



Oxfordshire Meeting

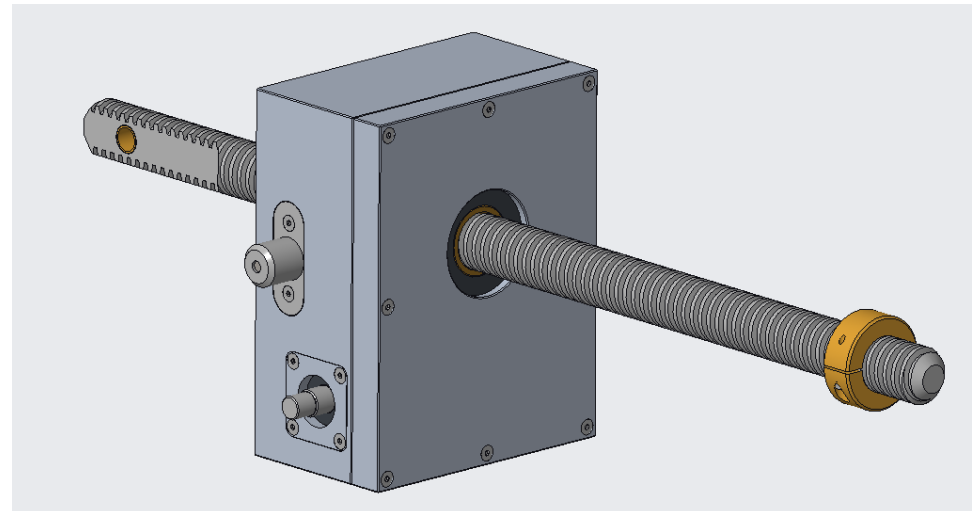
Liverpool Integration Tooling Updates

Matthew Brown

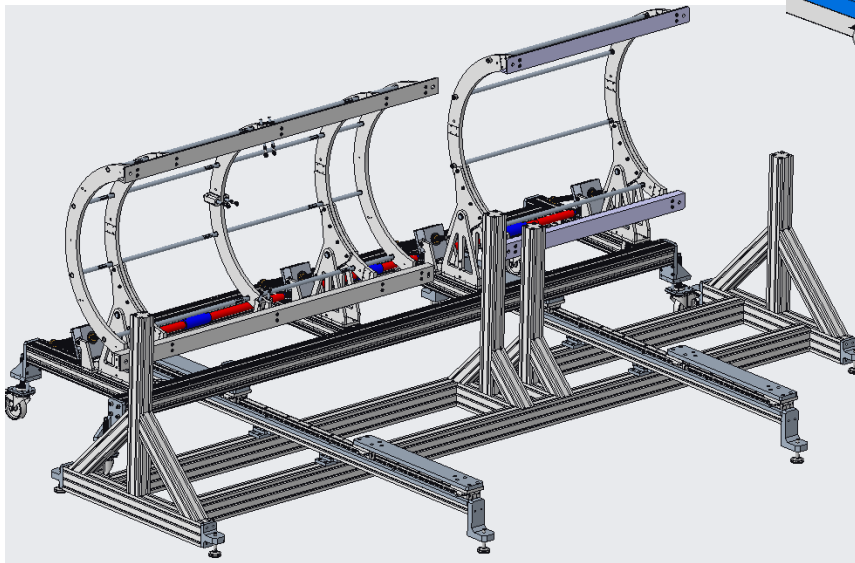
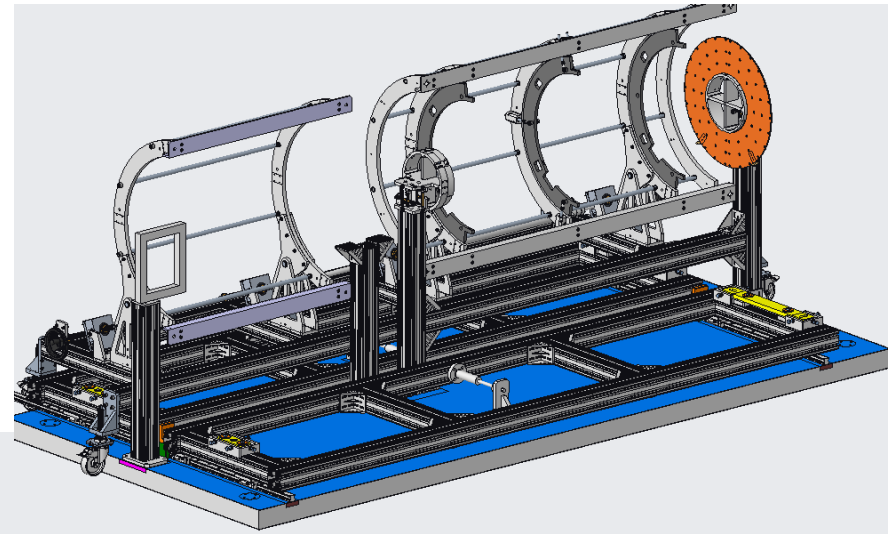
- Follow original Frascati design
- All components have been manufactured for 2 trolleys
- One set up fully (minus gearboxes)
- One used for testing



- Decided to make our own gearboxes
- A lot cheaper and allows more design flexibility
- Successful prototype made
- Full set of 8 gearboxes now in production in Liverpool workshop
- Initial testing in January

