



PXD-Halfshell Transport to KEK

PXD - Mechanical Overview

Transport DESY – MPI

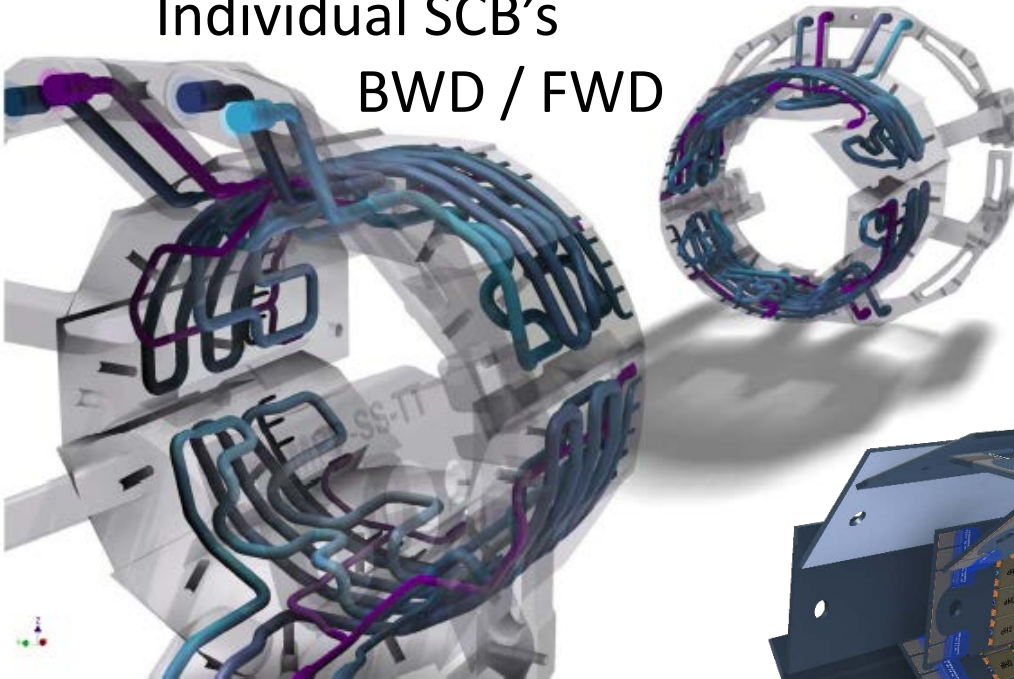
Transport MPI – KEK

Half Shell Mounting on Beam Pipe

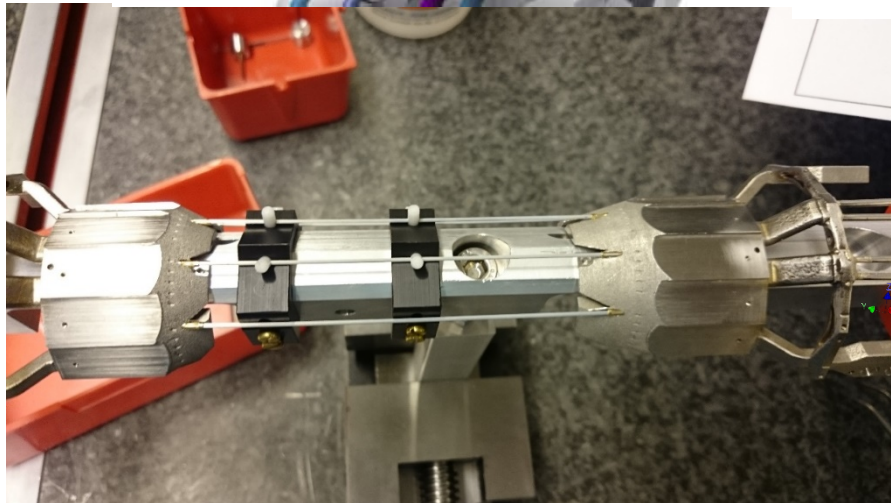
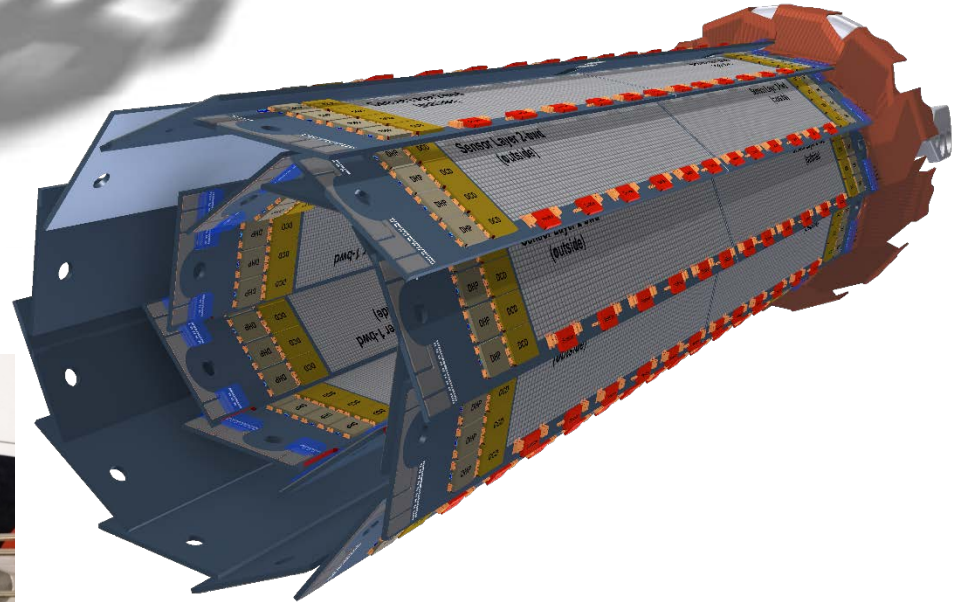
Next Steps

