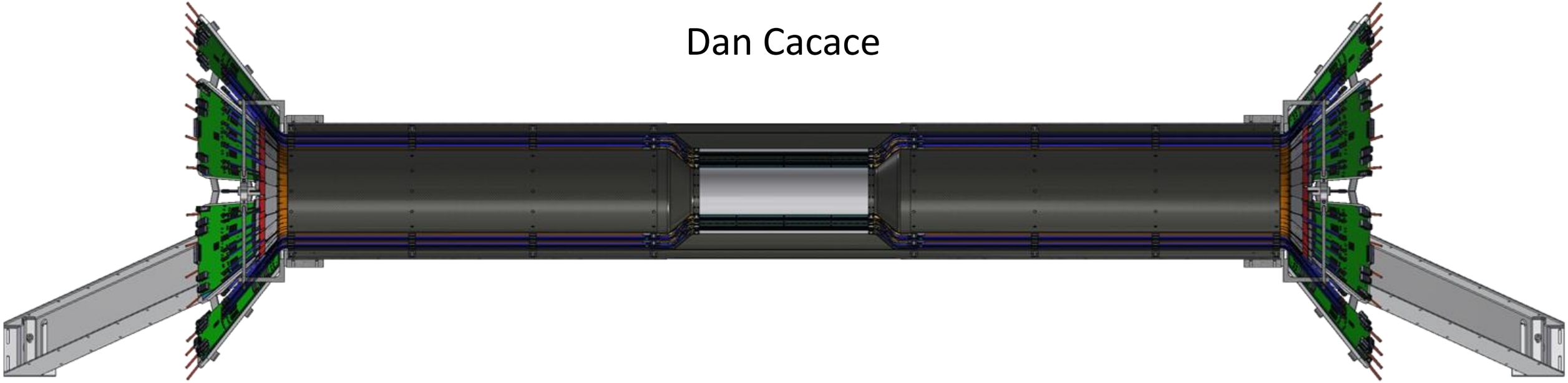
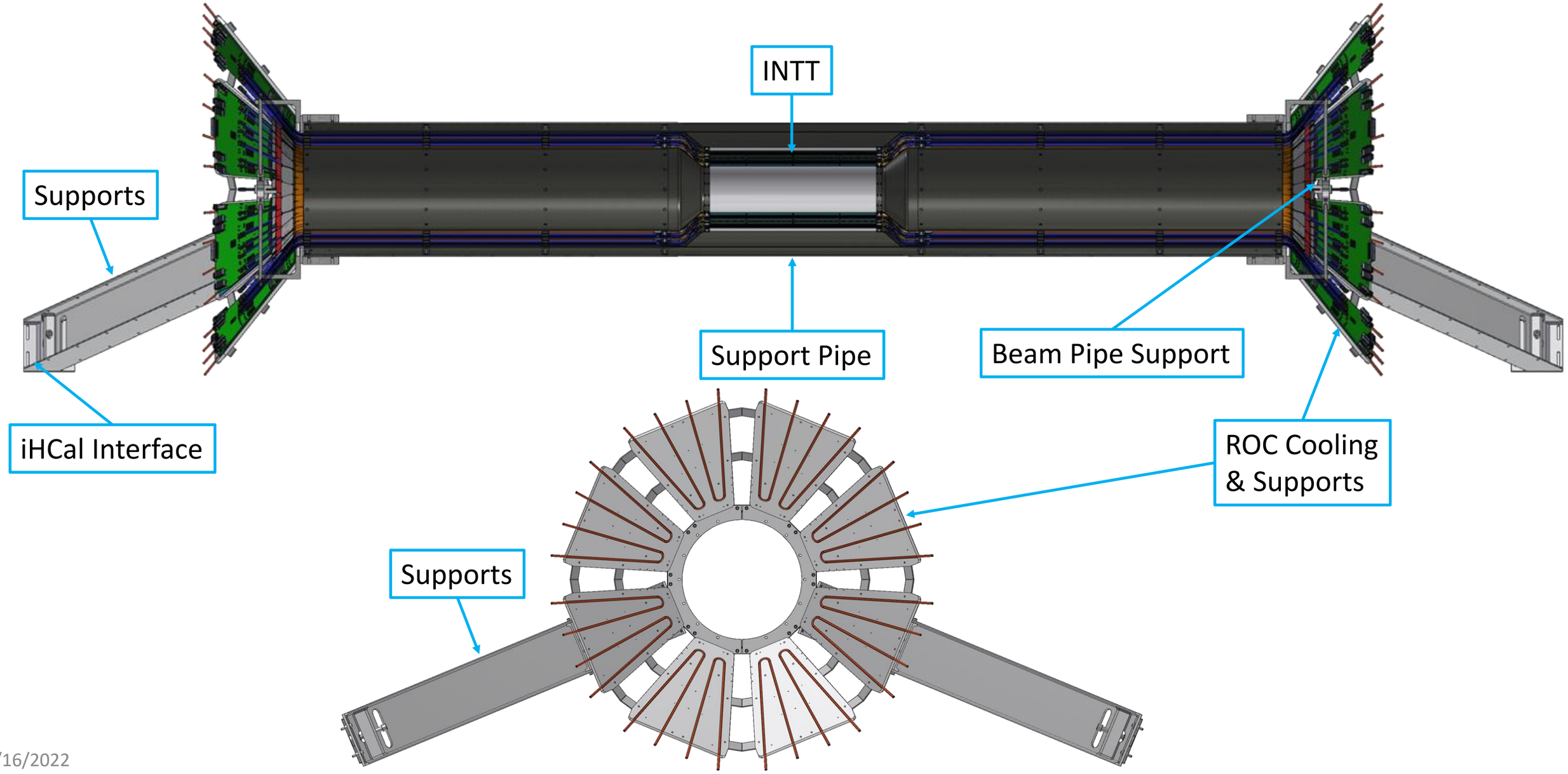
INTT Installation