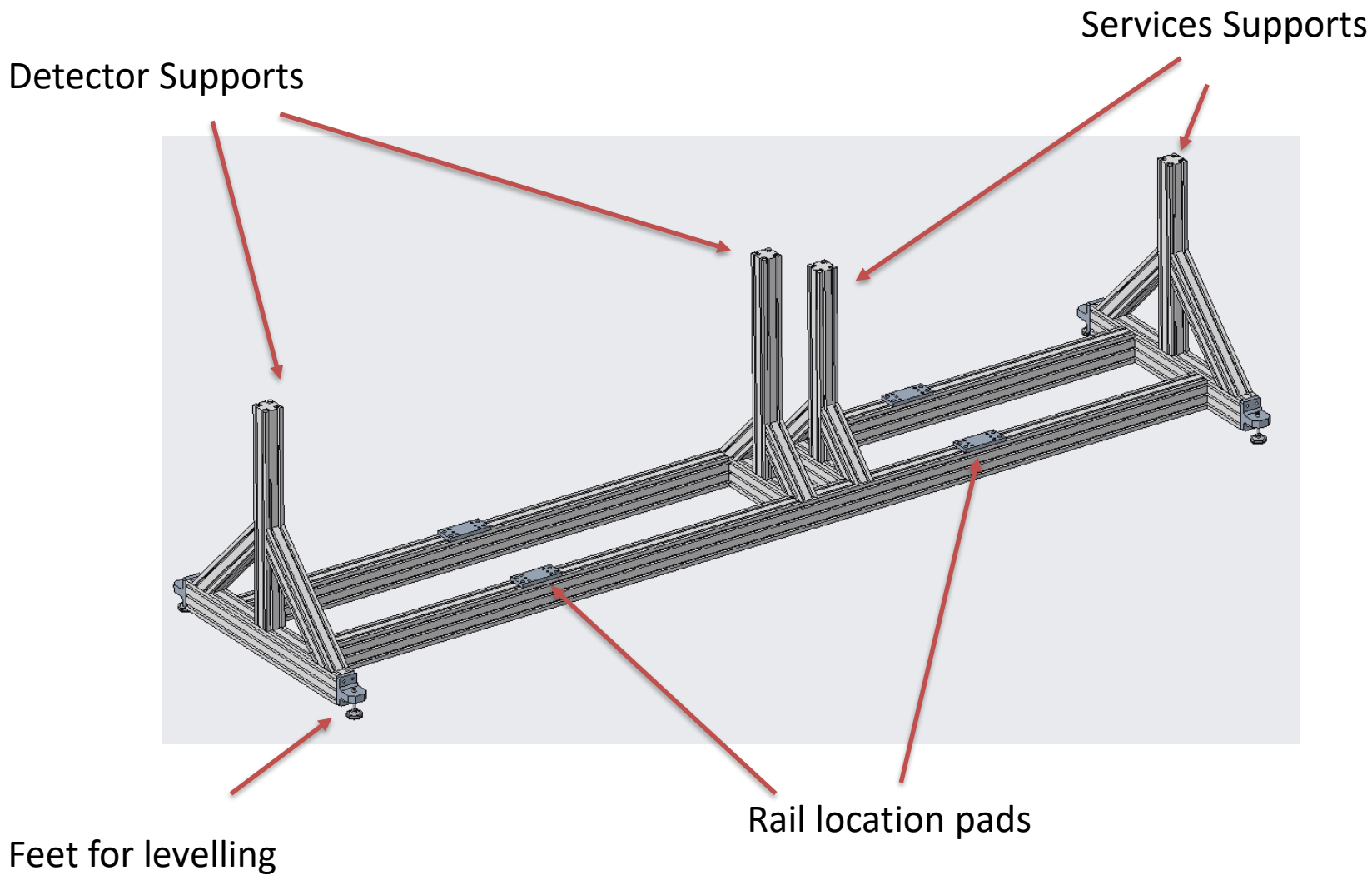


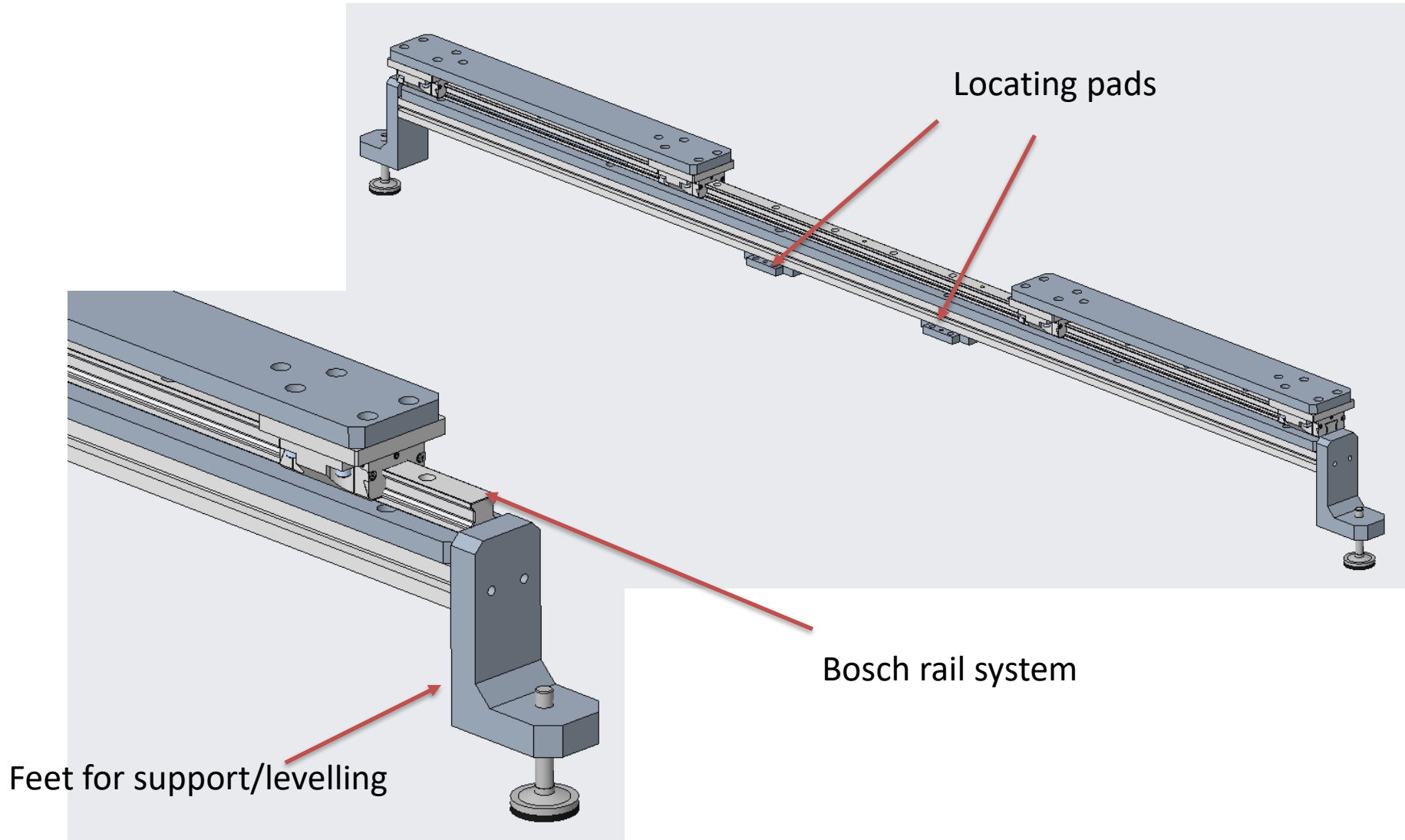
- Main support system for Endcap has been completely redesigned
- Few reasons:
 - Clean room geometry
 - Manufacturing
 - Ease of movement

