

For Monday meeting 03 August 2026

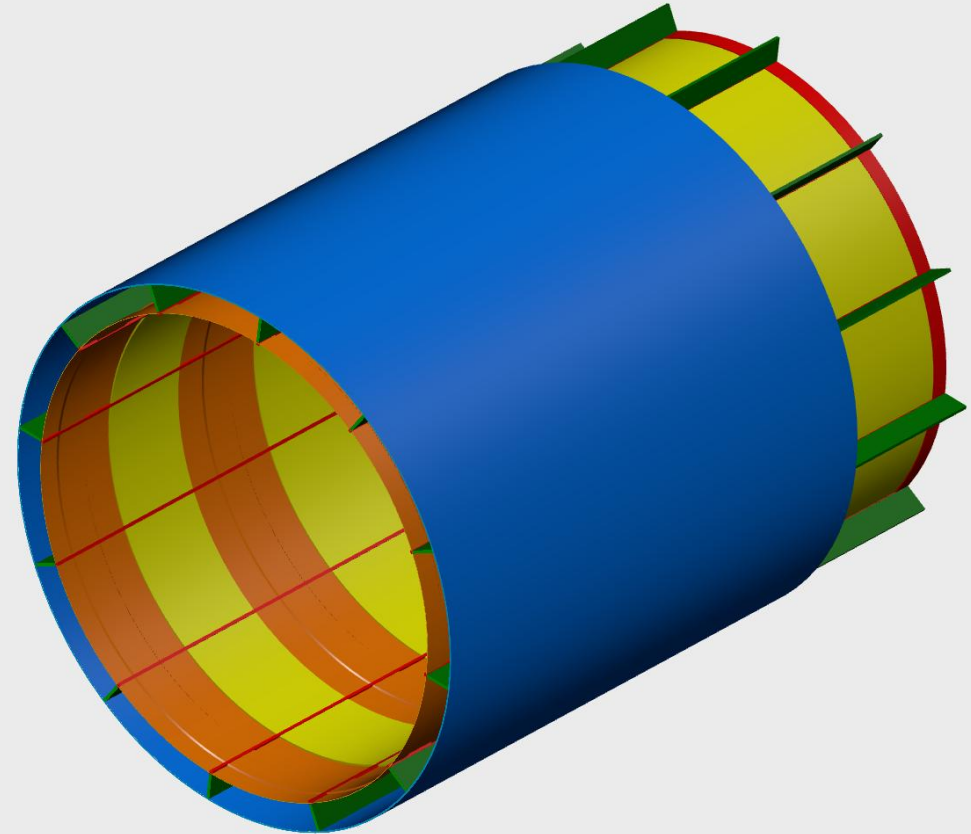
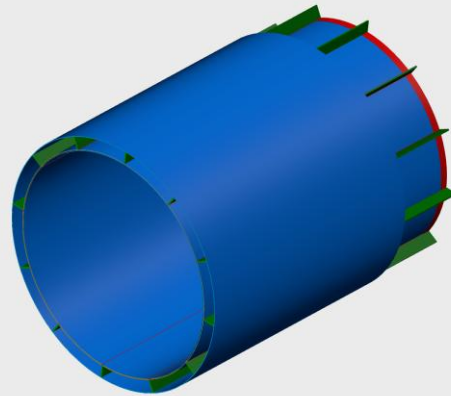
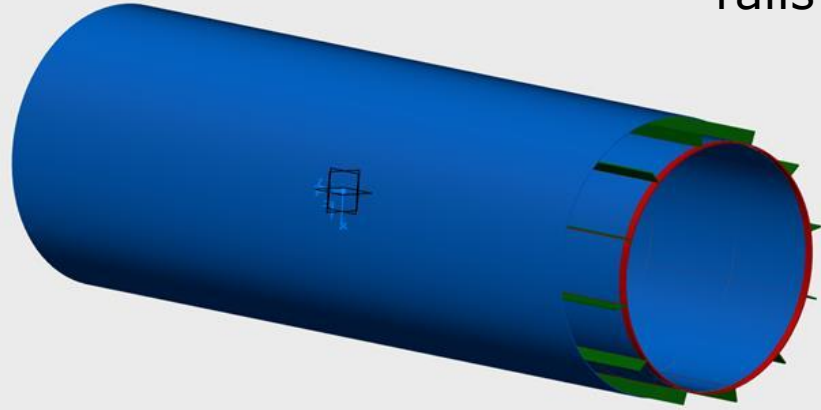
GST envelopes

