



Half shell mounting & commissioning at DESY

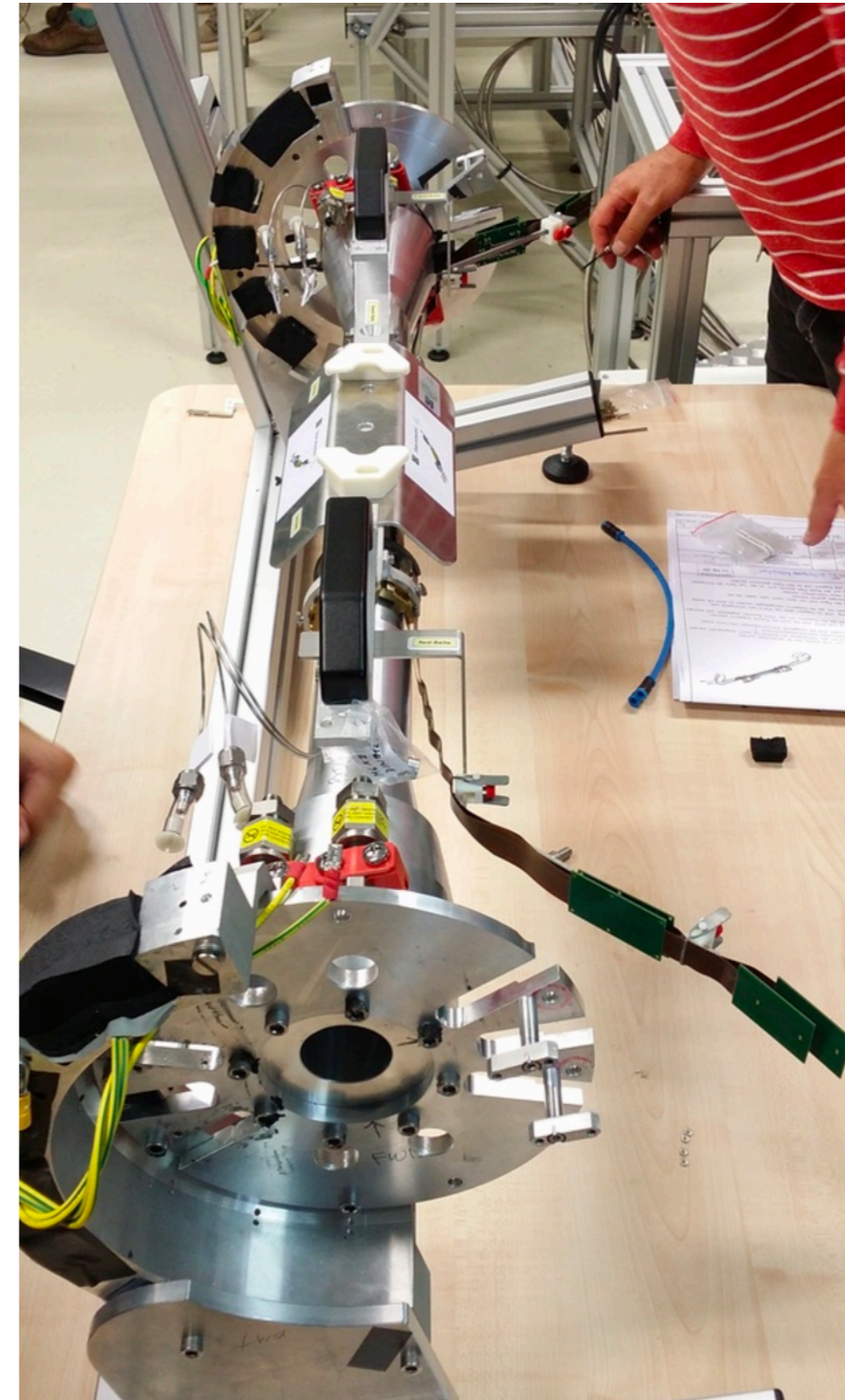
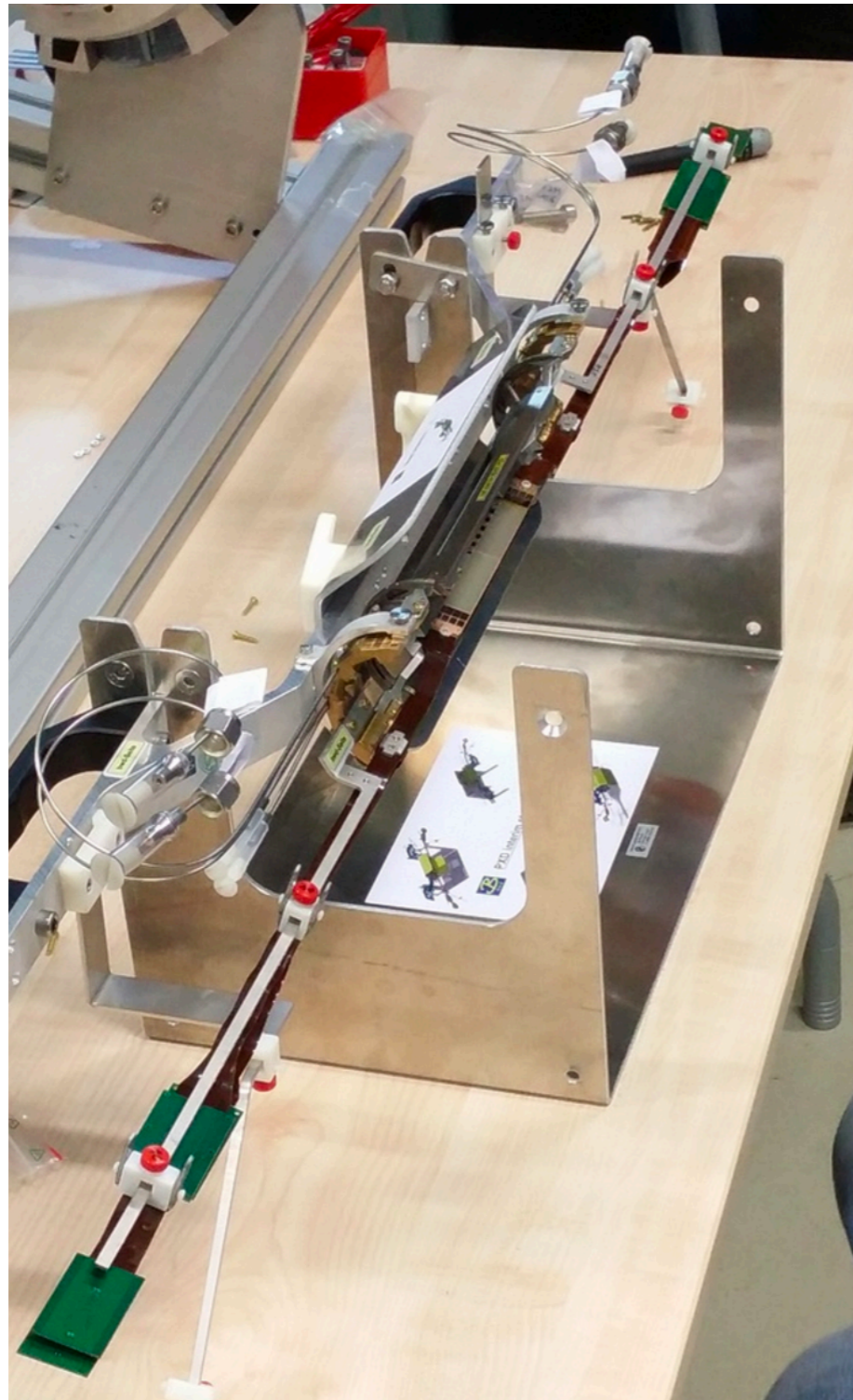
Status and Plans

Hua Ye (DESY)