Ladder Mounting: Overview

Individual SCB's
BWD / FWD

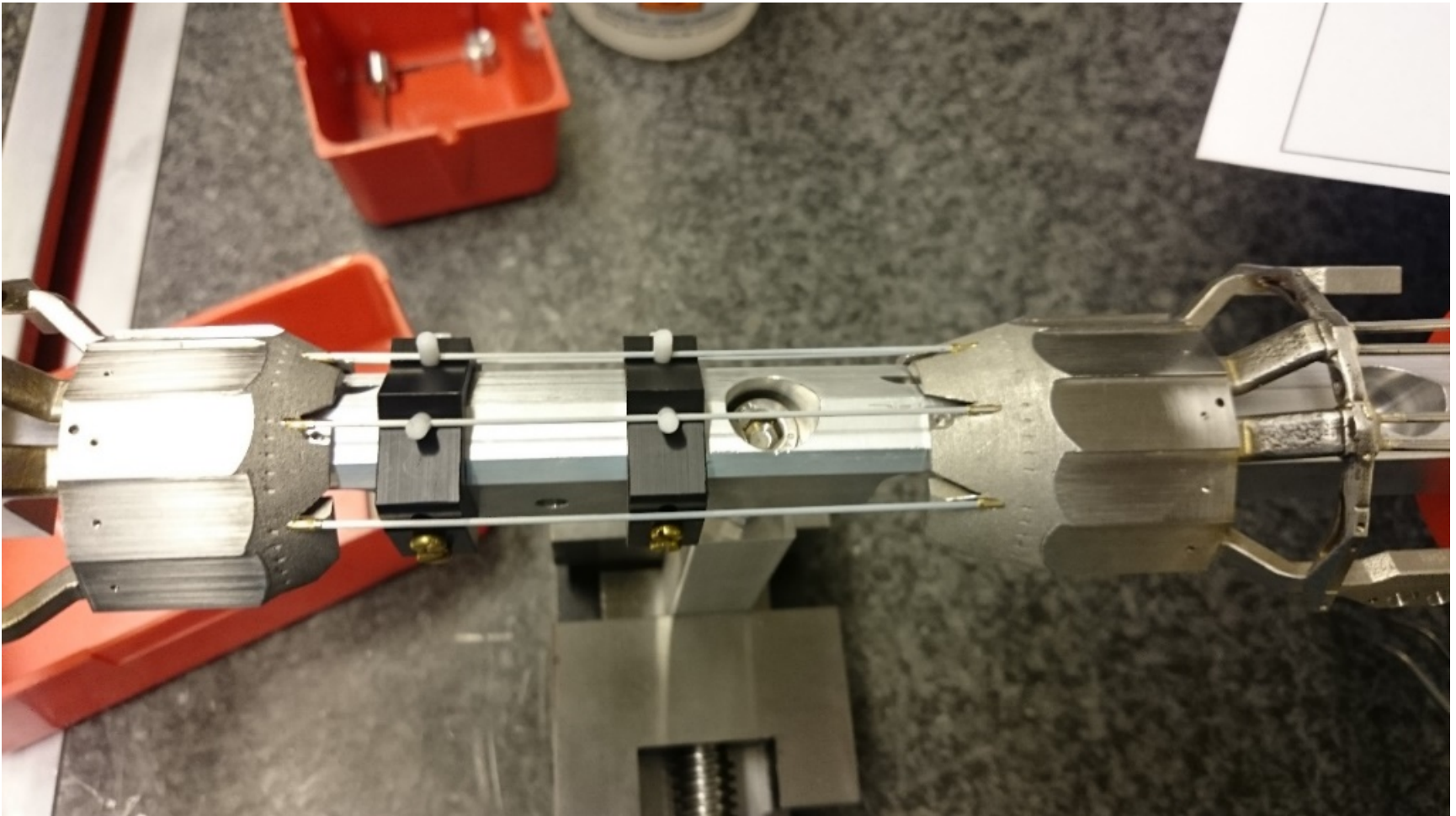


40 modules glued to
20 ladders
(8 inner, 12 outer)
L1 L2



SCB Half Shell (SCB-HS) prepared
for the ladder mount
[SCB: Support and Cooling Block]