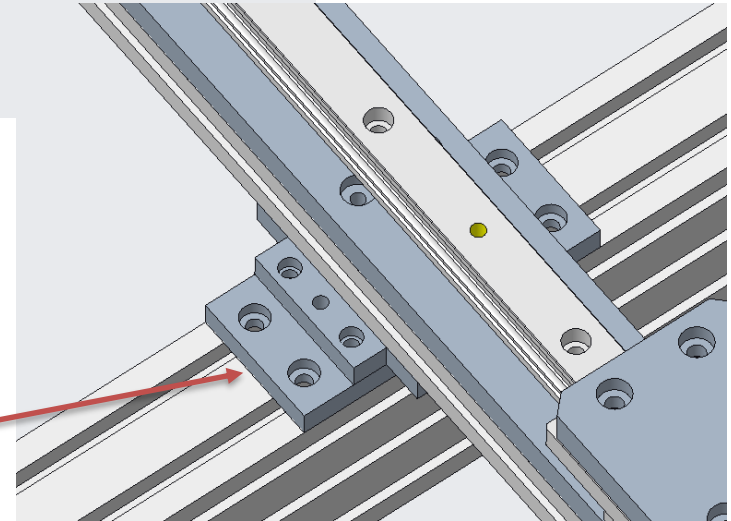
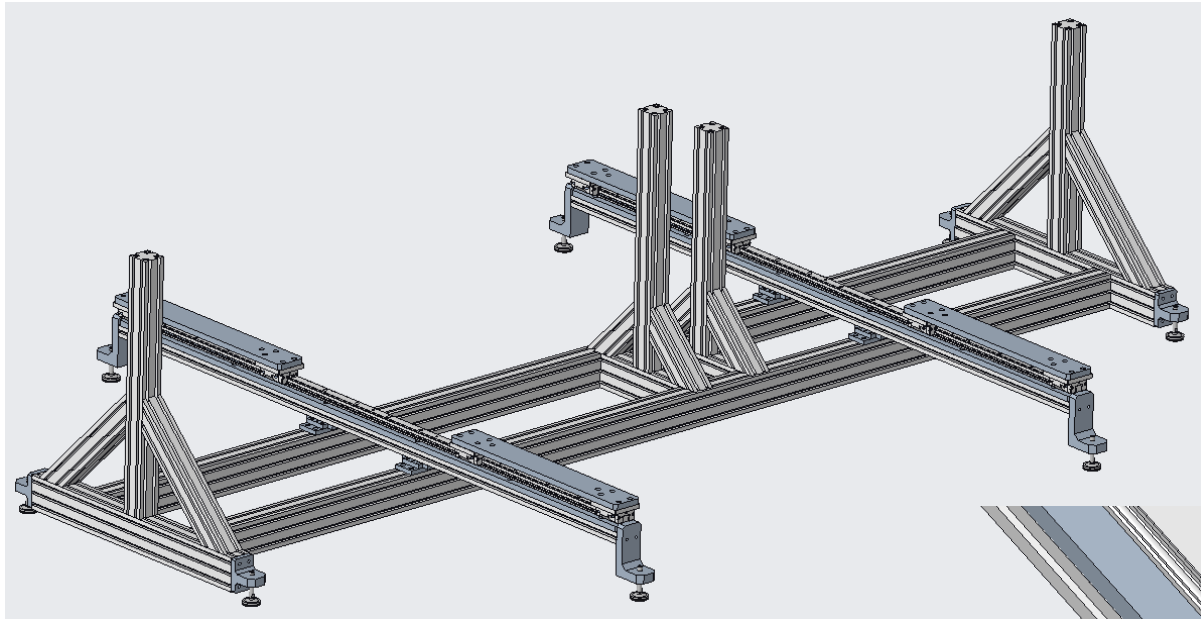




