

Description of Setup

- World volume made of Air a Tubs with inner/outer radii 0.0 m, 3.2 m and half-length 4.5 m extended from -90 to 90 degrees
- There are 13 layers of sensitive Tracker layer made of Silicon covering from -45 to 45 degrees, half-length 75 cm, radial thickness 0.3 mm and inner radio at (2.9, 6.8, 10.9, 16.0, 22.0, 29.0, 37.0, 45.0, 52.0, 59.0, 66.0, 75.0, 80.0) cm
- These layers are supported by layers of G10 of thickness 0.5 mm
- The protection layer is made of Paraffin from inner and outer radii 82 and 86 cm, half-length 1.2 m and covering between -45 and 45 degrees
- ECAL layer is a section of Sphere made of PbWO₄ between -45, 0, 45 and 90 degrees with inner and outer radii of 123 cm and 152.6 cm
- ECAL Electronic is a section of a Sphere made of FRPCarbon with inner and outer radii 155 and 160 cm, the remaining parameters the same as that of ECAL

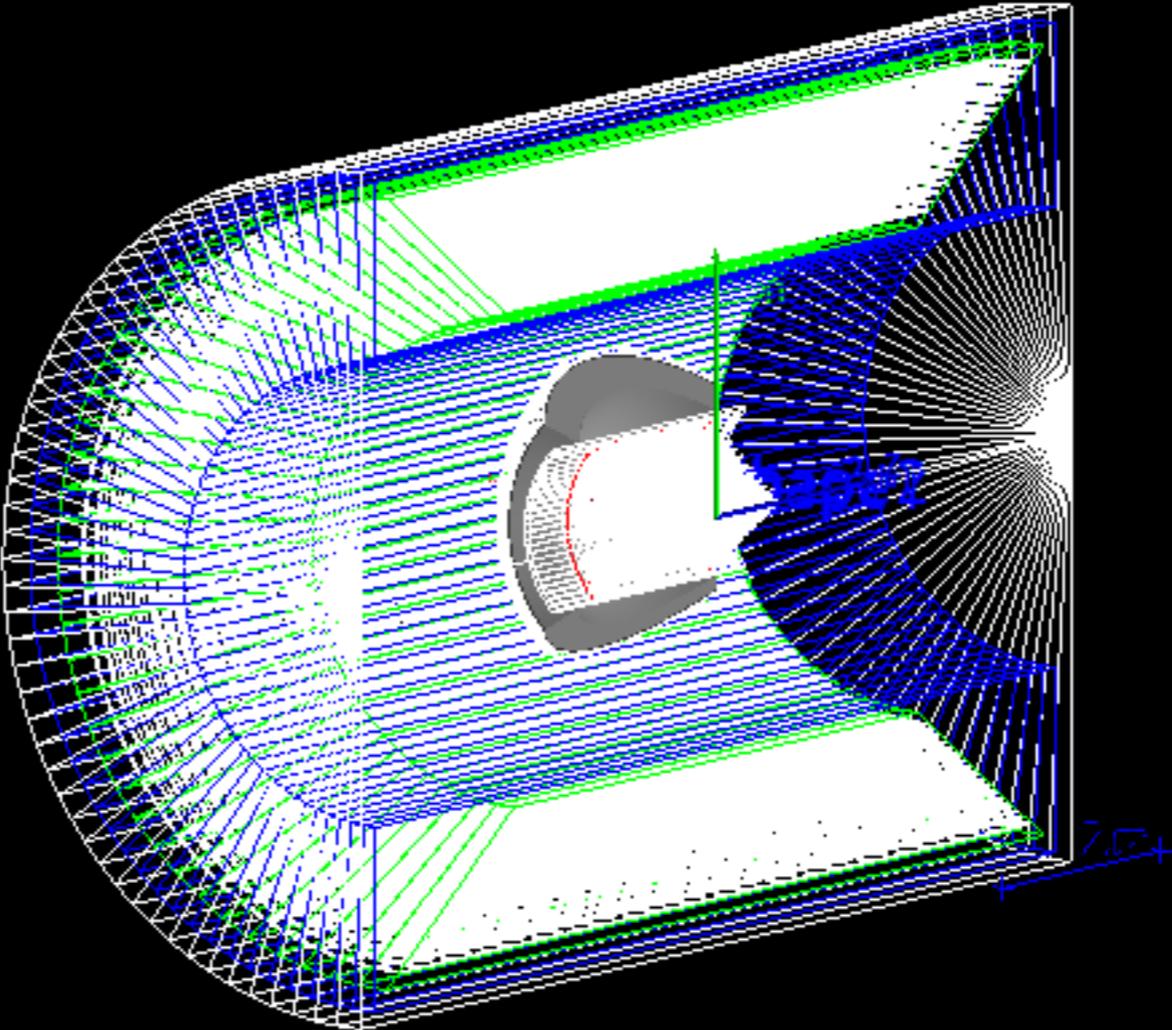
Setup Description

- HCAL is a Tub made of brass between -45 and 135 degrees with inner and outer radii of 0.95×181 cm and 1.05×295 cm and with a half-length of 4.3 m
- HCAL has 36 wedges each having 17 Scintillator layers with 34 divisions along eta