Dan Cacace

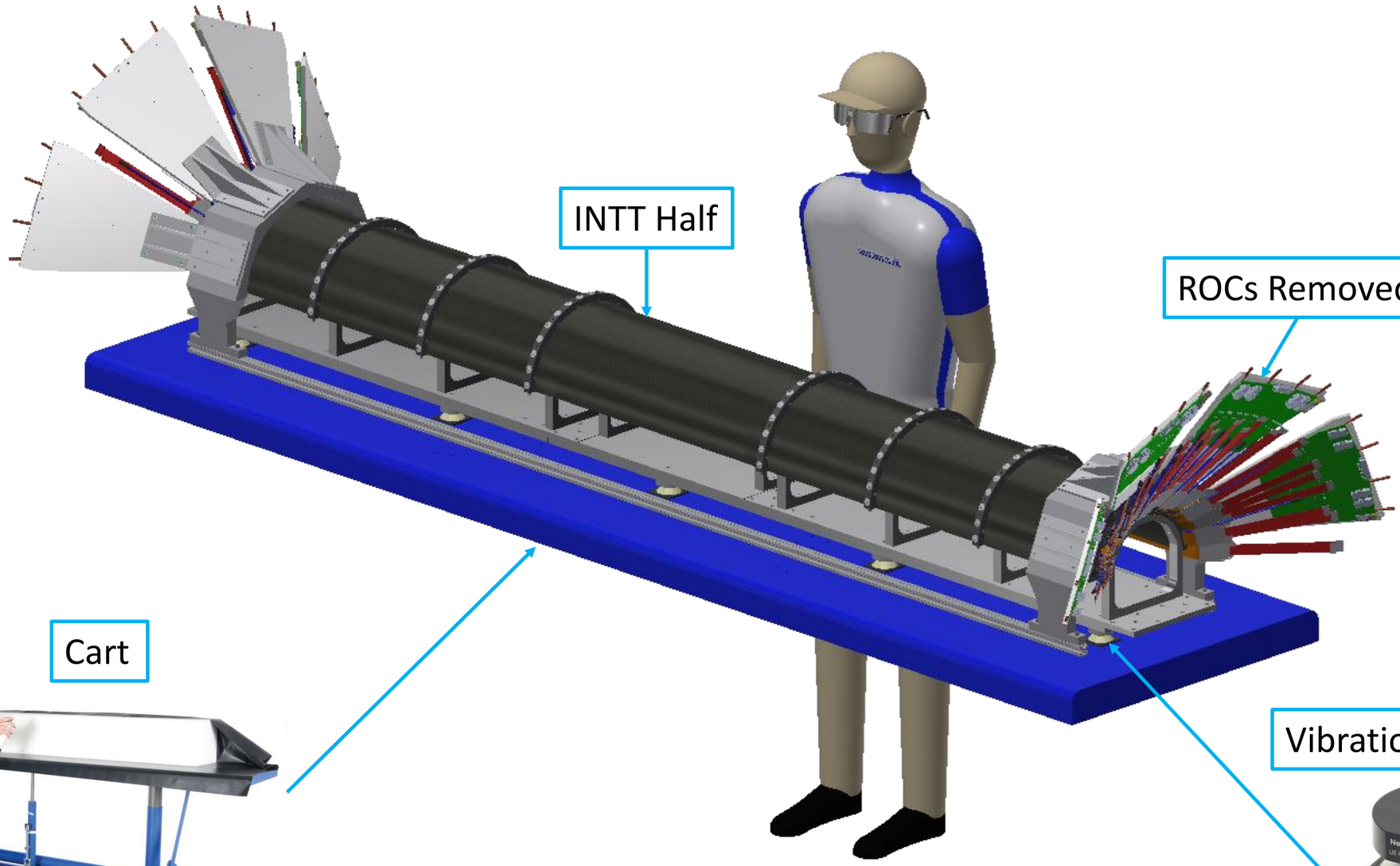


Design Components



INTT Assembled in 510 Lab

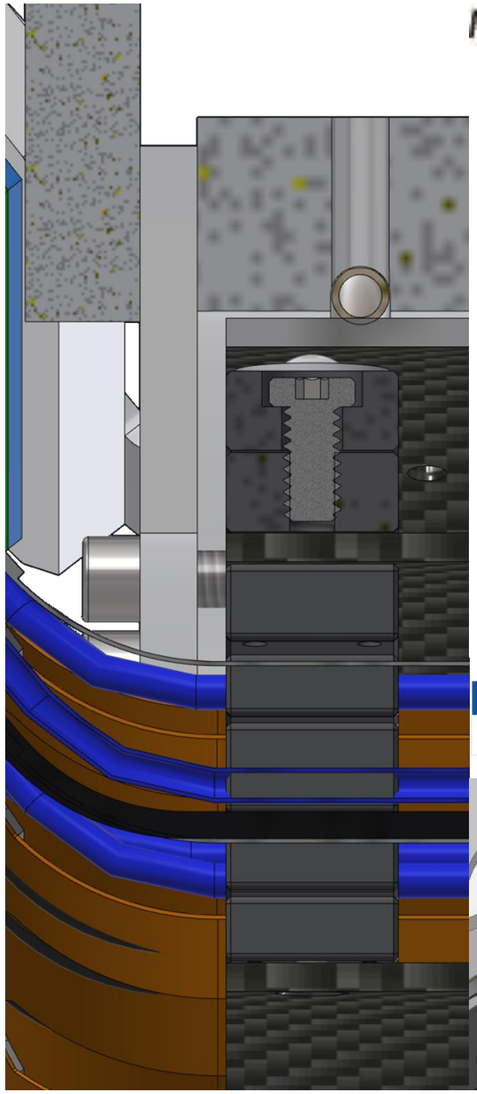
2X

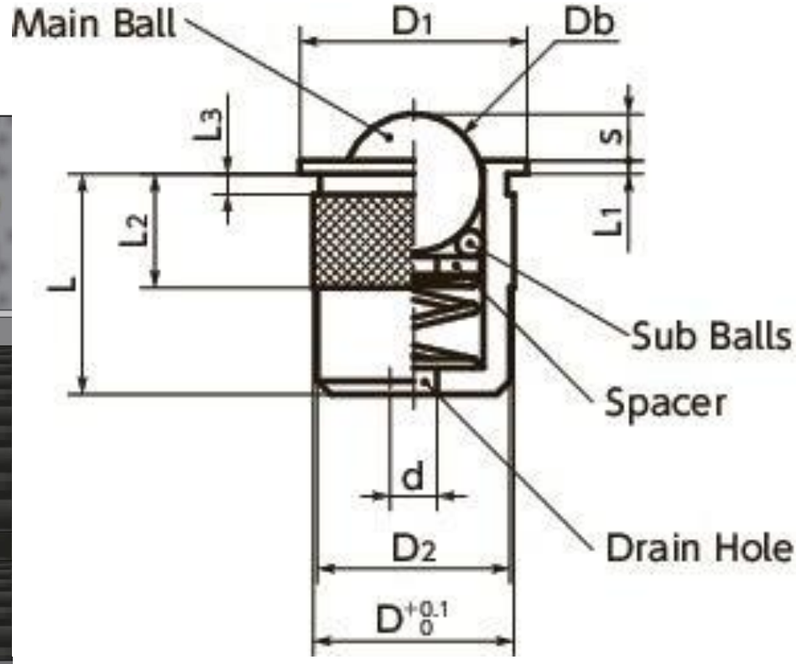


Cart

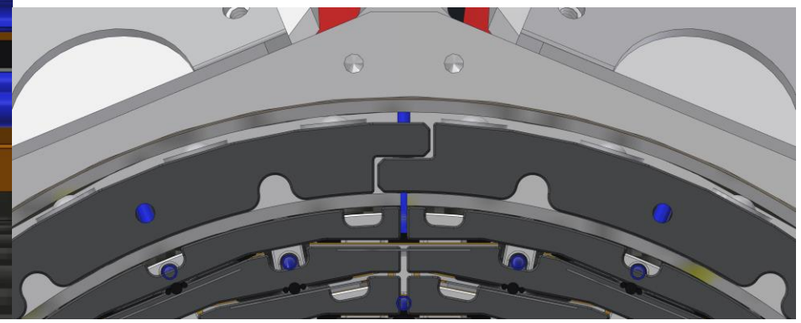
Vibration Isolators

INTT Interface





Part Number	D	D_1	D_2	L	s	L_1	L_2	L_3	Db	d	Load (N) Min./Max.	Qty per Pack	Mass (g)
BRPIN-15-N	15	17	14.7	16.5	3.5	1	8.5	1.5	10.32	3.5	0.3 / 11	1	3.9



- INTT has 8 rings of 32 spring loaded ball transfers (256 total).
- Each ball transfer is nominally half compressed ~1/16”, 1.25lb.
- INTT roles in on carbon fiber support tube.

