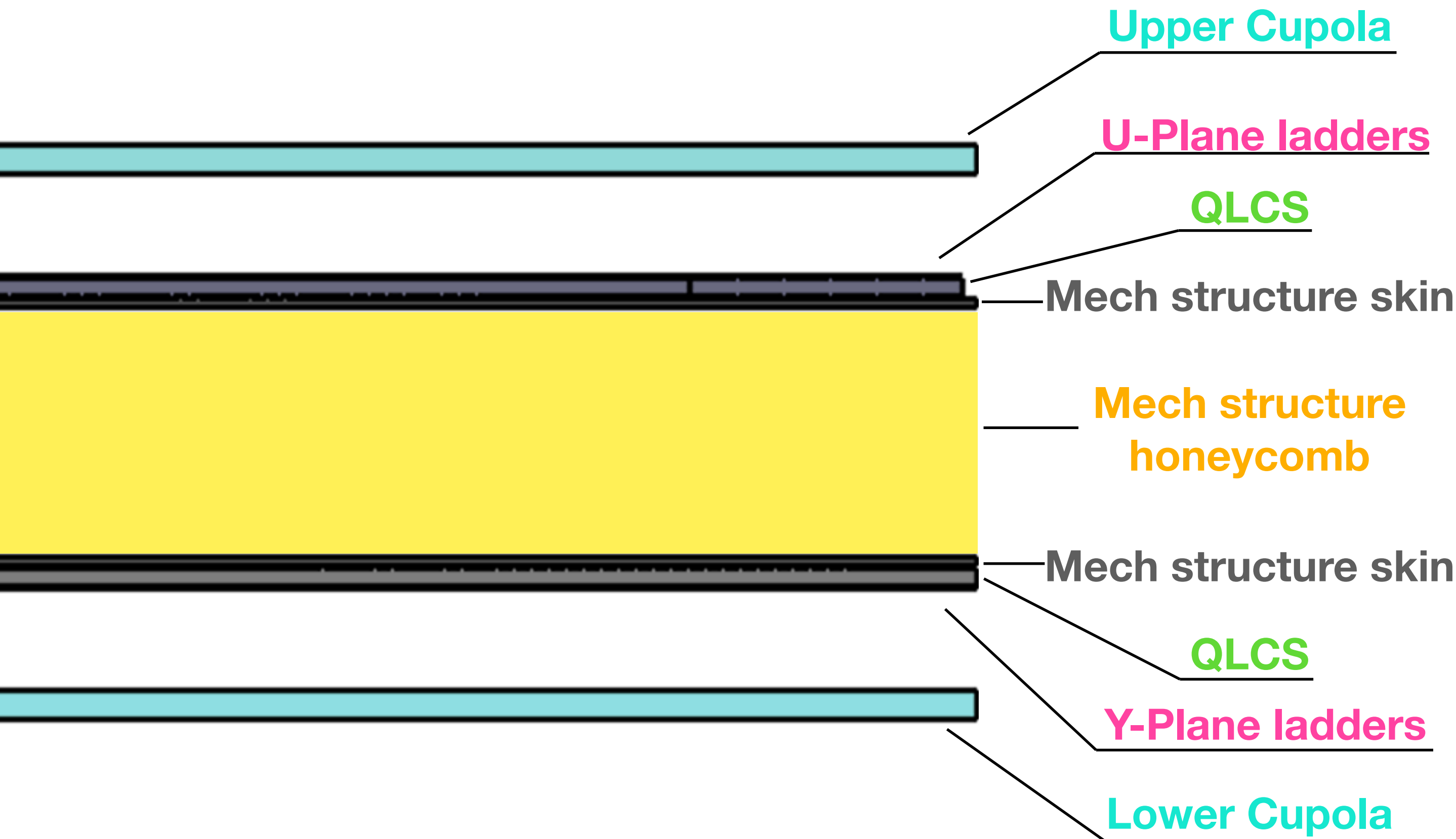


# **L0 quarter plane material specs**

**L.Mussolin - 03-Nov-2022**

# AMS-2.2 - Layer 0 quarter plane



**Cupolas\*:**

- Top skin: K13D2U/EX1515, 0.2 mm
- Core: Hexcel CR111-3/16-5056-.001-3.1, 8.0 mm
- Bottom skin: K13D2U/EX1515, 0.2 mm

