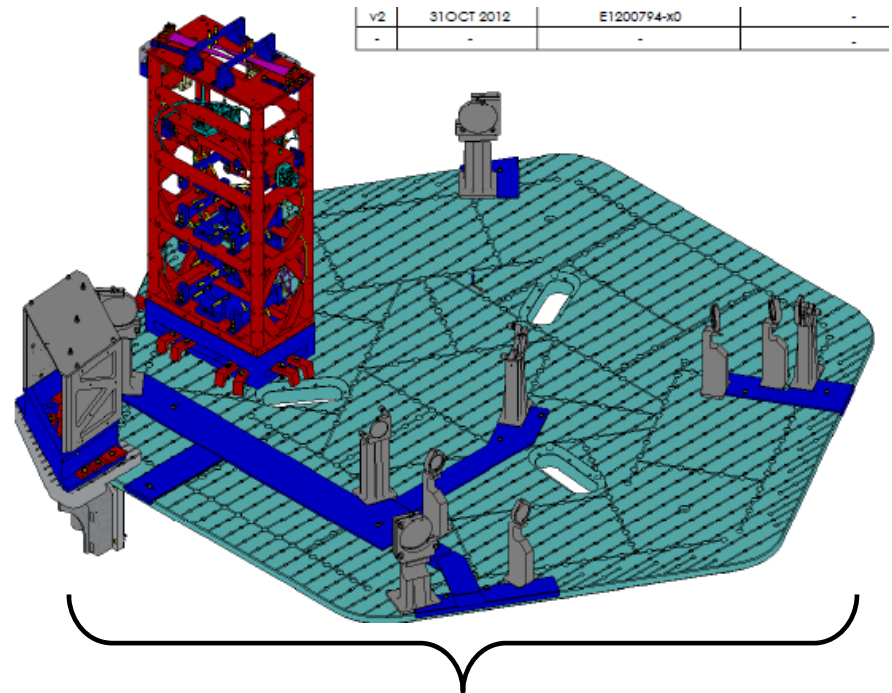
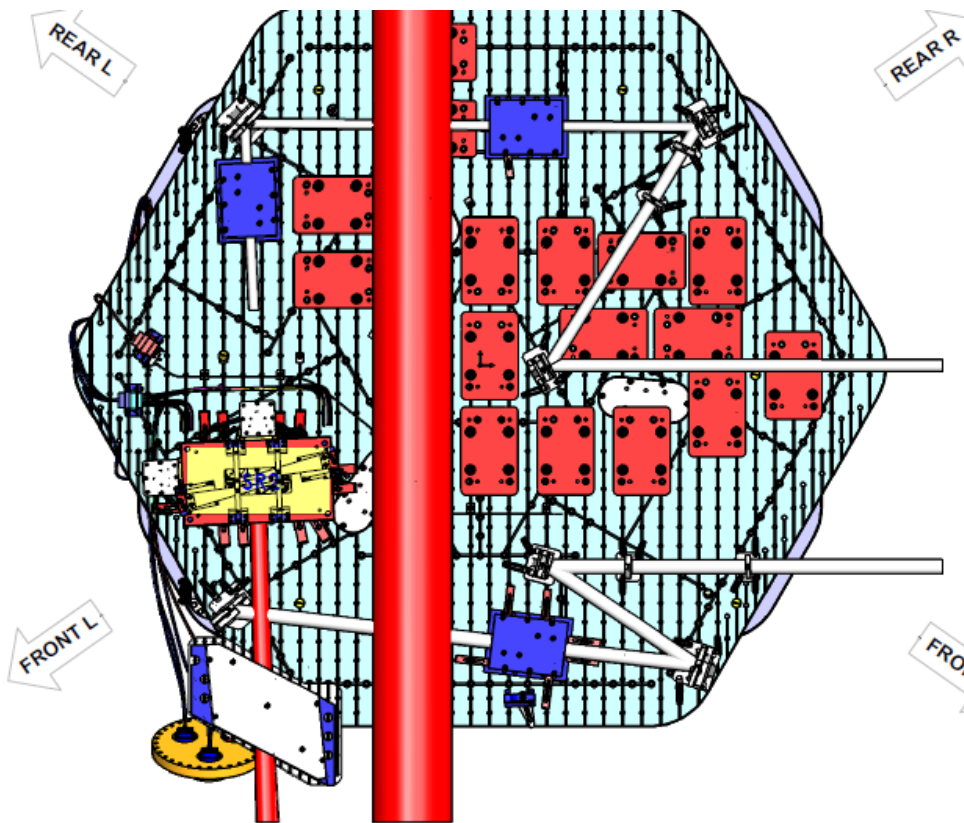


