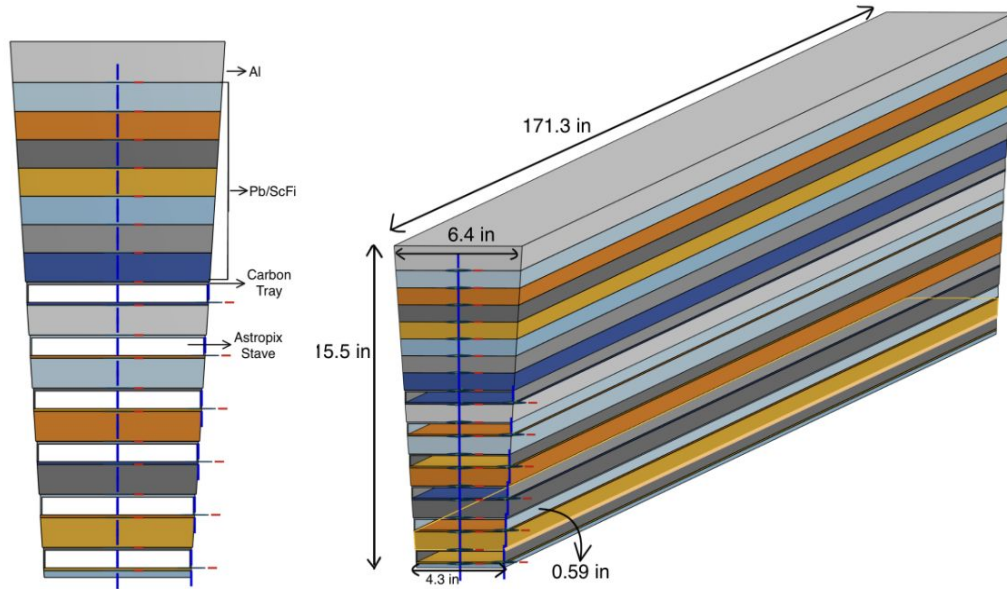# BIC full sector and ESB cooling

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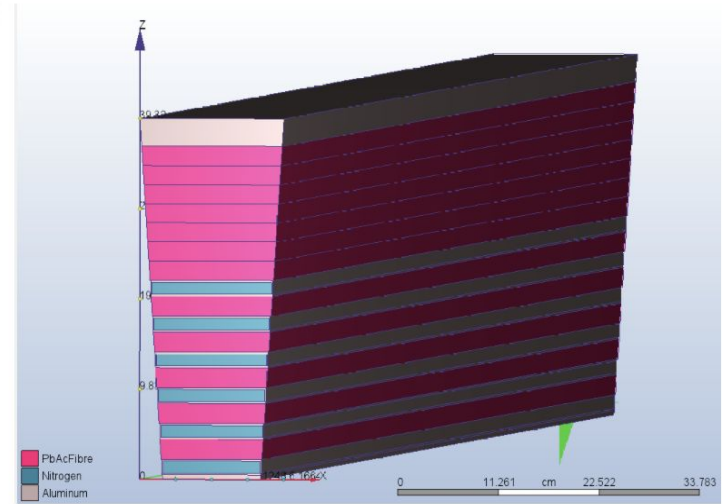
2025-05-13