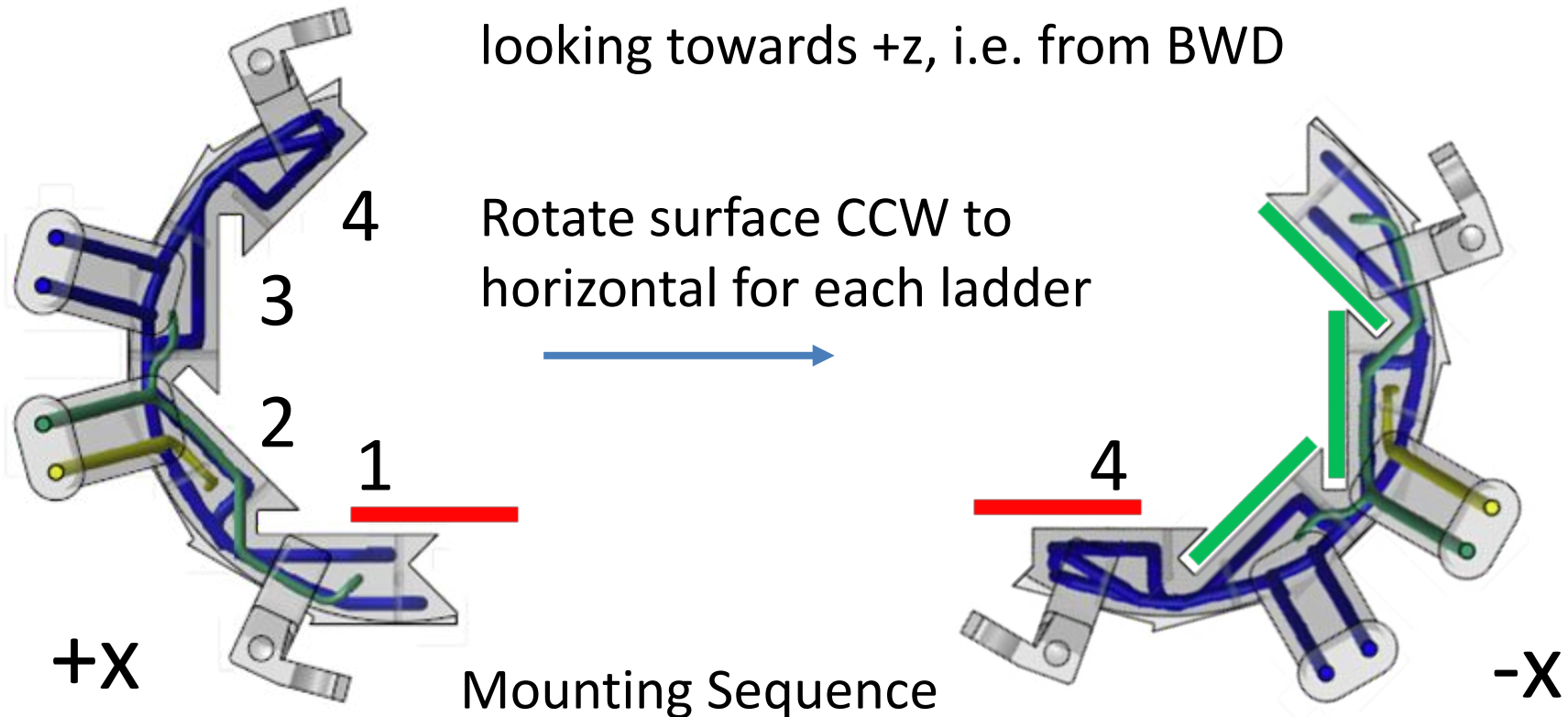
Fully Assembled SCB Half Shell, Phase 3



SCB Half Shell for Phase 3, same assembly tested in Phase 2