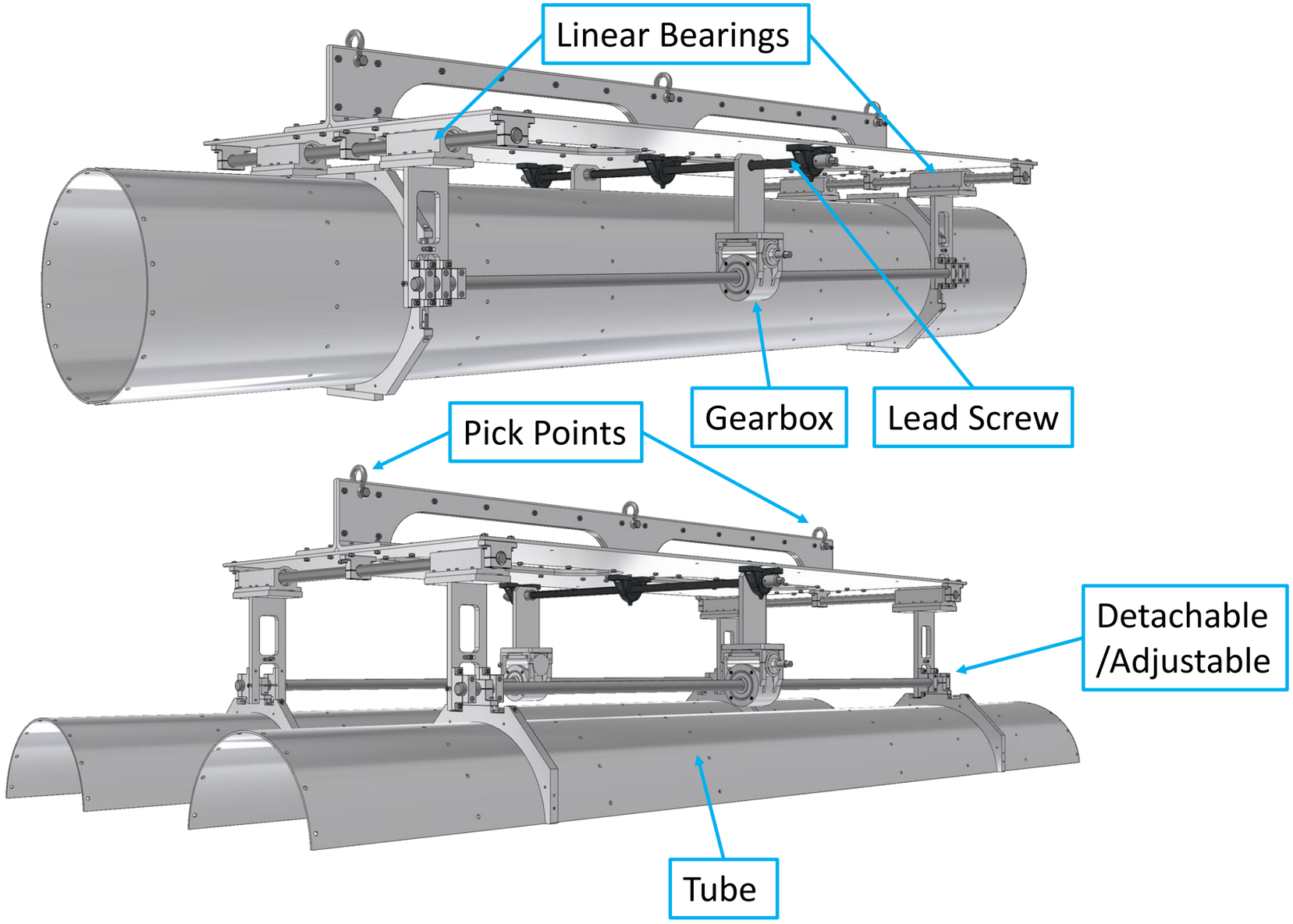
510 Lab to 1008 Hall

Installation Fixture

Closed Position

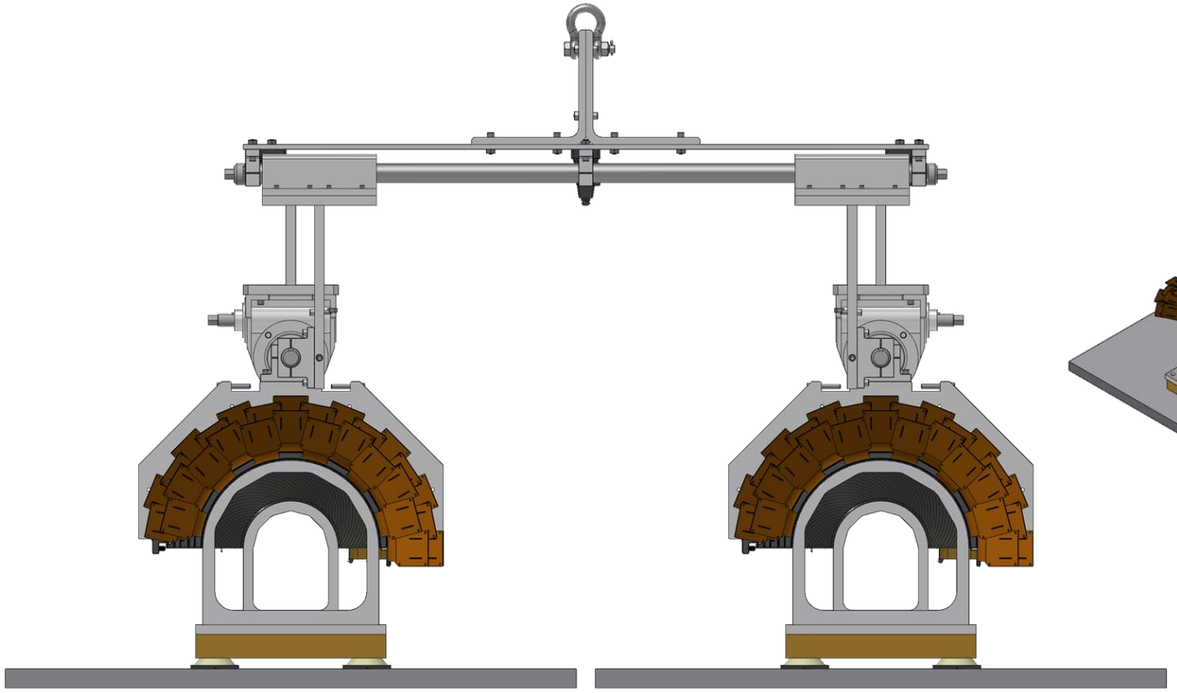
Tested in silicon lab

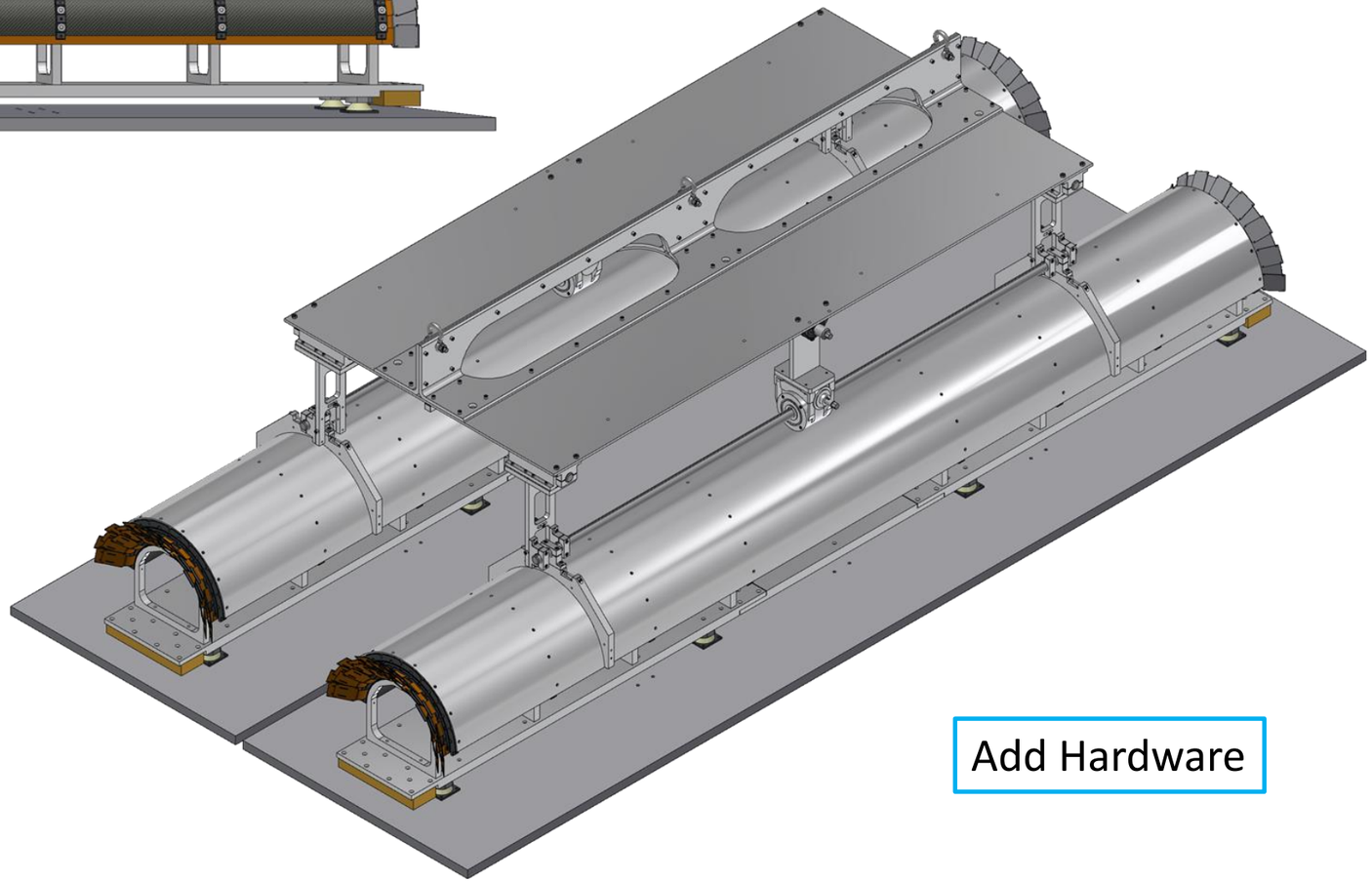
Open Position



Installation – Attach

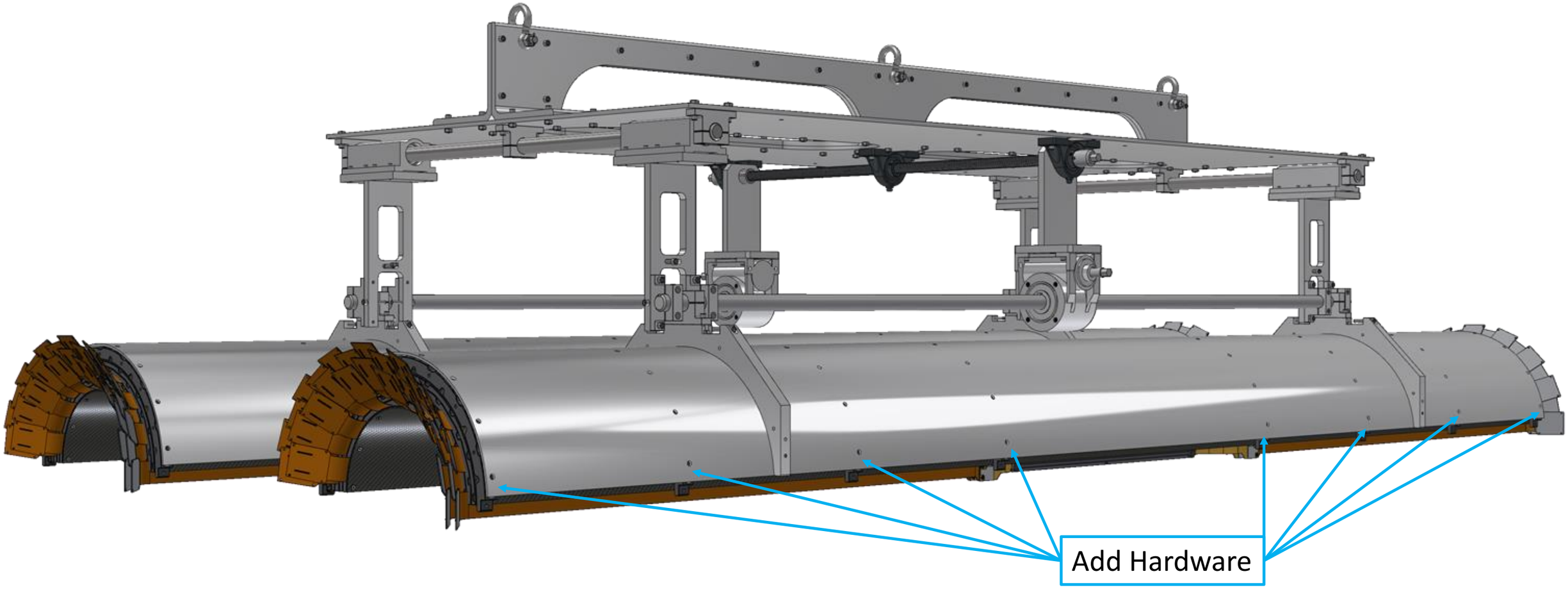
Assembly Stand