**QLCSs:**

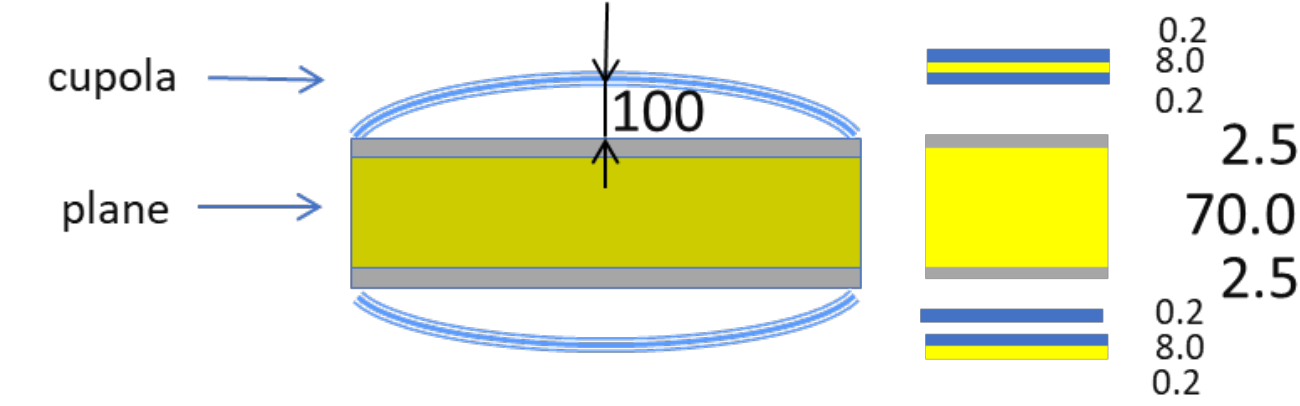
- Top skin: M55J/EX1515, 0.3 mm
- Core: CF Honeycomb, 5.0 mm
- Bottom skin: M55J/EX1515, 0.3 mm

**Mech structure\*:**

- Top skin: M55J/EX1515, 2.5 mm
- Core: CF Honeycomb, 70.0 mm
- Bottom skin: M55J/EX1515, 2.5 mm

