

# Cylindrical mRwell

## $\mu$ RWELL Material

Table 3\*:  $\mu$ RWELL active area material budget

Name	Material	Thickness ( $\mu m$ )
Windows (x2)	Kapton	25
Drift	Cu (80%)	5
	Kapton (80%)	50
$\mu$ RWELL Foil	Cu (80%)	5
	Kapton (80%)	50
DLC + prePreg	Kapton	50.2
Readout	Cu-80 (20%)	5
	Cu-350 (80%)	5
	Kapton (20%)	5
	Kapton	50
	Glue	60

\*Note: Gas layer is left out of the table

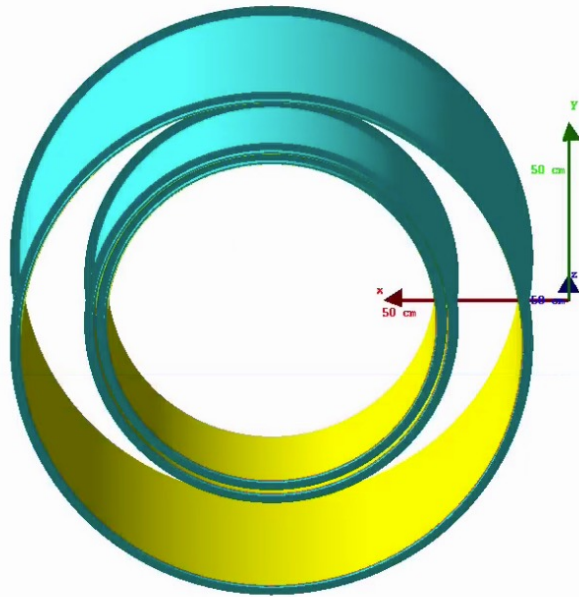
Table 4:  $\mu$ RWELL active area total Cu and Kapton thicknesses

Material	Thickness ( $\mu m$ )
Total Kapton	231.2
Total Cu	13

Matt's slide

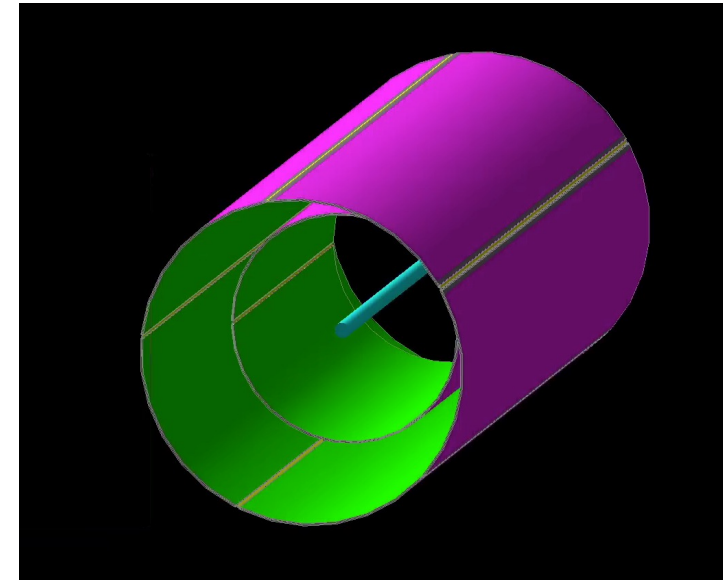
# Cylindrical mRwell

- Implement several layers of material as in previous slide along with cylindrical tile structure in Geant 4
- Comparison of detector structure (smooth cylindrical with Low material budget vs tiles structure with realistic material budget)



- Smooth cylinder
- Ultra thin material
- Has support structure at end based on FIT