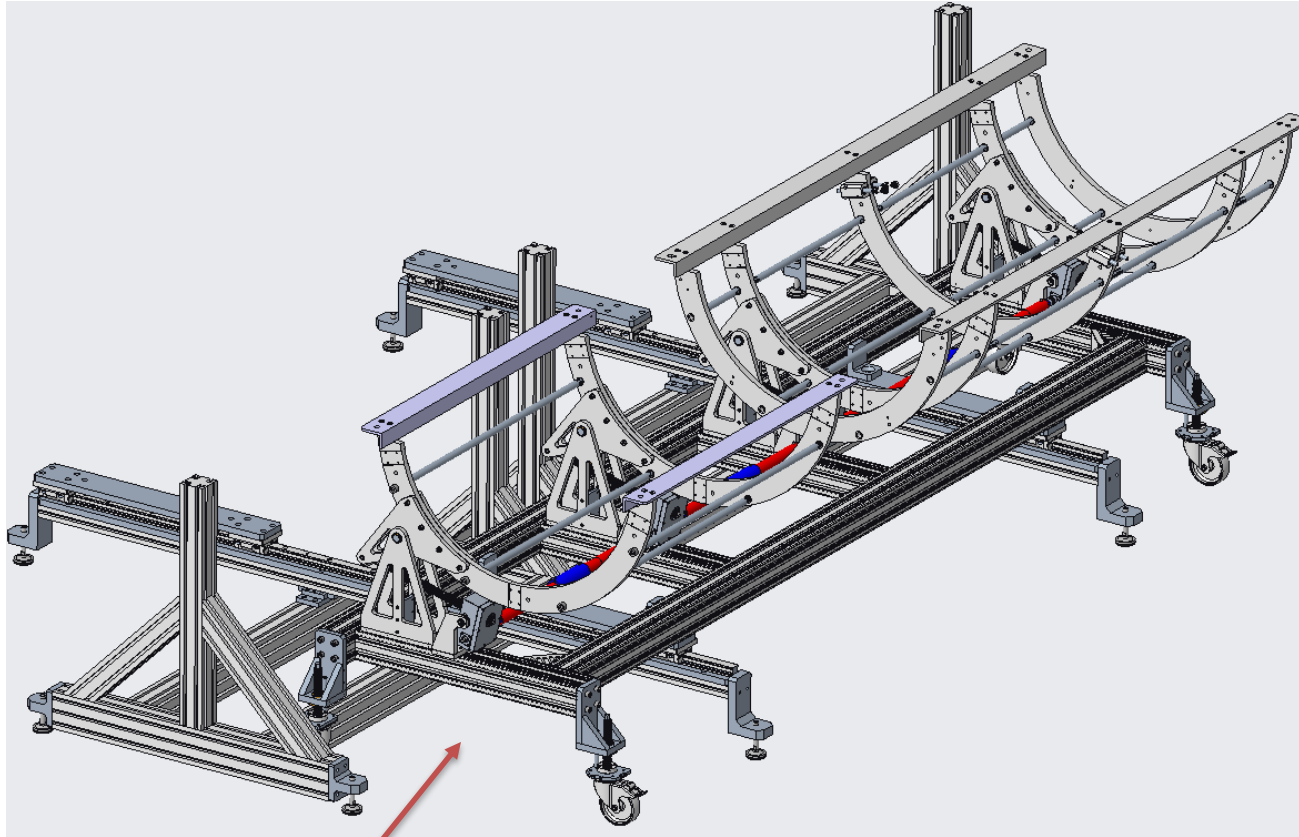
Detector Trolley



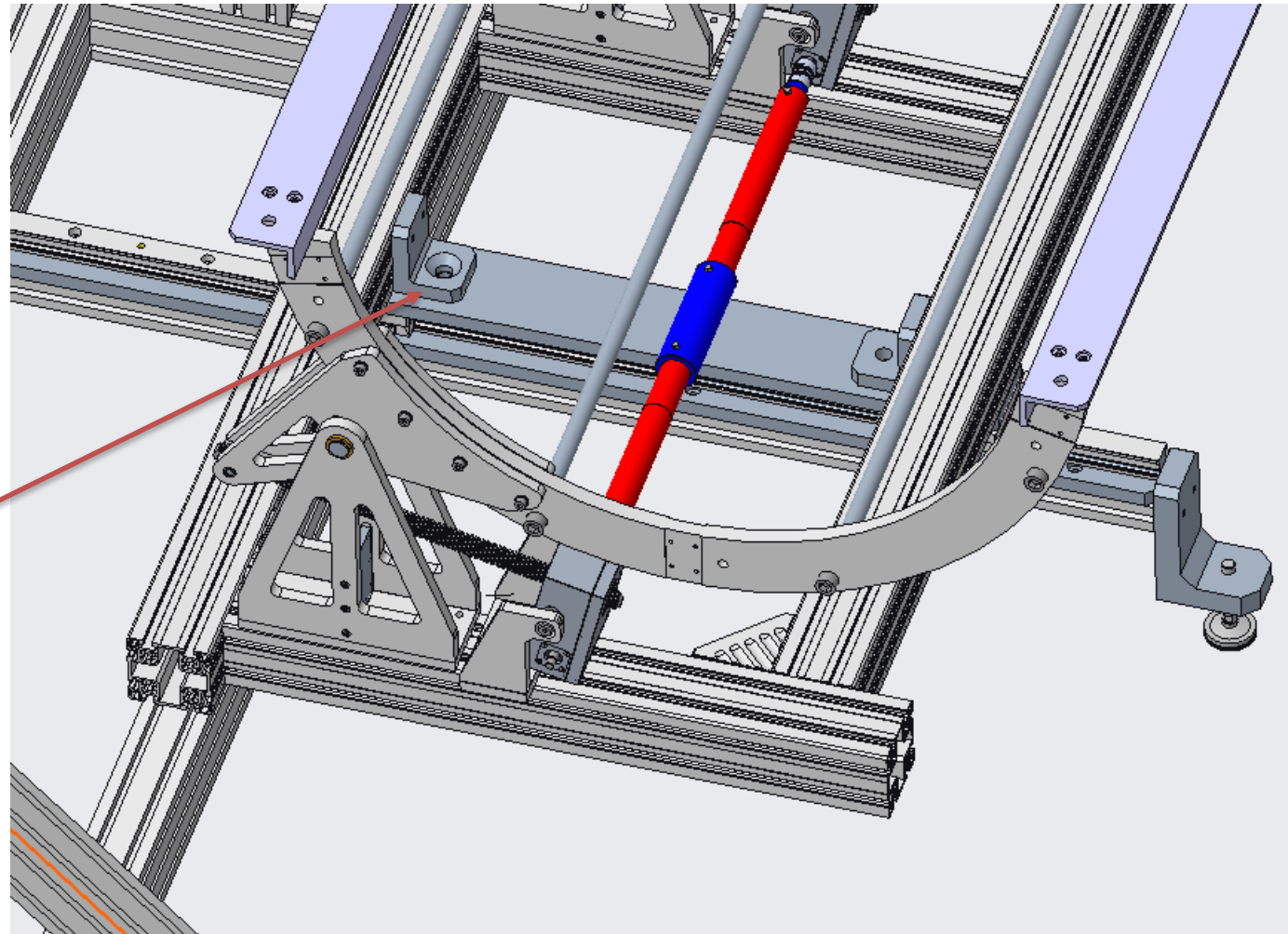




Connection made by
corresponding
mounting pads

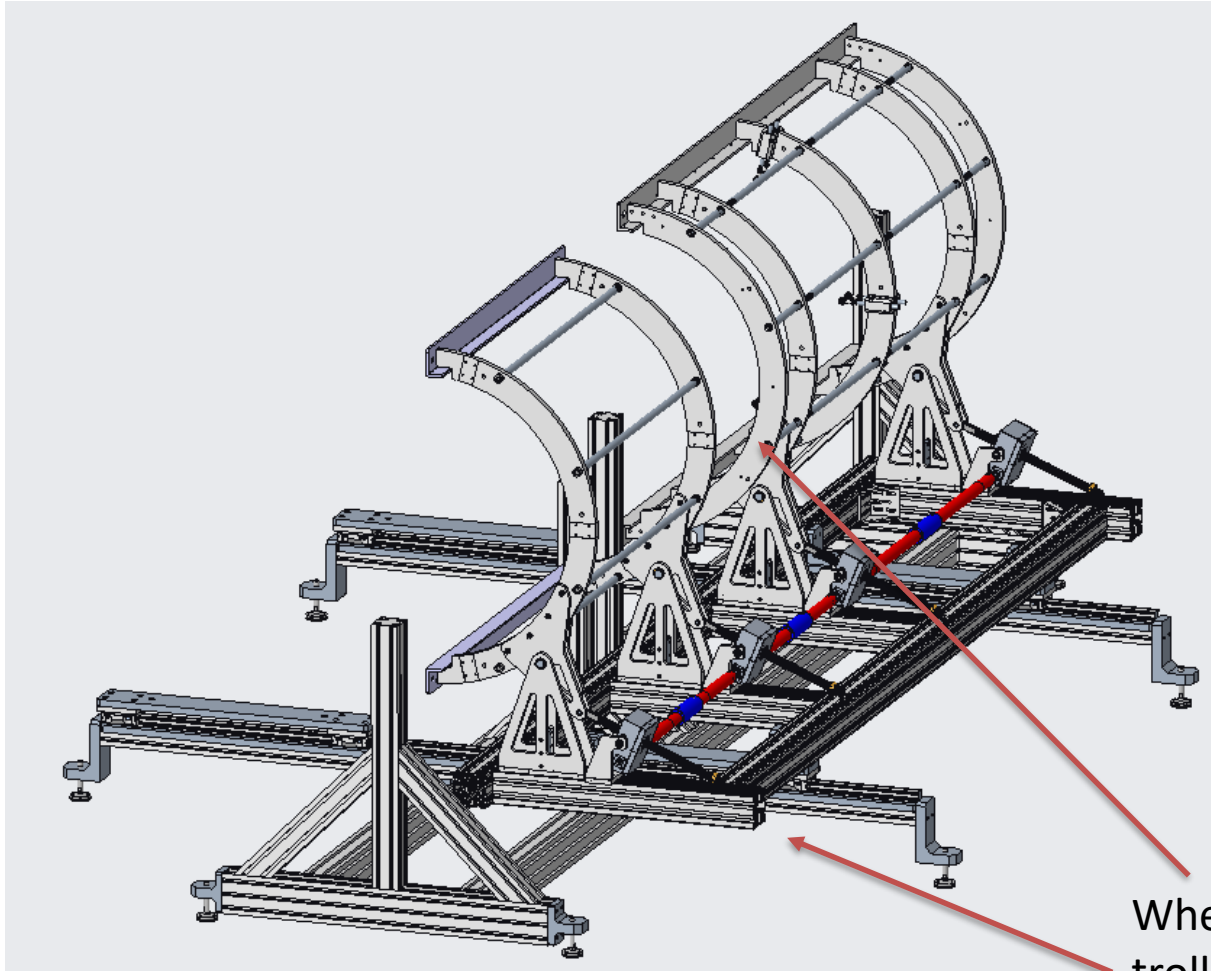