Deflection numbers

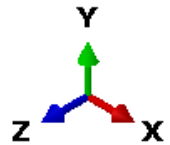
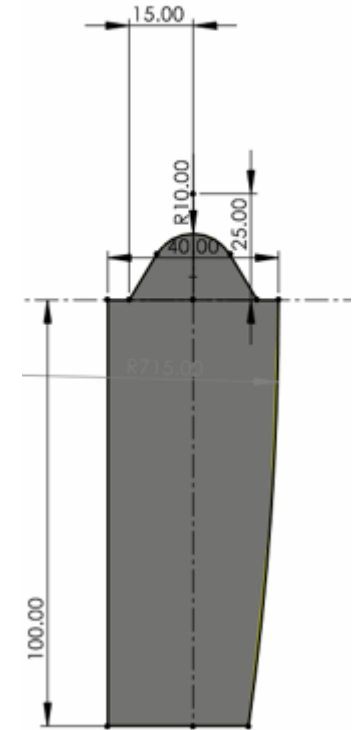
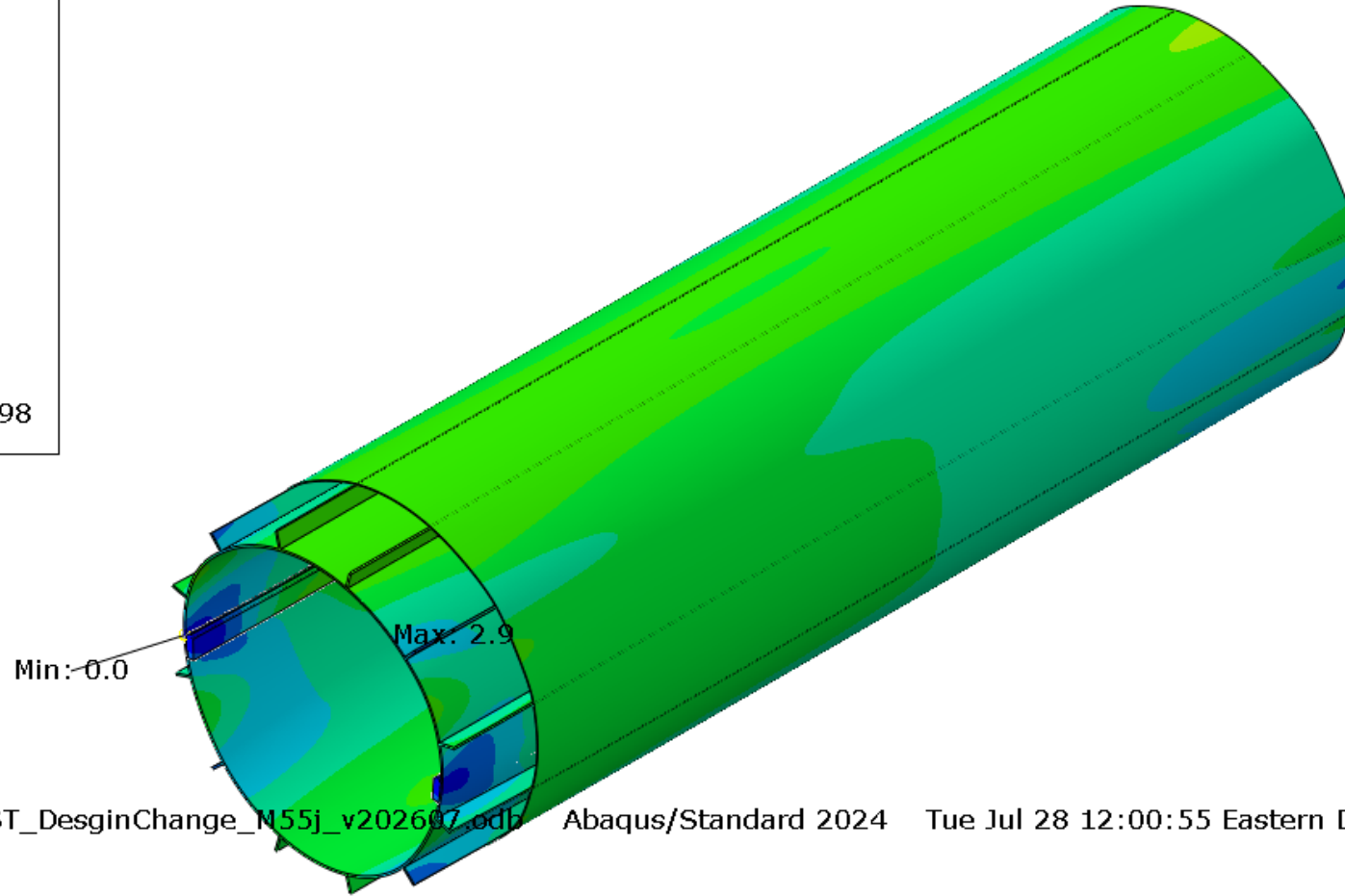
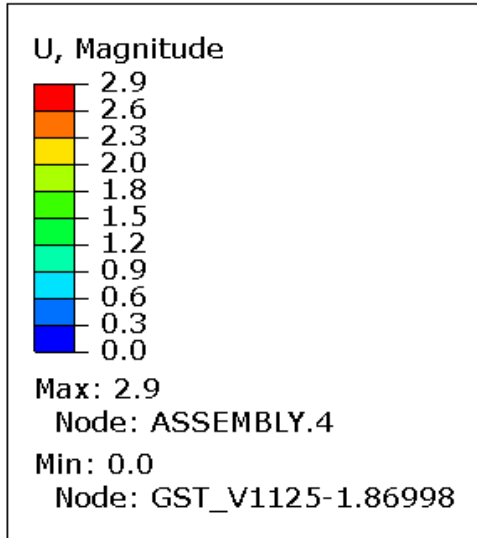
EEEMCal Mounting

