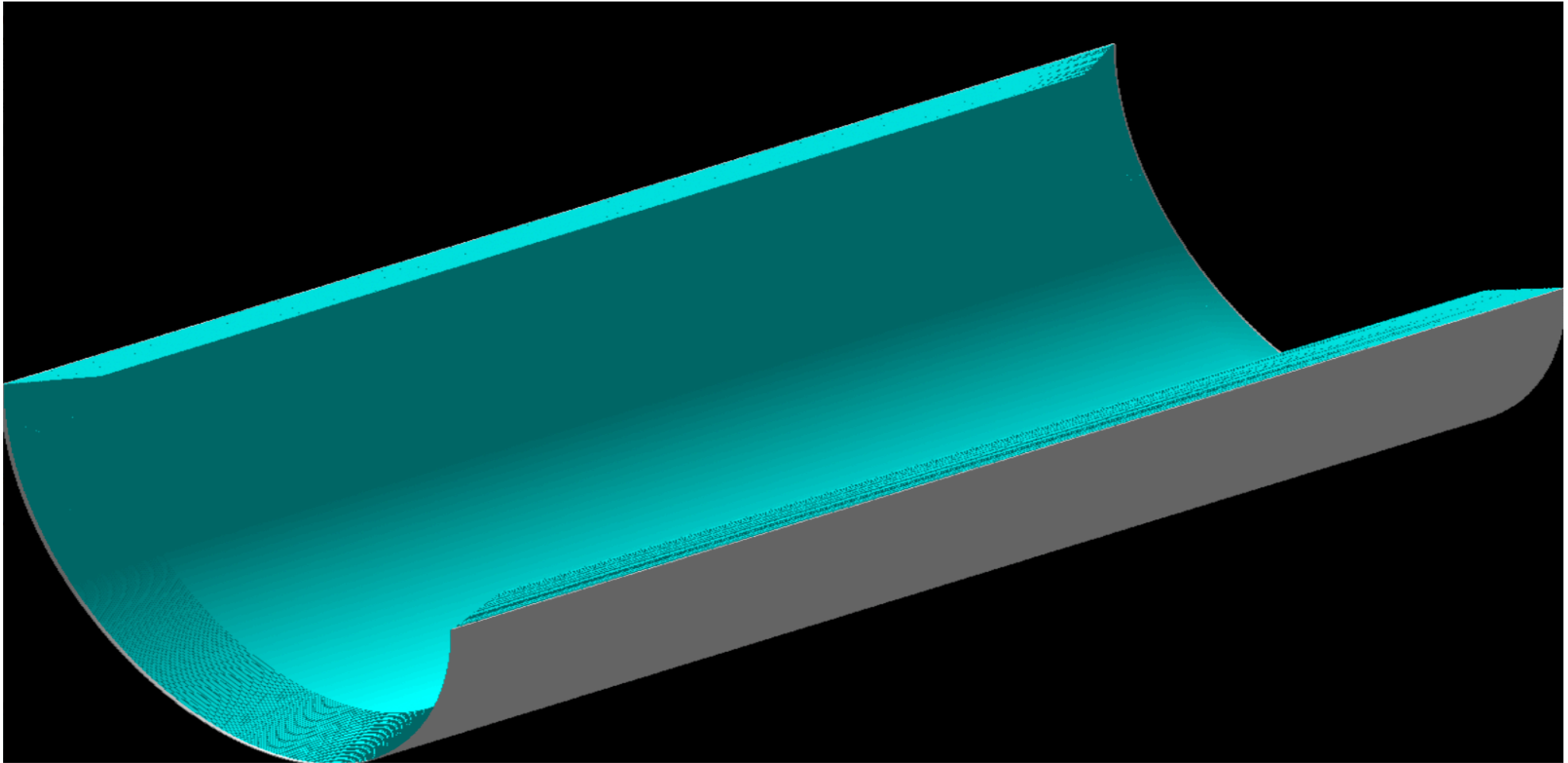


Implement barrel homogeneous EMCal

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Justin Frantz
Special thanks to:
Jin Huang
Friederike Bock

What do we have?