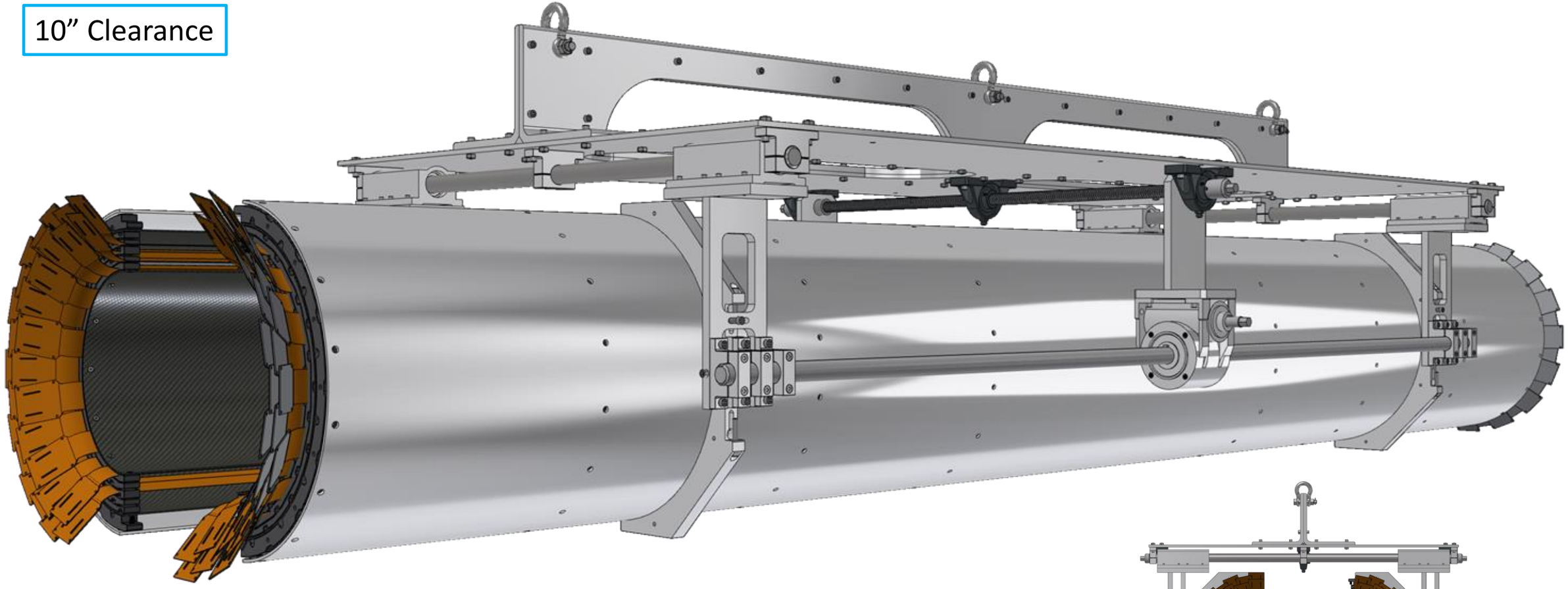
Add Hardware

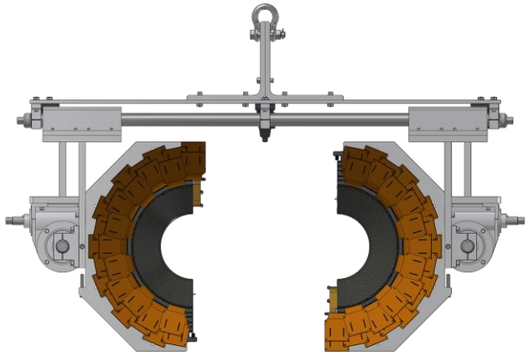
Installation – Pick Up



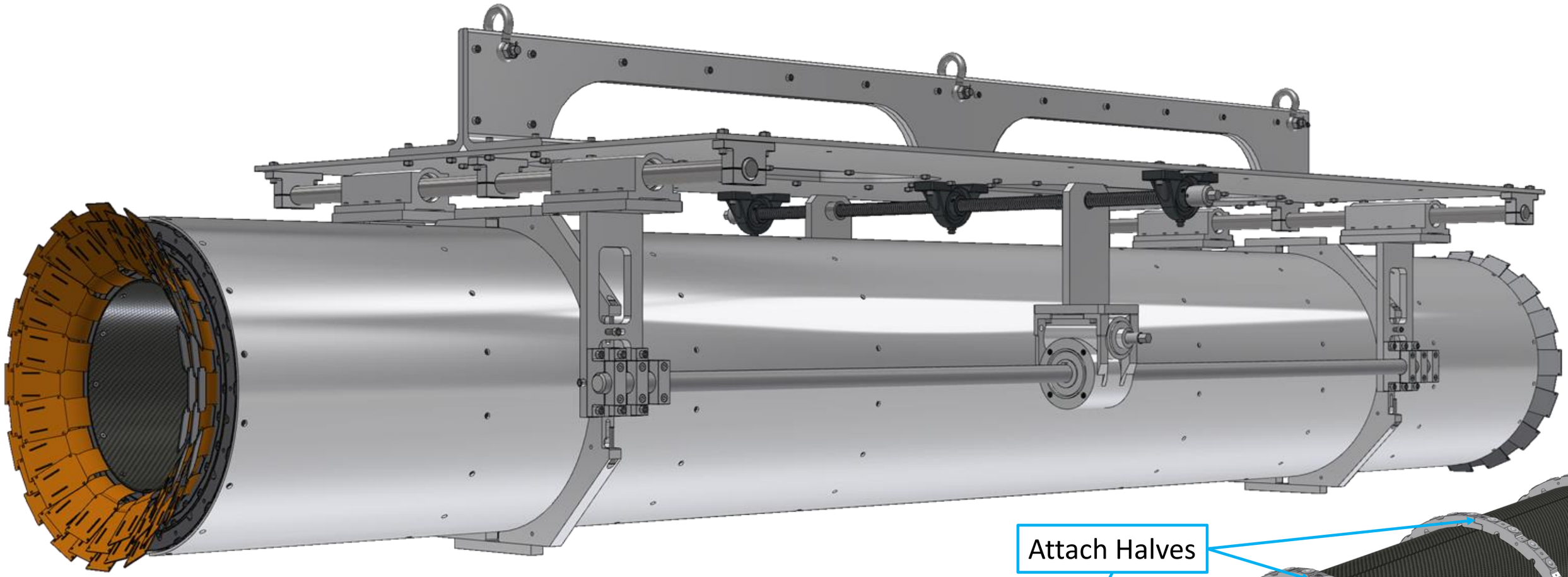
Installation – Rotate

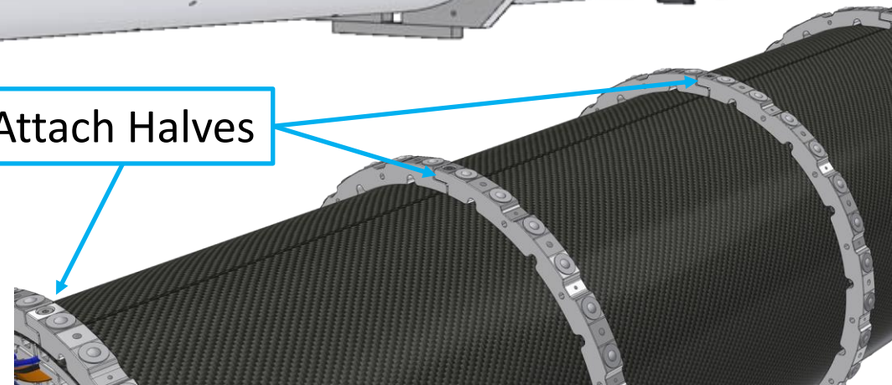
10” Clearance



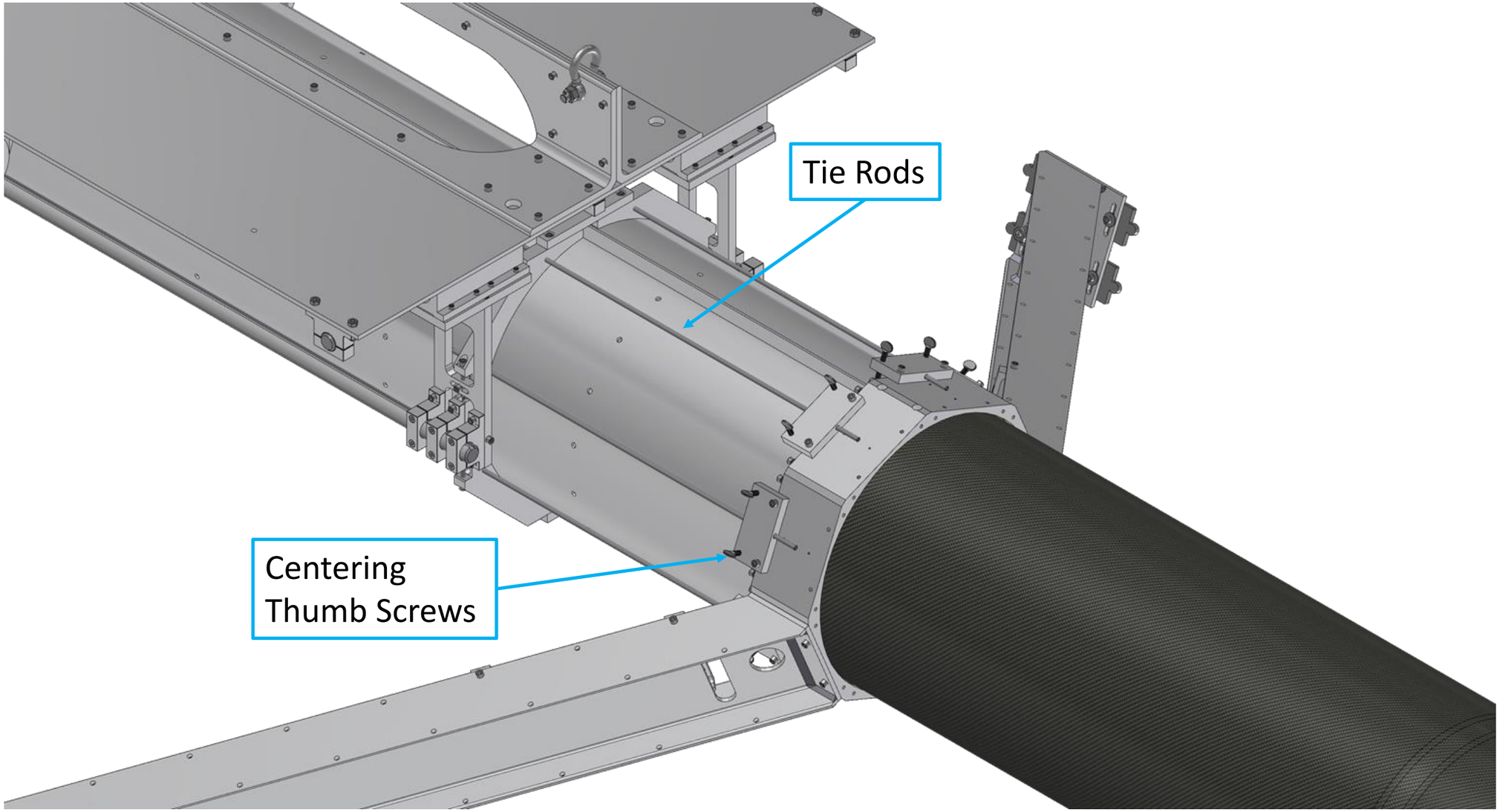