A.) BIC full sector cooling
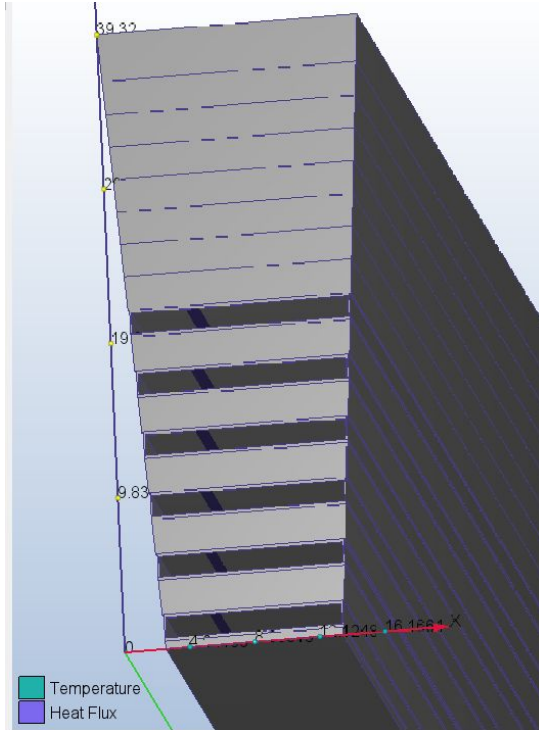
CAD model for complete sector
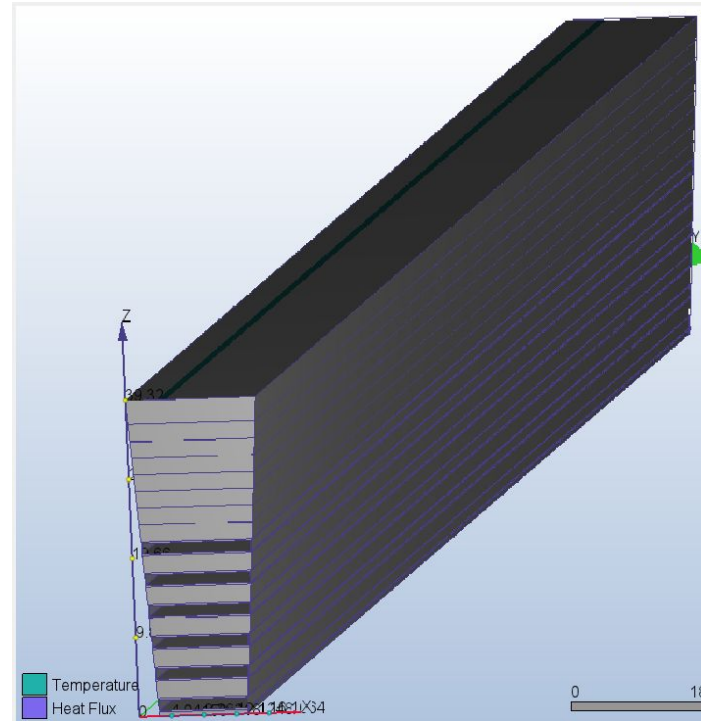

CAD Render of the sector

Material distribution
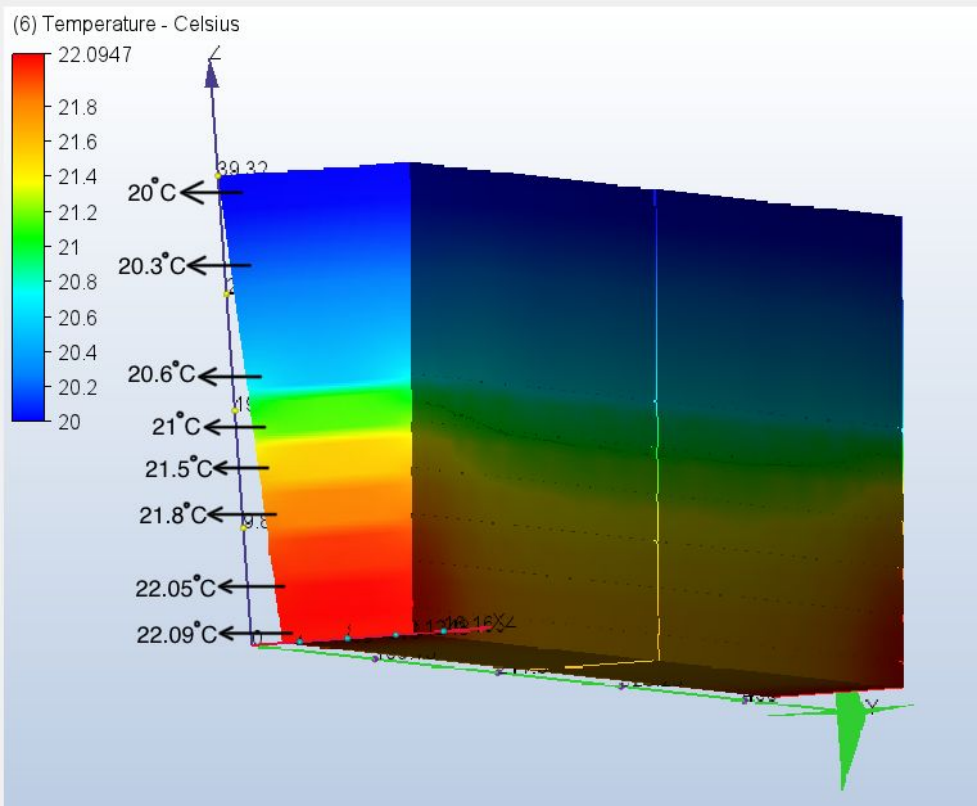
Boundary Conditions