Try with the stringer geometry as suggested by LBNL

This does not work – reverting back to rings and stiffeners – modified rails



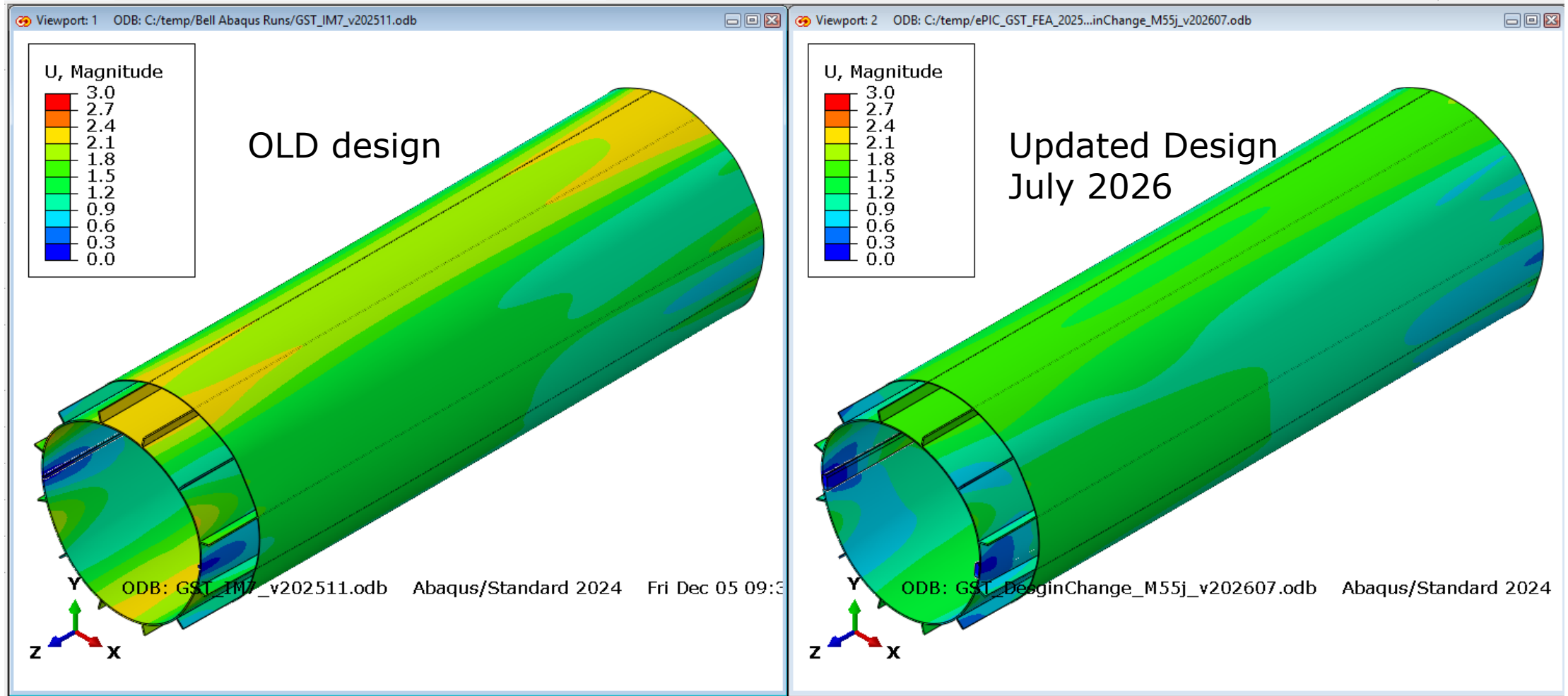
Rail geometry modified – and the constraints – how the rails tie into the ‘hoops/rings’ is changed



ODB: GST_DesginChange_M55j_v202607.odb Abaqus/Standard 2024 Tue Jul 28 12:00:55 Eastern Daylight Time 2026

Deformation comparisons

Unit mm



For Alex – HP-DIRC deformations

⬡ My z-axis for the plotting is inverted. Will correct this in future- but for now Z-negative is towards dRICH from Interaction Point.

