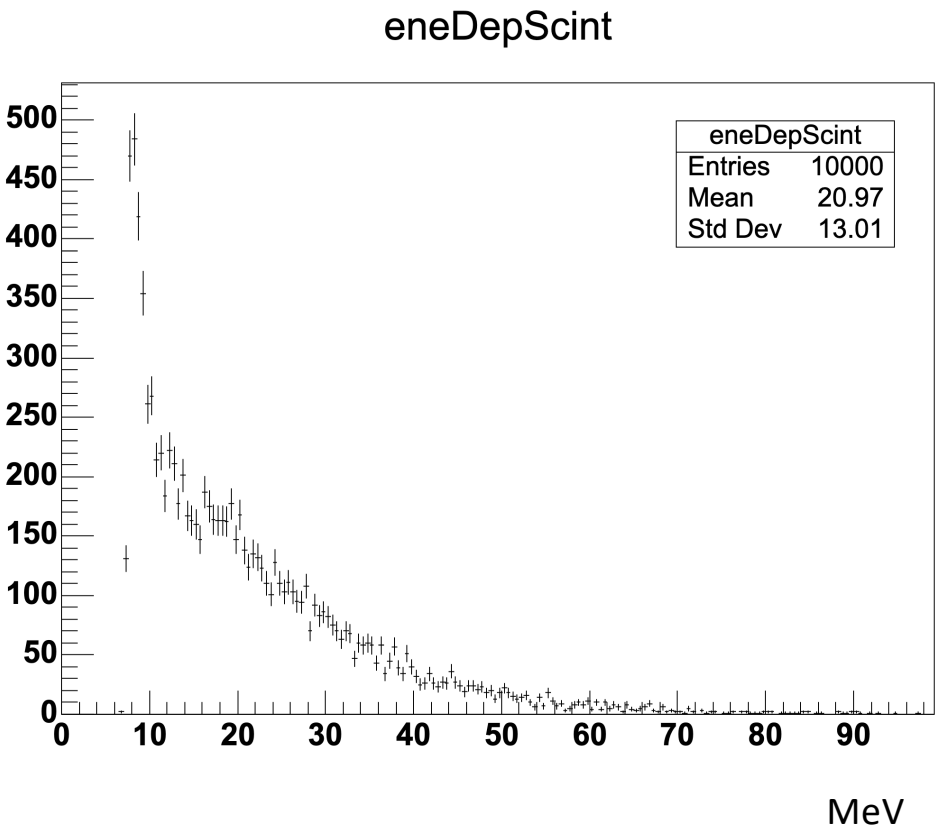
mu- → 20 GeV → 1e4 events → energy-weighted scint times