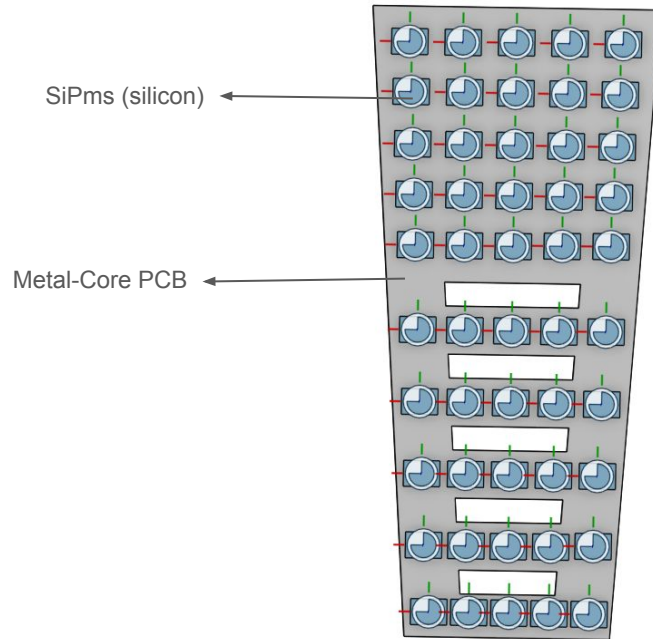Boundary condition: Heat flux as 0.002 W/cm² on the top of the carbon tray.

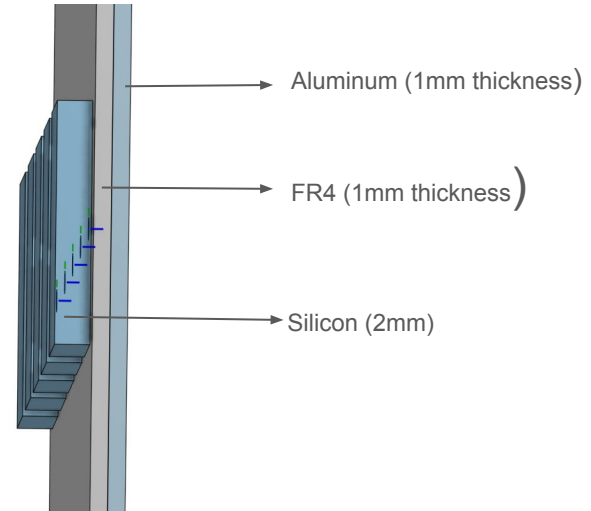Boundary condition: Temperature as 20 °C

Thermal Simulation

B.) BIC ESB cooling with metal core PCB

CAD Render

SiPms (silicon)

Metal-Core PCB

Aluminum (1mm thickness)

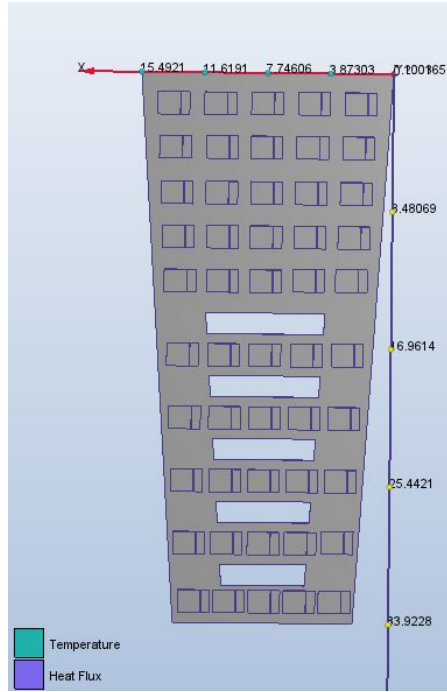FR4 (1mm thickness)

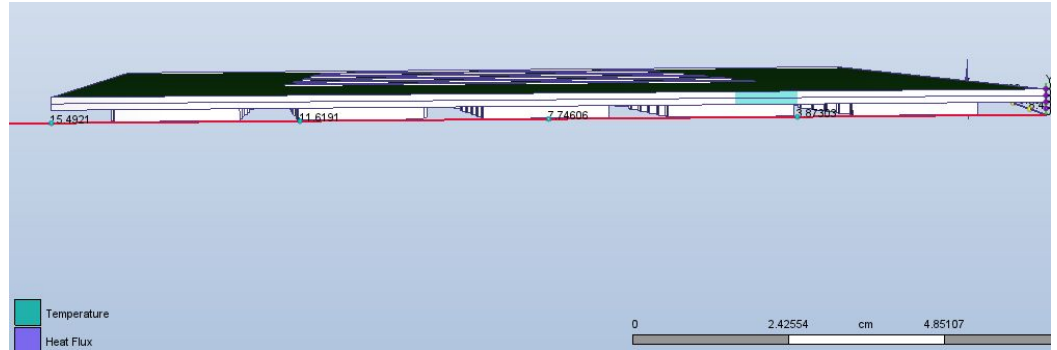Silicon (2mm)

Front View of the board with SiPms

Side View of the Board

Boundary Conditions

Boundary Conditions on SiPms: Heat Flux as 0.056 W/cm².

Boundary Condition on the top part of the Board and the Metal core: Temperature as 20 °C.

Thermal Simulation