Installation – Clamshell



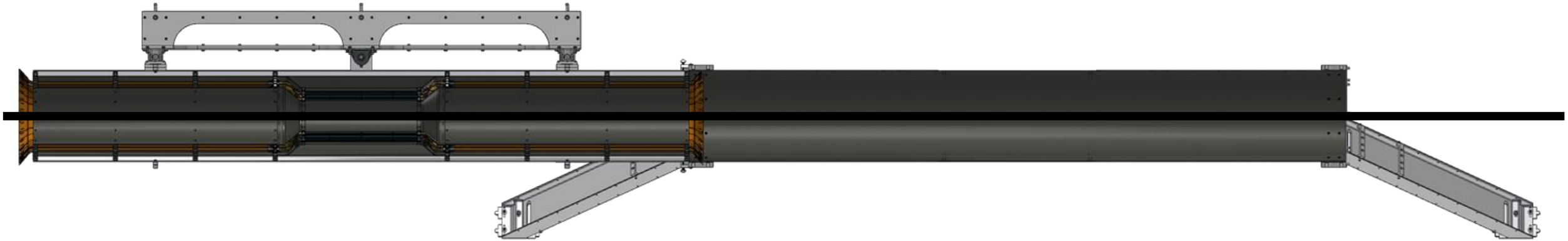


Installation – Tie Down and Align

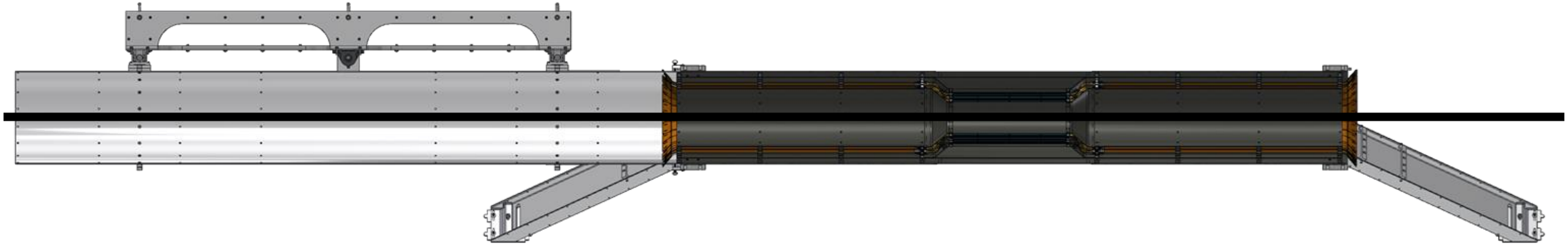


Installation – Cross Section

Thread Cable Through First

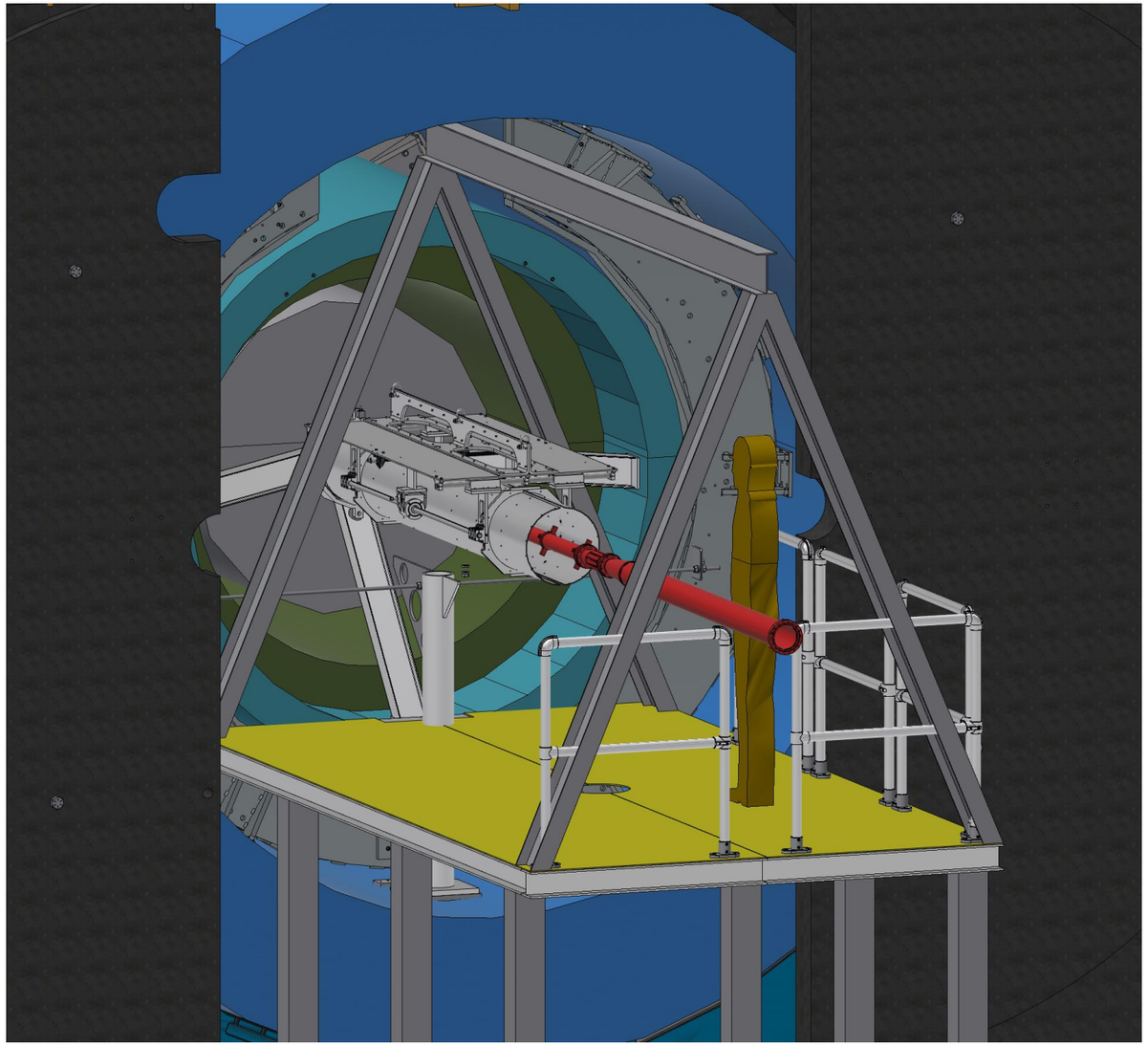


Pulled Through with Cable

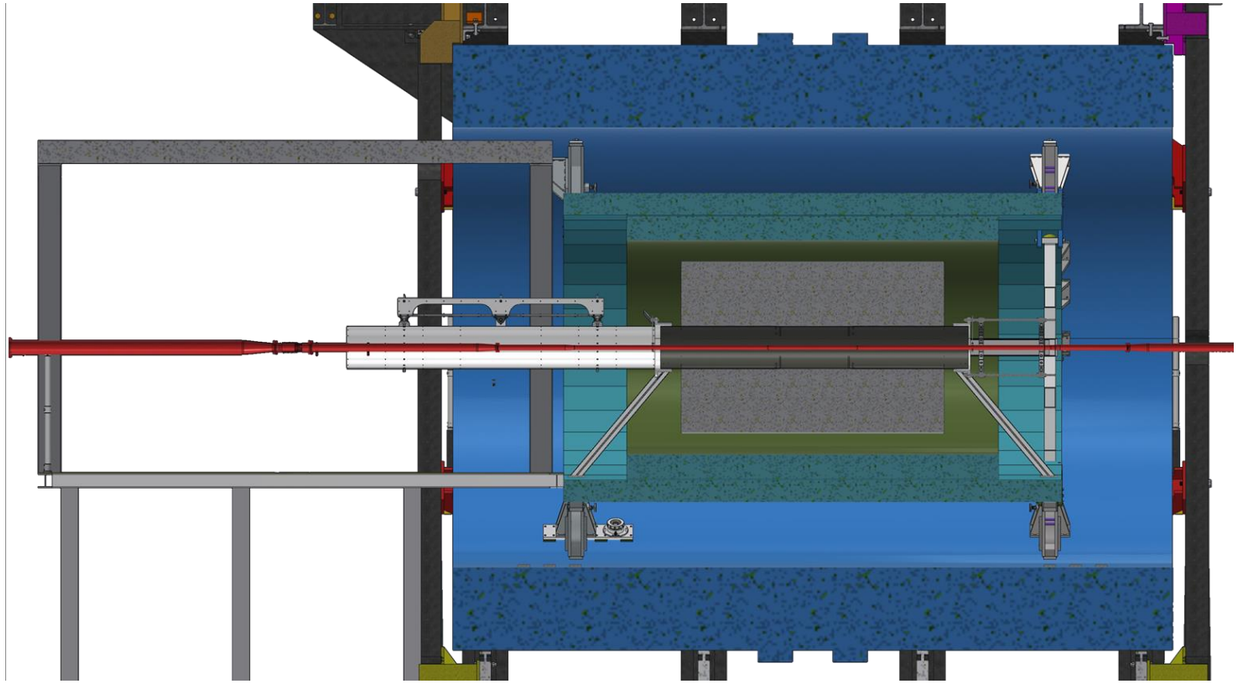