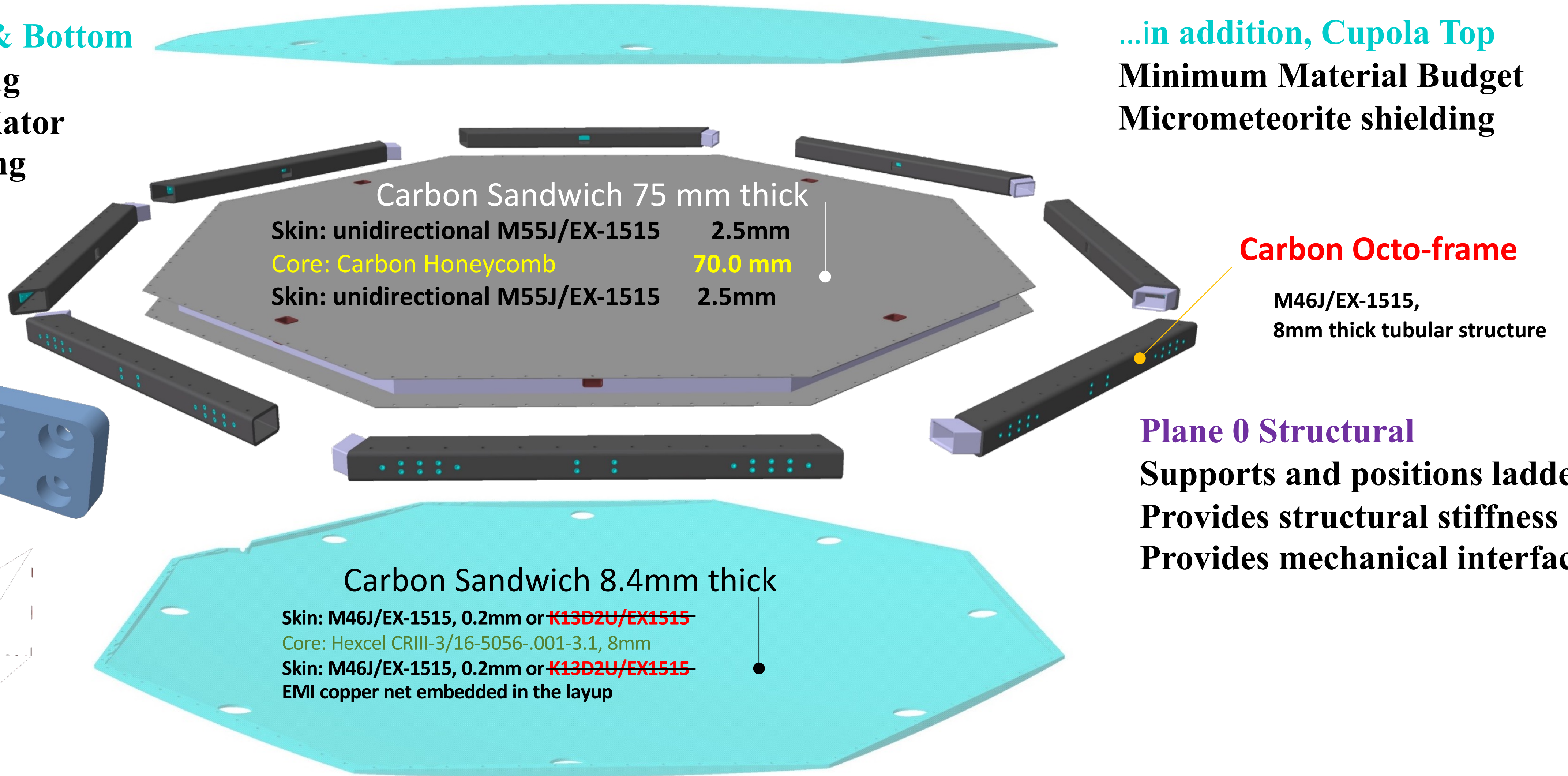
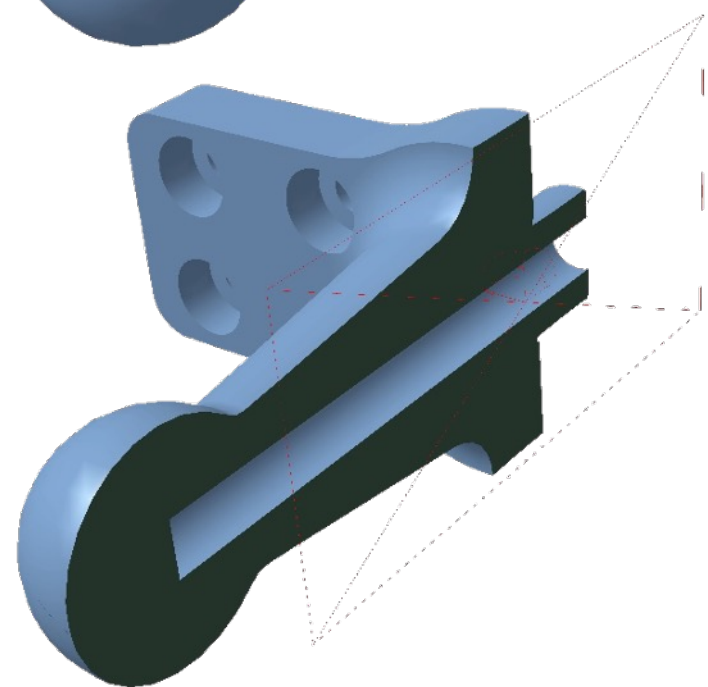
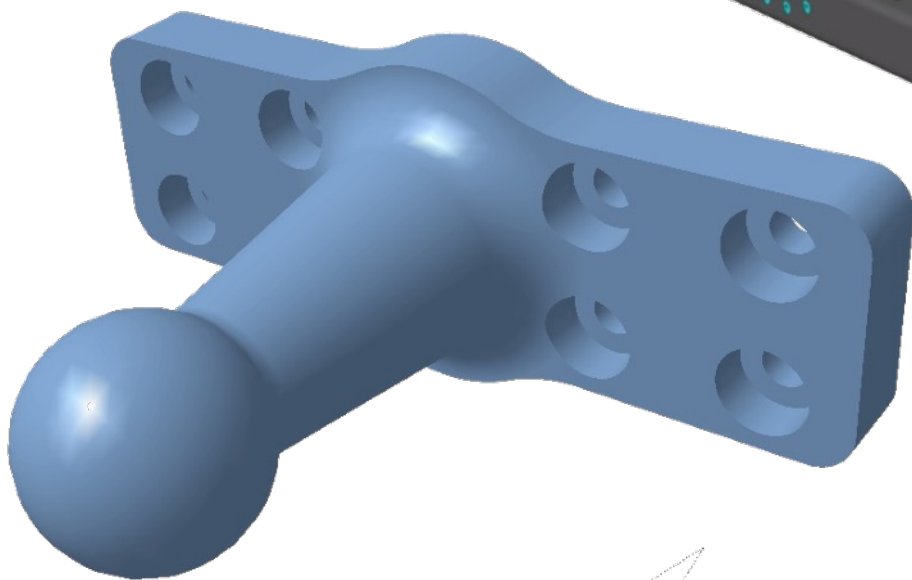
Density: 36 kg/m<sup>3</sup>  
 Compressive modulus: 890 MPa  
 Shear modulus: 380 MPa