2017.10.15-17, BPAC focused review on VXD

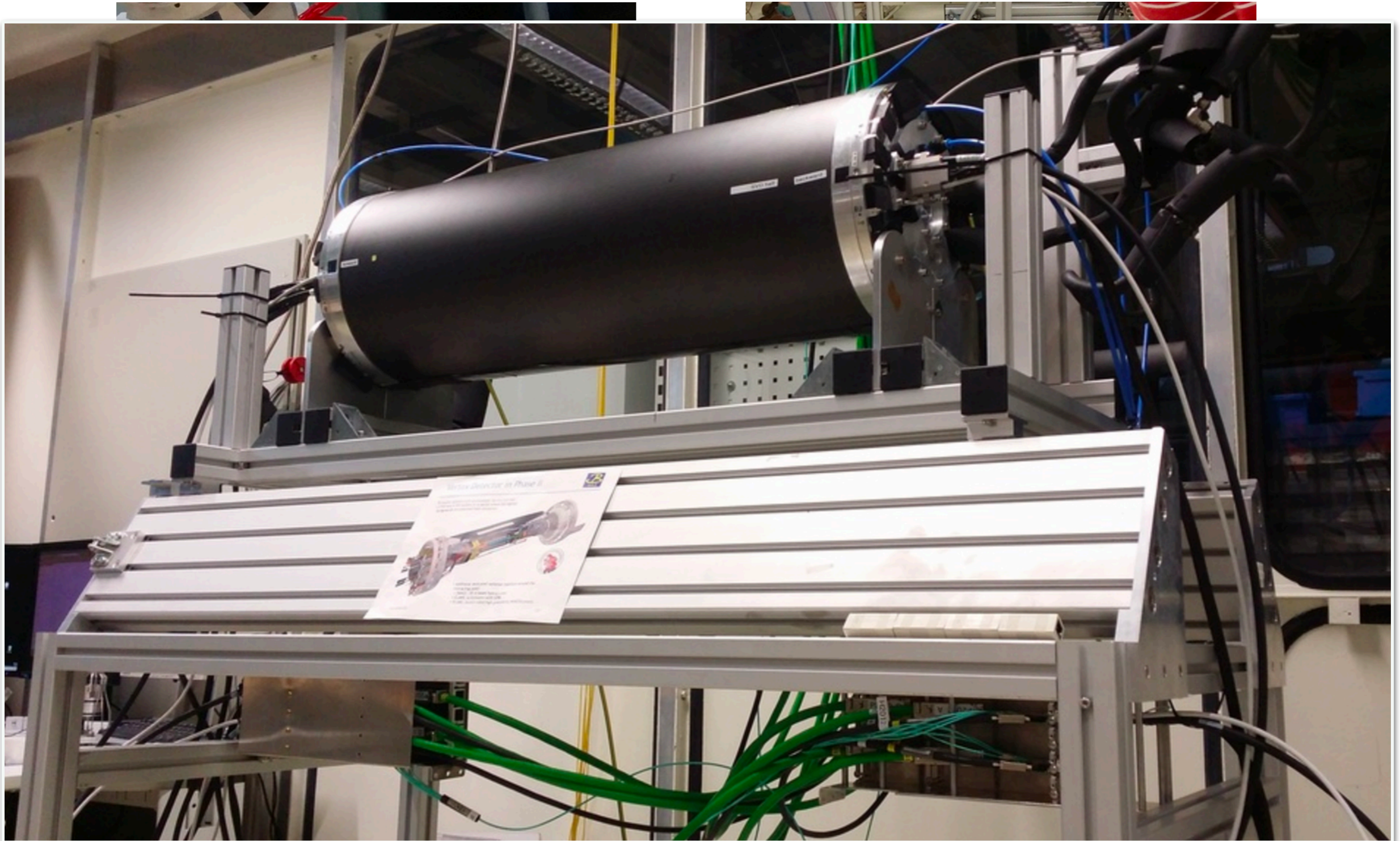
(hua.ye@desy.de)

Phase2 Commissioning Test at DESY



C.Kiesling, 27th B2GM, <https://kds.kek.jp/indico/event/24563/session/14/contribution/171/material/slides/0.pdf>

Phase2 Commissioning Test at DESY



PS Units for Phase 3 Commissioning



Primary PS



Interlock

Backplane & Controller



24V

LMU PS



PXD modules

CO₂ Cooling systems



Marco



XFEL Cooler

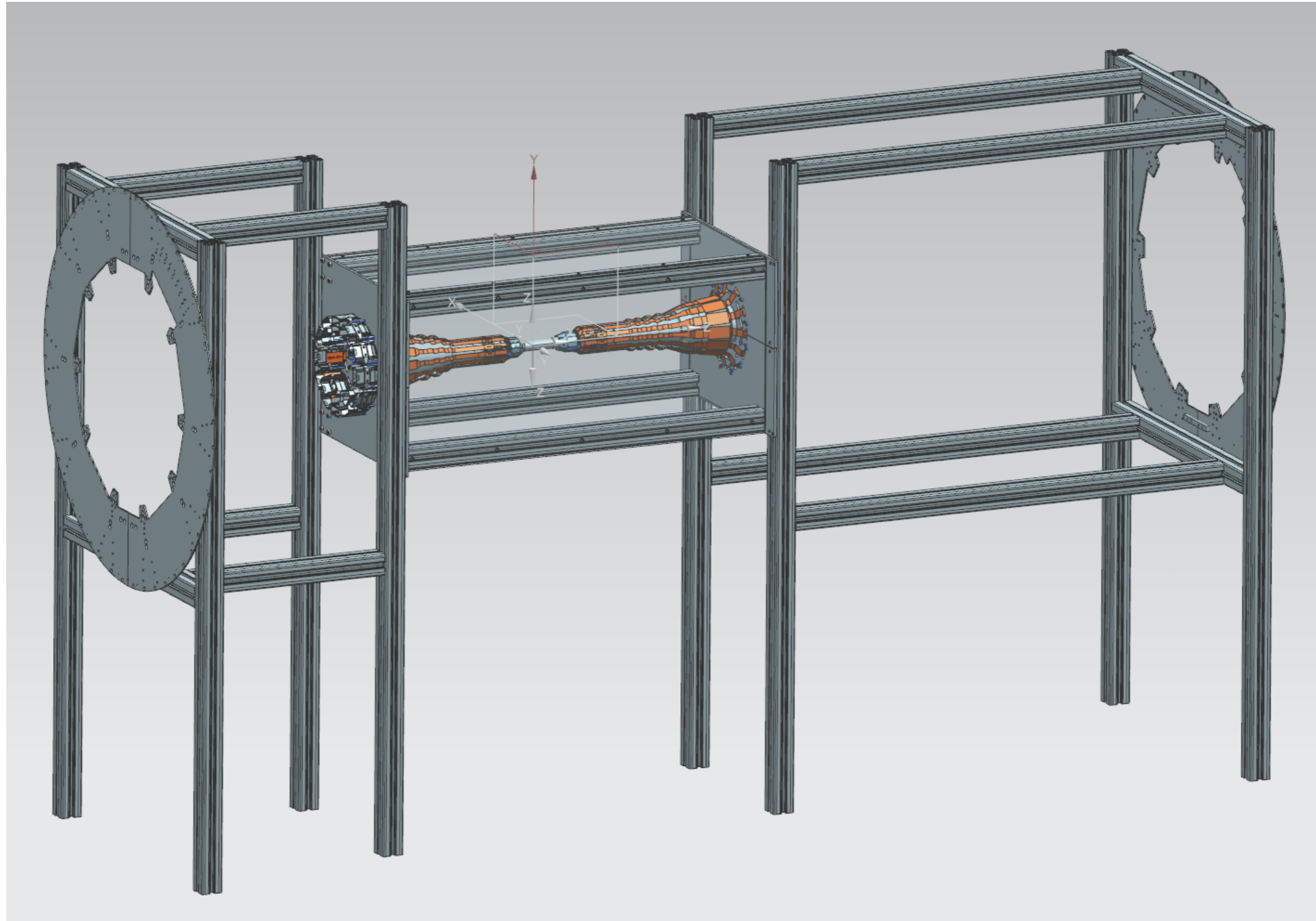


The initial target capacity will be 1kW from the range of +25°C to -40°C.

