

Detector Geometry Parametrisation

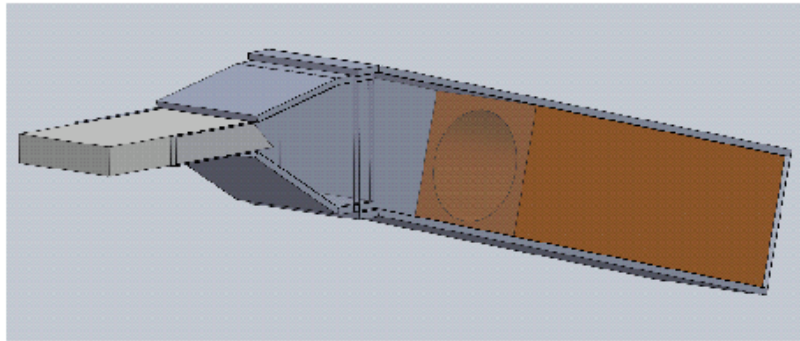
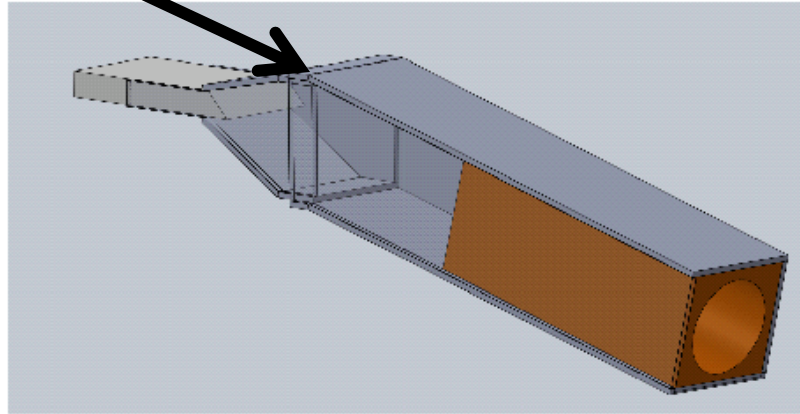
Sakib Rahman

Goal

- Parametrize detector geometry in gdml.
- Make parametrization script able to read csv file containing value of parameters for each detector in a ring .

CAD Model

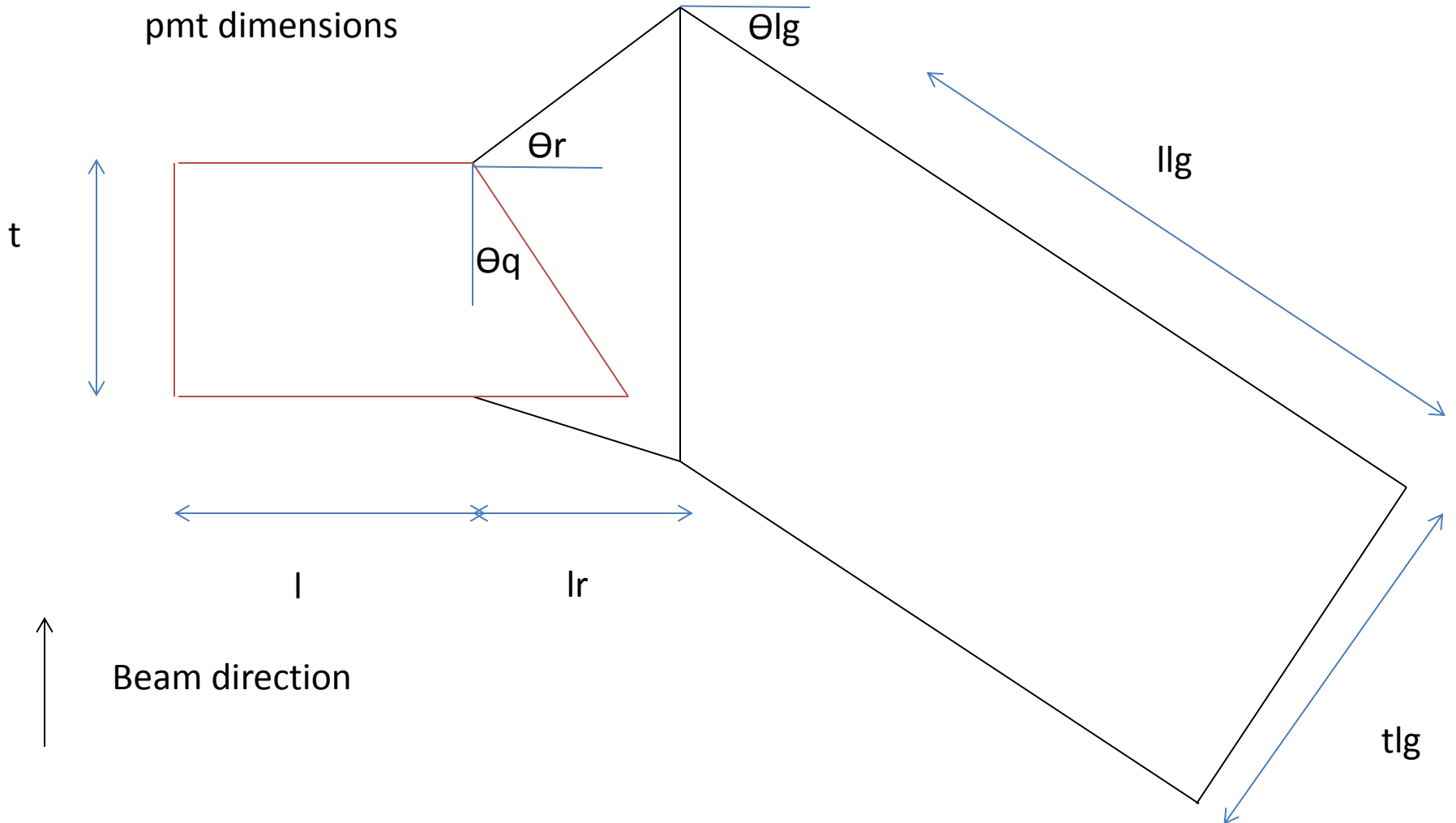
Simplify the test model by
getting rid of unessential inset
junctions