aLIGO TCS HWS INS Interfaces

Key Issues During Initial Alignments

LHAM4

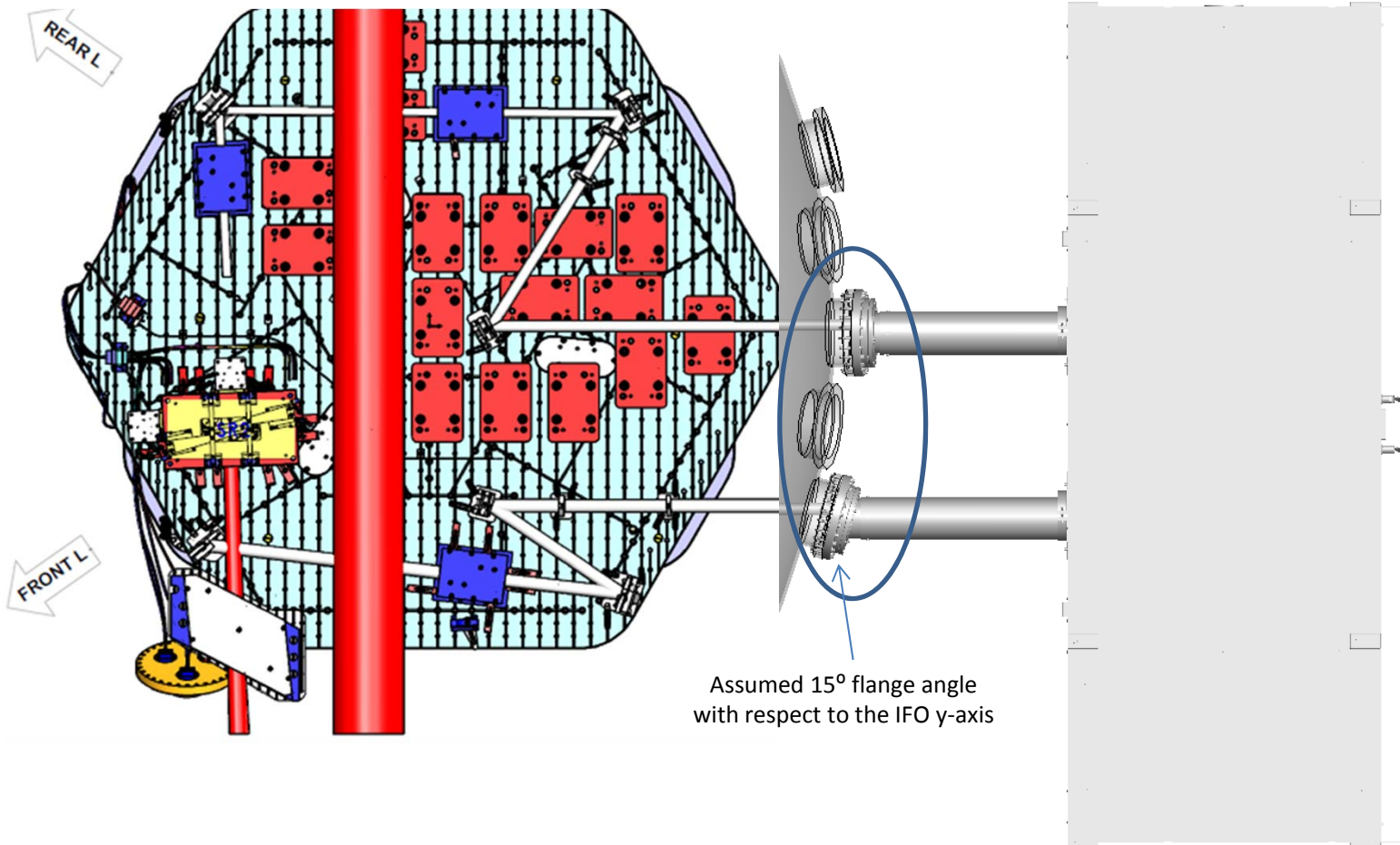
- Placing opto-mech items belonging to the assembly [D1101846](#)
 - There are two sub-assemblies for HWSX ([D1101847](#)) and HWSY ([D1101848](#))
 - Use the template fixtures ([D1201070](#)) layout ([D1201098](#)) for guidance
 - Refer also to the installation procedure: [E1200615](#) (maintained by Calum, et. Al.)



