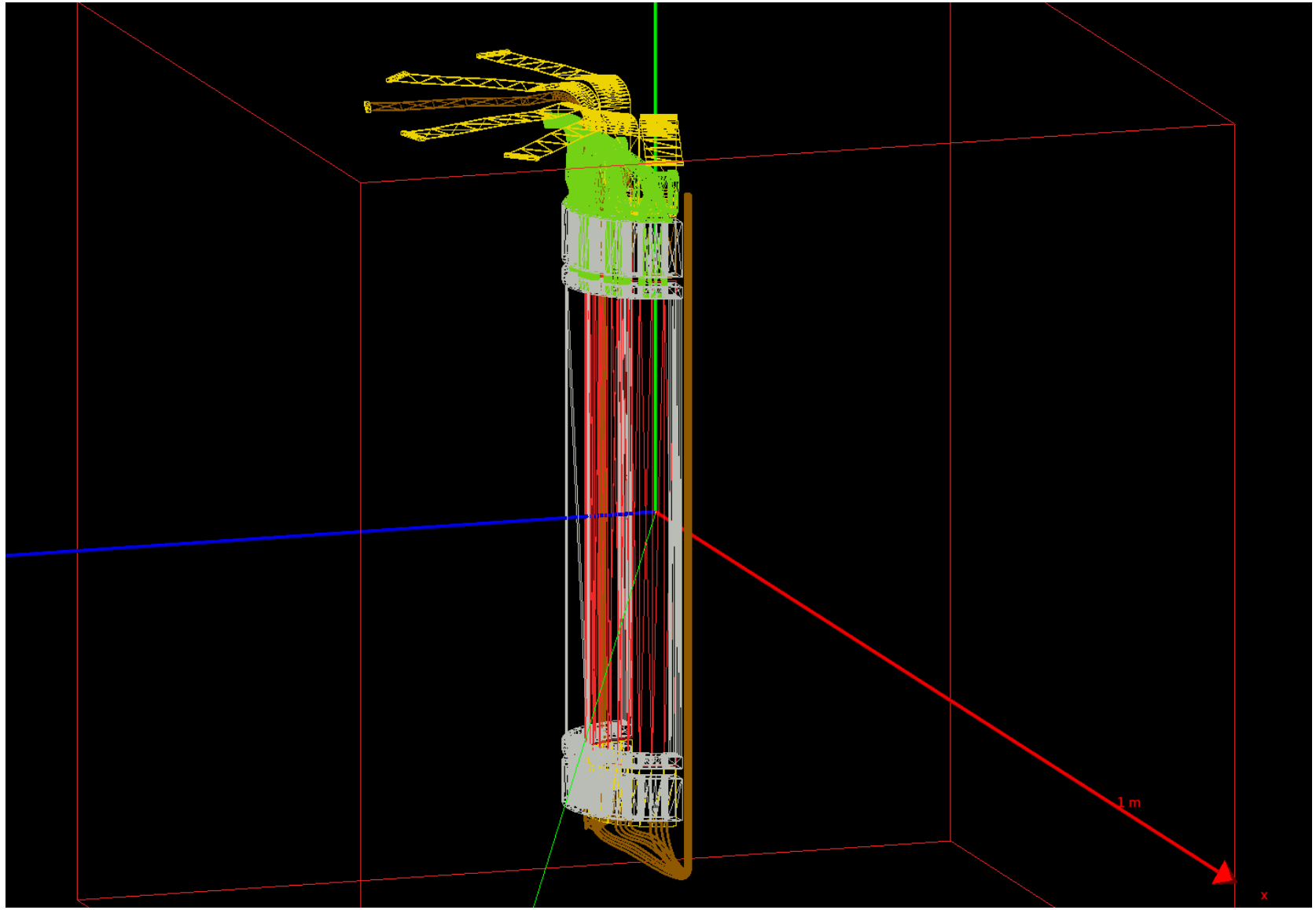
ePic

GEANT4 simulations for Material Budget

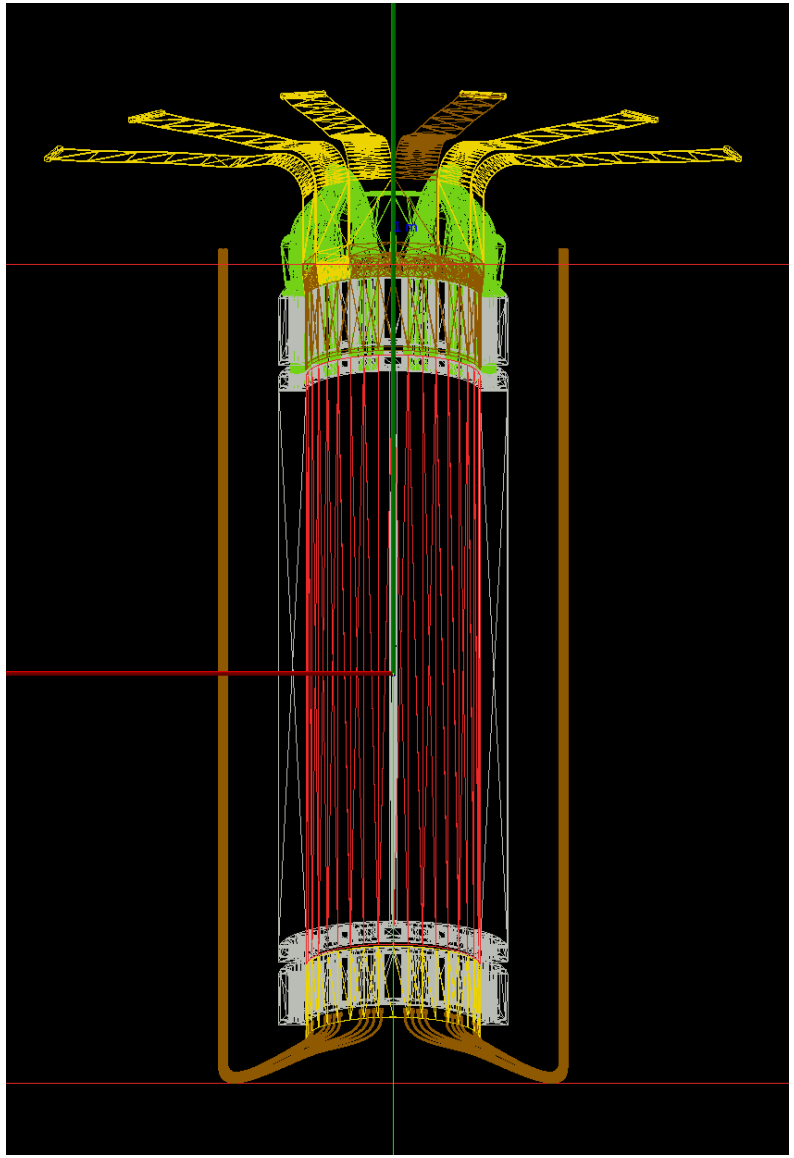
Geant4 simulations

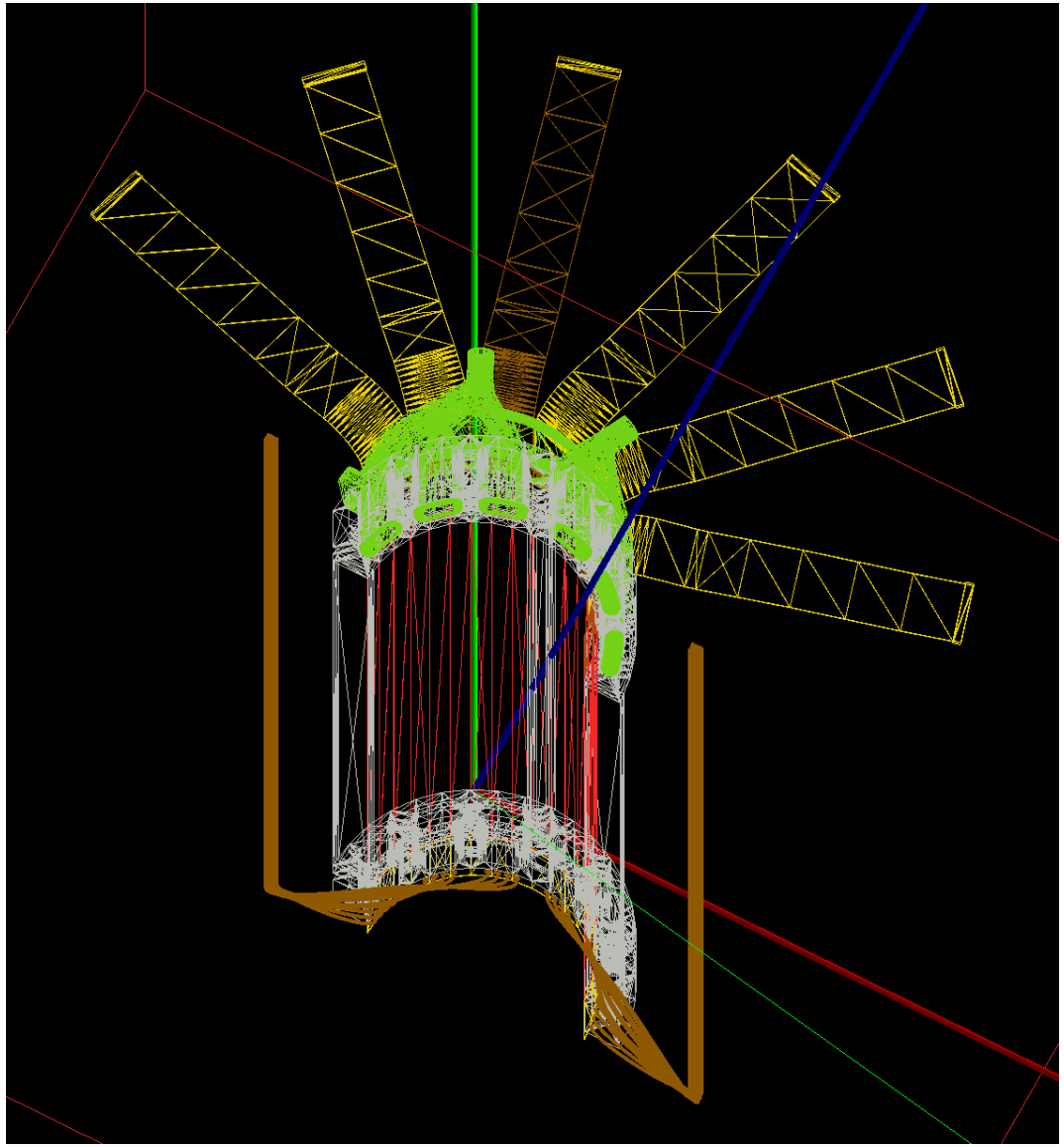
- CAD geometries transform into GDML files (from STEP to GDML using MRADSIM)
- A GDML file for each element, then a mother file in order to assemble all the elements in one large volume
- Geometry imported (mother GDML file) into Geant4 simulation toolkit
- Set all the properties for each daughter volumes inside Geant4 script

