

Front-end electronics and mechanical structure of the FTOF detector

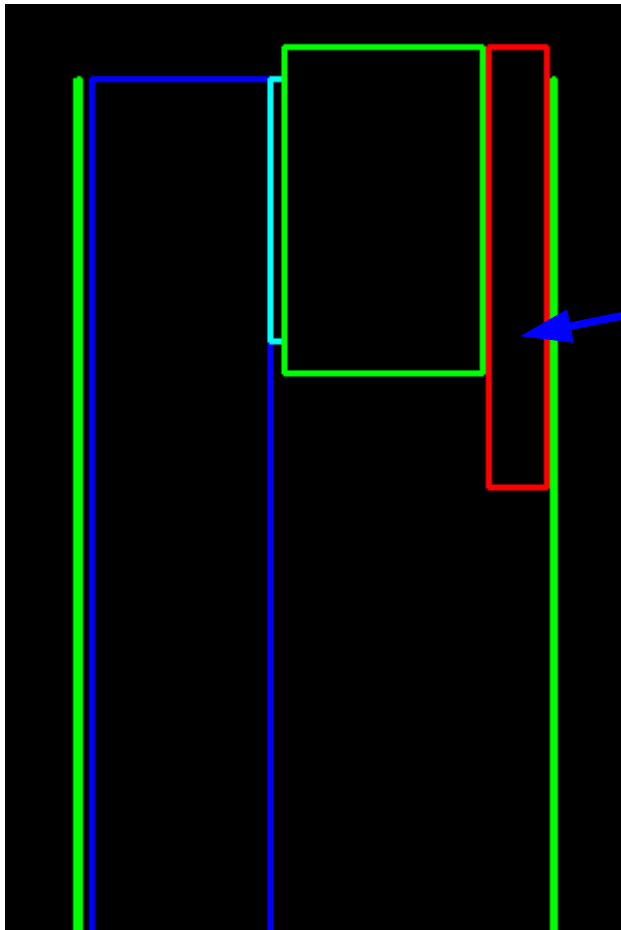
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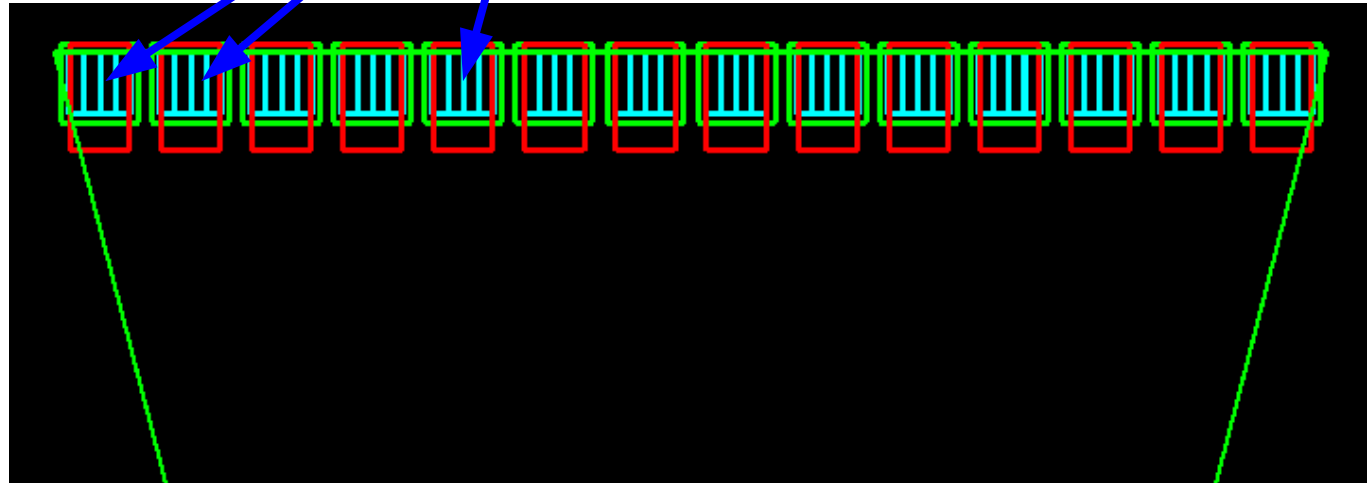