Ladder Mounting: Overview for Phase 3

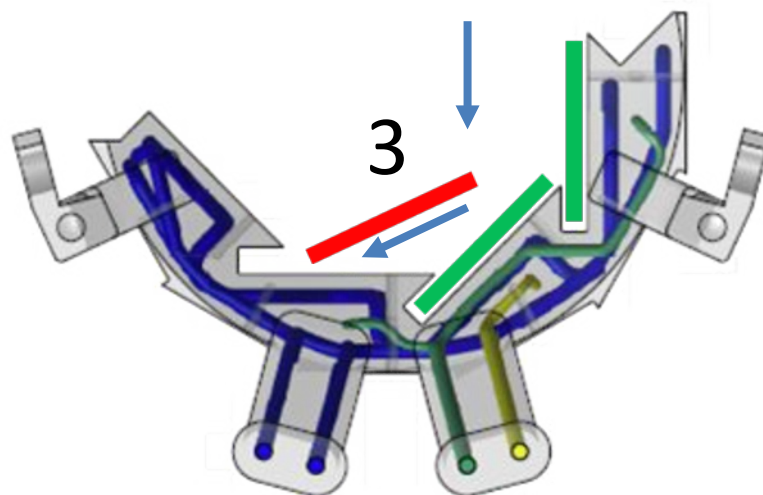
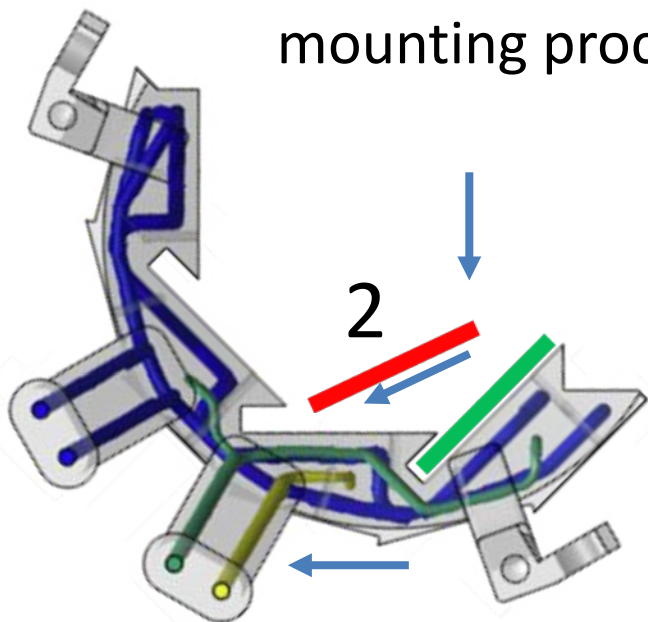
Principle: Mount ladders always from top; first L1, then L2