Current :

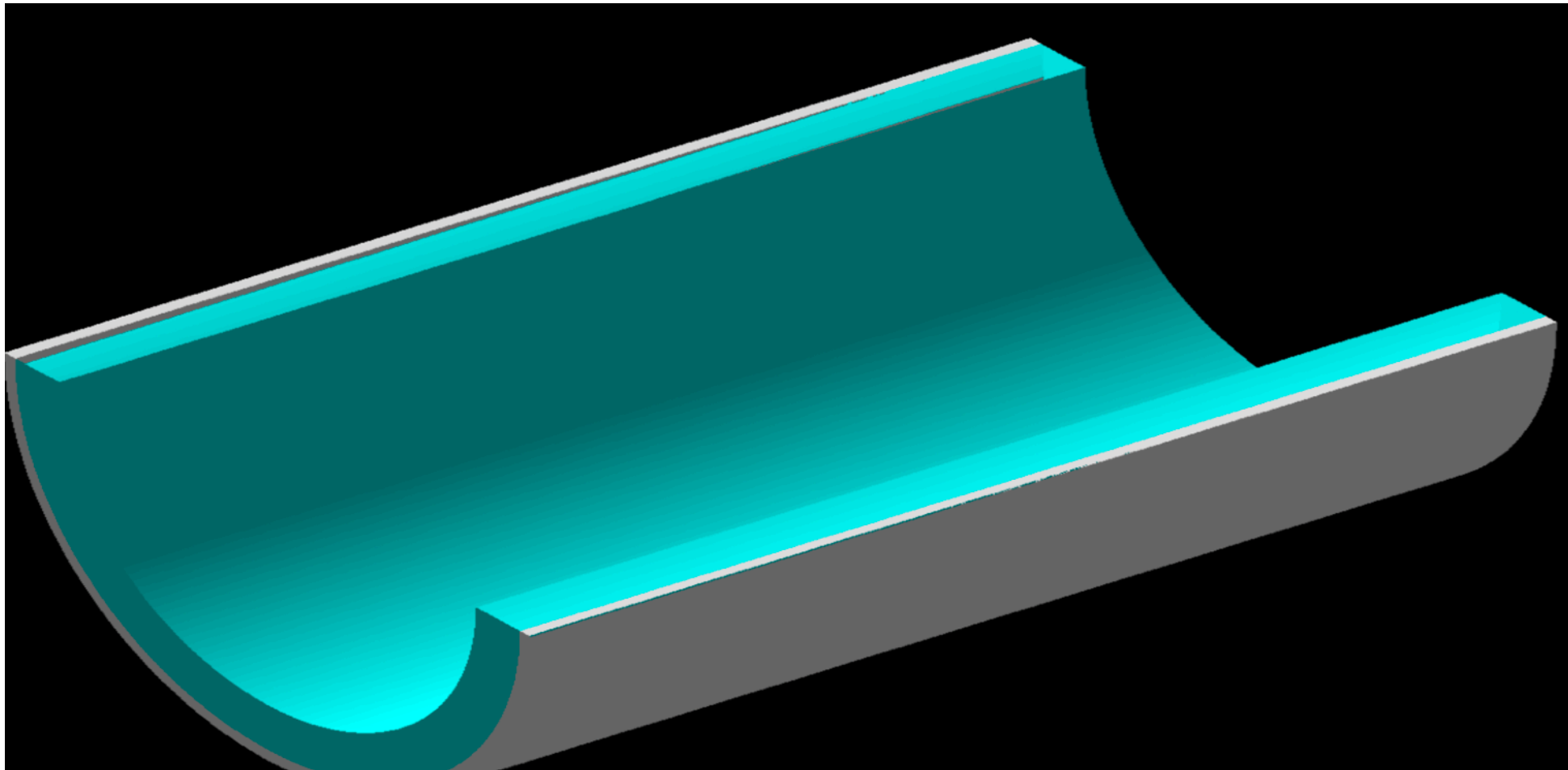
An array of readouts on a cylindrical volume.

40 layers: Active + Absorber

1 Layer for electronics

There is no projectivity module-by-module

Working on ...



Implementing :

An array of readouts on a cylindrical volume.