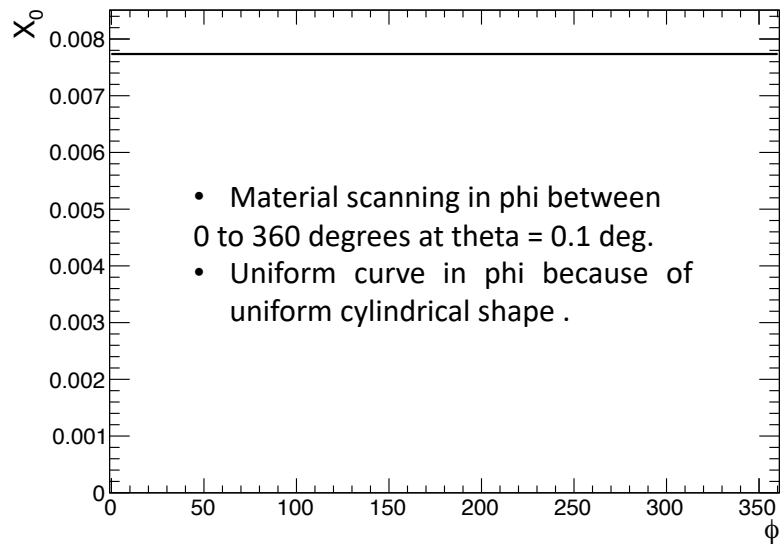
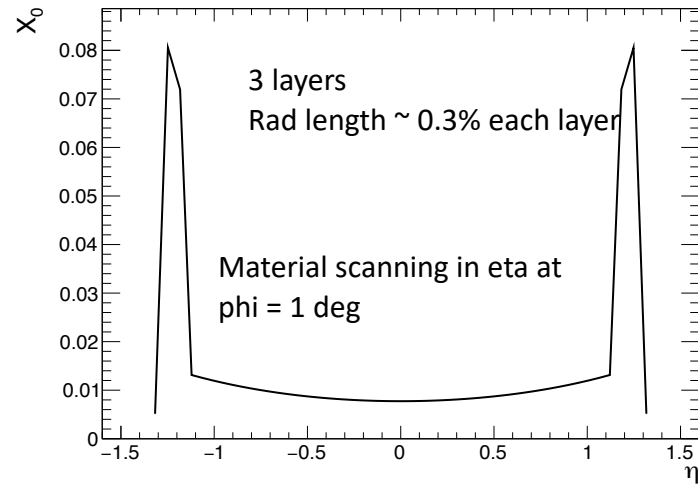
R&D



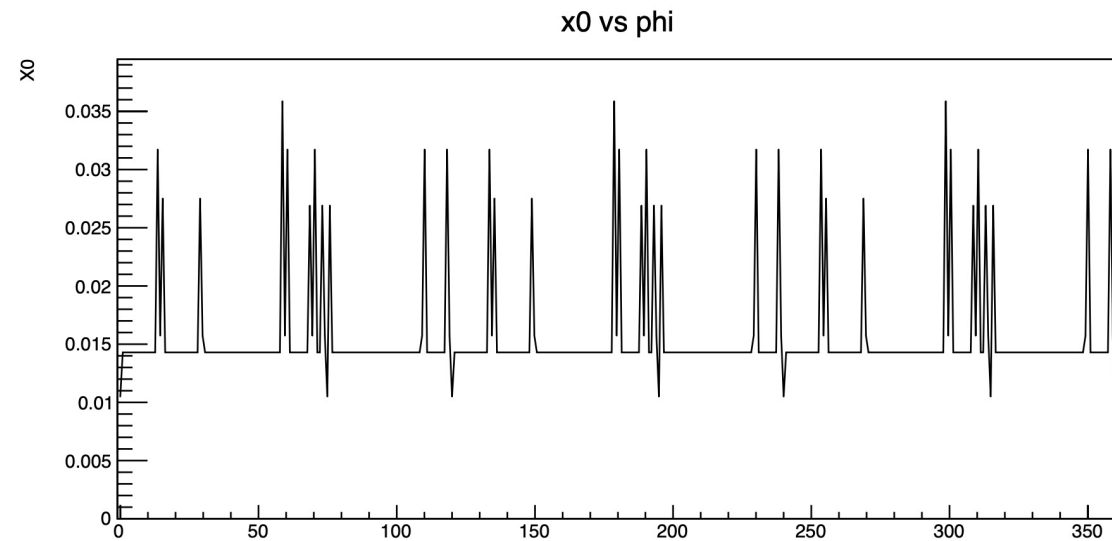
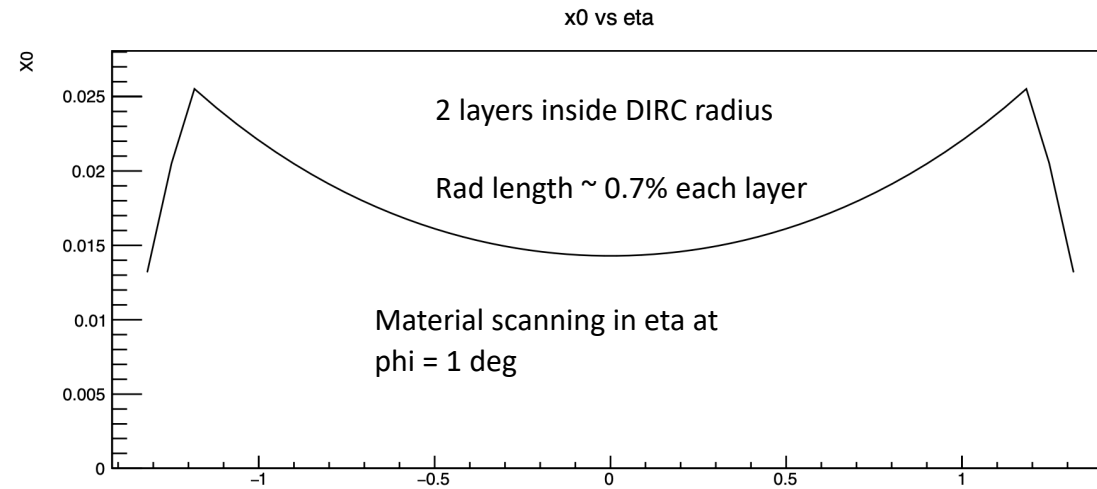
- Tiled structure along phi (1 m x 1m)
- Materials based on previous slide
- Added some additional layer to mimic cables
- Tile frames are hollow carbon fiber
- Lacks support structure at ends