Use Thin Shim Stock Sheet to Bridge seam

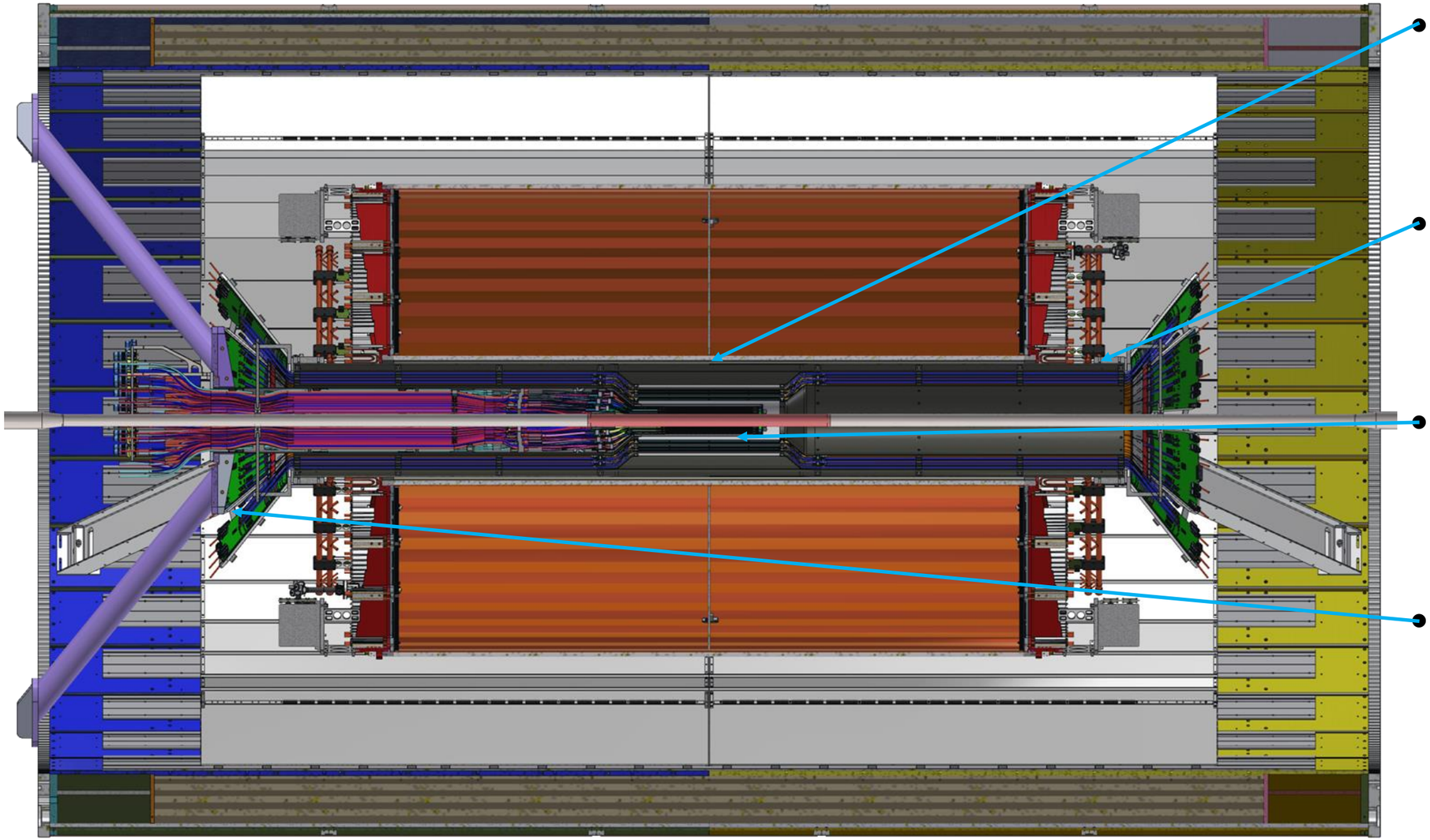
Installation – Platform



Frame Tested in silicon lab



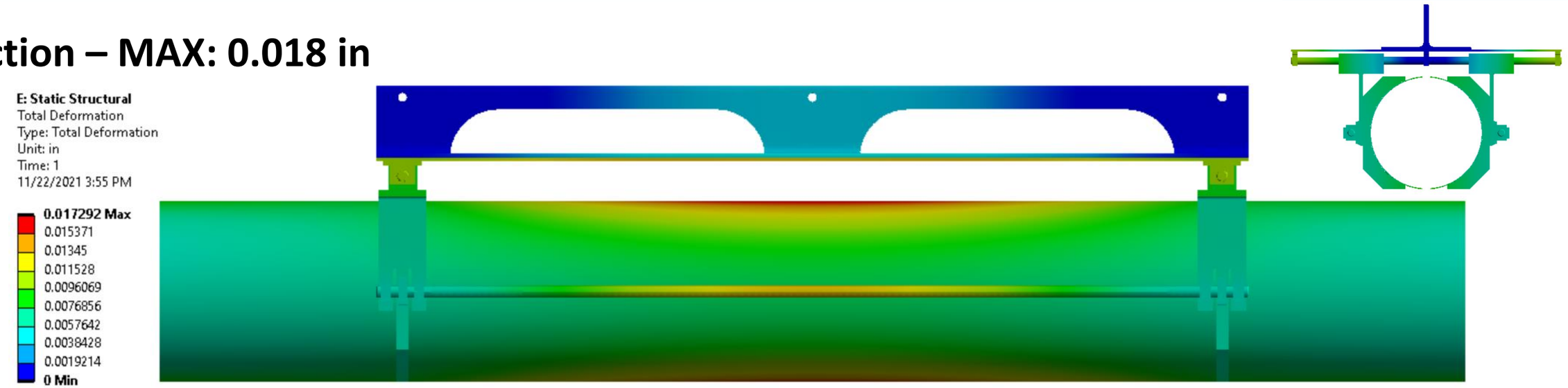
Integration – Installed Position



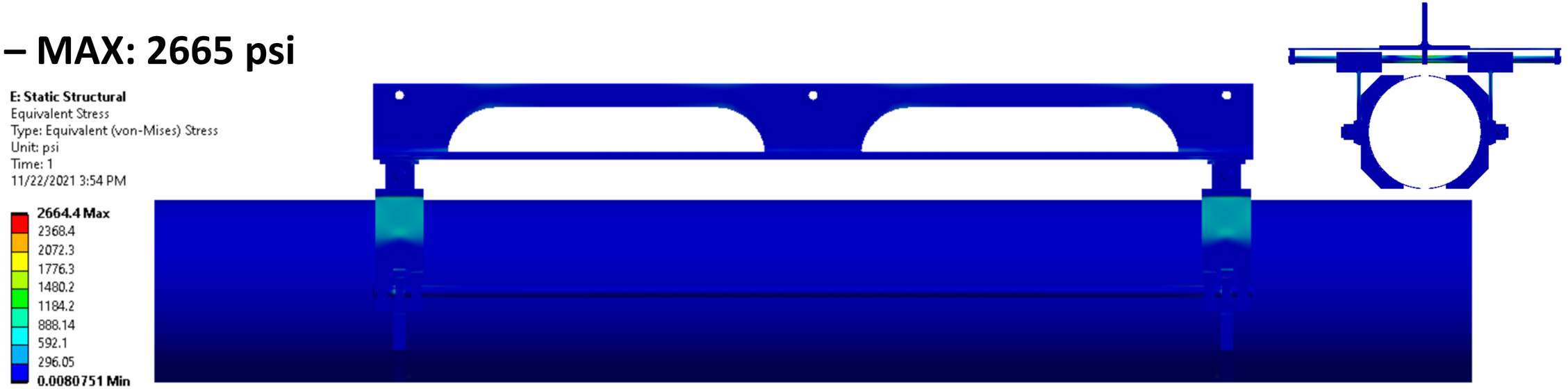