\* From Corrado's presentations



**Cupola Top & Bottom**  
**EMI Shielding**  
**Thermal radiator**  
**Light shielding**

**...in addition, Cupola Top**  
**Minimum Material Budget**  
**Micrometeorite shielding**



**Tight requirement on sensor alignment** drives the design and material choice  
**of the mechanics**

# AMS-2.2 - Layer 0 quarter plane

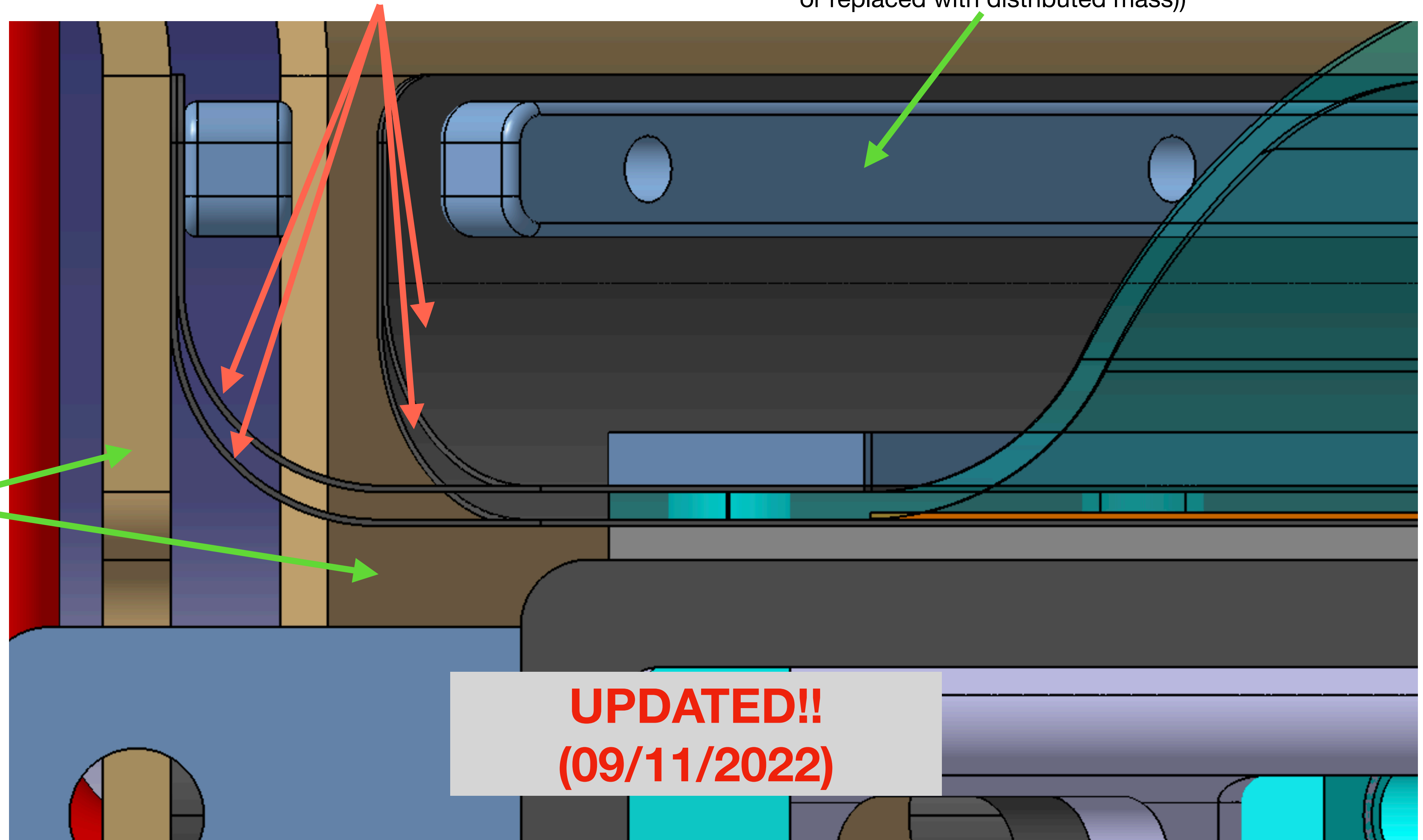
## Thermal foils

Carbon fiber K13D2U/EX1515 thickness 0.5 mm  
(Can be removed from simulation)

## Thermal foil to radiator fixation

Aluminum  
(Can be removed from simulation  
or replaced with distributed mass))