Dimension Parameters

Yet to add
reflector and
pmt dimensions

Wall thickness?



Position Parameters

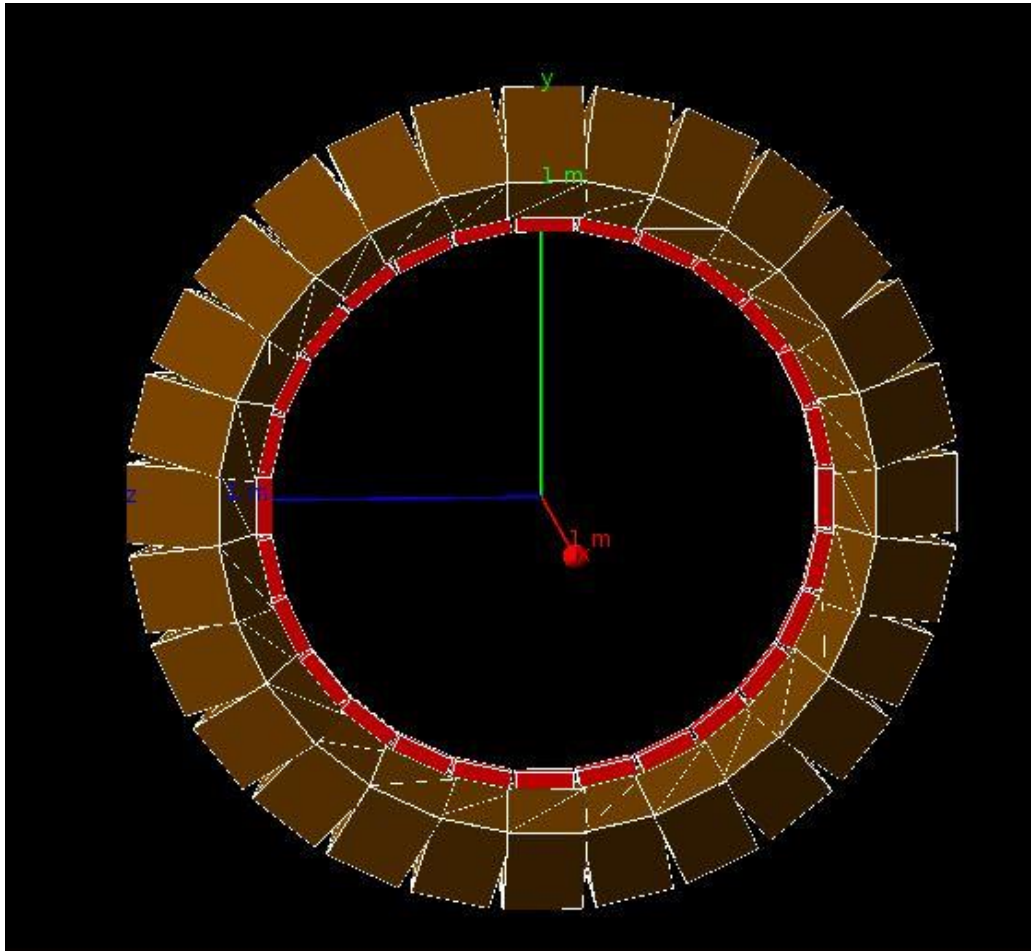
- Cylindrical coordinates
- Tilt angle of detector along beam direction
- Detector Index