Geant4 simulations – L0 layer

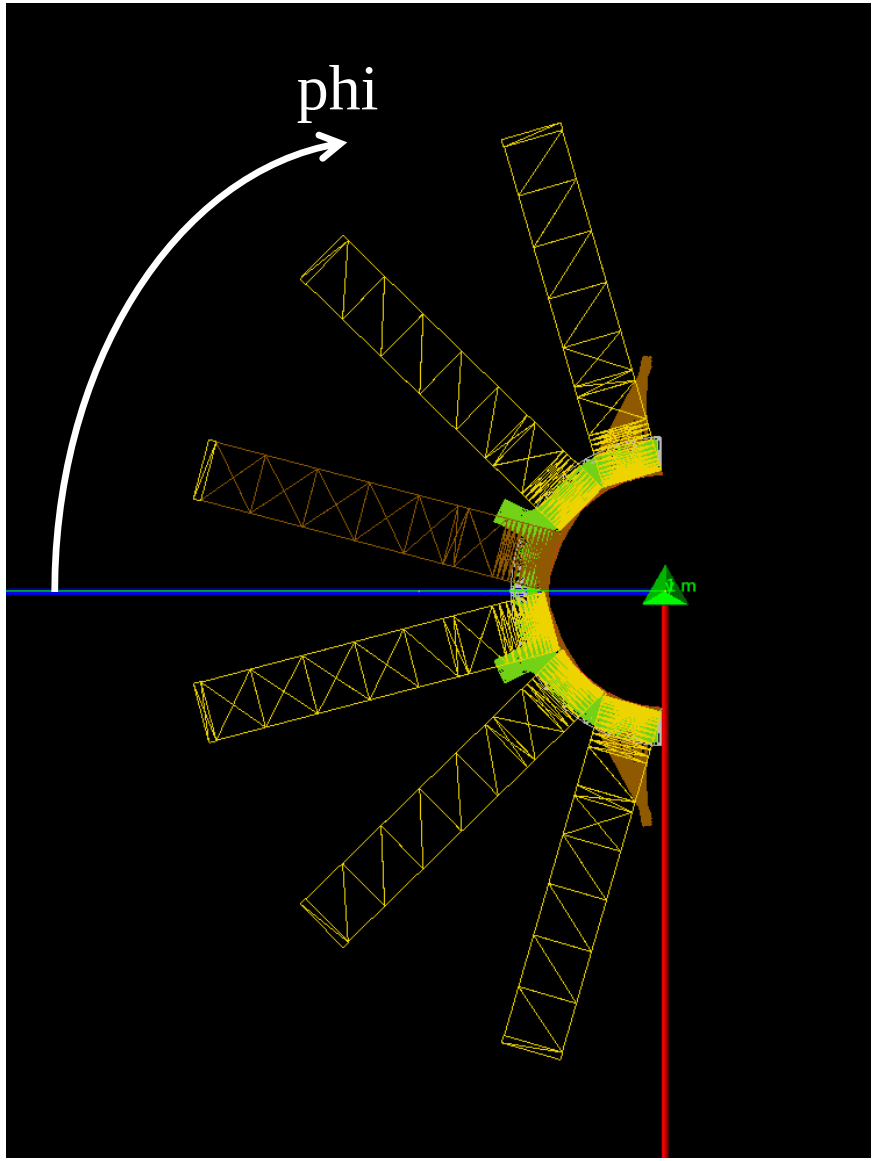


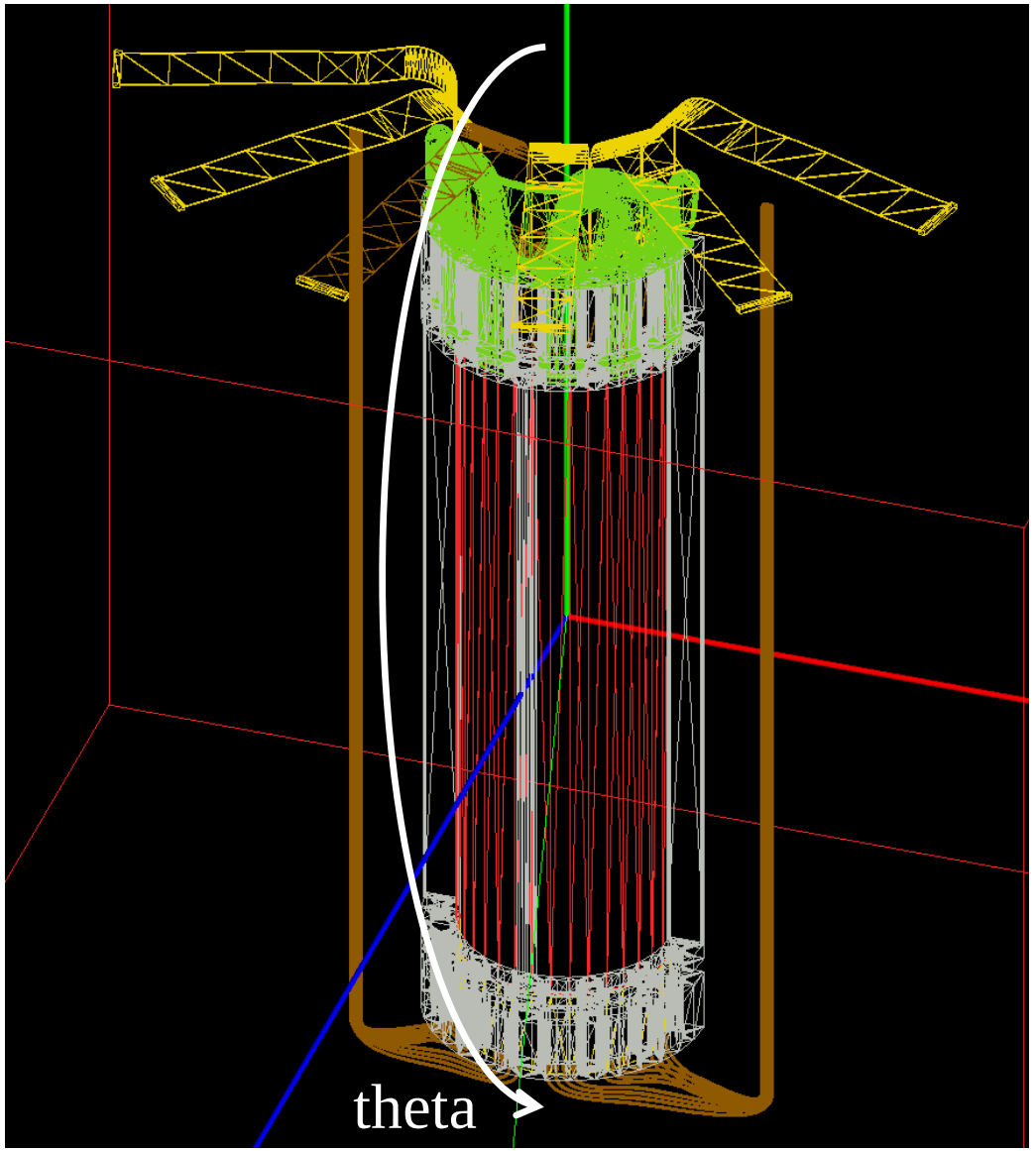
Geant4 simulations – L0 layer





Geant4 simulations – L0 layer