1st and last ladder are “easy”, 2 and 3 “tricky”

Ladder Mounting: Layer 1

Ladder 1 mounted, now mount ladders 2 and 3, mounting procedure of ladder 2 and 3 “identical”



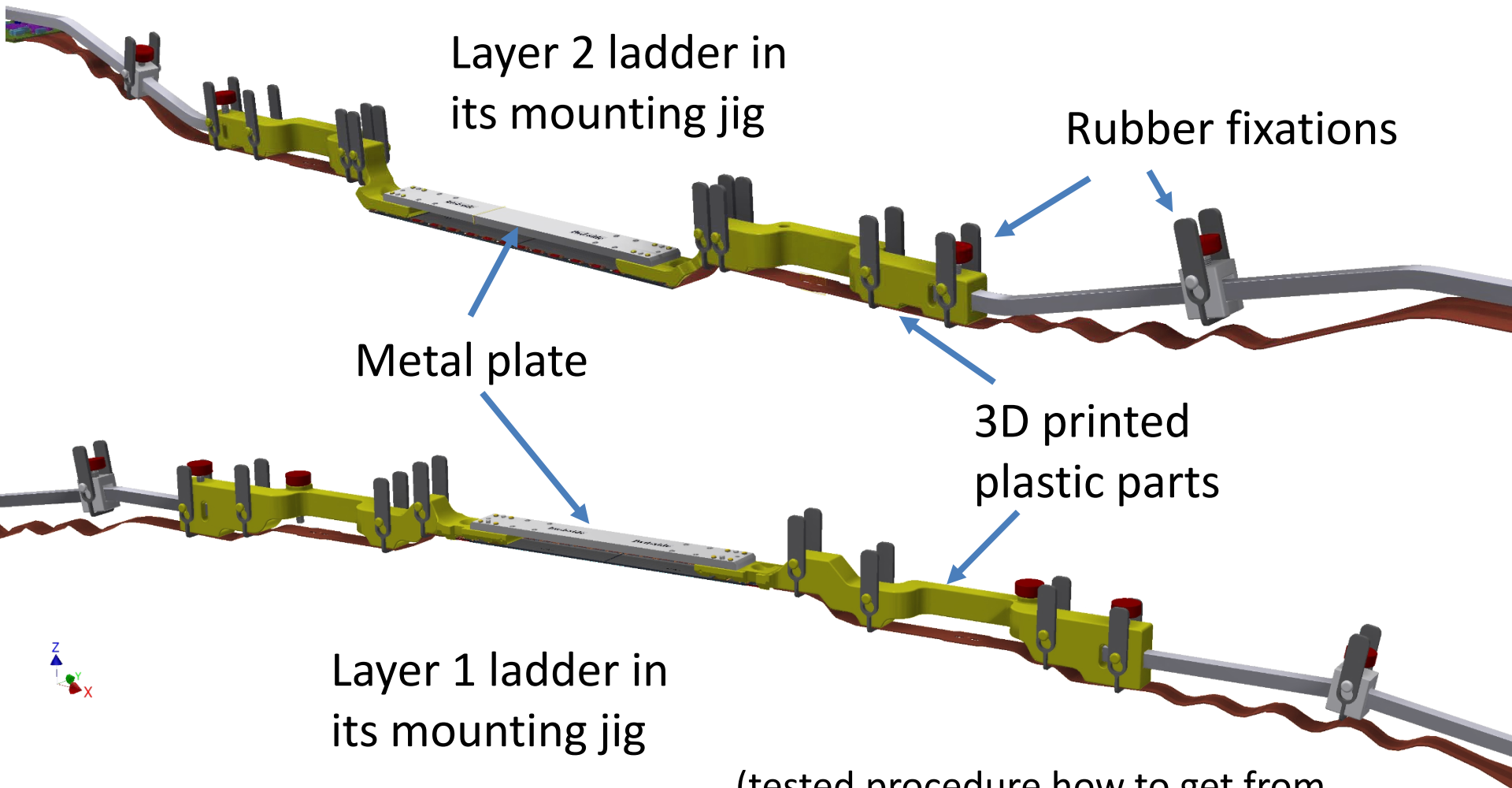
+X

-X

Ladder 2(3) must be guided “down” and “left” in a well coordinated way (tactile feedback mandatory)

