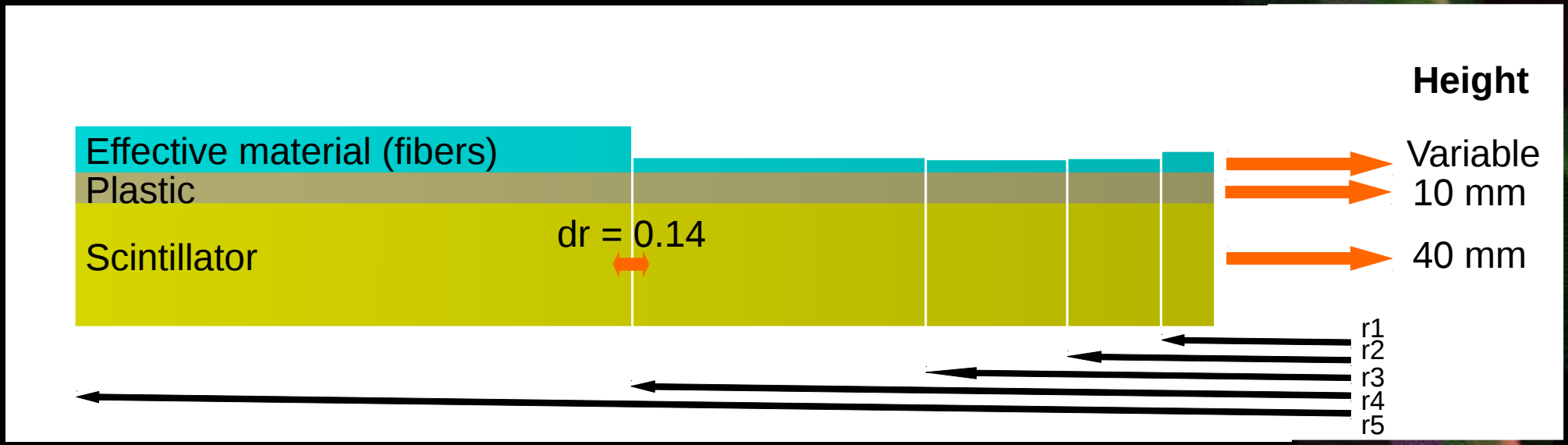
V0+ Geometry Description
implemented in ROOT 5.34

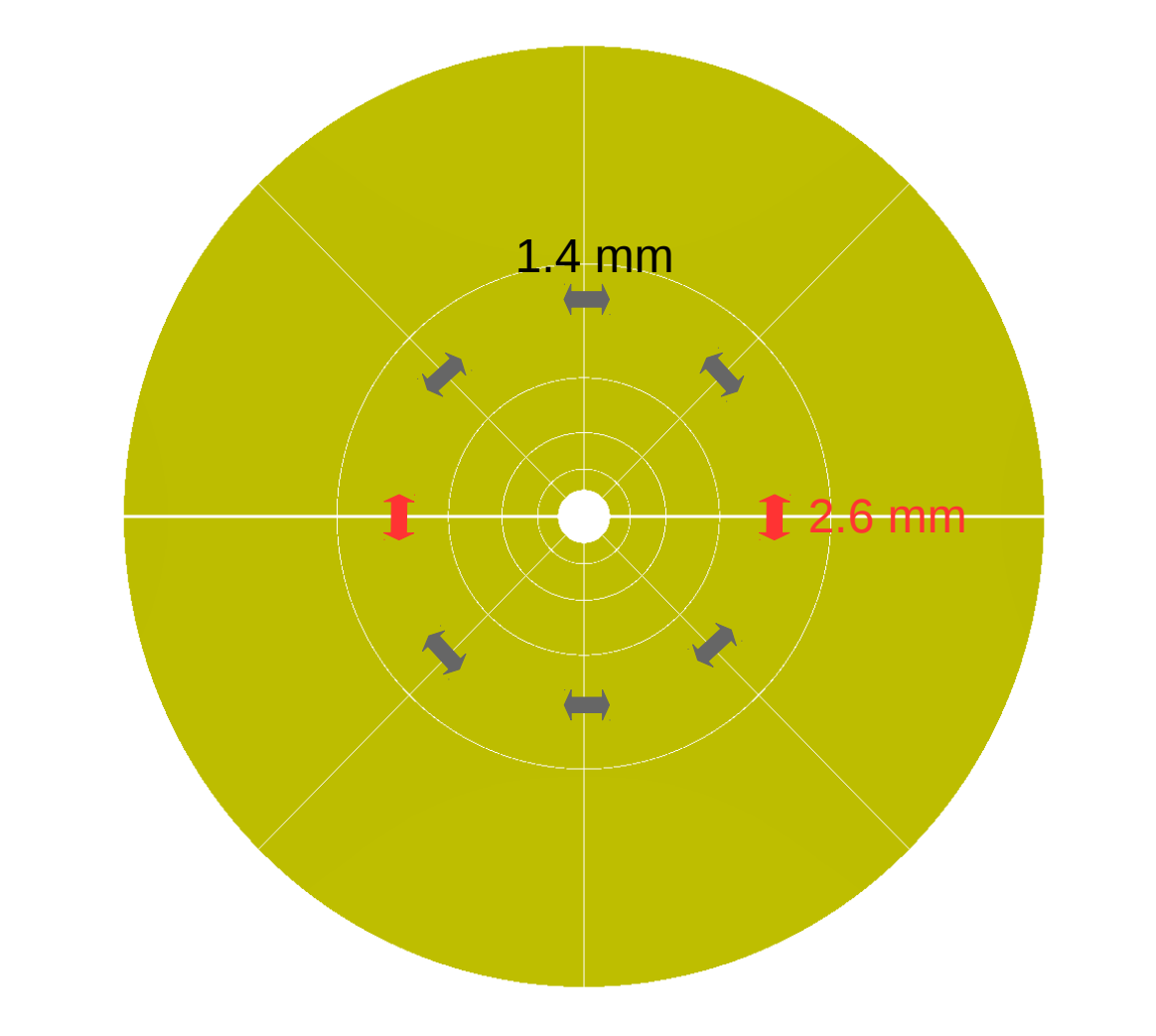
Segovia Ttito, Julio R.