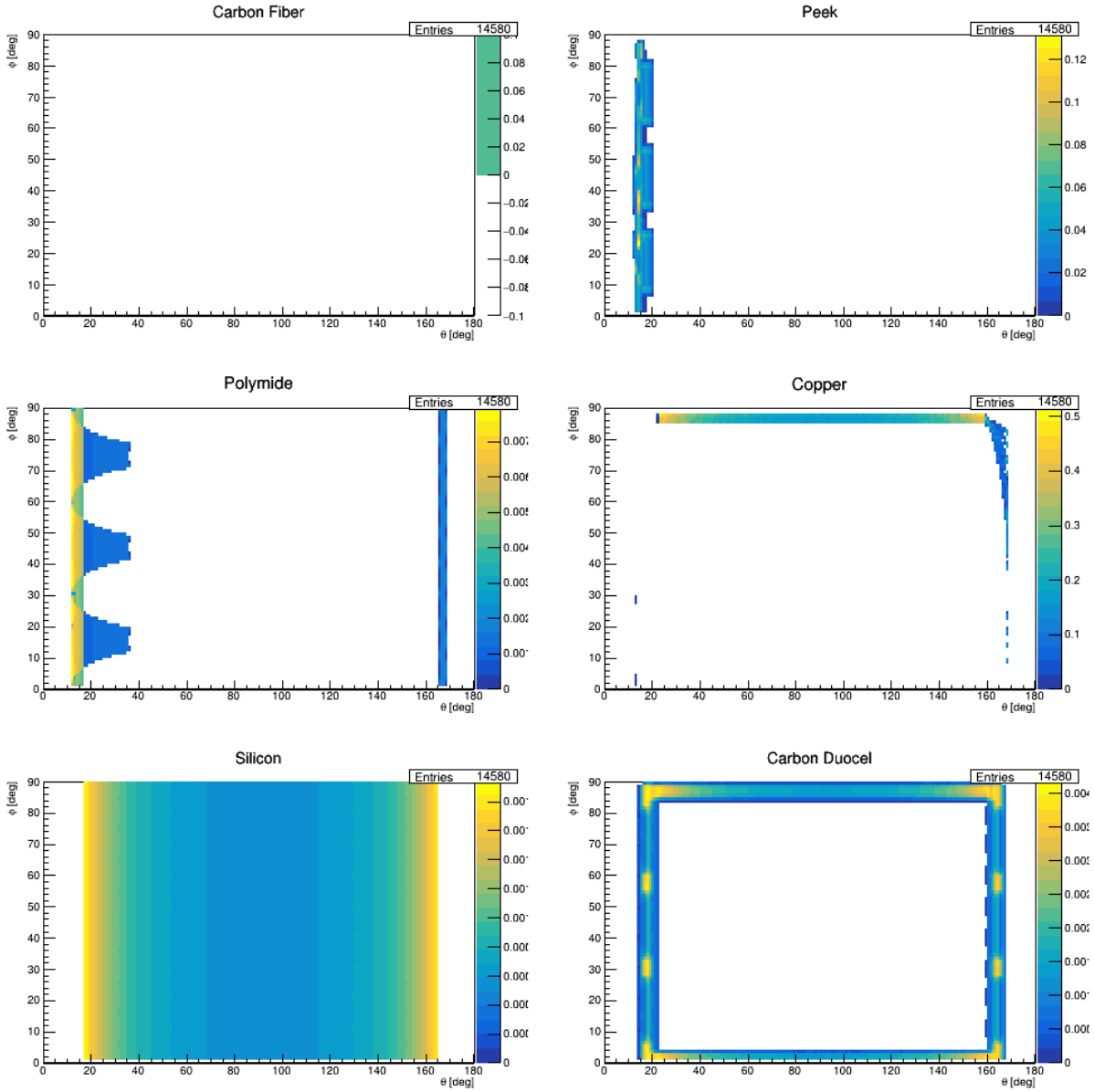


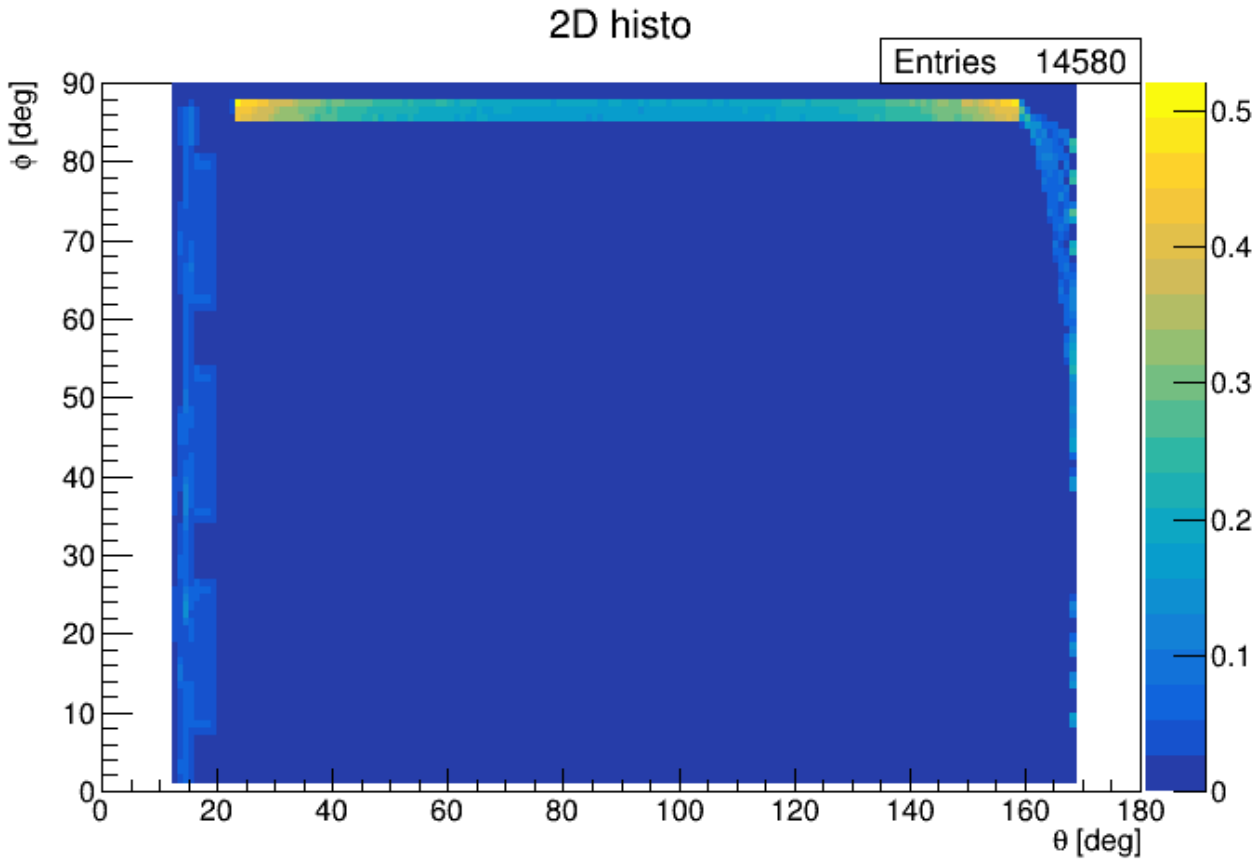


Geant4 simulations – Material Budget

- 10^6 gentino particles fired in a simulation
- 6 simulations with different initial seed
- θ from zero to 180°
- φ from zero to 90°

Material Budget – L0 layer





Material Budget – L0 layer