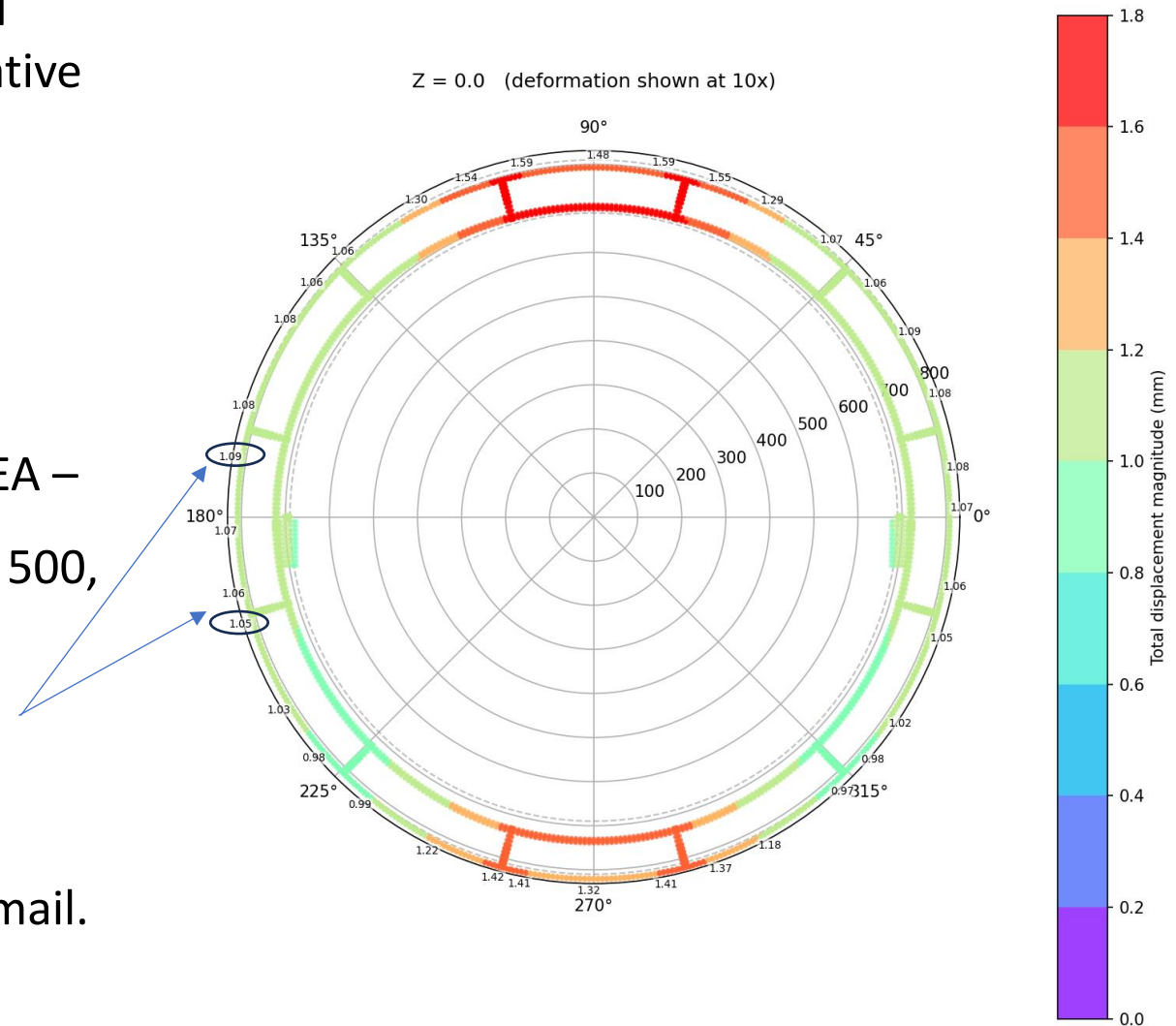
⬡ Z-positive is towards EEEMCal from the interaction point.