Front-end electronics (preamplifier)

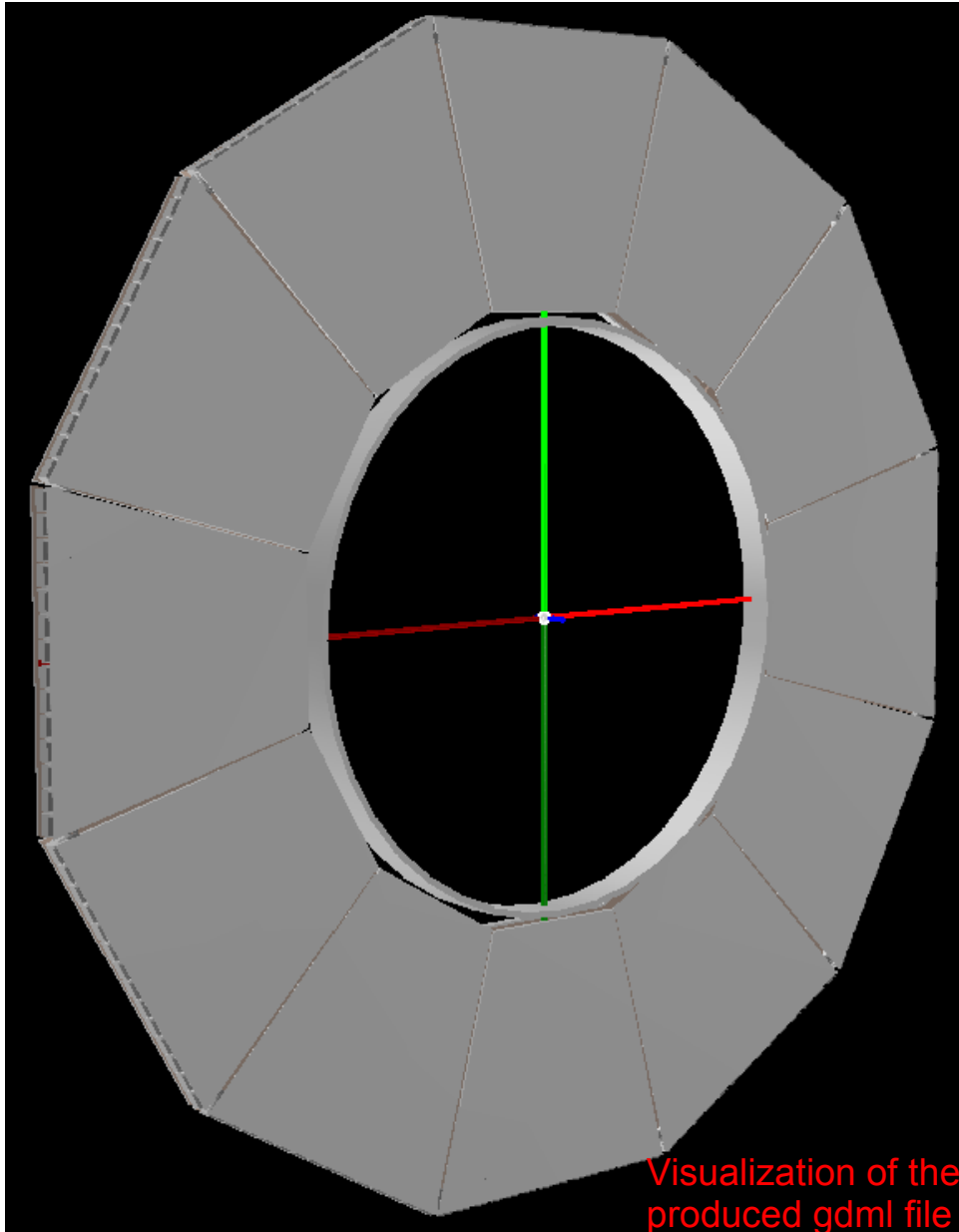
- ➔ Made of silicone
- ➔ $X_0 = \text{RadL}$: 9.372 cm (G4)
9.4 cm (CLAUS GRUPPEN)
- ➔ Thickness = 5 mm \sim 5.3% of X_0