Interface

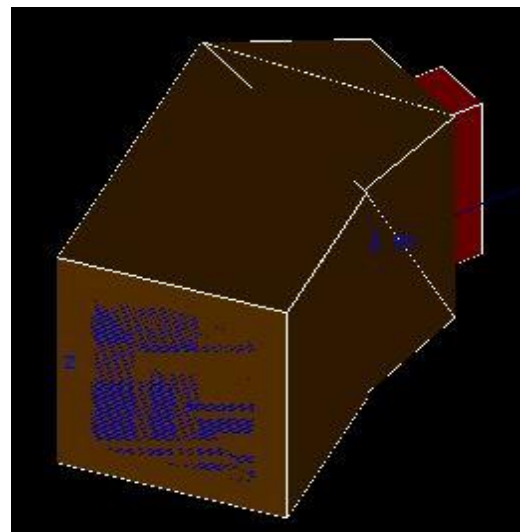
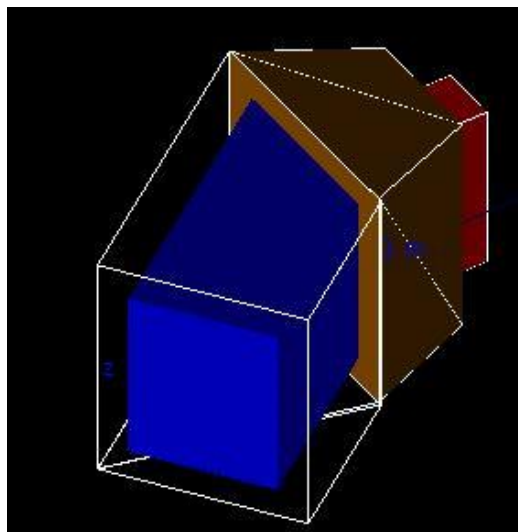
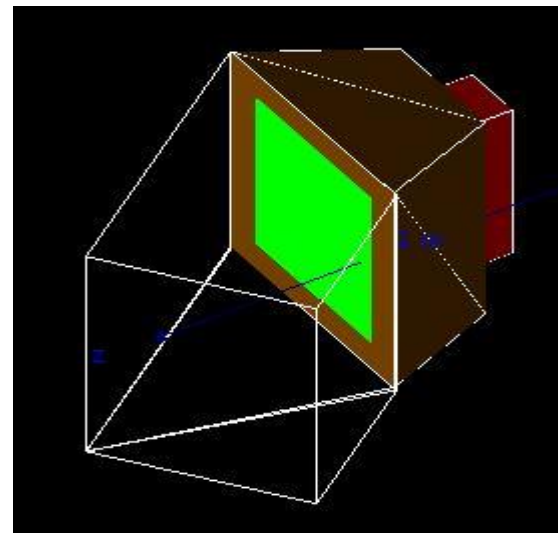
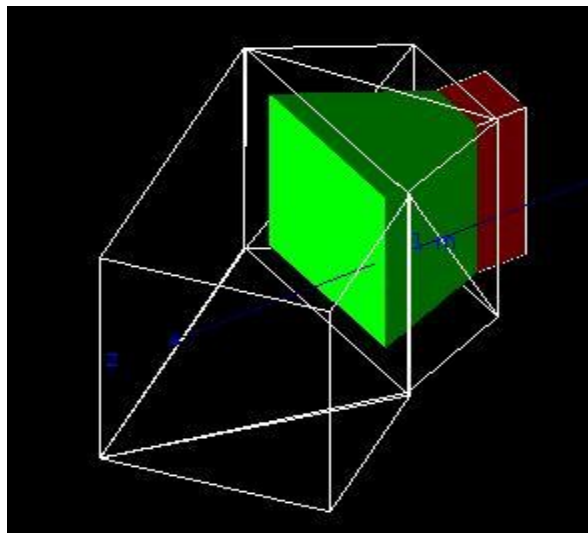
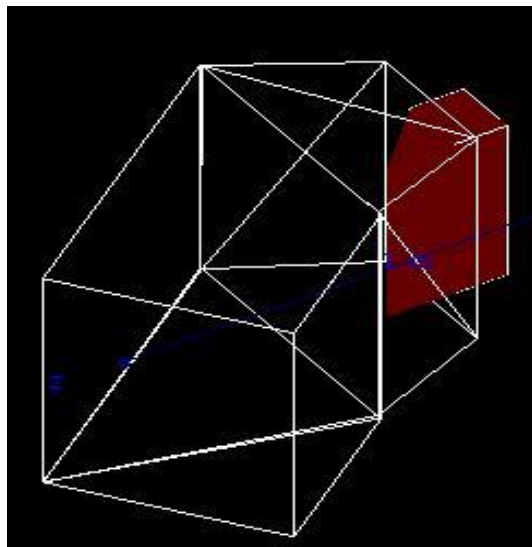
Script takes in two arguments: csv file name and ring index for labelling.
Produces gdml.

```
[srahman@sapsimserv geometry_dose]$ perl gdmlGeneratorRotStagger9.pl -F Parameters.csv -T 1
```

Array



Single Detector



To do

- Cut a section out of the existing lg volume and put in reflector.
- Add PMT window.