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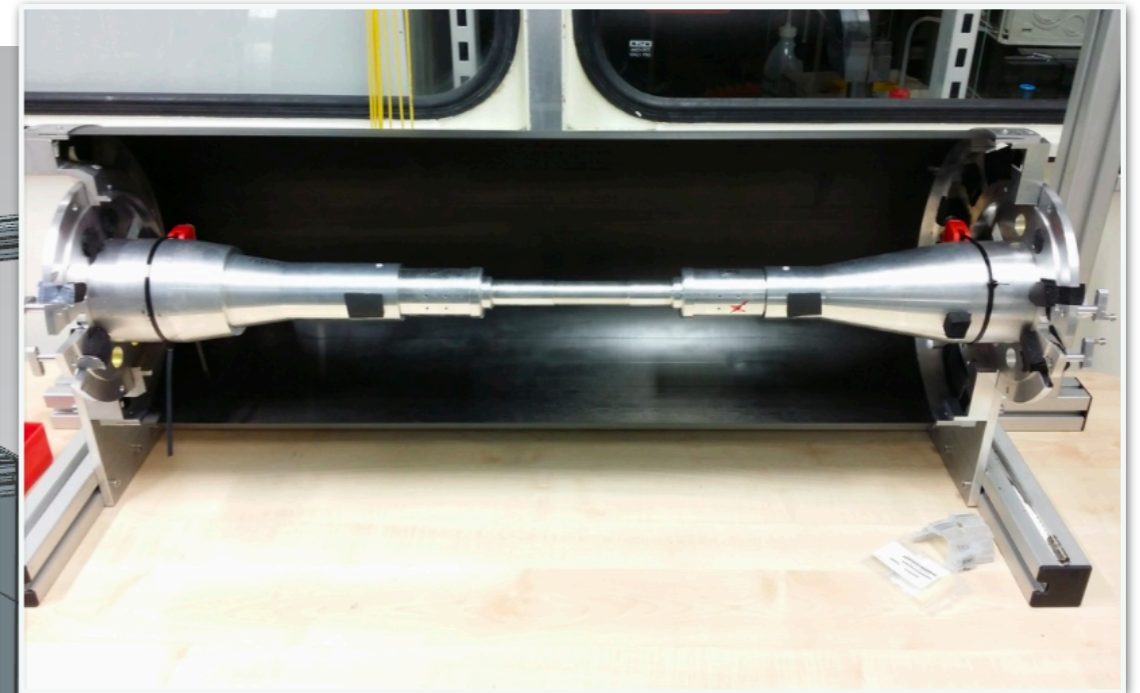
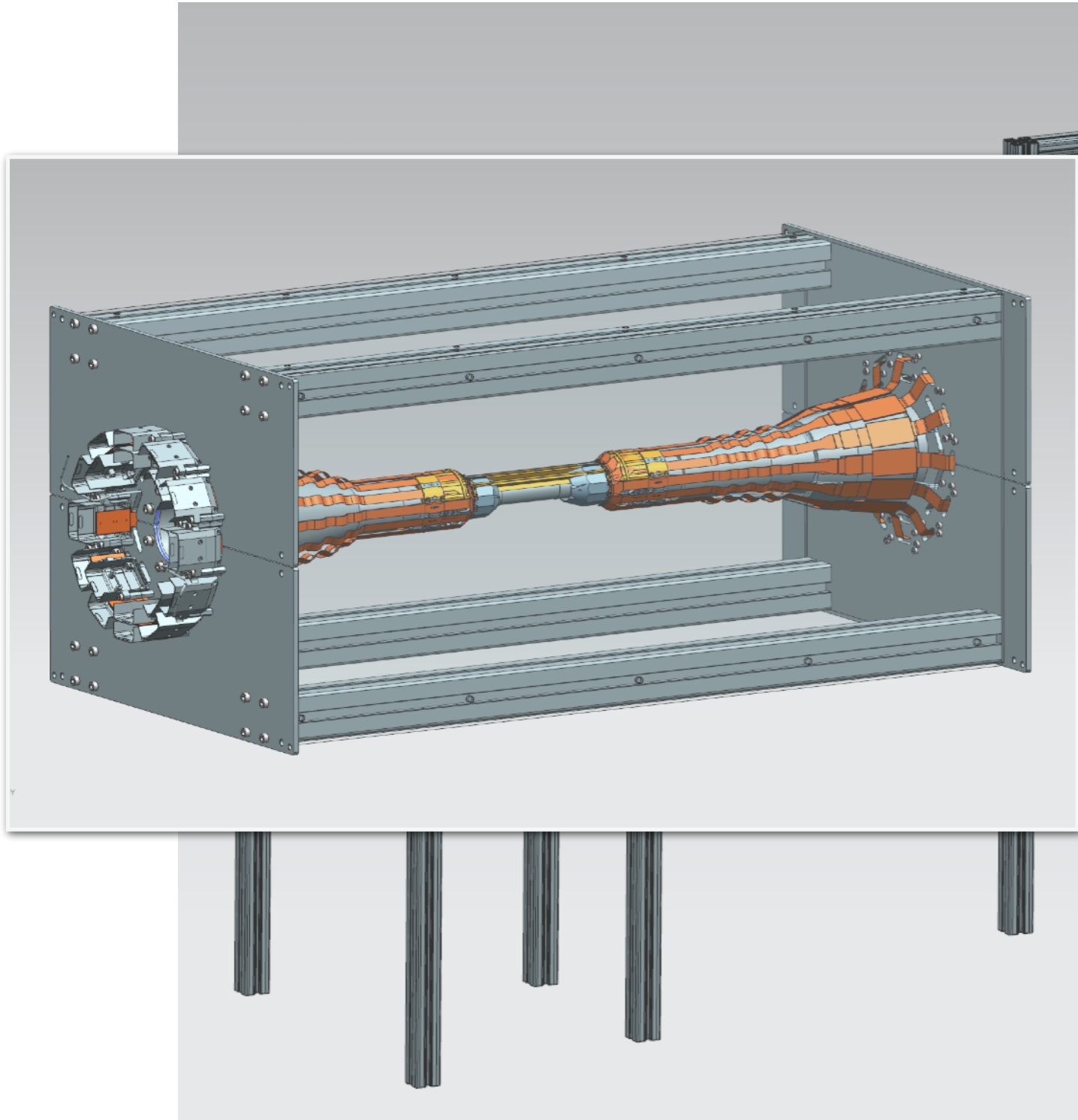
Cooling Power maximum 1.2 kW, minimum evaporating temperature required -15°C