Front-end electronics



Mechanical structure



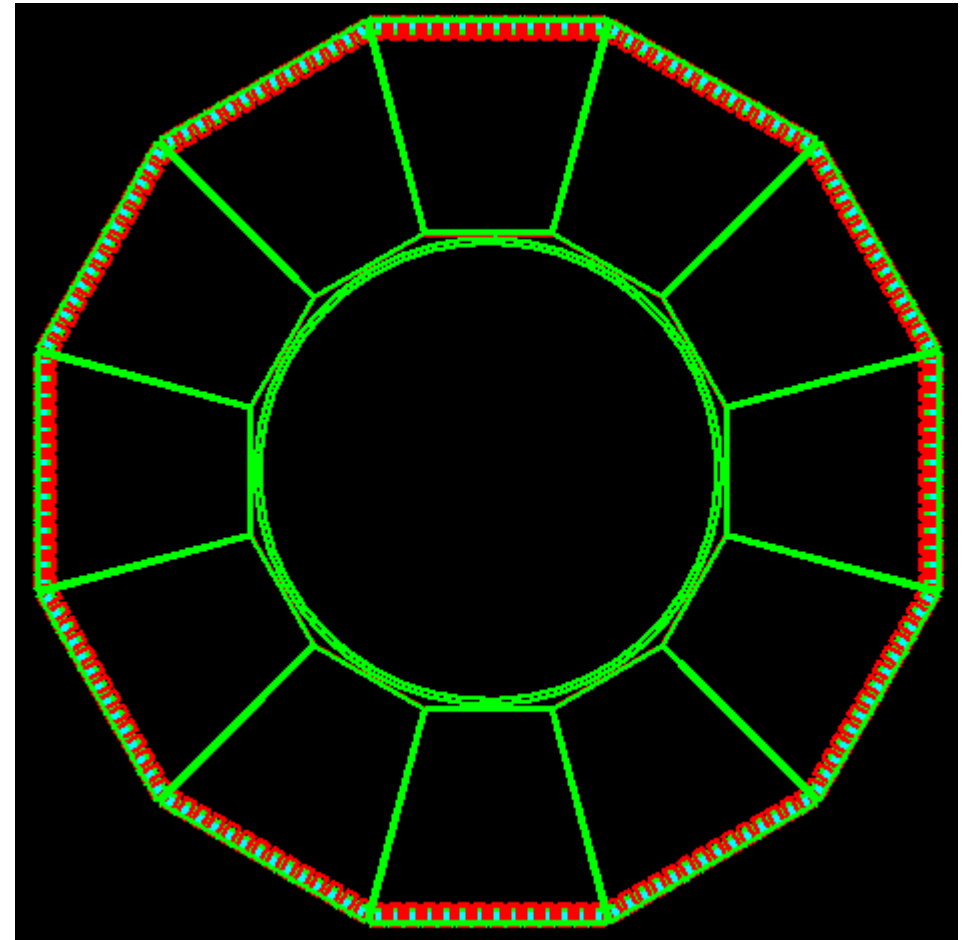
Visualization of the produced gdml file



Aluminum ring, 50 mm wide
Thickness = 10 mm

$R_{\max} = 445 \text{ mm}$

$R_{\min} = 435 \text{ mm}$



Which information do we need to estimate life-time of the electronics

- Total energy deposit
- Energy spectrum of the particles (n, p, γ , e^+ , e^-)
- Flux of the particles (n, p, γ , e^+ , e^-) as a function energy.