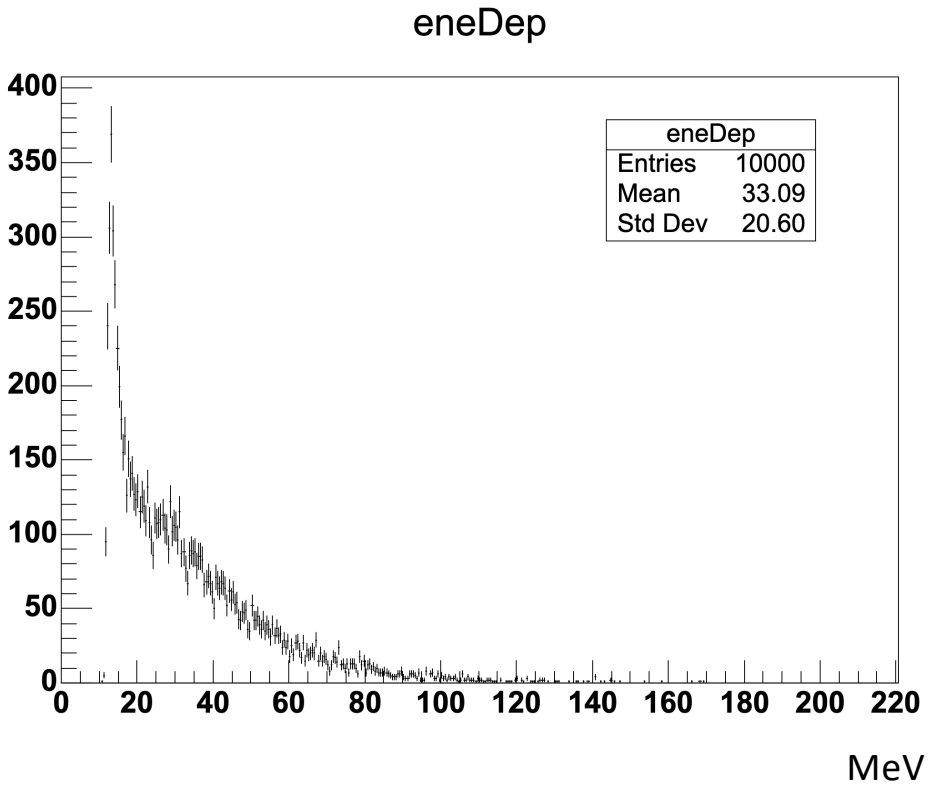


e- → 100 GeV → 1e4 events → longitudinal profile

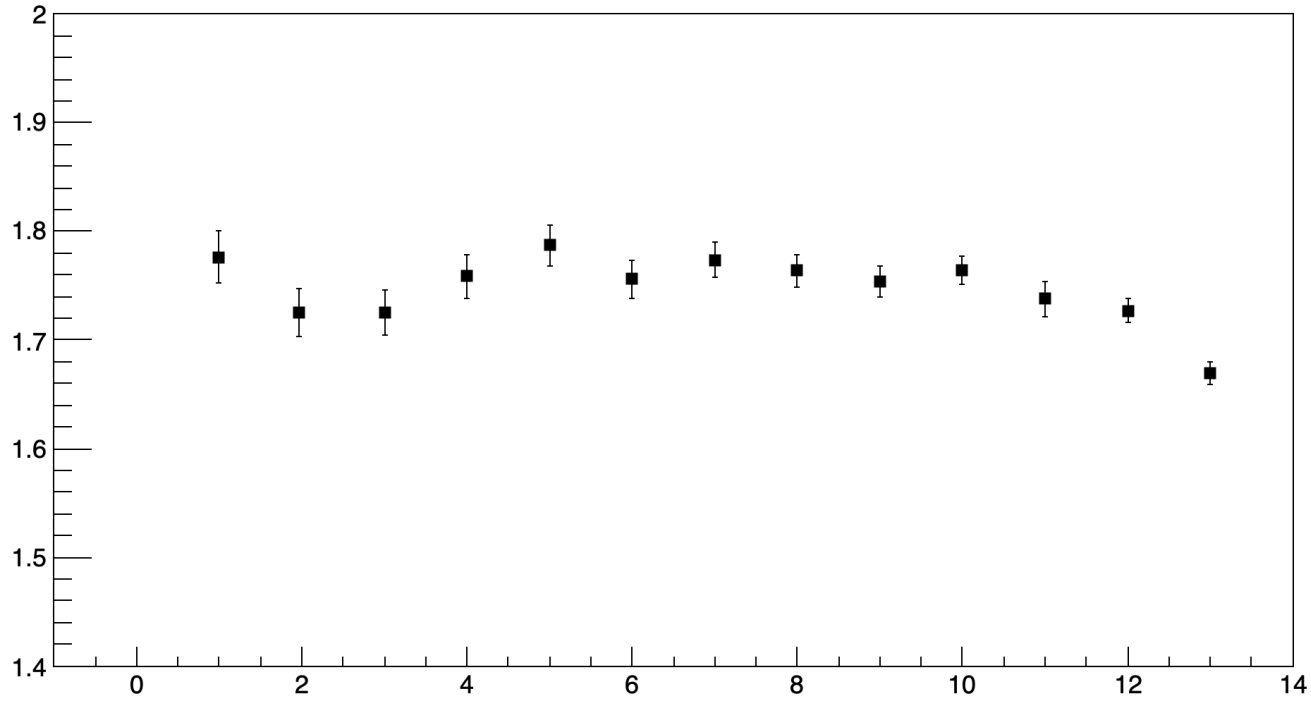


e- → 100 GeV → 1e4 events → eneEvent scint and tot





e- → 100 GeV → 1e4 events → scint/abs sampling fraction



e- → 100 GeV → 1e4 events → transv prof