Phase3 PXD Commissioning

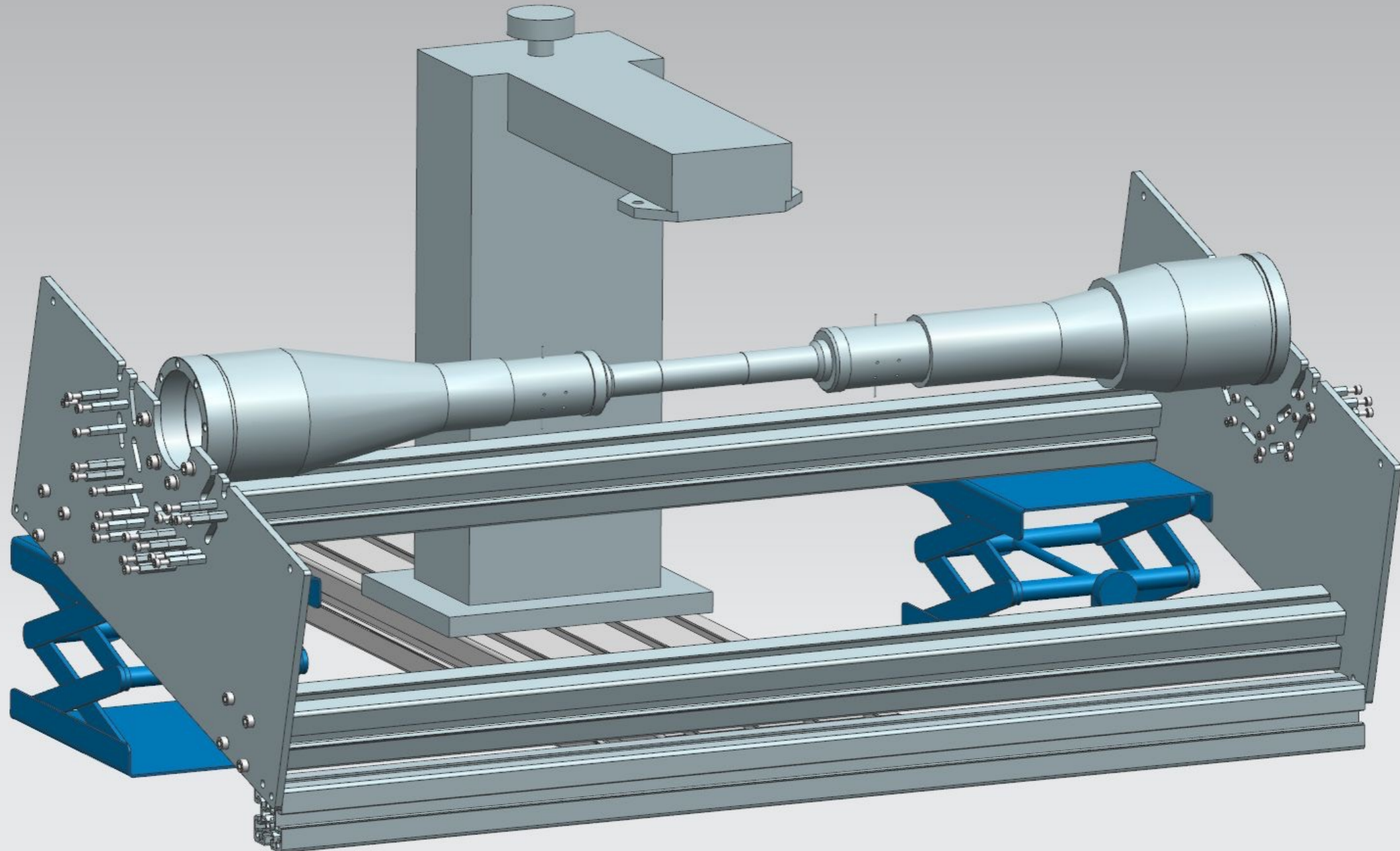


From R. Stever, DESY

Phase3 PXD Commissioning



Half-shell Mounting Procedure

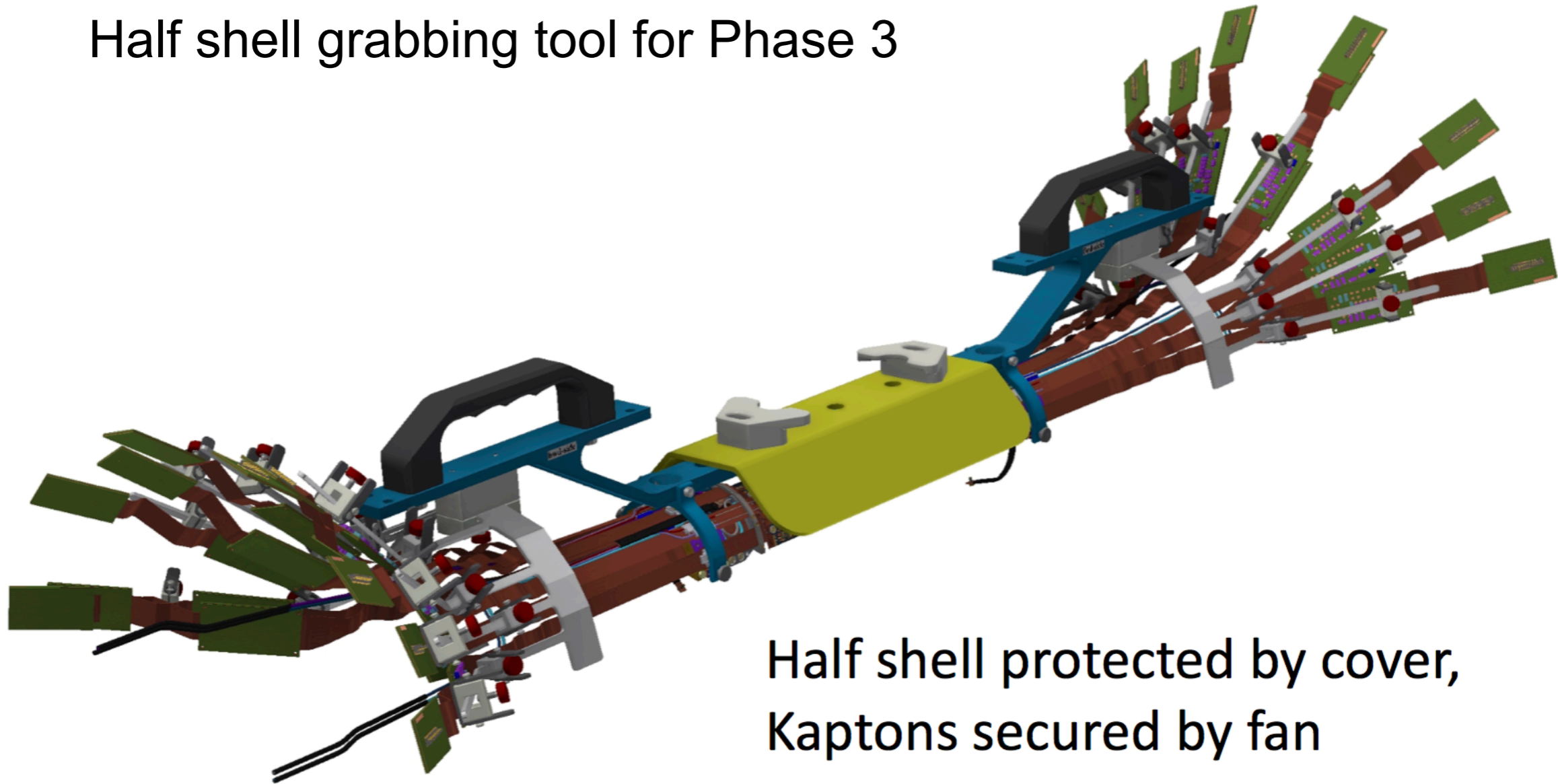


- Assemble the dummy Beam Pipe with the lower-half Patch-Panel plates, place onto the frame

Half-shell Mounting Procedure



Half shell grabbing tool for Phase 3



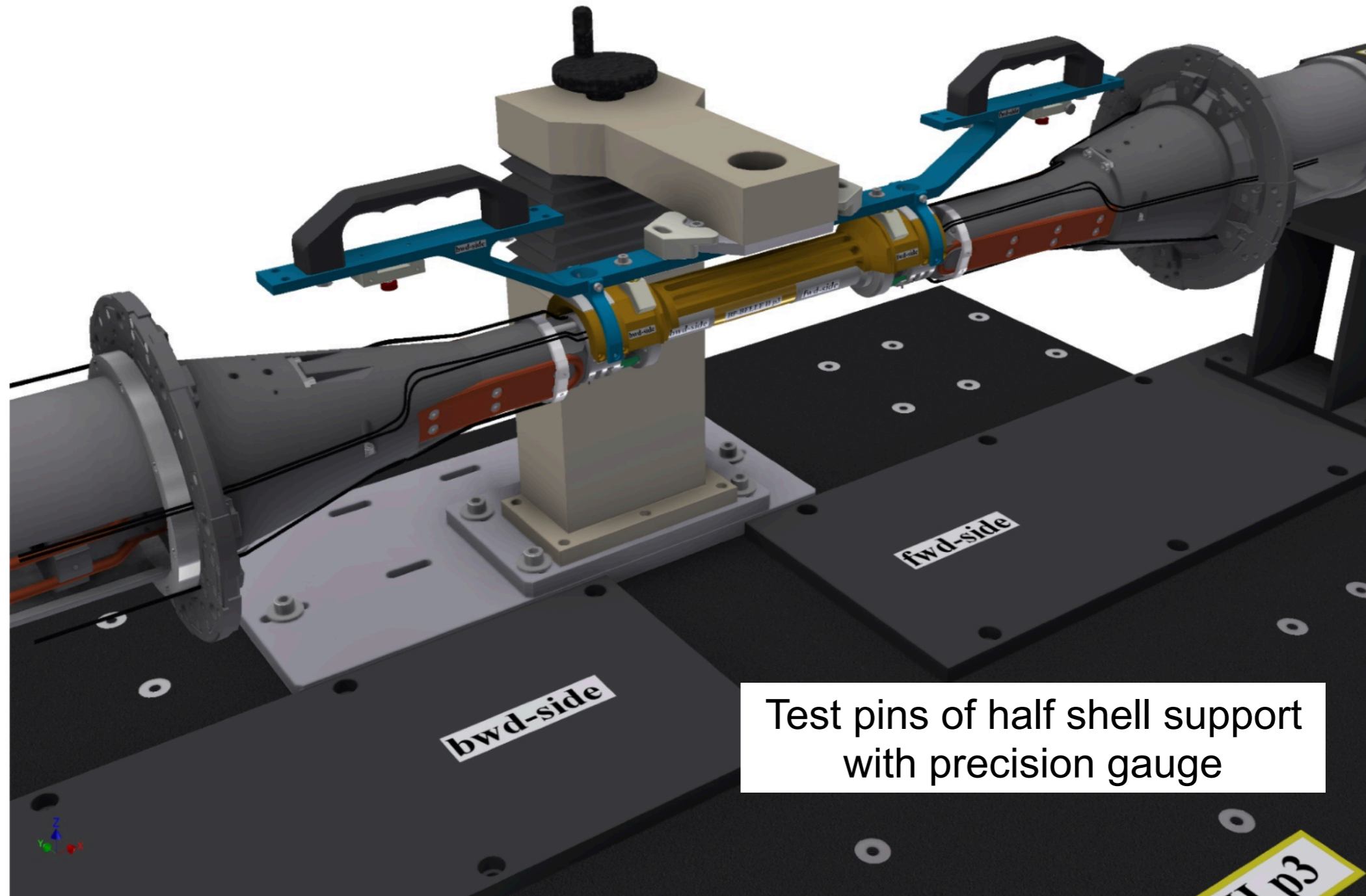
Half shell protected by cover,
Kaptans secured by fan