Principal components

- Scintillator
- Plastic Fiber support
- Equivalent Effective material instead of fibers



Ring Sectors



Assembly

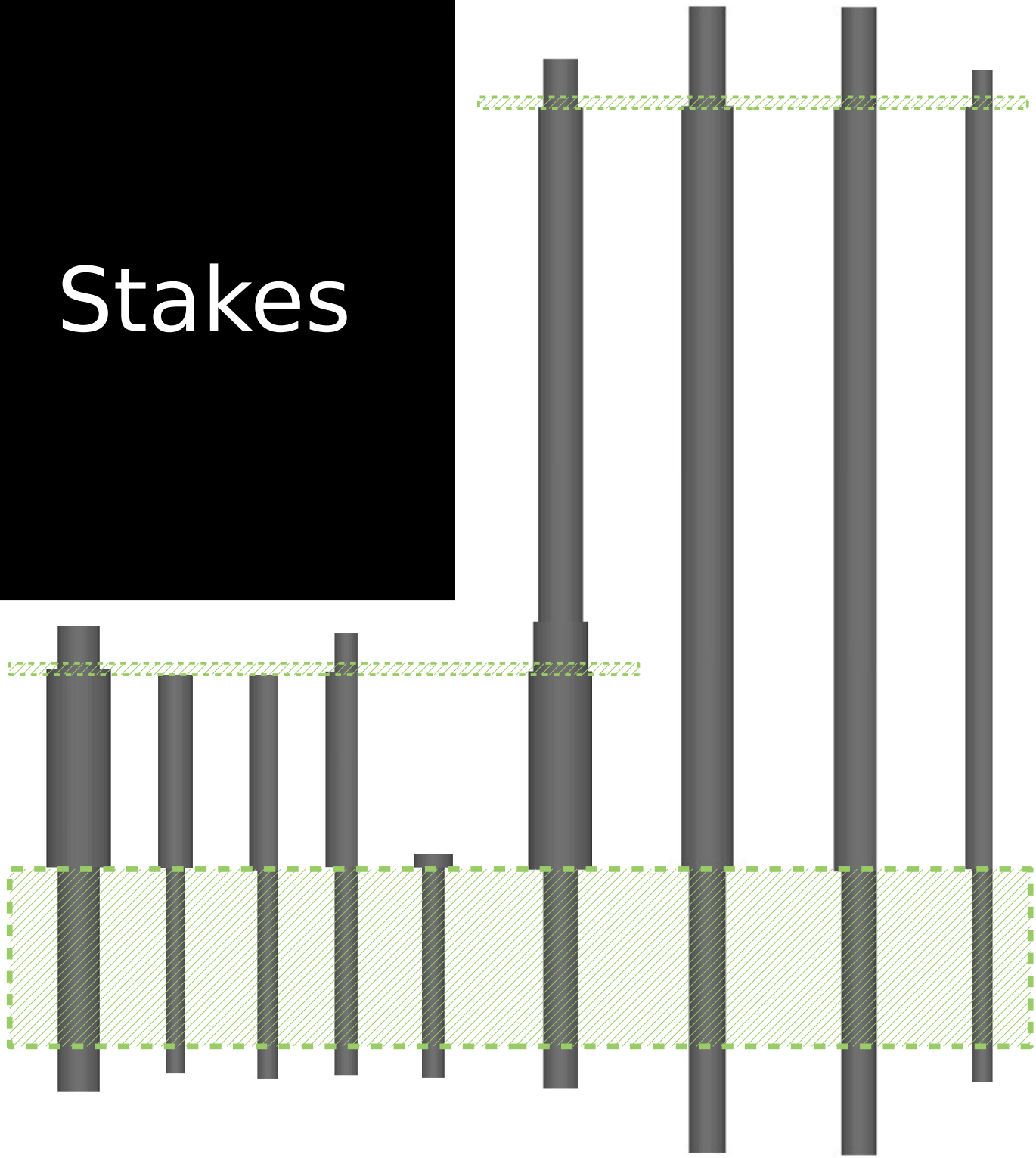
- 5 rings
- 8 sector

  - sector (45°)