- 0.375” clearance between TPC ID and INTT Support Tube OD.
- 2” clearance between TPC manifold and INTT octagonal interface.
- 0.2” clearance between MVTX OD and INTT ID.
- 2” clearance between MVTX support and INTT ROC.

Installation Fixture – FEA

Deflection – MAX: 0.018 in



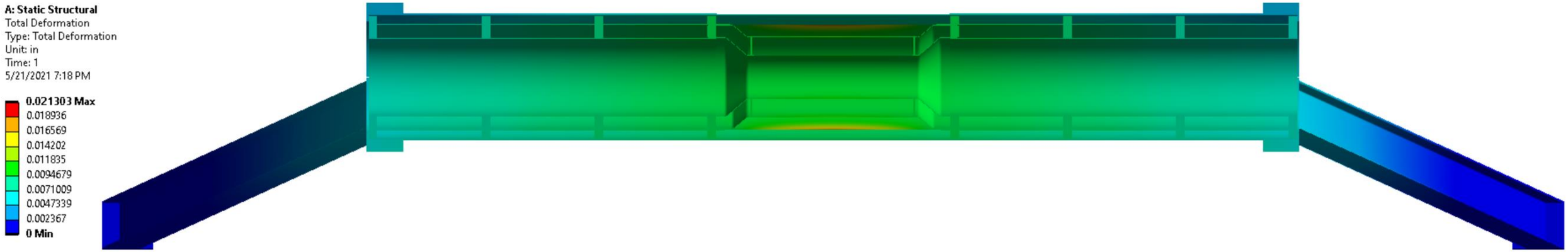