Trolley positioned
over rail system

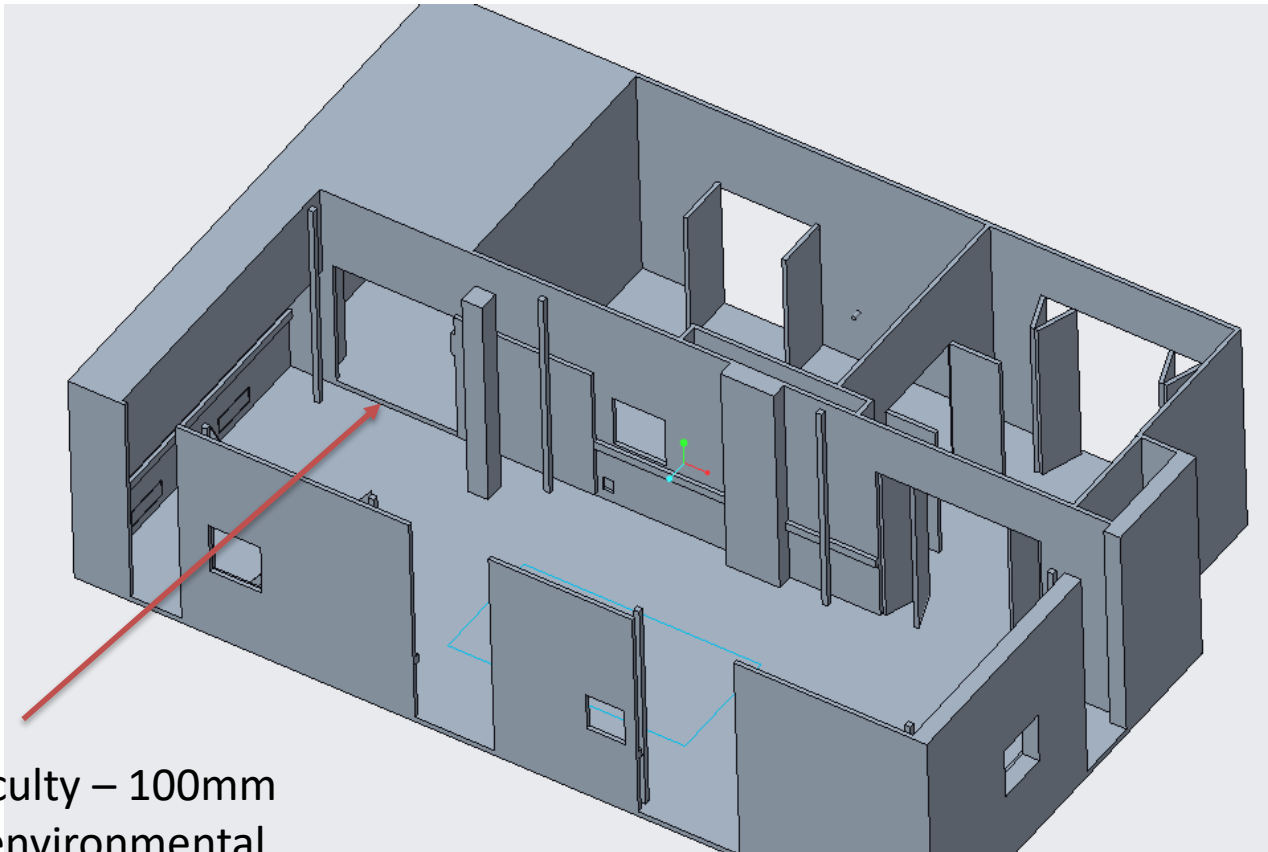


Alignment made by
large countersunk
bolt

Trolley Coupling



Wheels removed,
trolley rotated and slid