  Class CompositeShape
- TubeSeg(45°) – 2*Bbox

  Substract 2 box, in 0° and 45° for each sector

Stakes

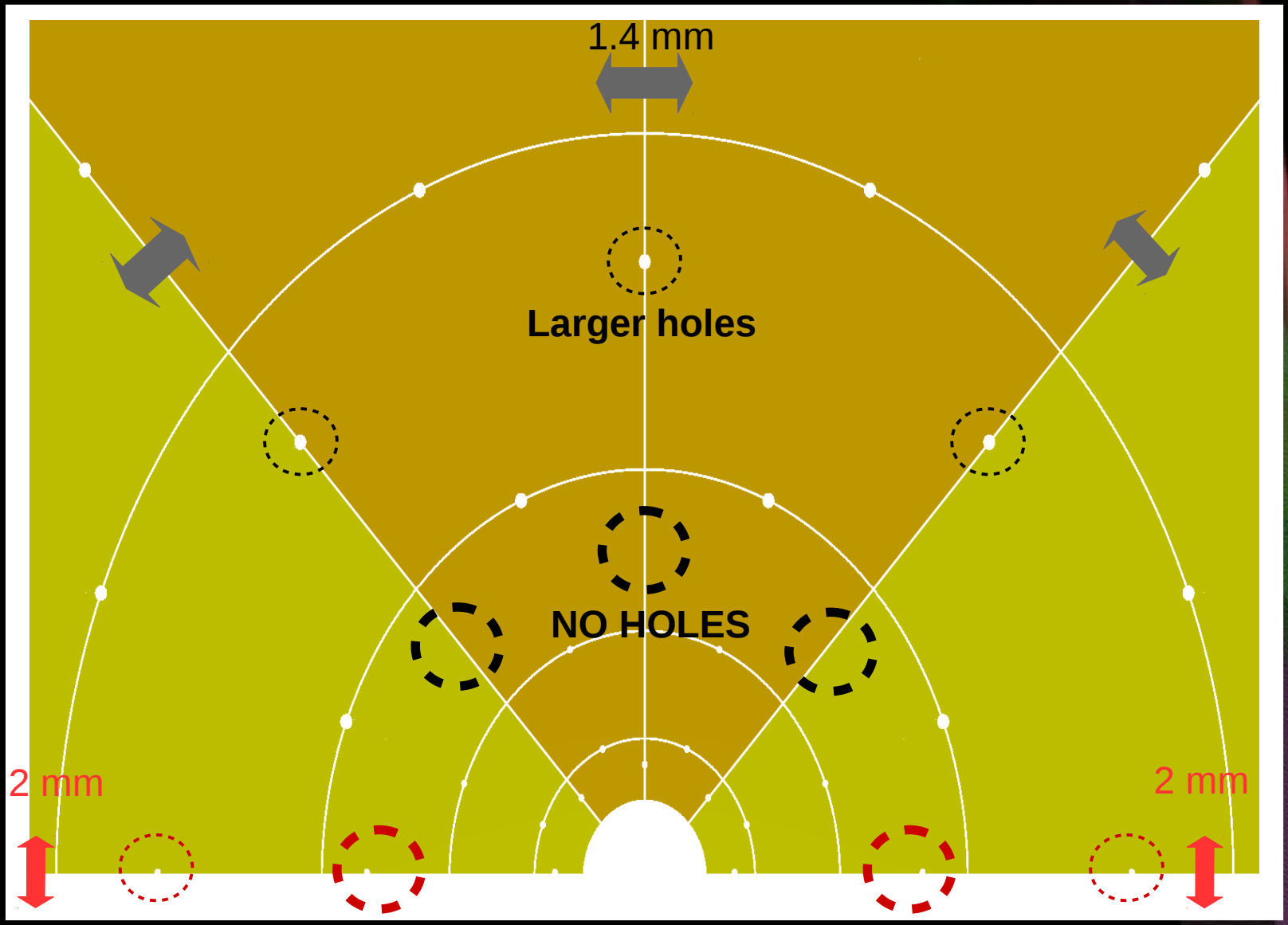


Stakes set

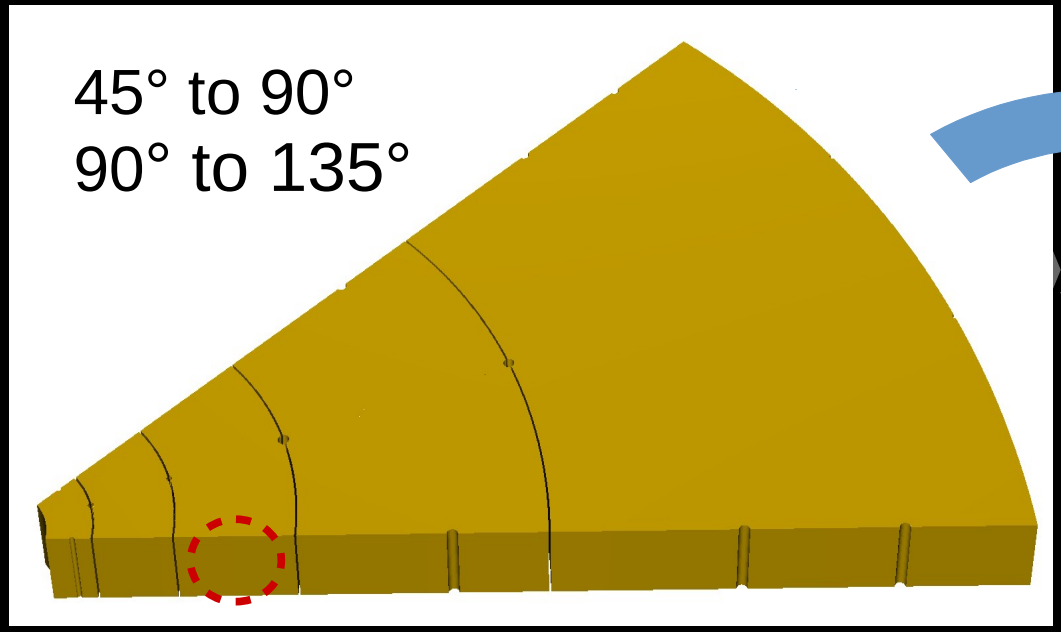
Use class TgeoVolumeAssembly to get a set in 180°