From K. Ackermann, MPI

Half-shell Mounting Procedure



Mounting procedures for Phase 2 half shell



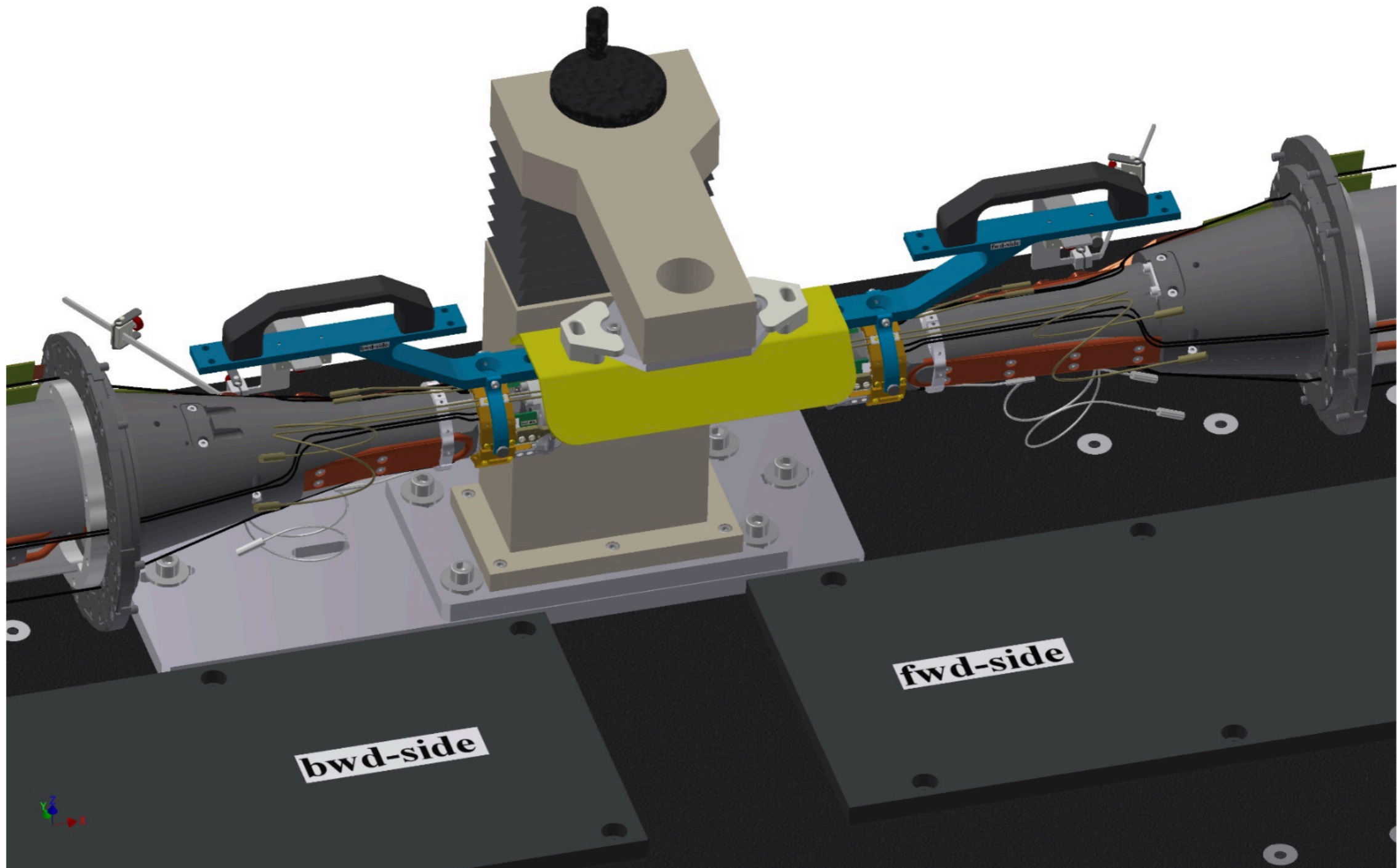
Test pins of half shell support with precision gauge