into final position

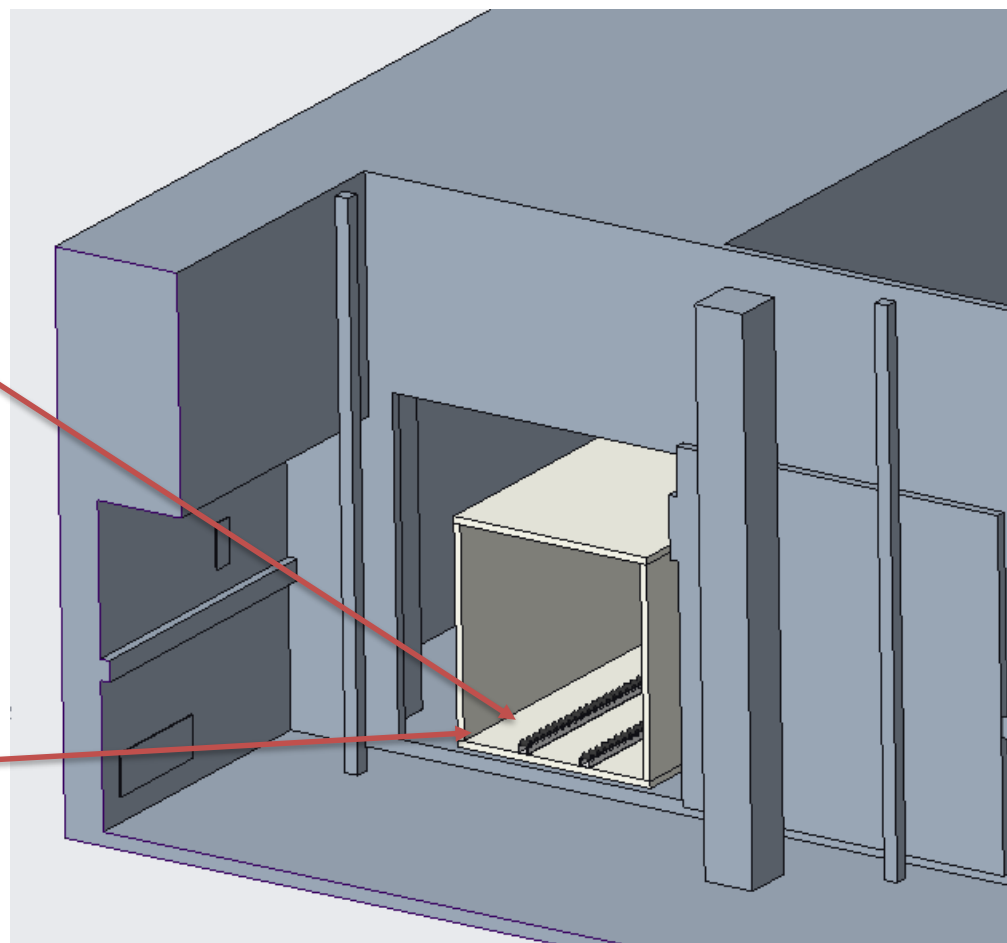


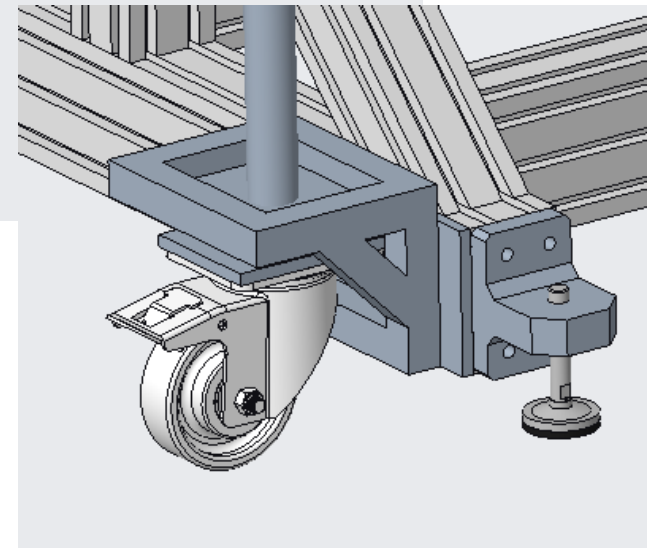
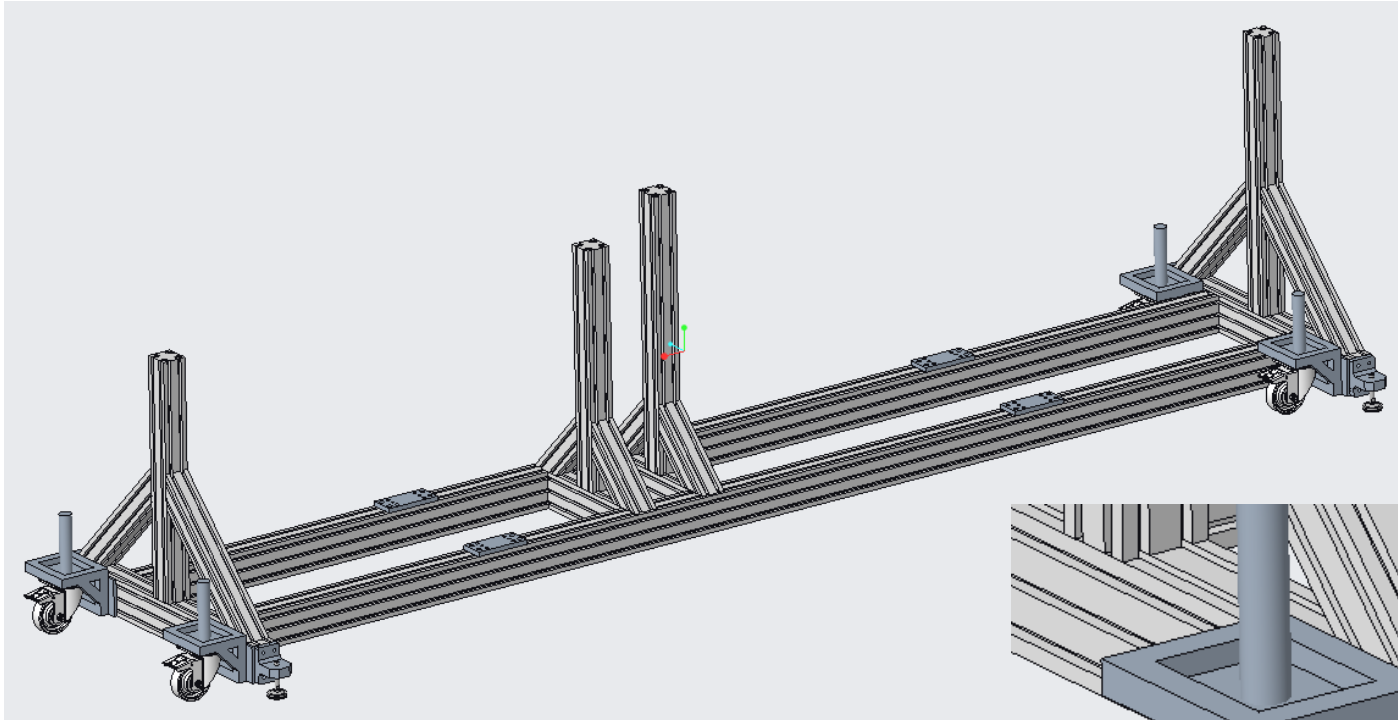
Main difficulty – 100mm
step into environmental
chamber