Alignment targets from the [Brunson catalog](#) cannot fit into these mounts
Can actual optics be used?

LHAM4

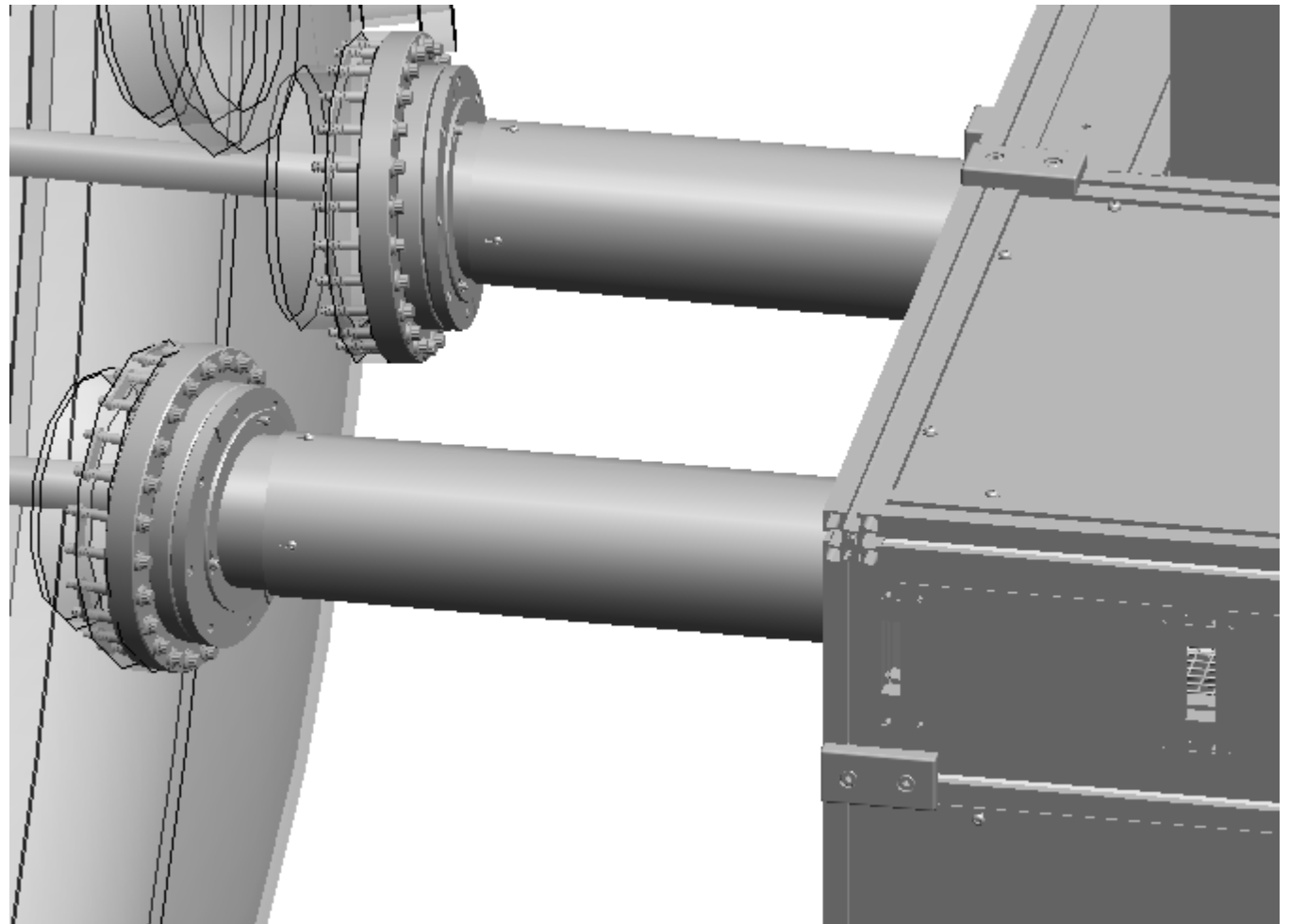
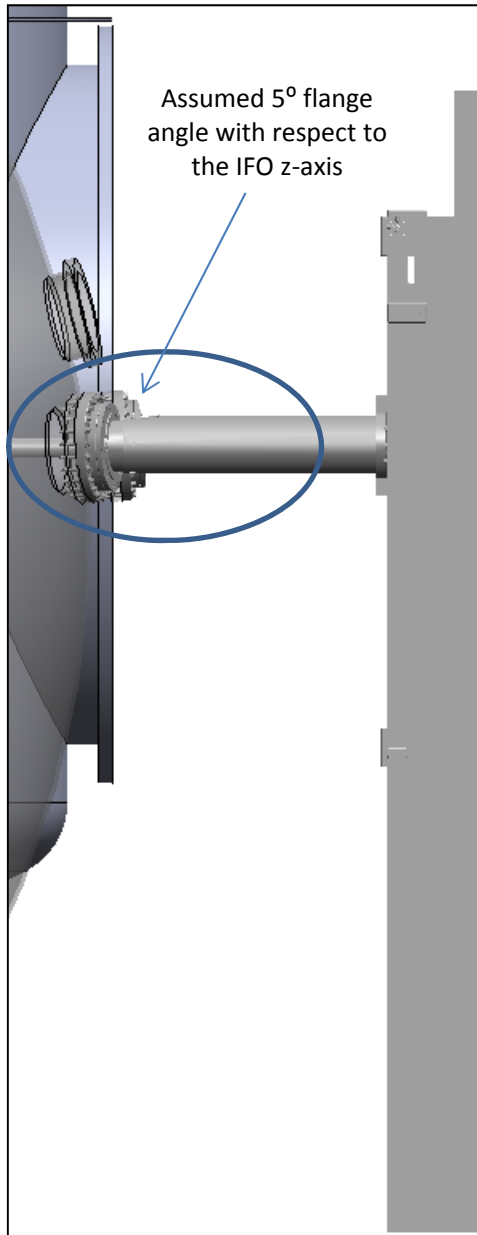
- “Centering” beam paths through the viewports
 - Clocking of adapter flange hole patterns really matters!
 - See next slide for interface clocking specification