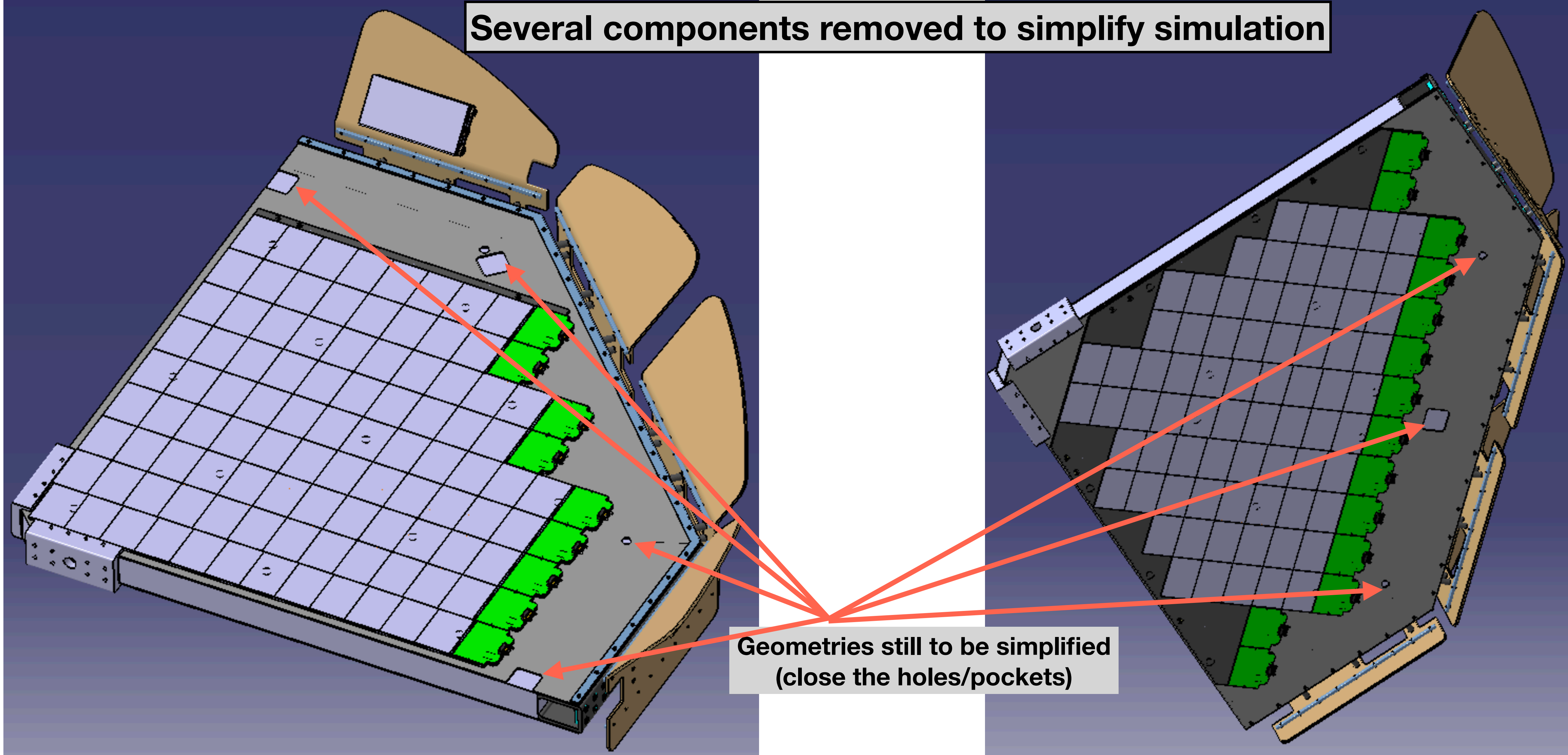
Radiators  
Aluminum



**UPDATED!!**  
**(09/11/2022)**

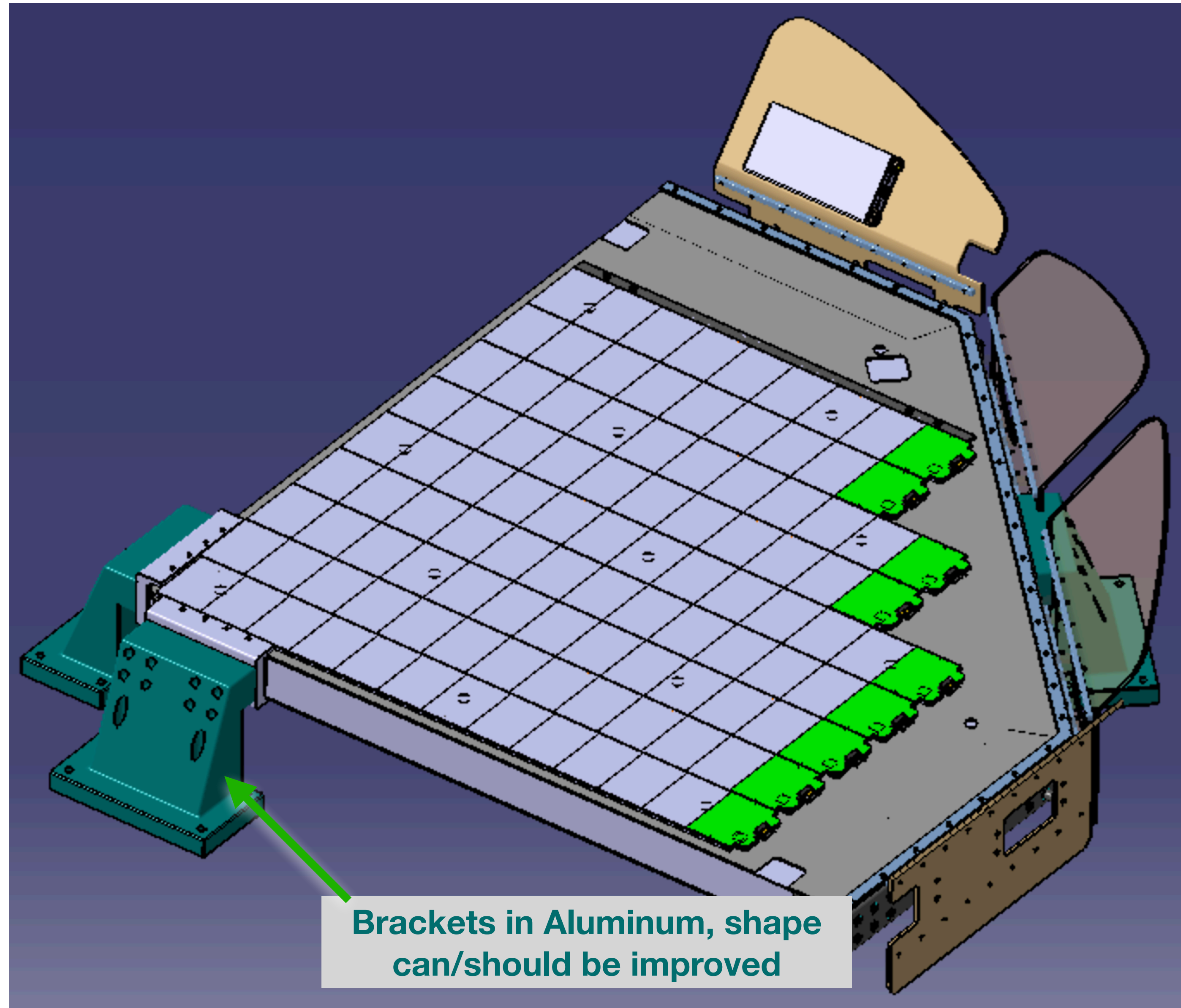
# Layer 0 quarter plane simplified model

Several components removed to simplify simulation



Geometries still to be simplified  
(close the holes/pockets)

# Layer 0 quarter plane shaker brackets



Brackets in Aluminum, shape can/should be improved