From K. Ackermann, MPI

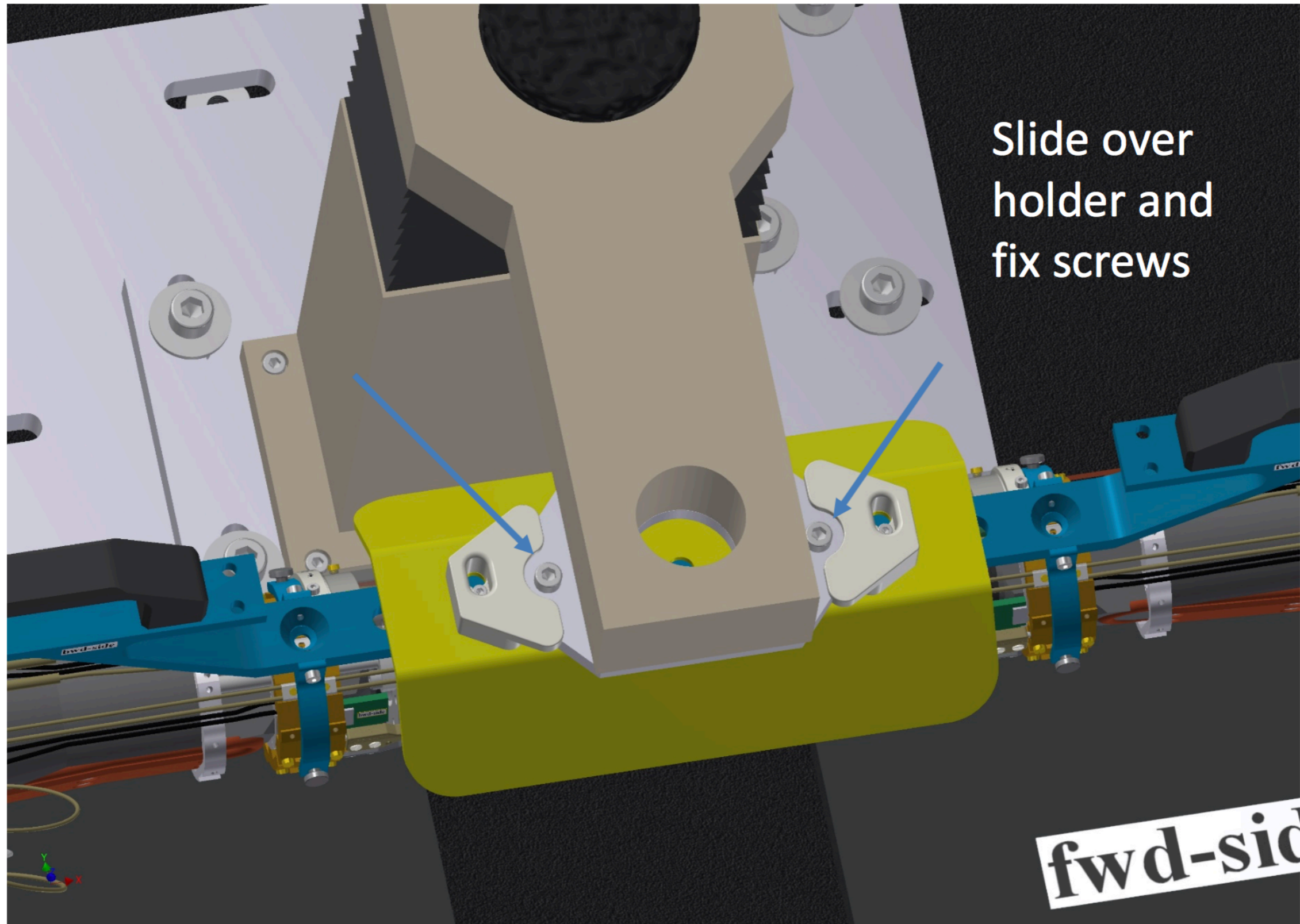
Half-shell Mounting Procedure



Bring half shell by grabbing tool to lowering stage



Half-shell Mounting Procedure

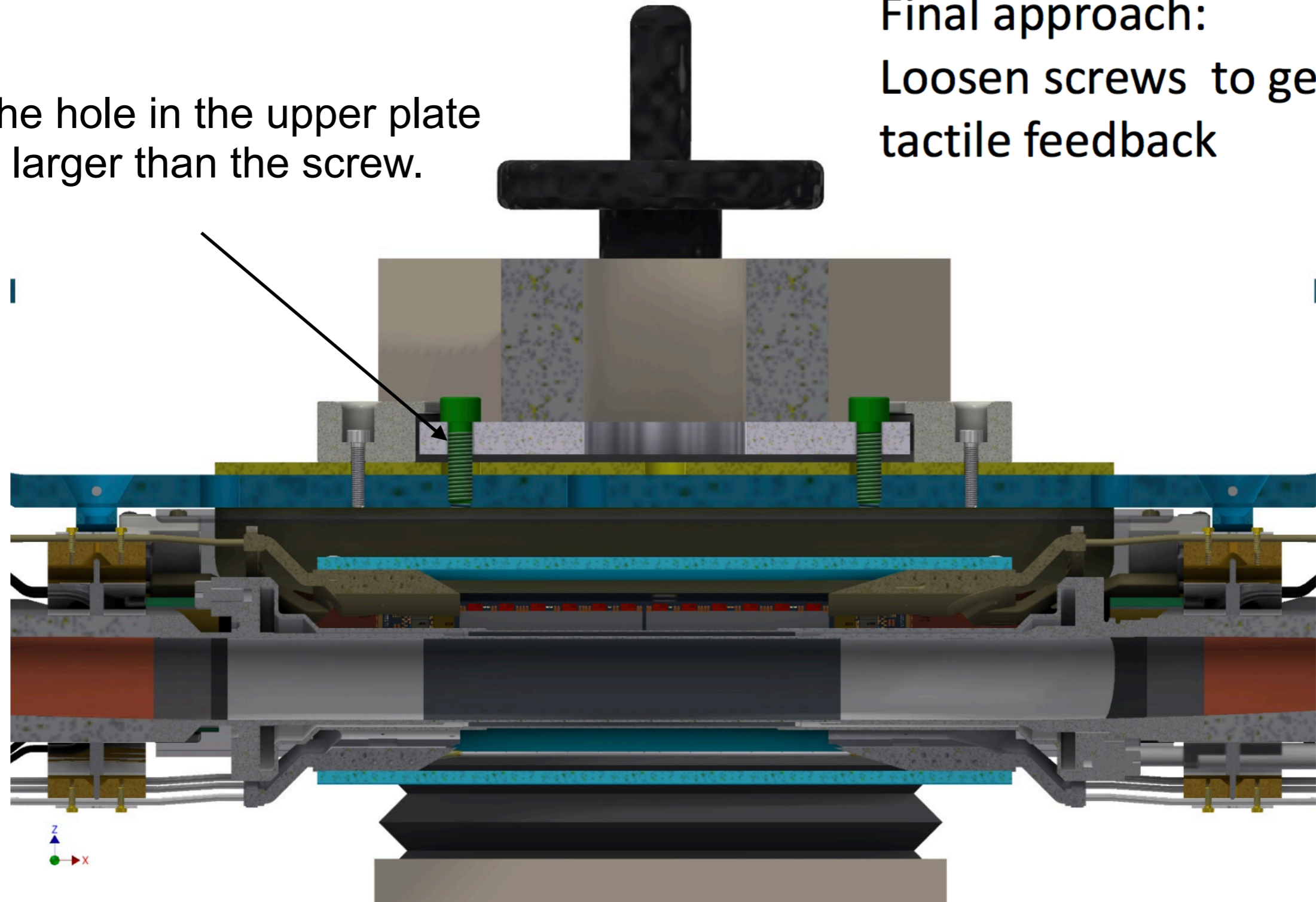


Half-shell Mounting Procedure



Final approach:
Loosen screws to get
tactile feedback

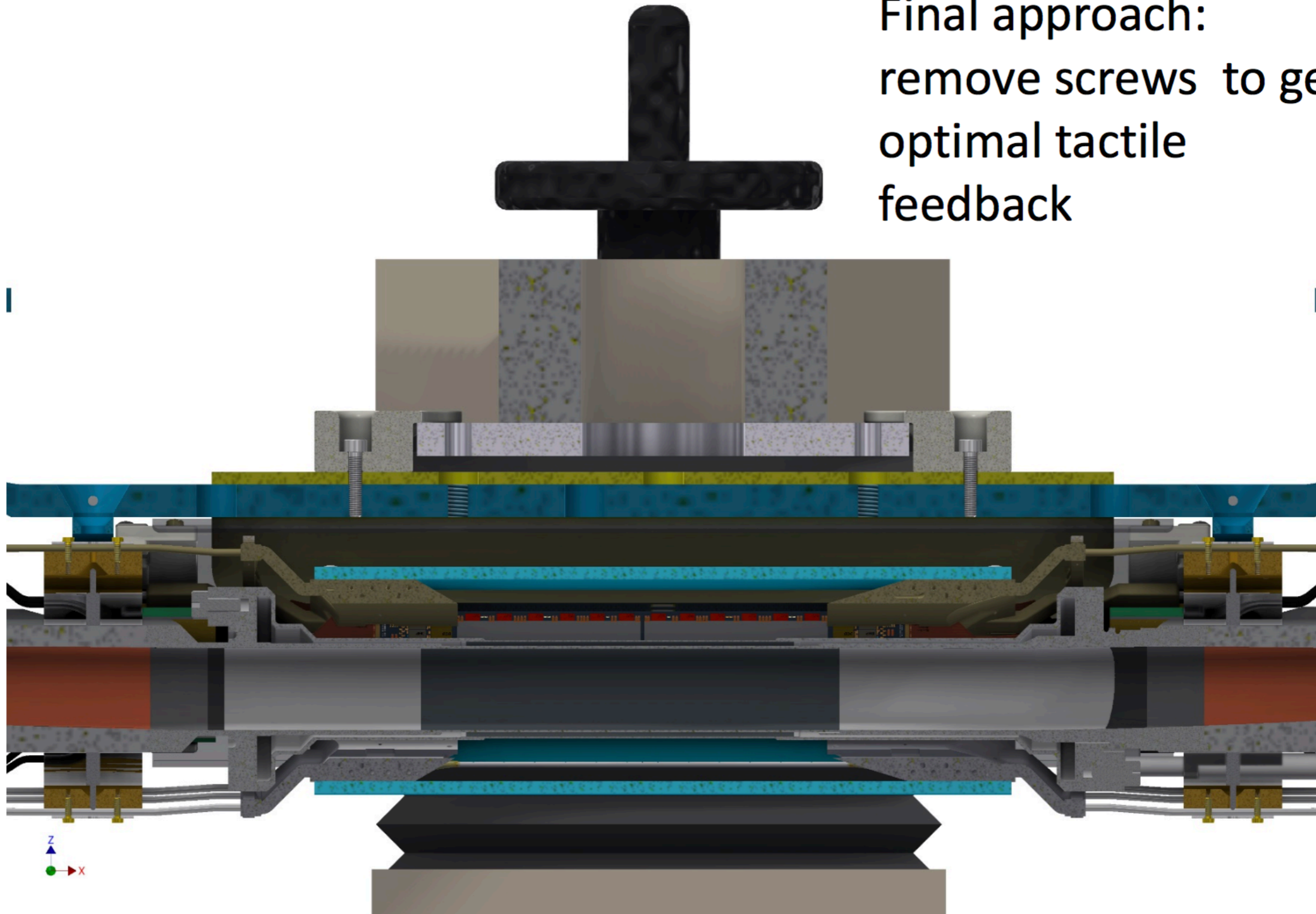
The hole in the upper plate
is larger than the screw.