Necessary make holes in other components for stakes

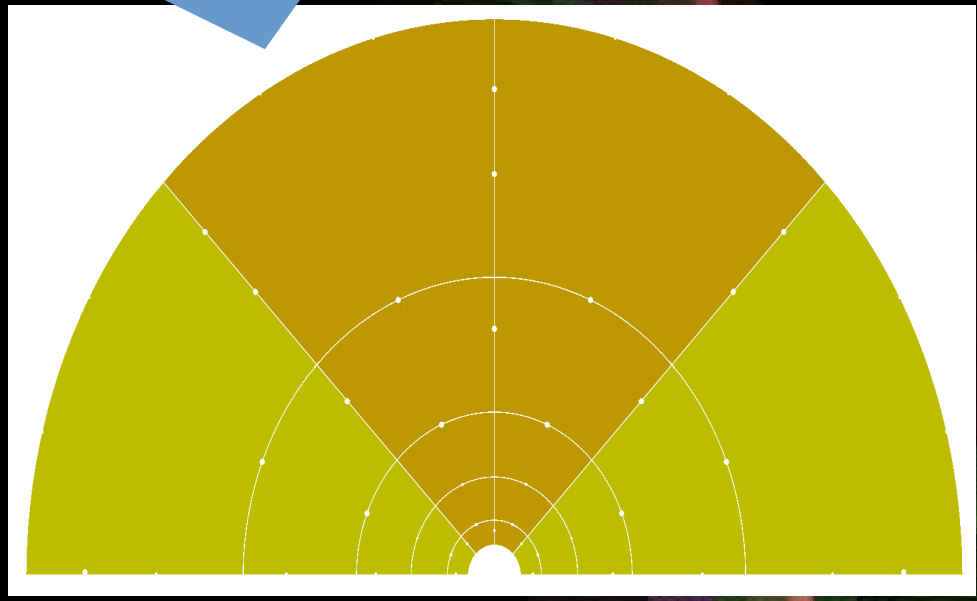
Difference between sectors

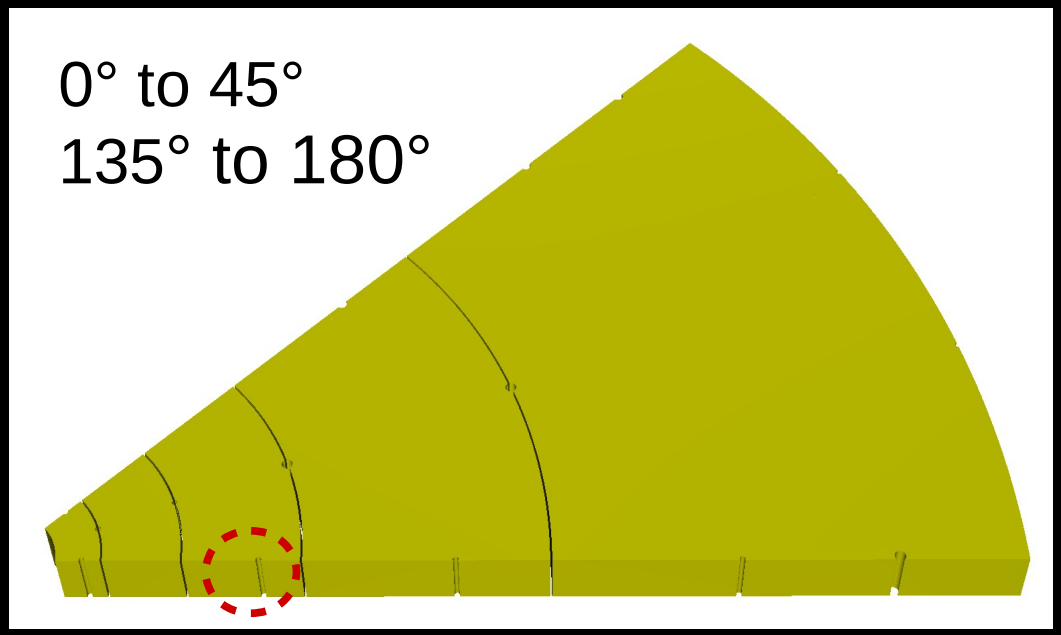


Different sectors



Translation and Rotation