LHAM4

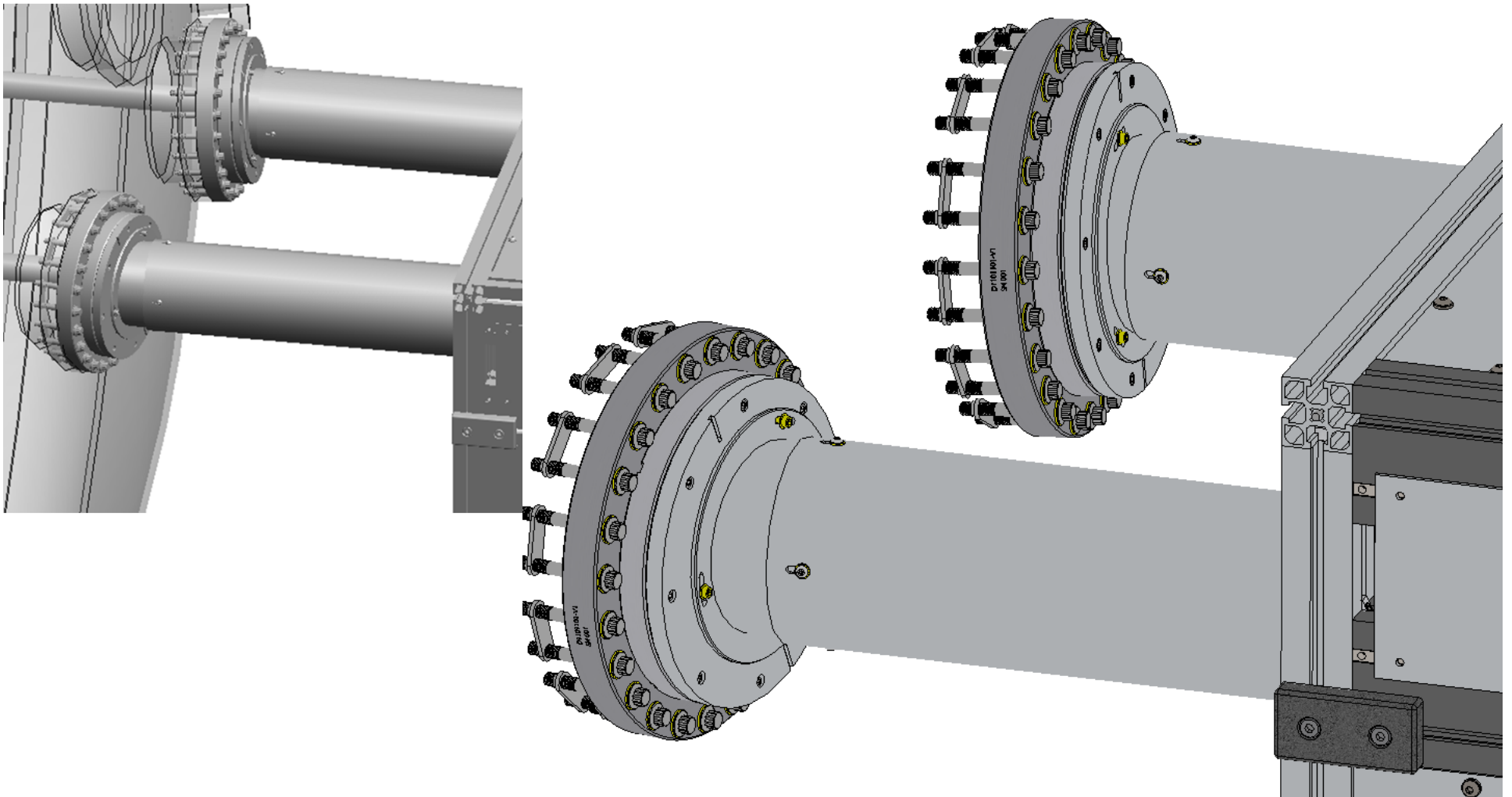
“Centering” beam paths through the viewports

- Clocking of adapter flange hole patterns really matters!