⬡ The slices are taken at 13 points in the FEA –

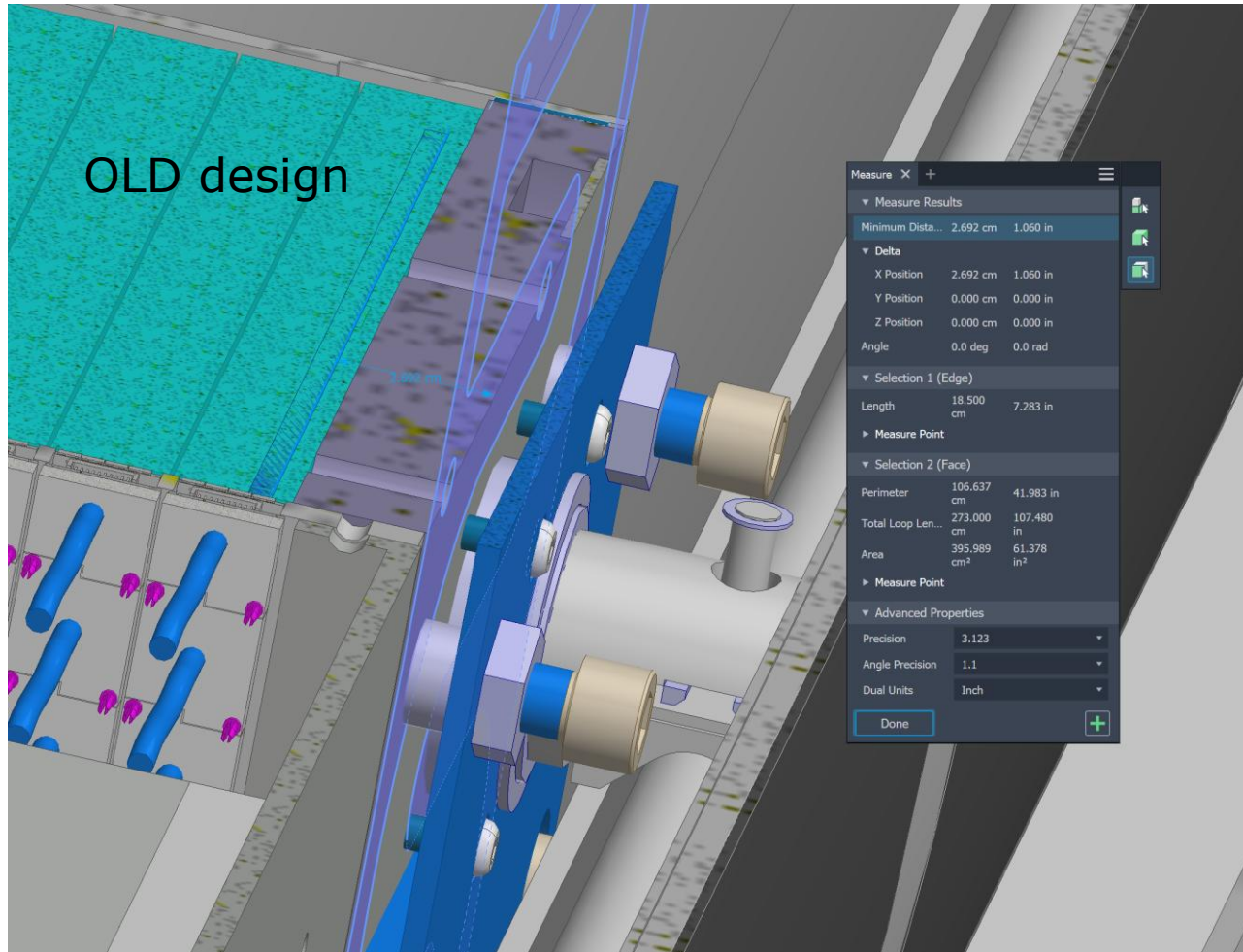
Z = -1900, -1850, -1500, -1000, -500, 0 (IP), 500, 1000, 1500, 1850, 2200, 2500, 2700 mm

The smaller numbers are the deformations

Also shared the plot files in the attached email.