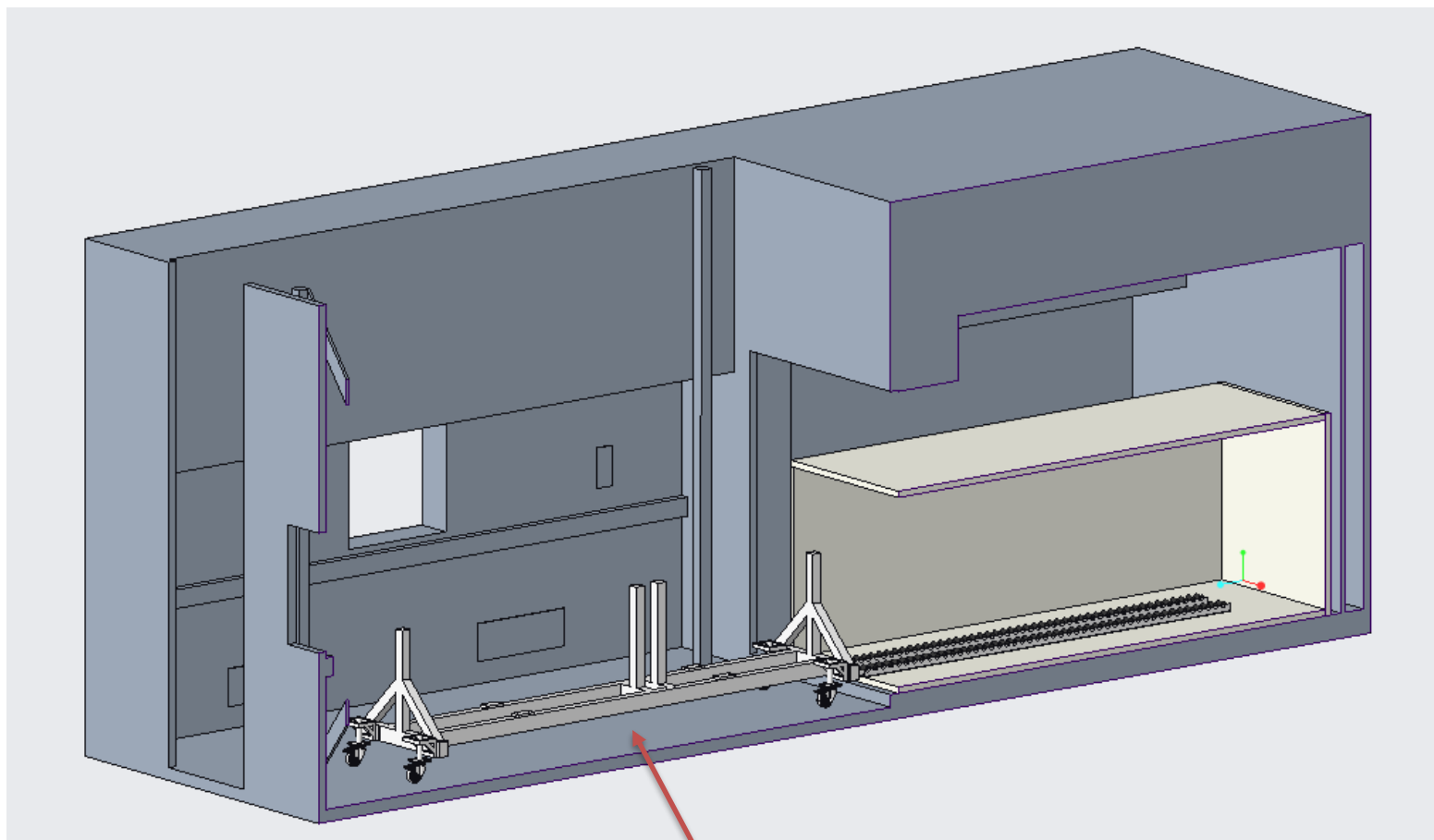
Roller track system to allow for transfer of detector trolley

Plan is to have secondary 'cold box' inside environmental chamber to allow sufficiently low temperature to be achieved