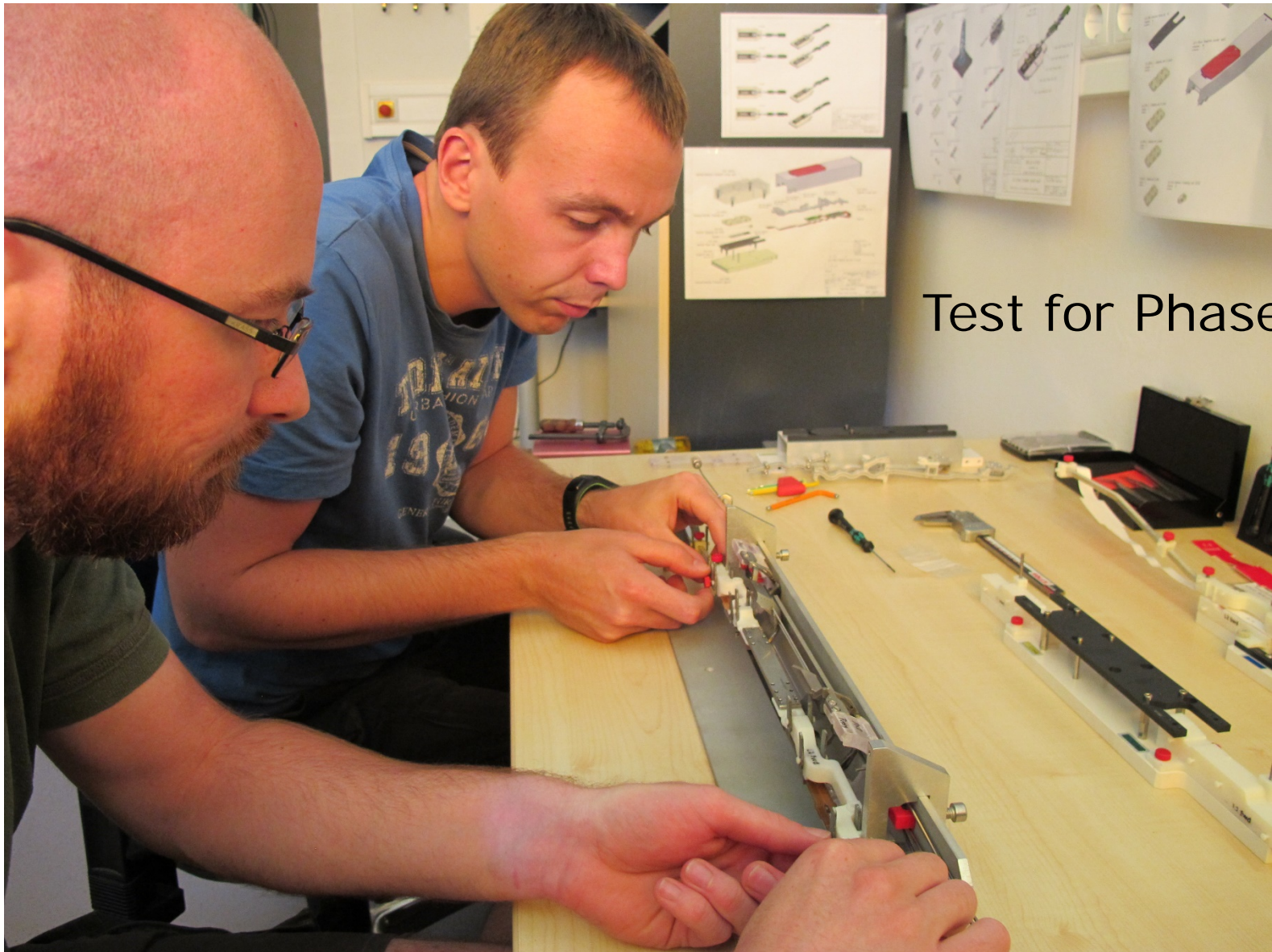
- Need a rotation mechanism for SCB half shell
- Need mounting jig (protection) for each layer