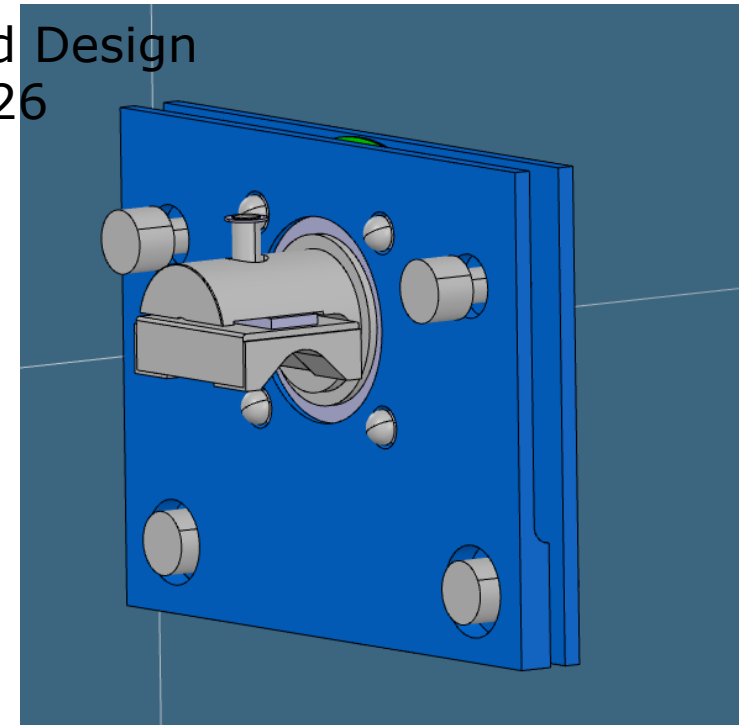


EEEMCal - GST Rail Mount Mechanism Updates

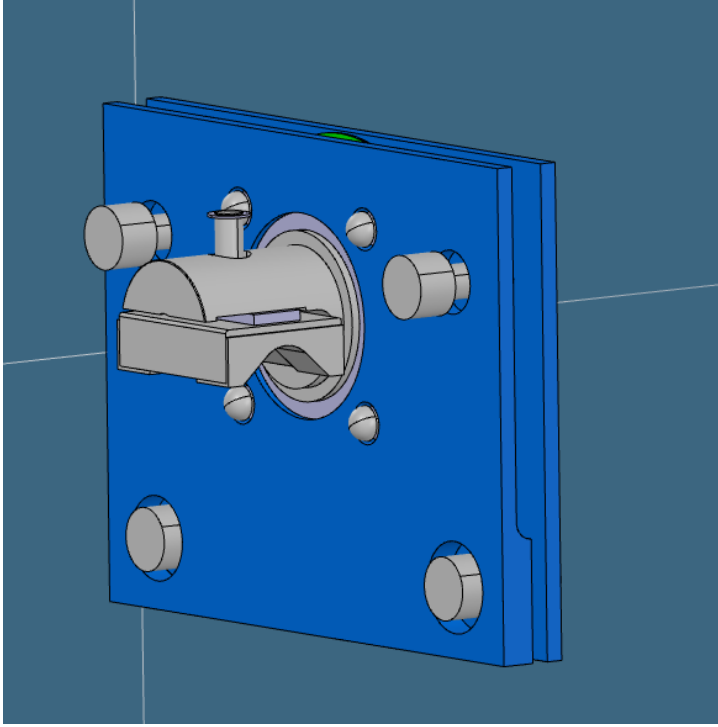


- EEEMCal 'diameter' was resulting in interference with the