Details for B-Field and Material

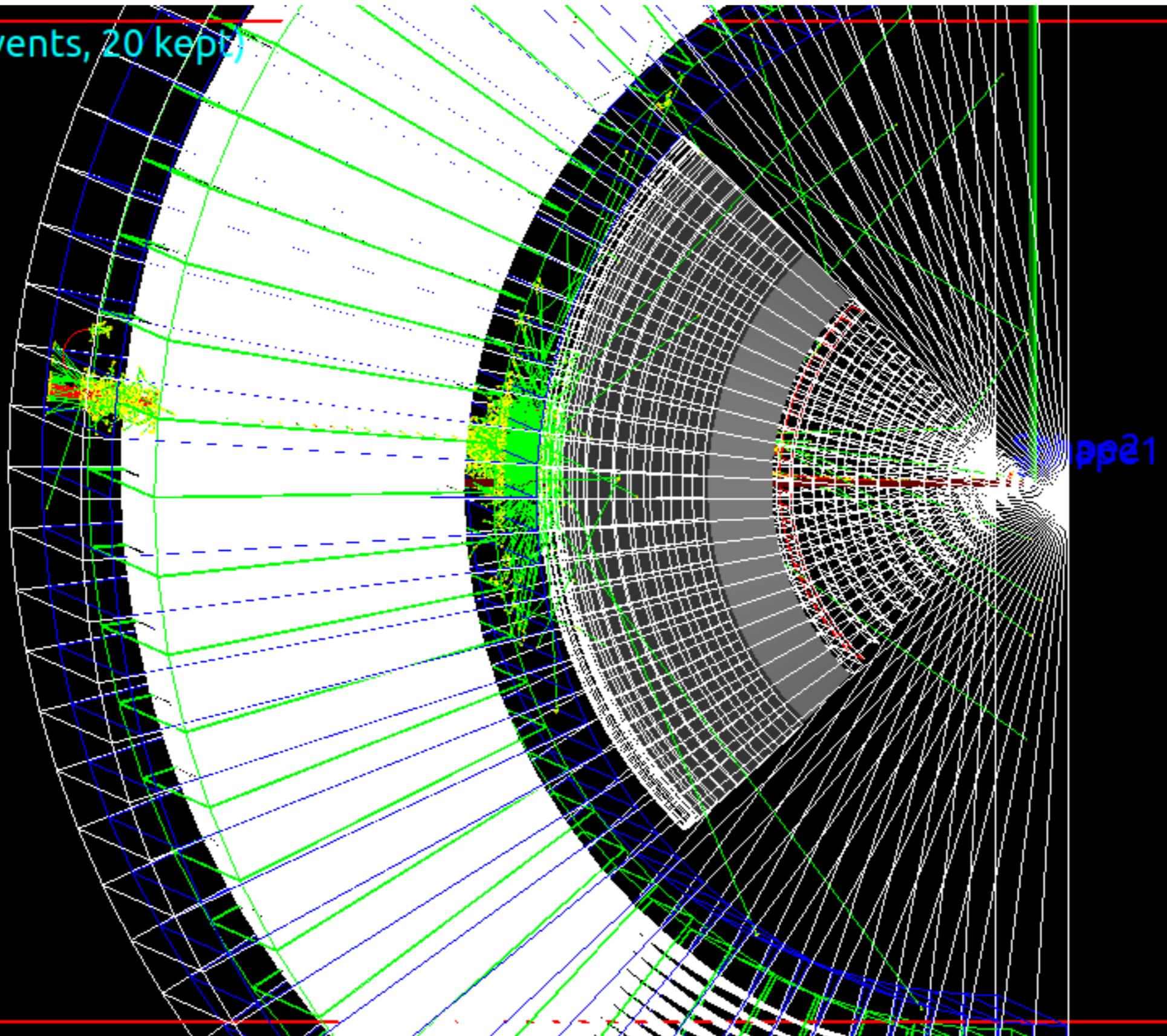
- B-field 3.8 Telsa along the z-axis
- Material Definition:
 - Brass: 70% Cu + 30% Zn with density 8.4 g/cc
 - Silicon: 99.99% Si, 0.01% O with density 0.232 g/cc
 - Scintillator: C_9, H_10 with density 1.0329 g/cc
 - G10: Si, O_2, C_3, H_3 with density 1.099 g/cc
 - Paraffin: C_31, H_64 with density 0.99 g/cc
 - FRPCarbon: 99% C + 1% H with density 2.26 g/cc
 - PbWO4: Pb_1, W_1, O_4 with density 8.2 g/cc

Detector Picture



With 20 Muons

Run 1 (20 events, 20 kept)



Hit

- Hit information for Tracker
 - unsigned int Detector cell identifier
 - ThreeVector position
 - ThreeVector momentum
 - double energy deposit
 - double Time (also for x, y)
 - int PDG ID of the track
 - double local theta, phi
- Hit information for ECAL
 - unsigned int Detector cell identifier
 - ThreeVector position
 - double energy deposit
 - double Time
- Hit information for HCAL
 - unsigned int Detector cell identifier
 - ThreeVector position
 - double energy deposit
 - double Time