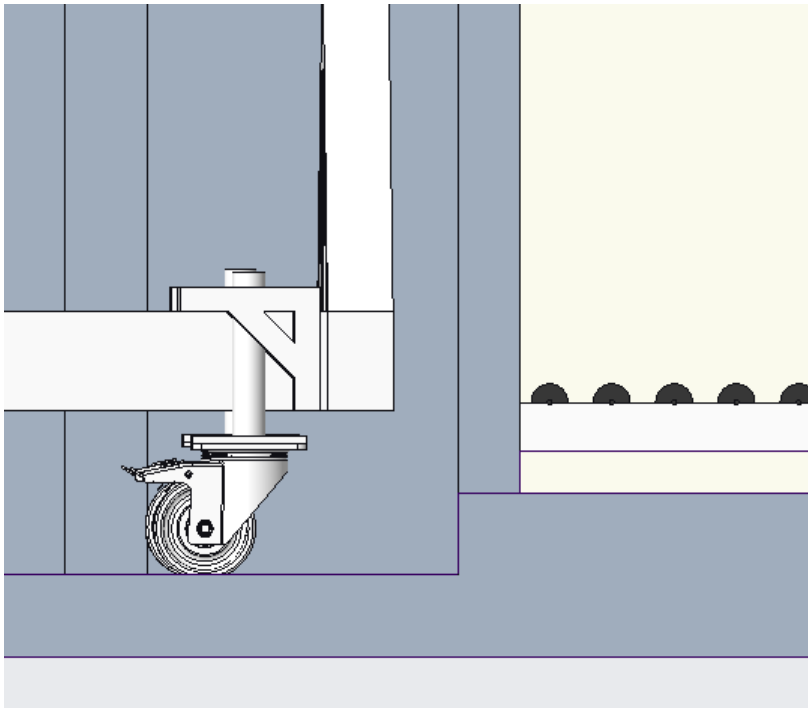




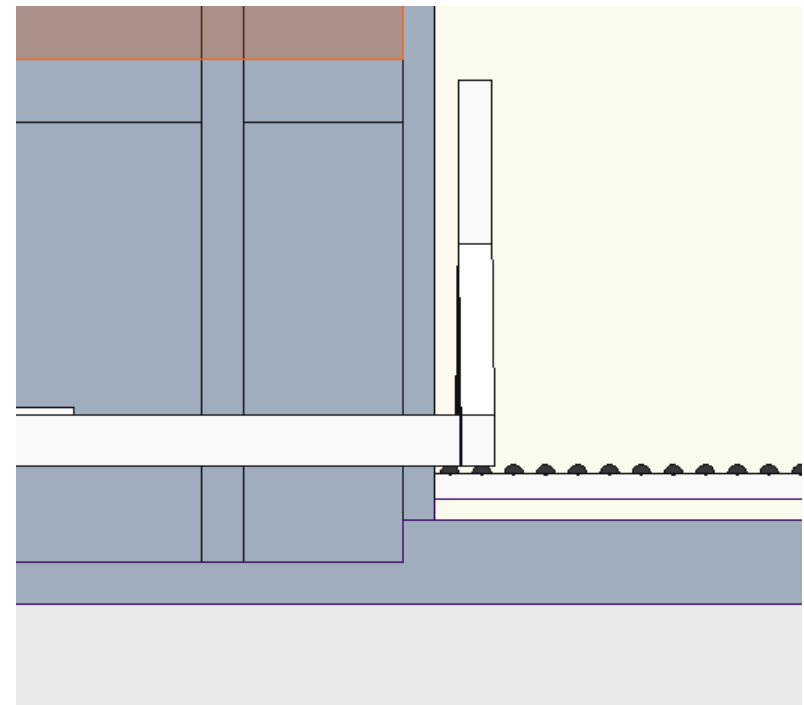
Heavy duty castor arrangement
(yet to be designed) to take
weight of detector trolley and
allow to be moved

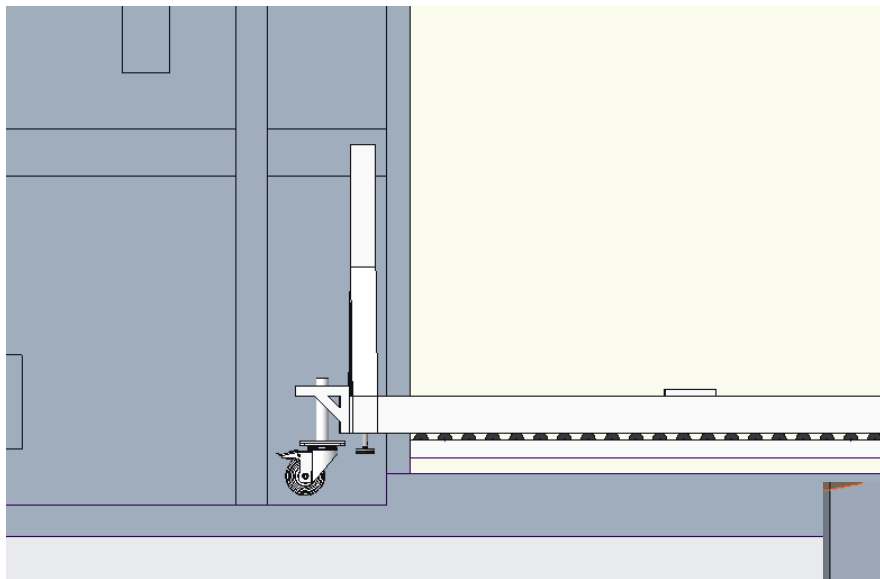


Detector trolley wheeled in
front of climate chamber ready
for insertion

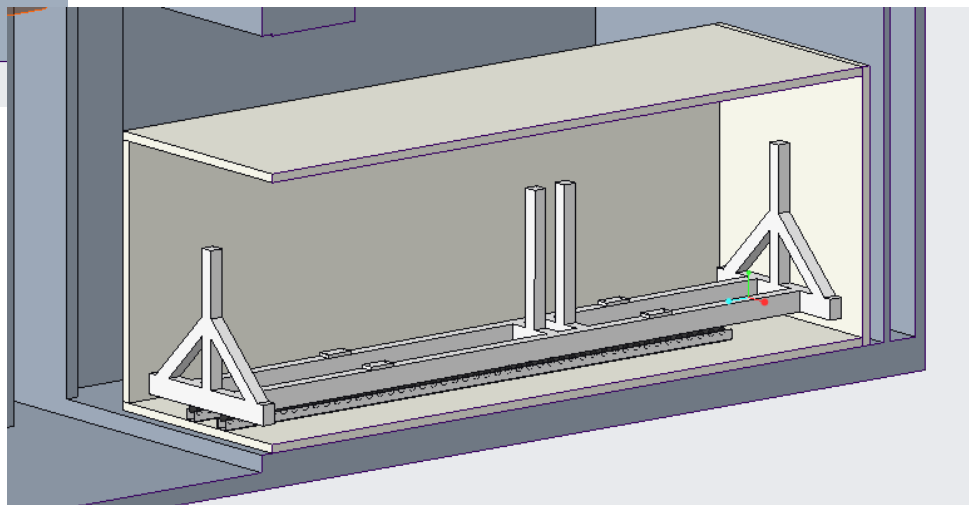


End of trolley wheeled over
start of roller track and
lowered down to transfer the
load from front castors and
they can be removed





Detector trolley then pushed
all the way in the in and rear
castors can be removed





The End