rail mount assembly in the old design
- Spacing updated to remove the interference.

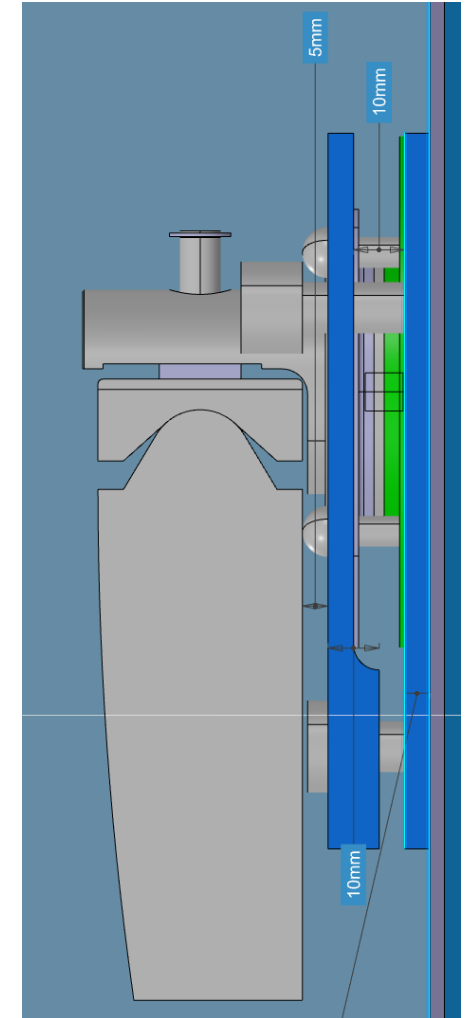
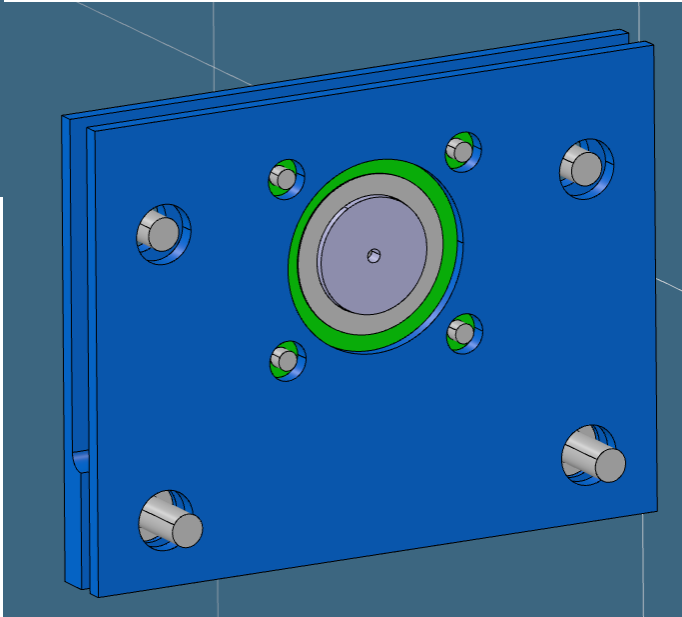
Updated Design
July 2026