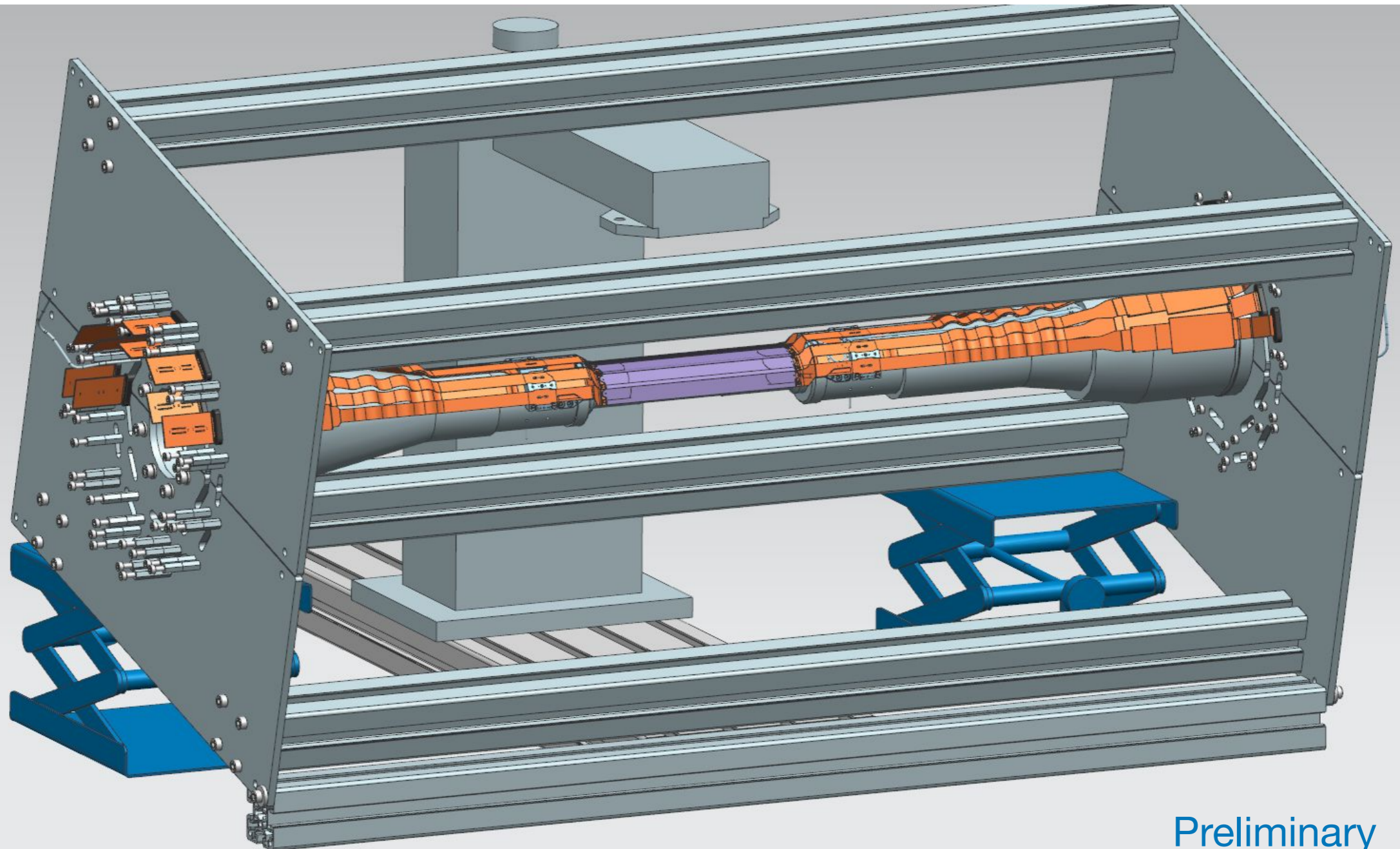
Half-shell Mounting Procedure



Final approach:
remove screws to get
optimal tactile
feedback



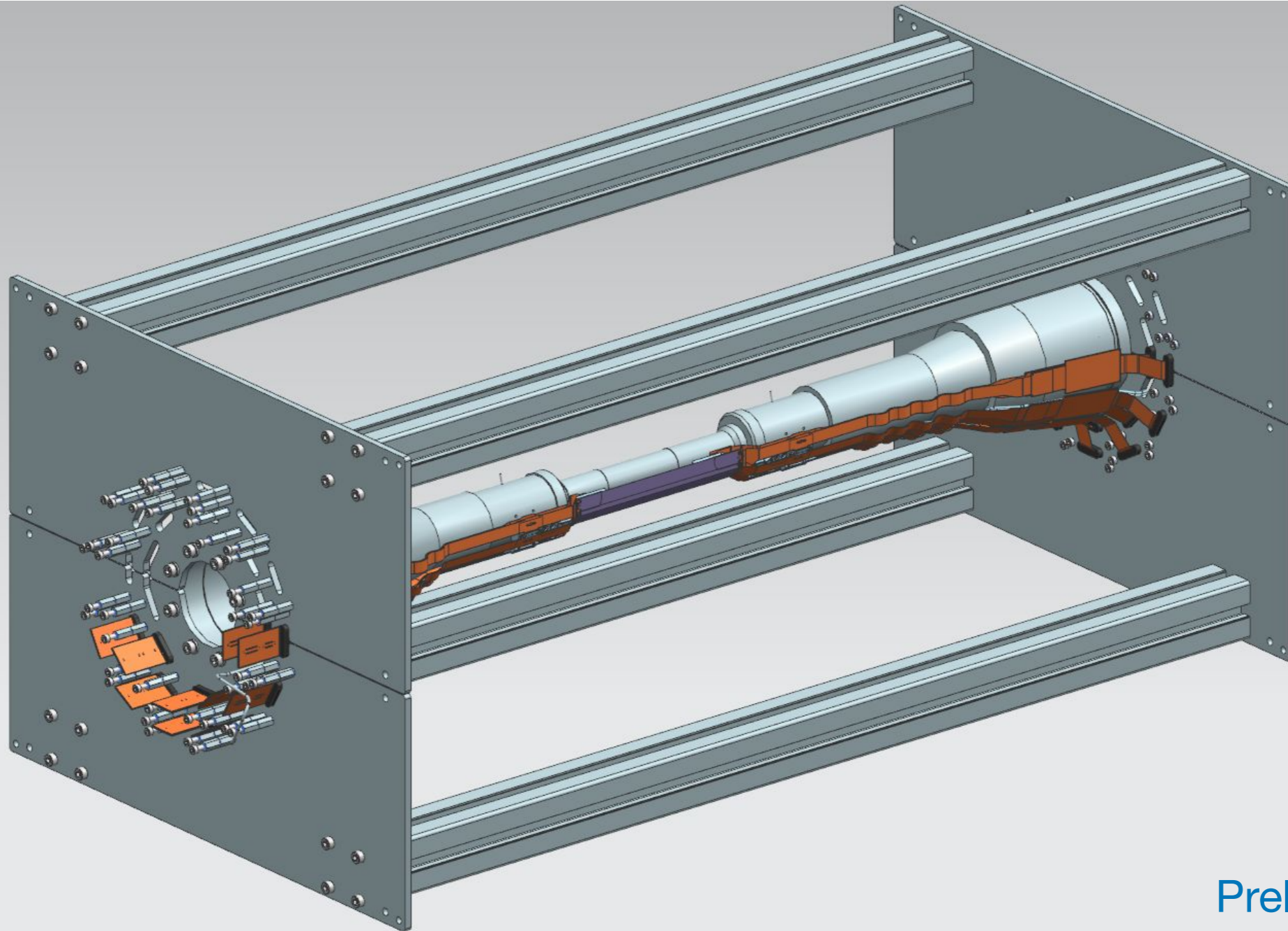
Half-shell Mounting Procedure



Preliminary

- Remove the grabbing tool, mount the upper half PP-plate

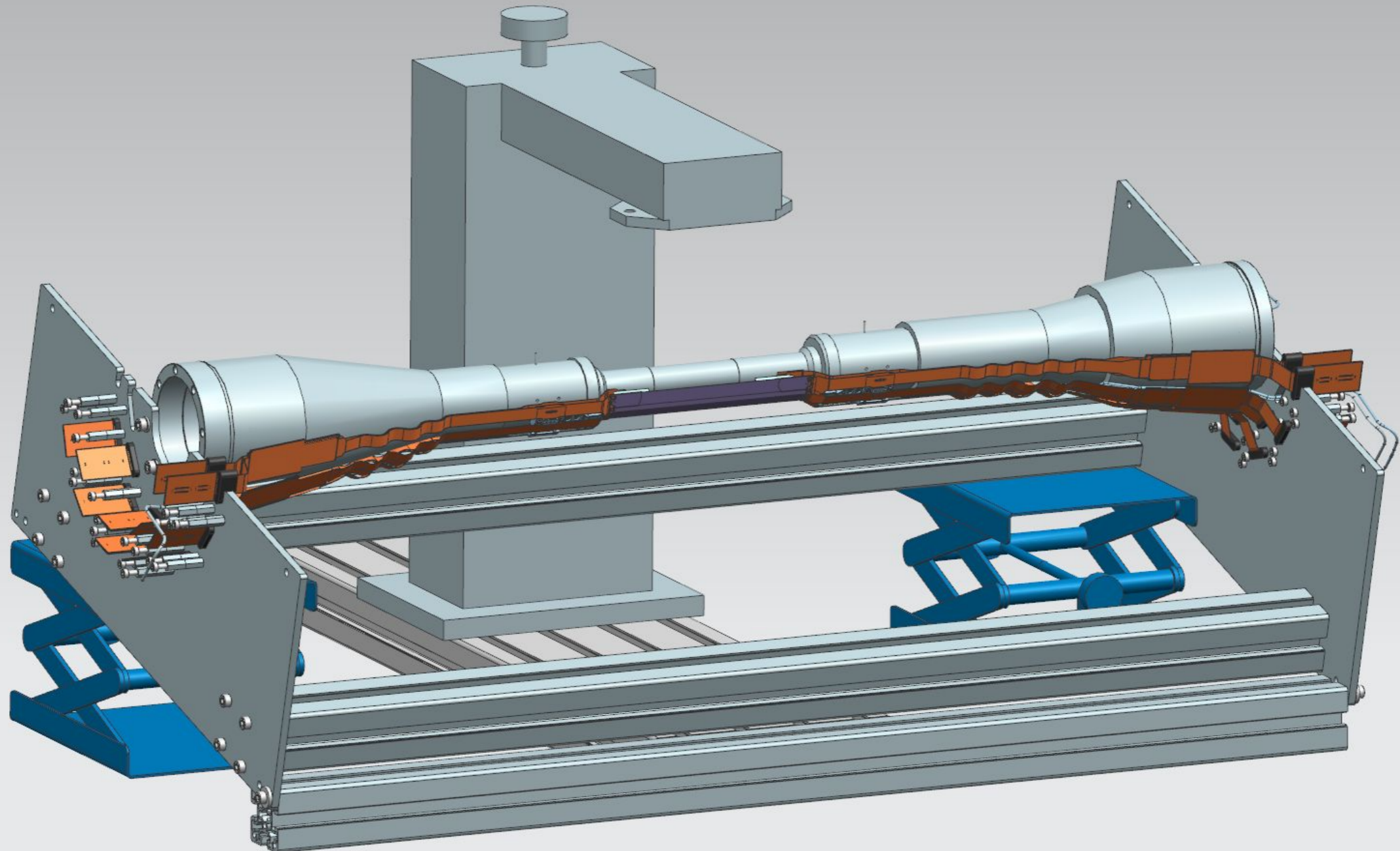
Half-shell Mounting Procedure



Preliminary

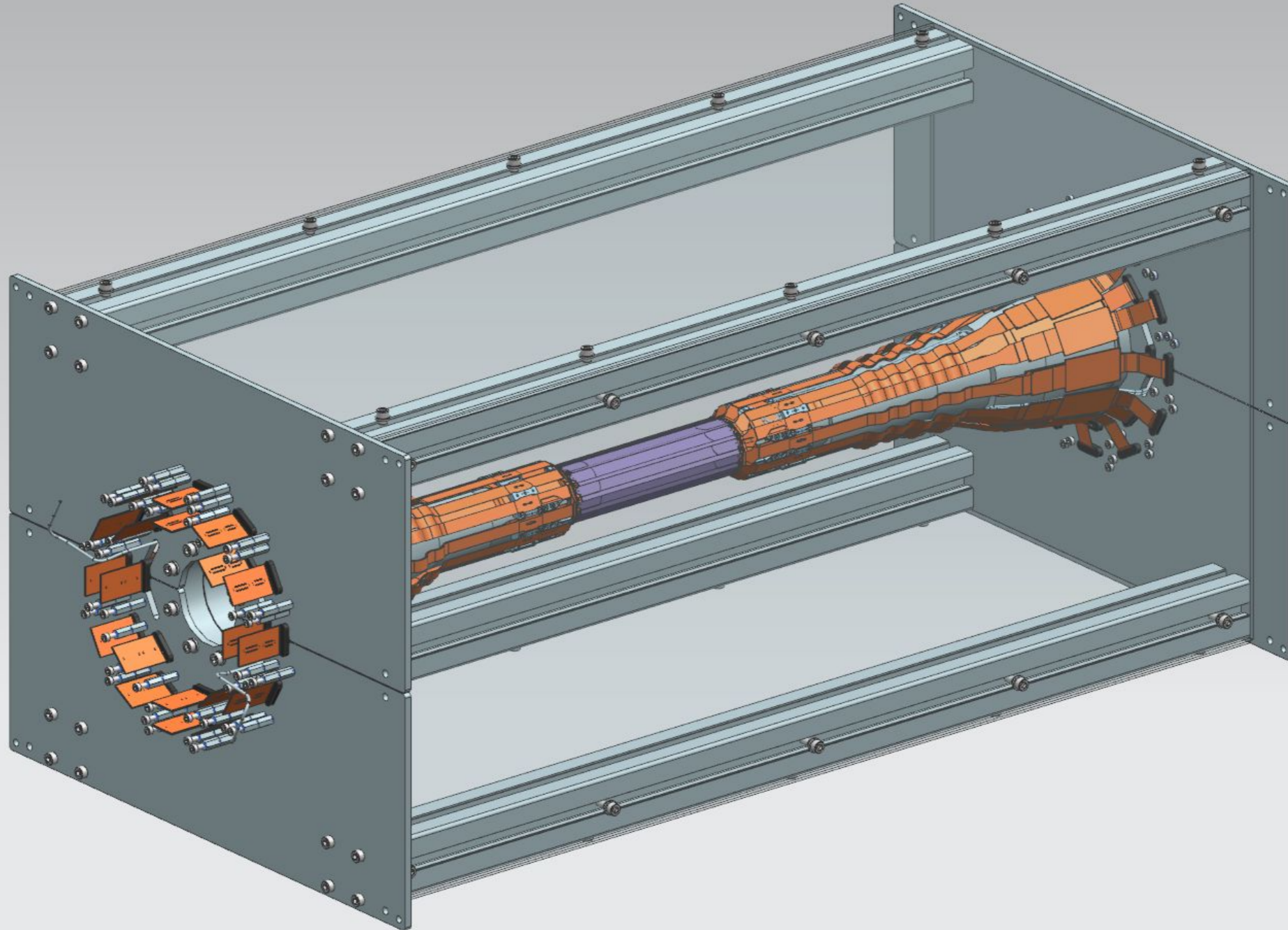
- Turn around the profile

Half-shell Mounting Procedure



- Mount the other PXD half-shell

Half-shell Mounting Procedure



- Close the volume