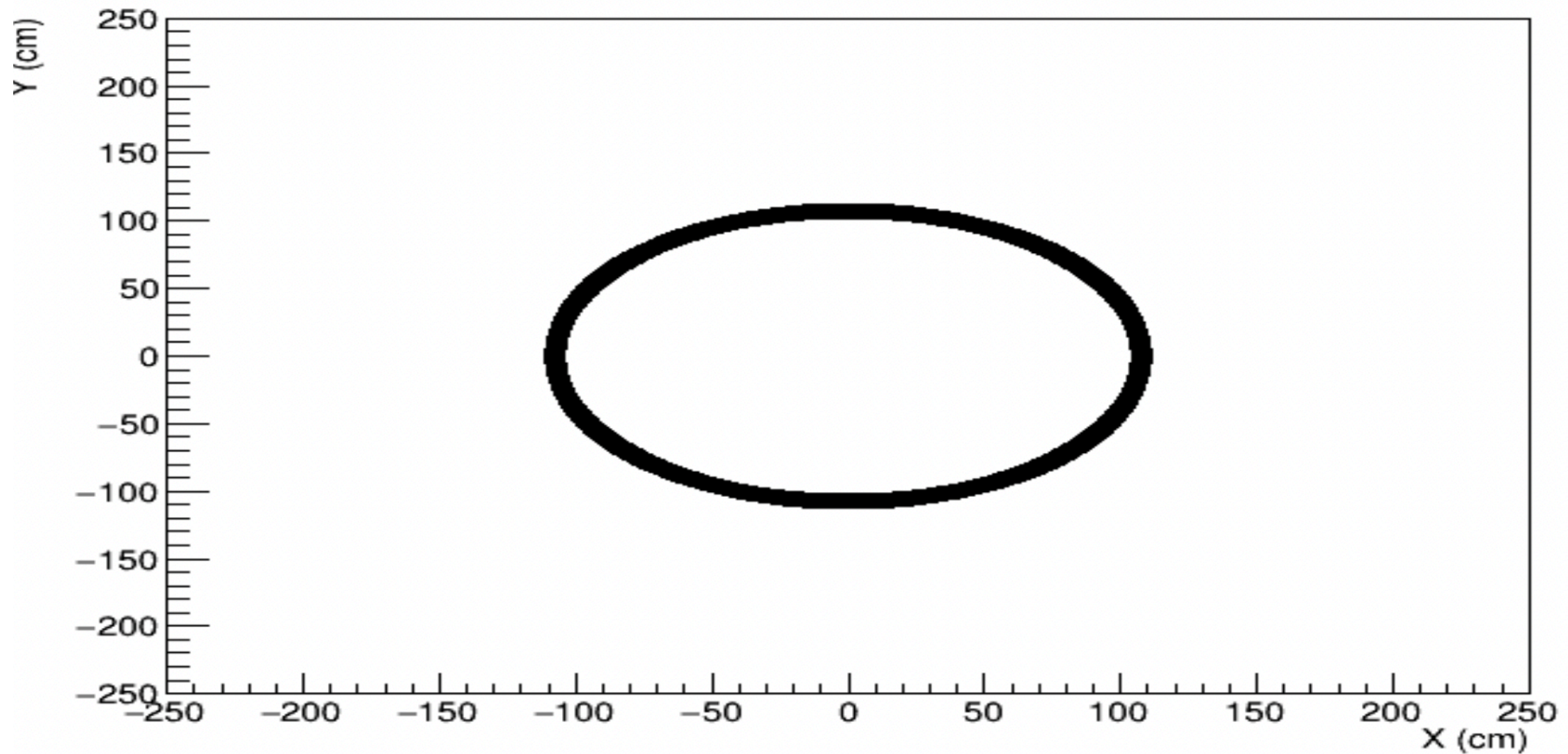
A single PbWO layer of 20 cm with the same structure -> the original version.

Main question with this geometry: Will the thickness of this crystal will contain all the showers?

Status:

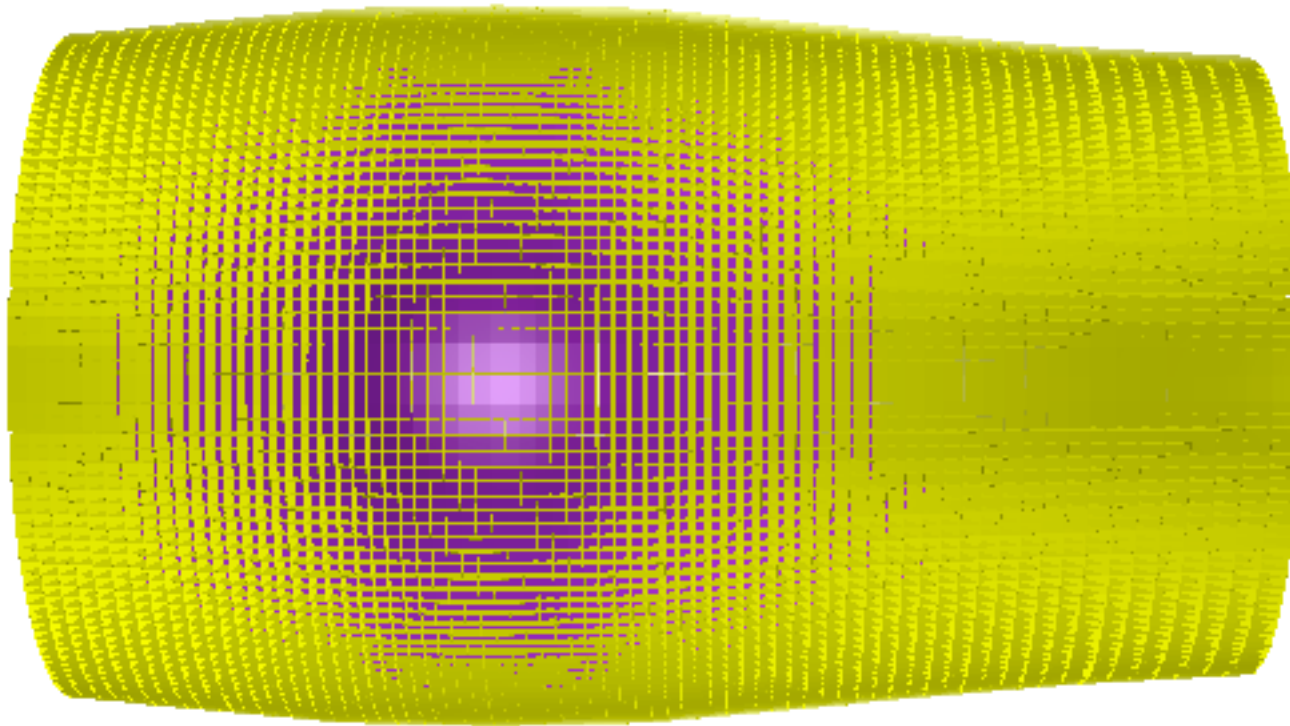
Simple Version:
Only 5 GeV electrons

Geant4 Hit distribution

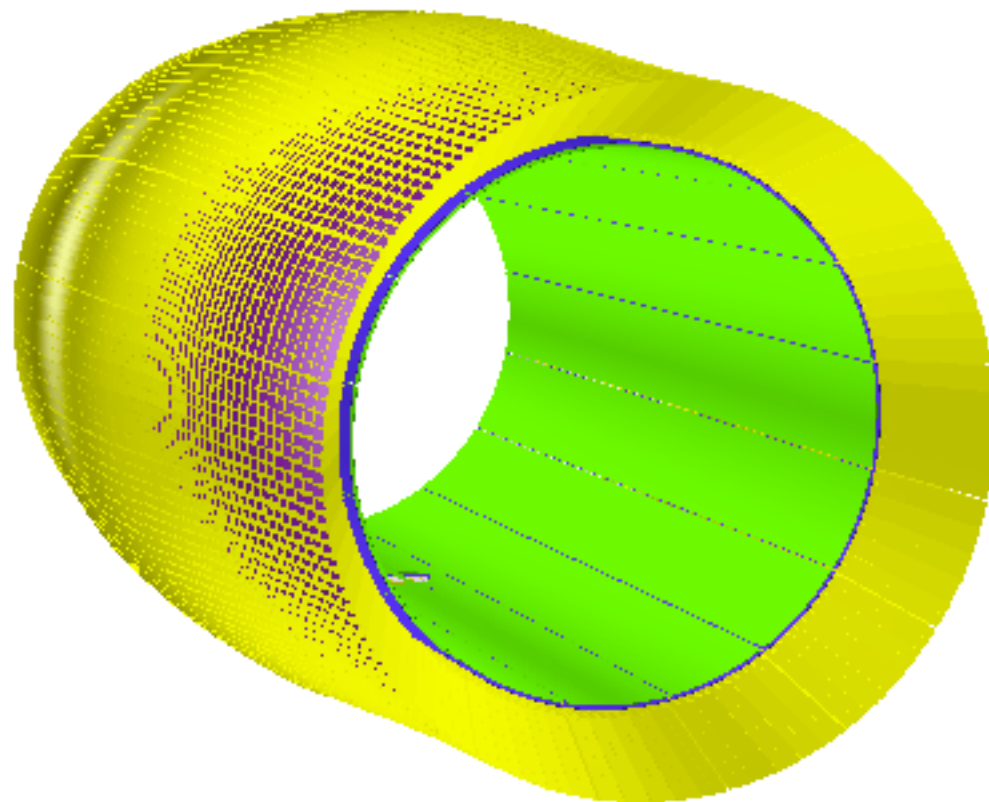


No Hits when I use a single cylinder

What do we want?



Very Similar to PANDA Geometry



- Panda collaboration will help us to get their geometry. Currently, we have root geometry file of the PANDA barrel EMC. You can visualize it using the root gGeoManager.
- Endcap EMcal is implemented module-by-module in fun4all, and including the projective PANDA geometry would be very helpful already in the current version of the implementation. Core suggestion: understand how to do the geometry transfer using the endcap EMcal as an example.