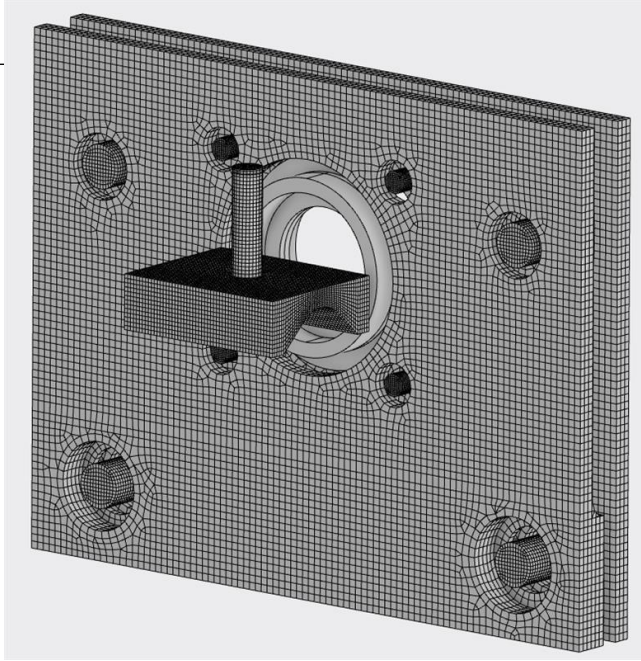
GST Rail Mount Mechanism Updates



- Plates have updated thickness of 5mm
- Inner reinforcement plate (green) thickness reduced by 2.5mm
- Support insert thickness reduced
- Distance between rail and front plate was reduced to 5mm.

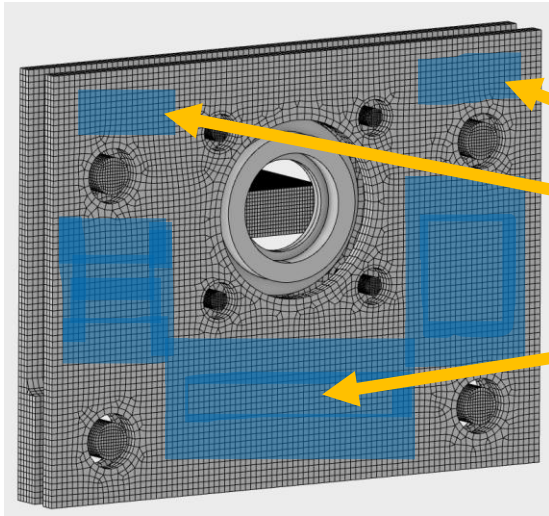


FEA for EEEMCal underway



Designing the pins and bolts for 600 kg PER MOUNT* -
expected at 400 kg per mount final weight (1.5x safety factor)

Adjustability along X dir. = +/- 2mm (reduced from +/-5mm)
Adjustability along Y dir. = +/- 3mm (stays the same)



Use any of this highlighted
blue space to make mount
points to EEEMCal or pFRICH or
SVT structures.

Coming up

1. FEA results for the EEEMCal Mount
2. Adjustment mechanism for the GST package
3. Envelope drawing for GST and Inner Detectors
4. Assembly Sequence for Inner Detectors
5. TOF tray insertion mechanisms