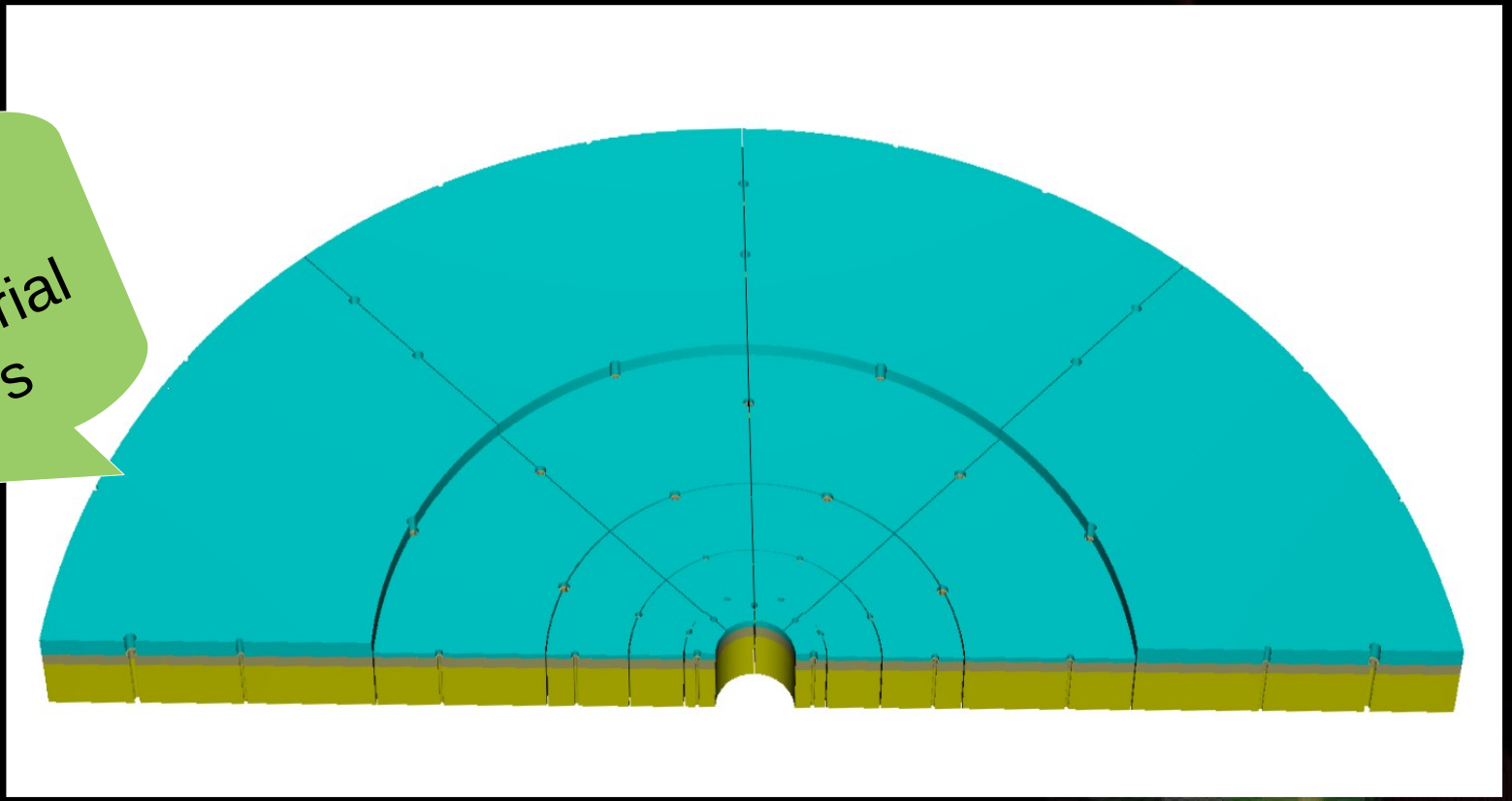


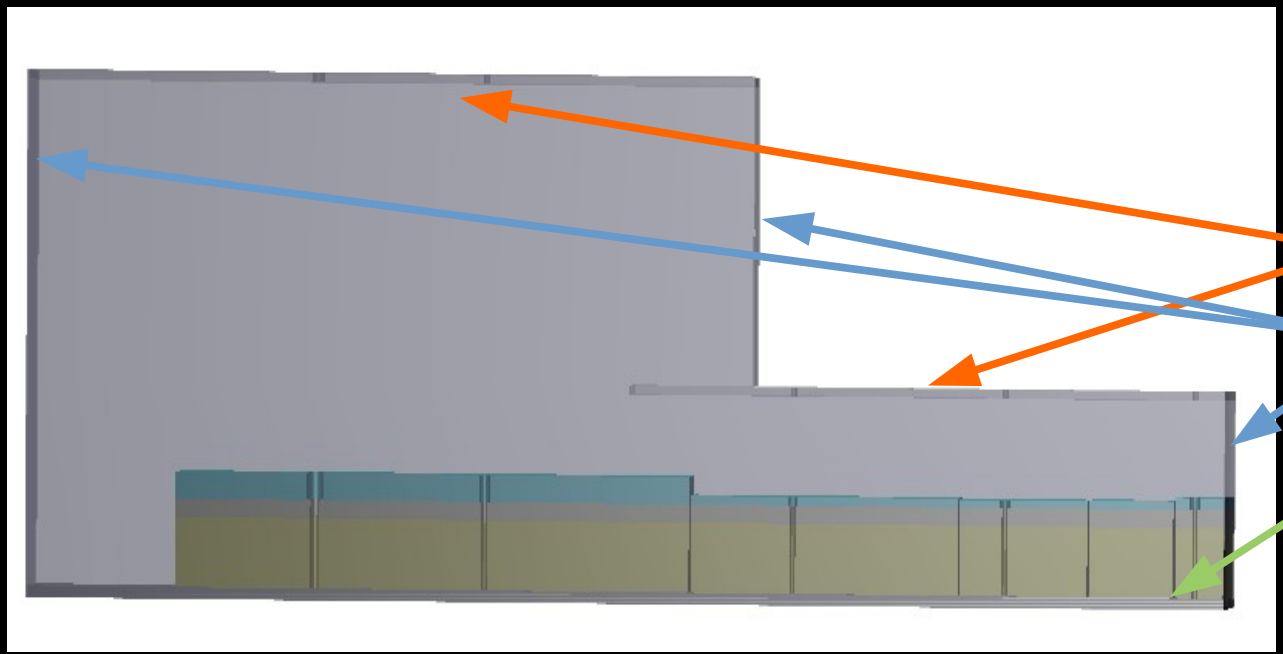


Translation and Rotation

+Scintillator
+Plastic
+Effective material
instead of fibers

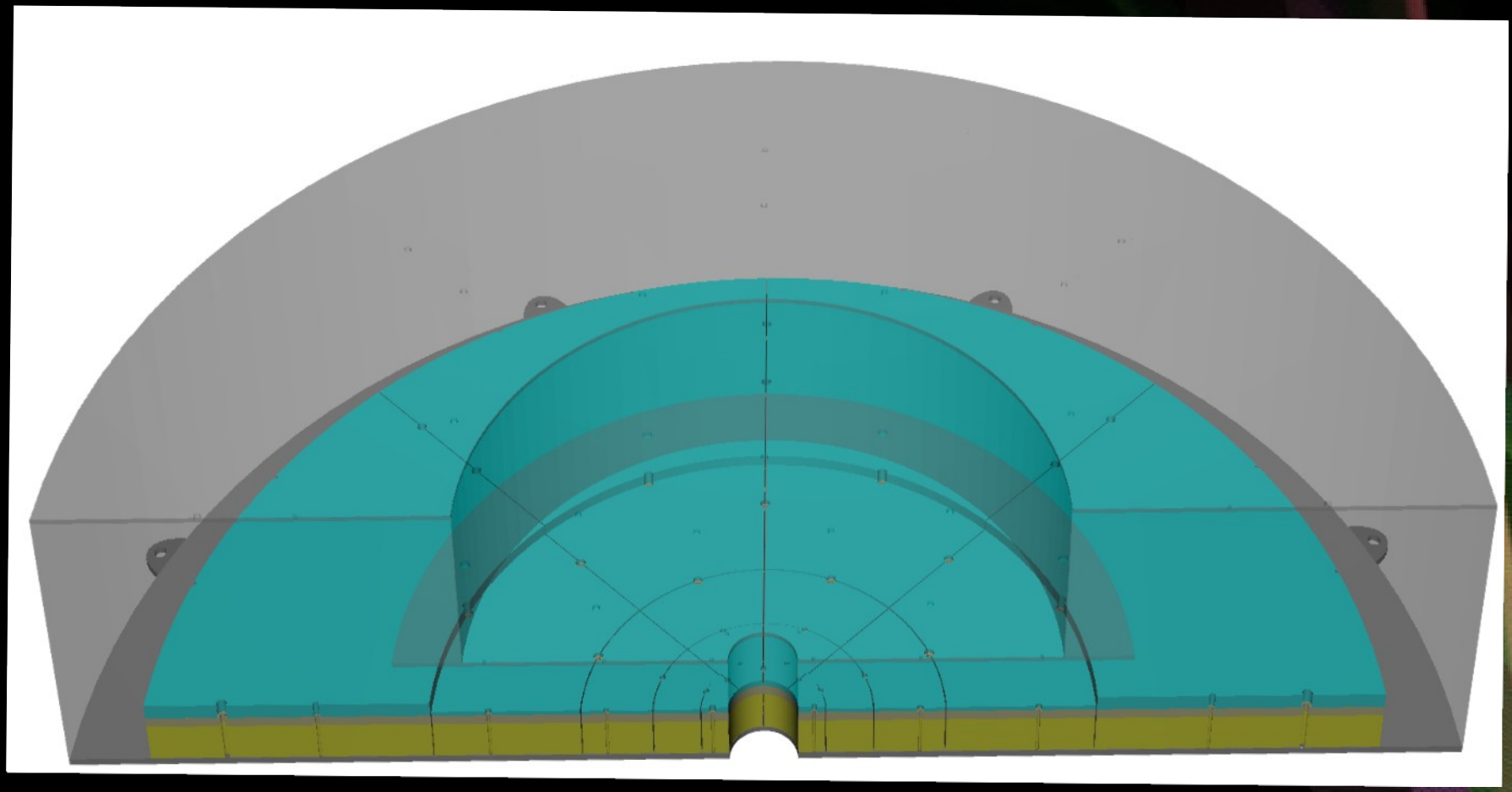
With holes!!