Ladder Mount Jigs



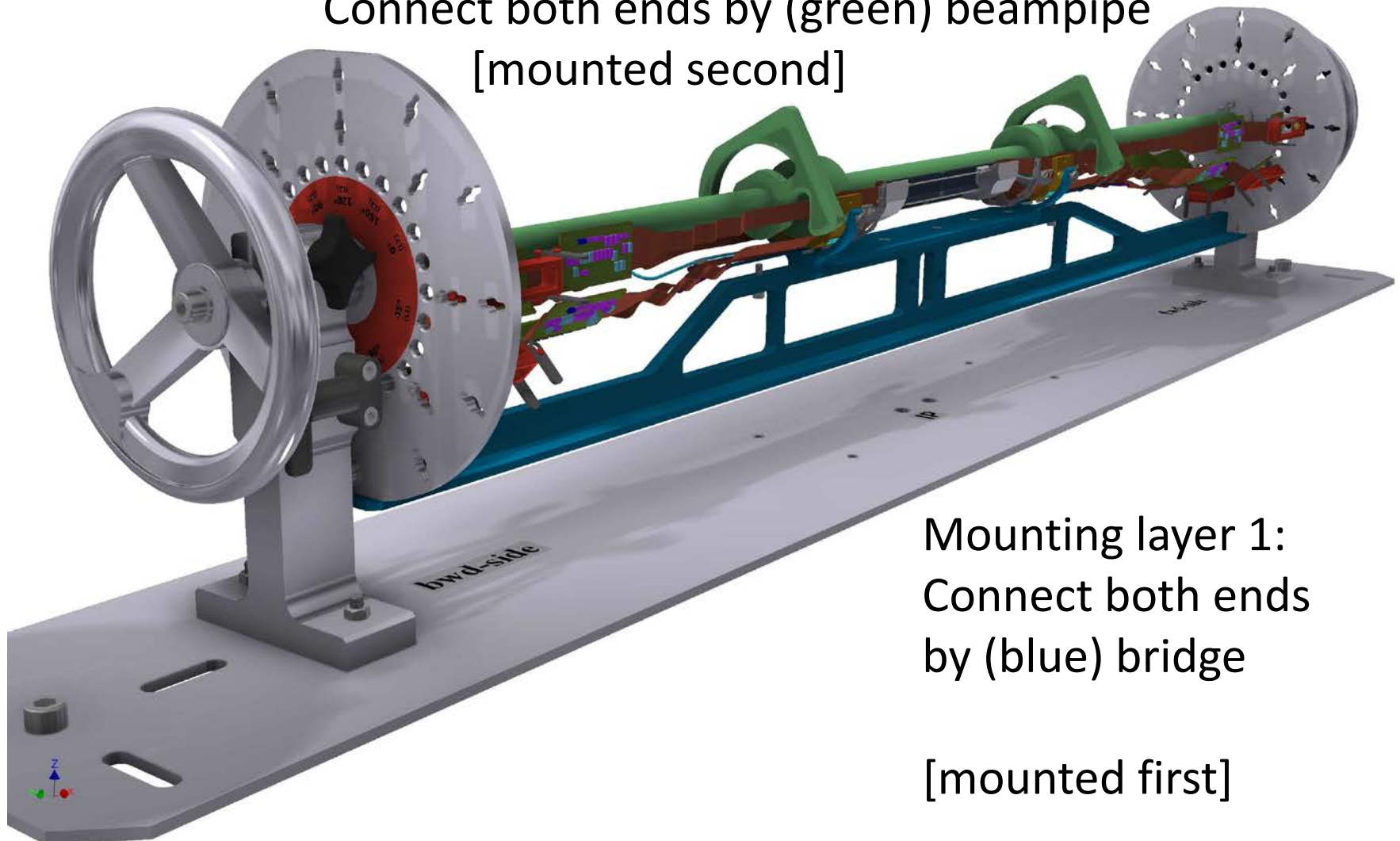
(tested procedure how to get from base jig to ladder mount jig -> backup)