Stress – MAX: 2665 psi



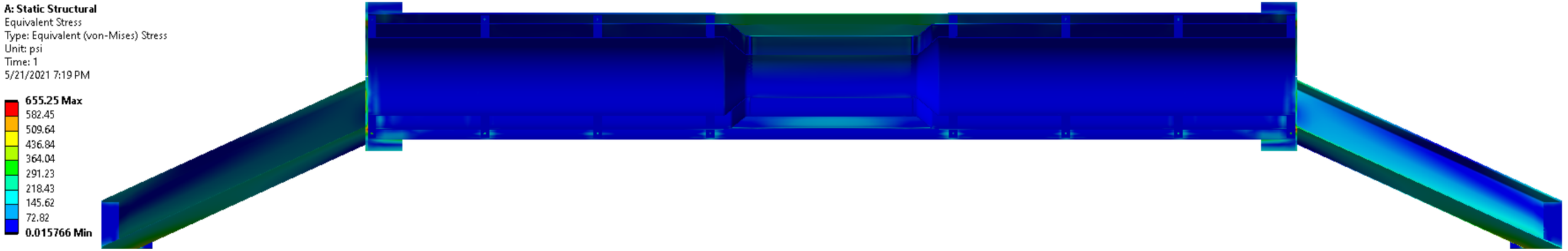
Boundary Conditions: Pick points fixed, gravity, detector weight added

Support Structure – FEA

Deflection – MAX: 0.022 in



Stress – MAX: 660 psi



Boundary Conditions: Support tabs fixed, ladder and services weight added

Questions?