# Cylindrical mRwell

## mRwell with ECCE proposal

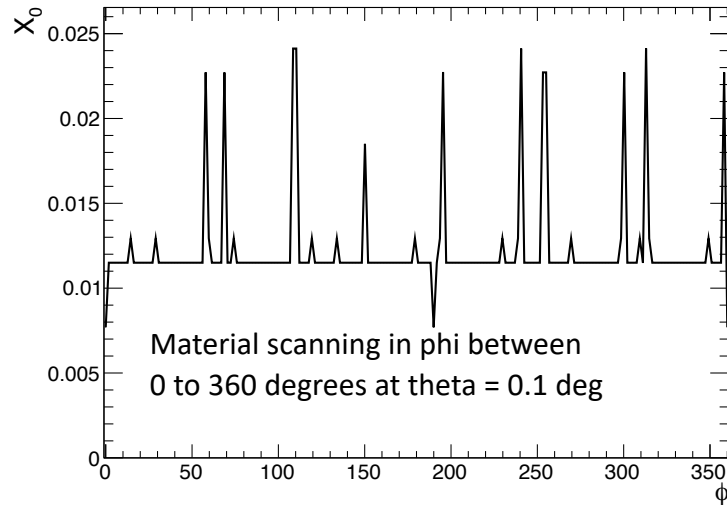
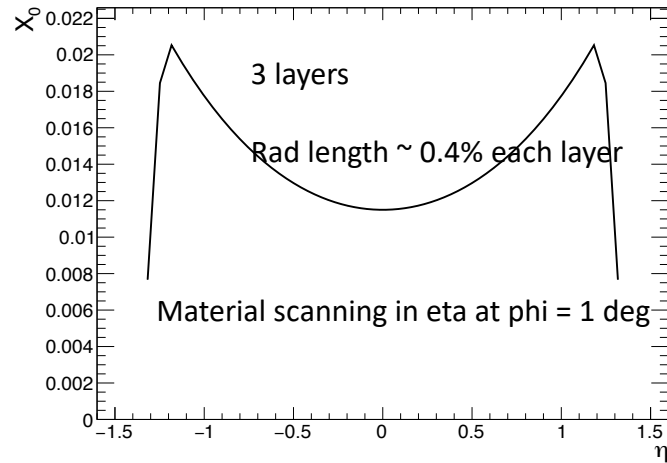


## Updated material and geometry



# Cylindrical mRwell and MMG

## MMG in Fun4All G4



## Updated material and geometry mRwell