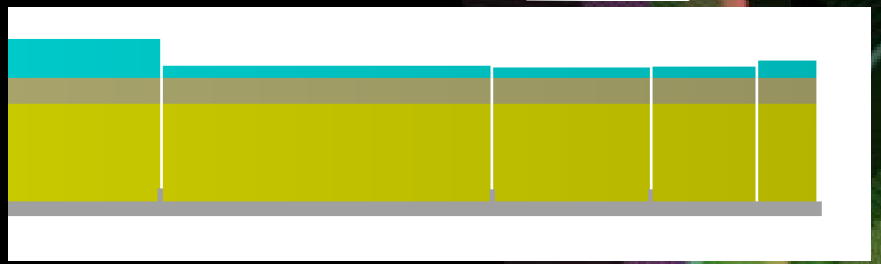


- Aluminum container
  - Caps up and down
  - Radial caps
  - Aluminum support

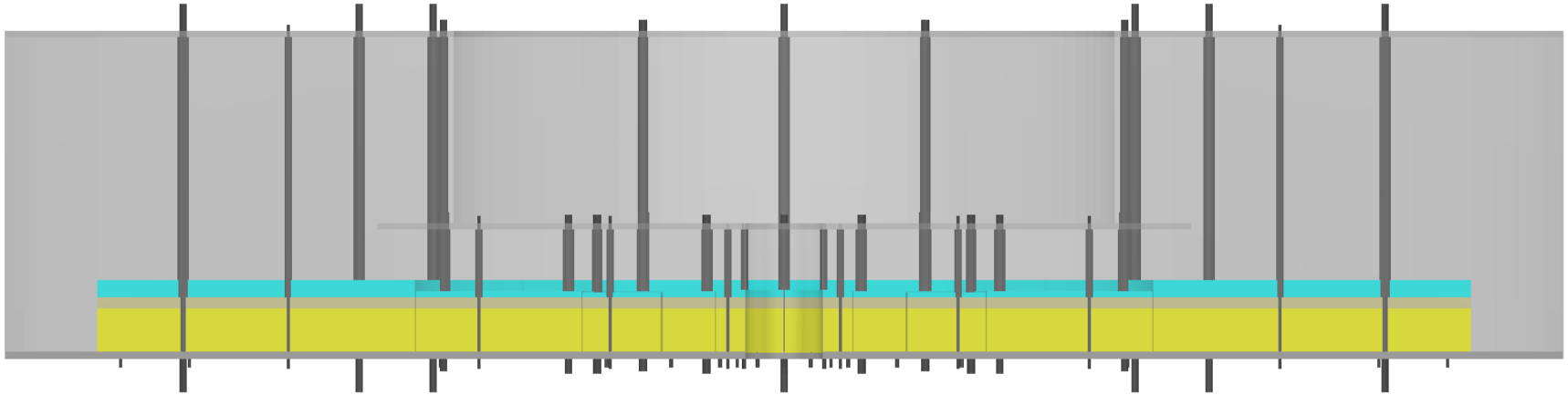
Detector + Container

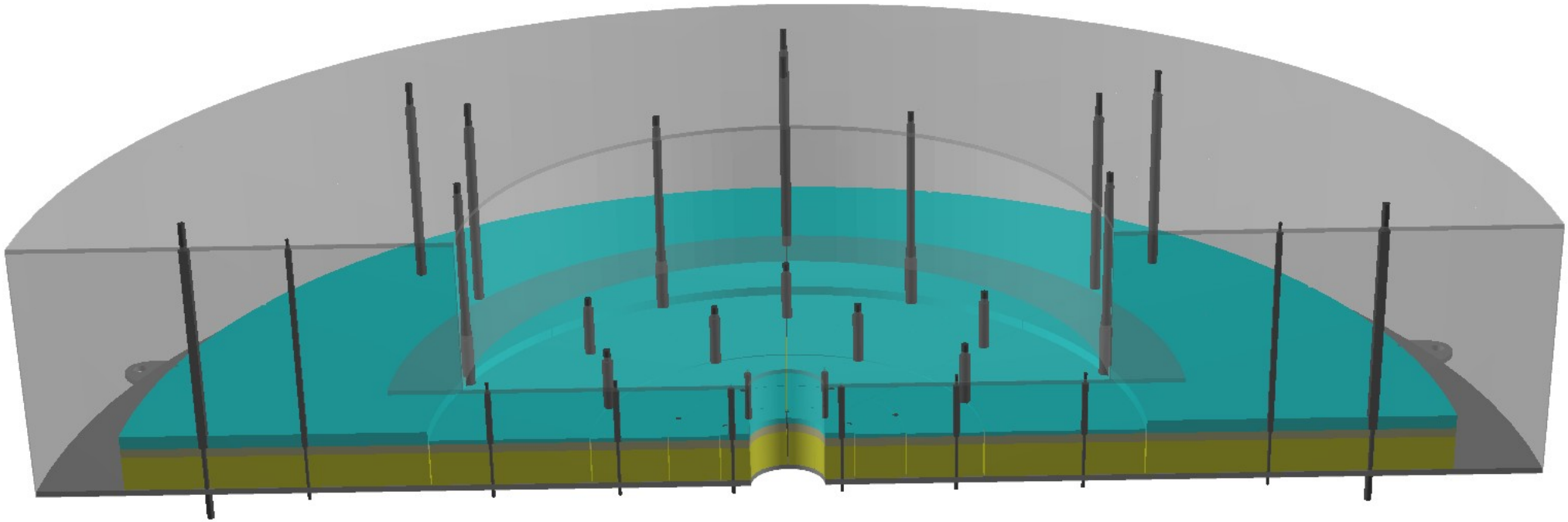


- Half disc of detector V0-plus

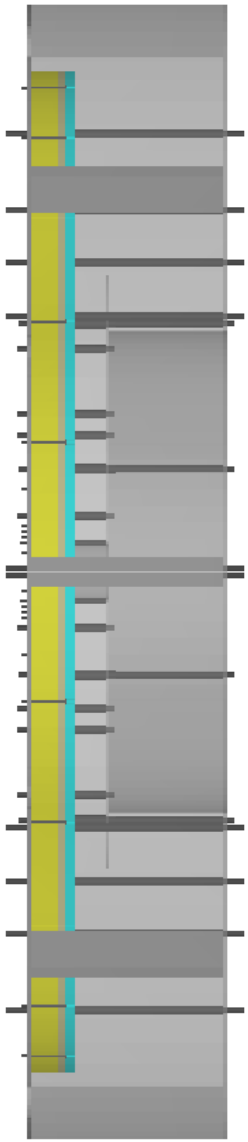