Clean Room



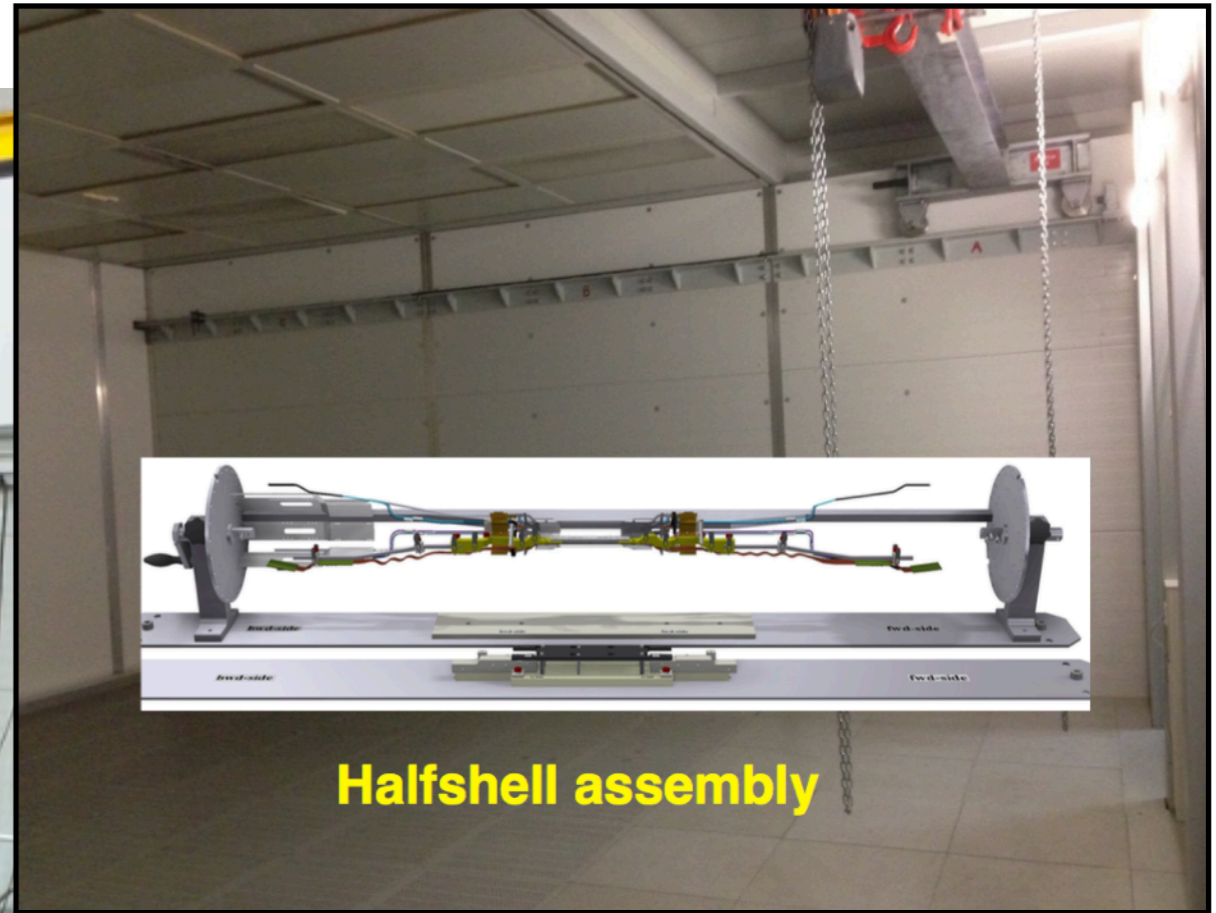
Clean Room for Phase3 commissioning

Thermal Mockup

Clean Room



Halfshell commissioning



Halfshell assembly



**Electronics/DAQ
will move to gallery**

Plenty of experiences gained in previous tests

- Thermal mock-up
- Beam test campaigns
- PERSY
- PXD Phase2 commissioning test

Preparation for PXD Phase3 commissioning

- Services, e.g. cooling, PS, DAQ
- Clean room (under preparation)
- Mounting frame and grabbing tools (under preparation)
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