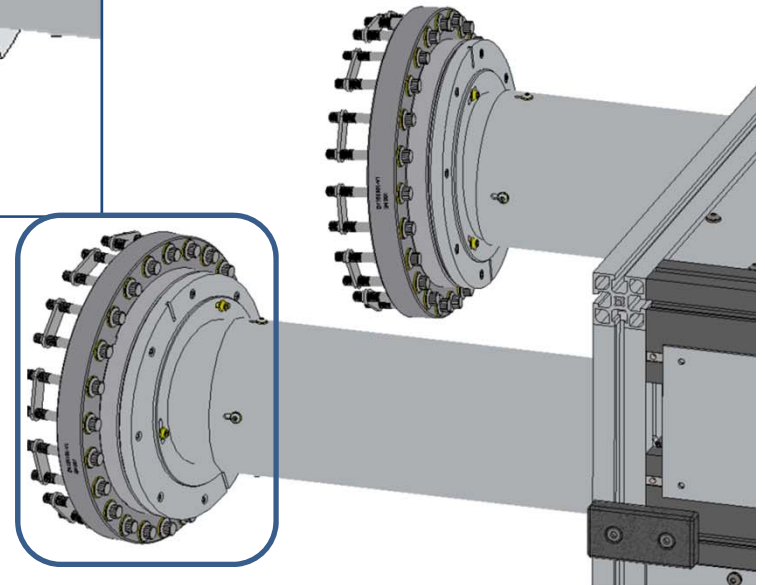
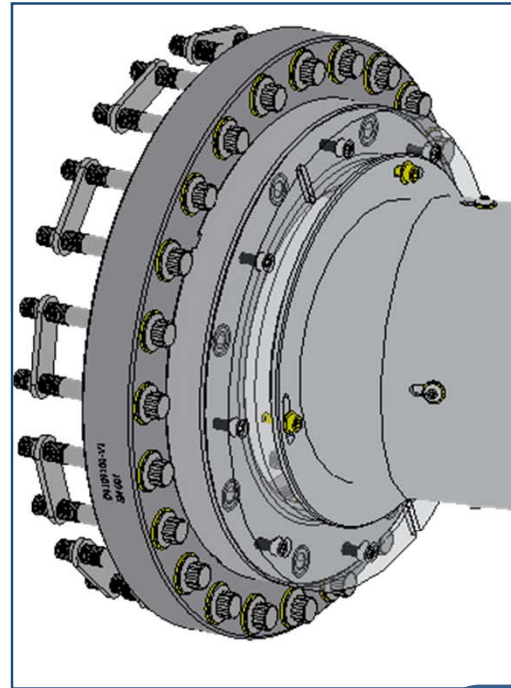
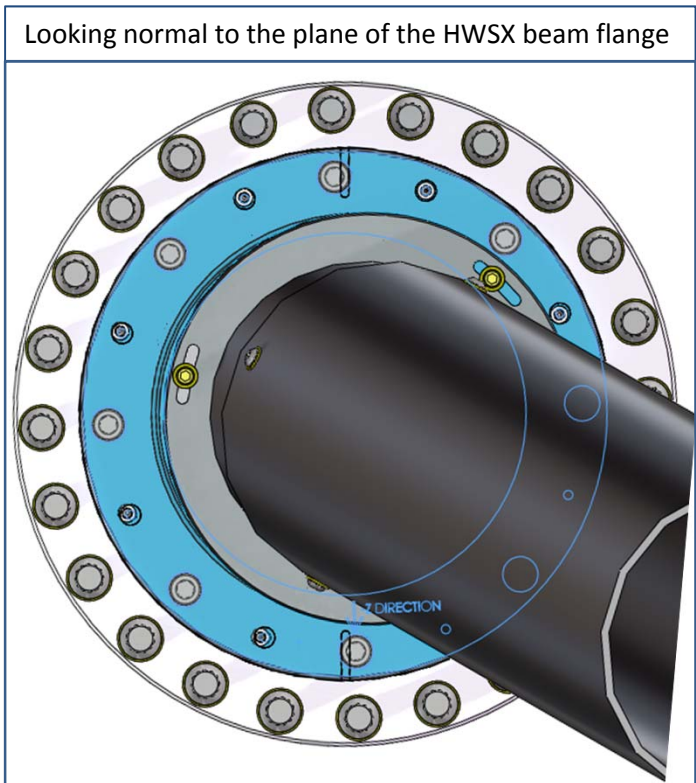
LHAM4

- “Centering” beam paths through the viewports
 - Clocking of adapter flange hole patterns really matters!



LHAM4

- “Centering” beam paths through the viewports
 - Clocking of adapter flange hole patterns really matters!



LHAM4

- “Centering” beam paths through the viewports
 - Clocking of adapter flange hole patterns really matters!

Looking normal to the plane of the HWSY beam flange