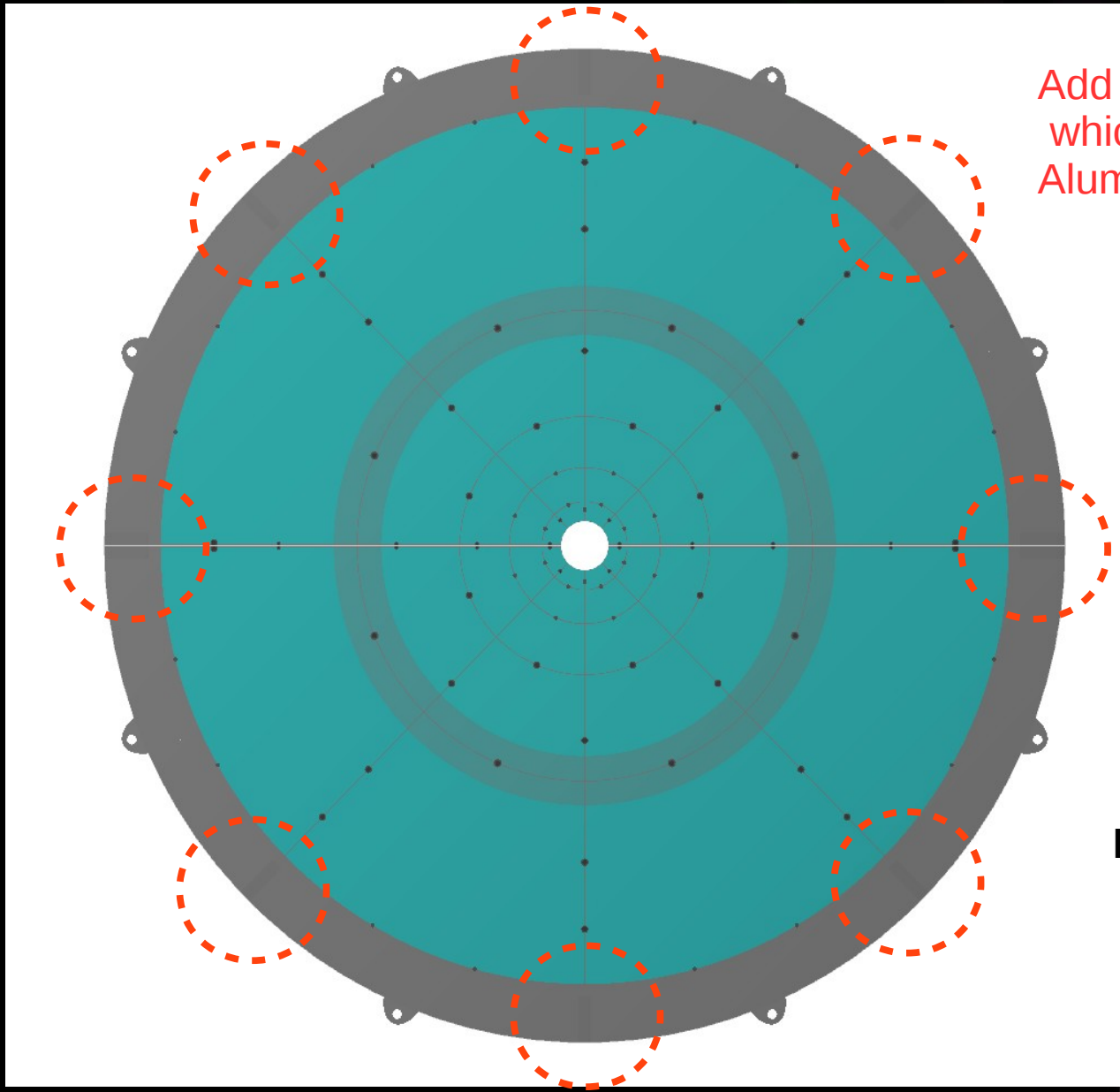
Detector + Container + Stakes



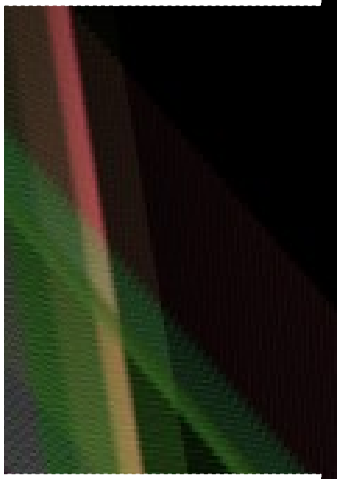


Set with stakes

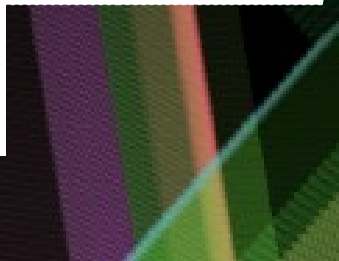




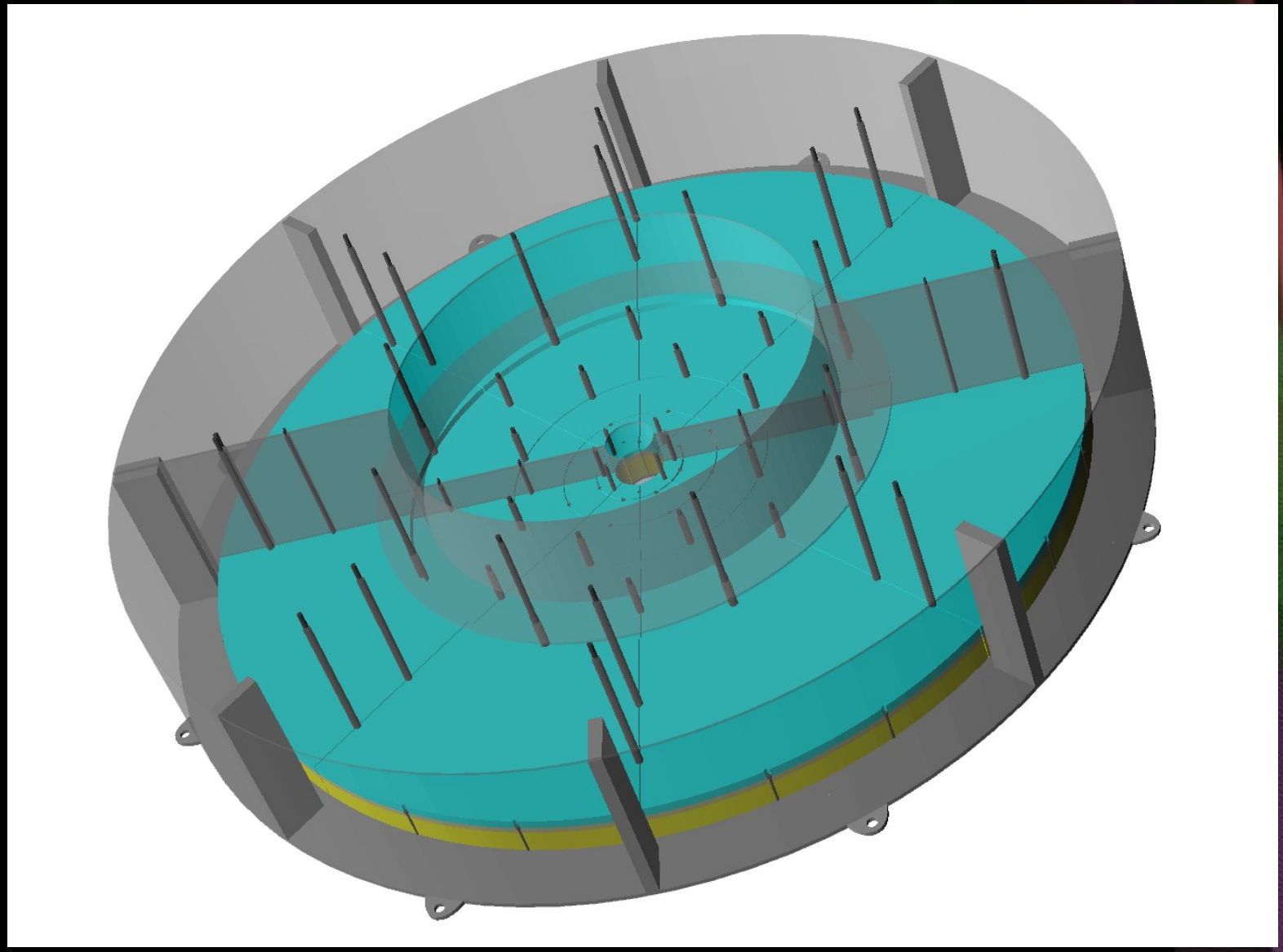
Add 10 vertical plates
which support
Aluminum cap up



There is NOT Photomultiplier!



Visual geometry v0-plus for now!!



Next step: INTEGRATE GEOMETRY WITH O2

In order to simulate V0 for RUN3:

- It will be achieved by the end of this year.
- Steps to be done are:

  a) description of geometry

  b) implementation of physics response in simulation

  c) digitization