Test Installation of Ladder in Mounting Jig



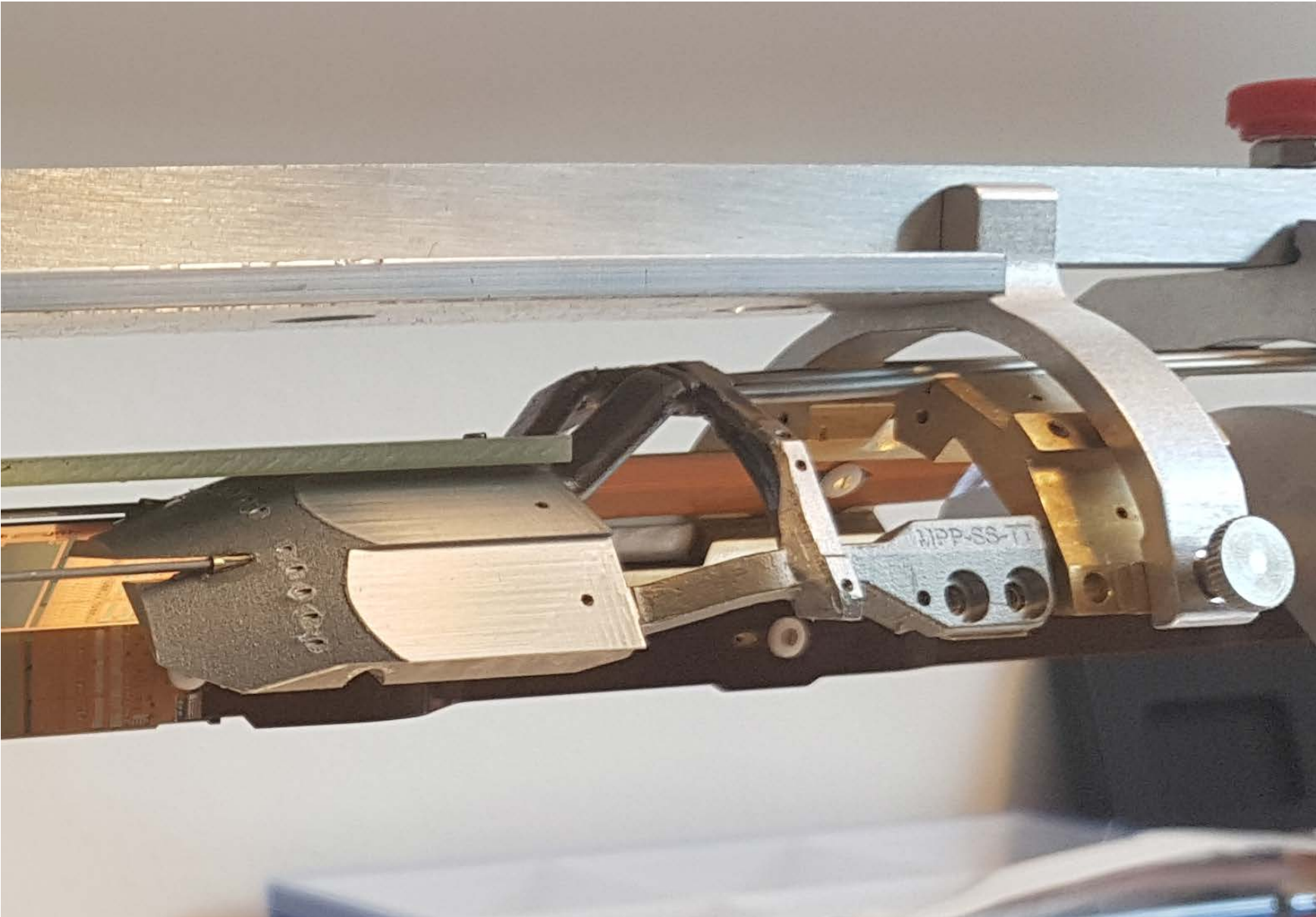
Test for Phase 2

Mounting layer 2:
Connect both ends by (green) beampipe
[mounted second]

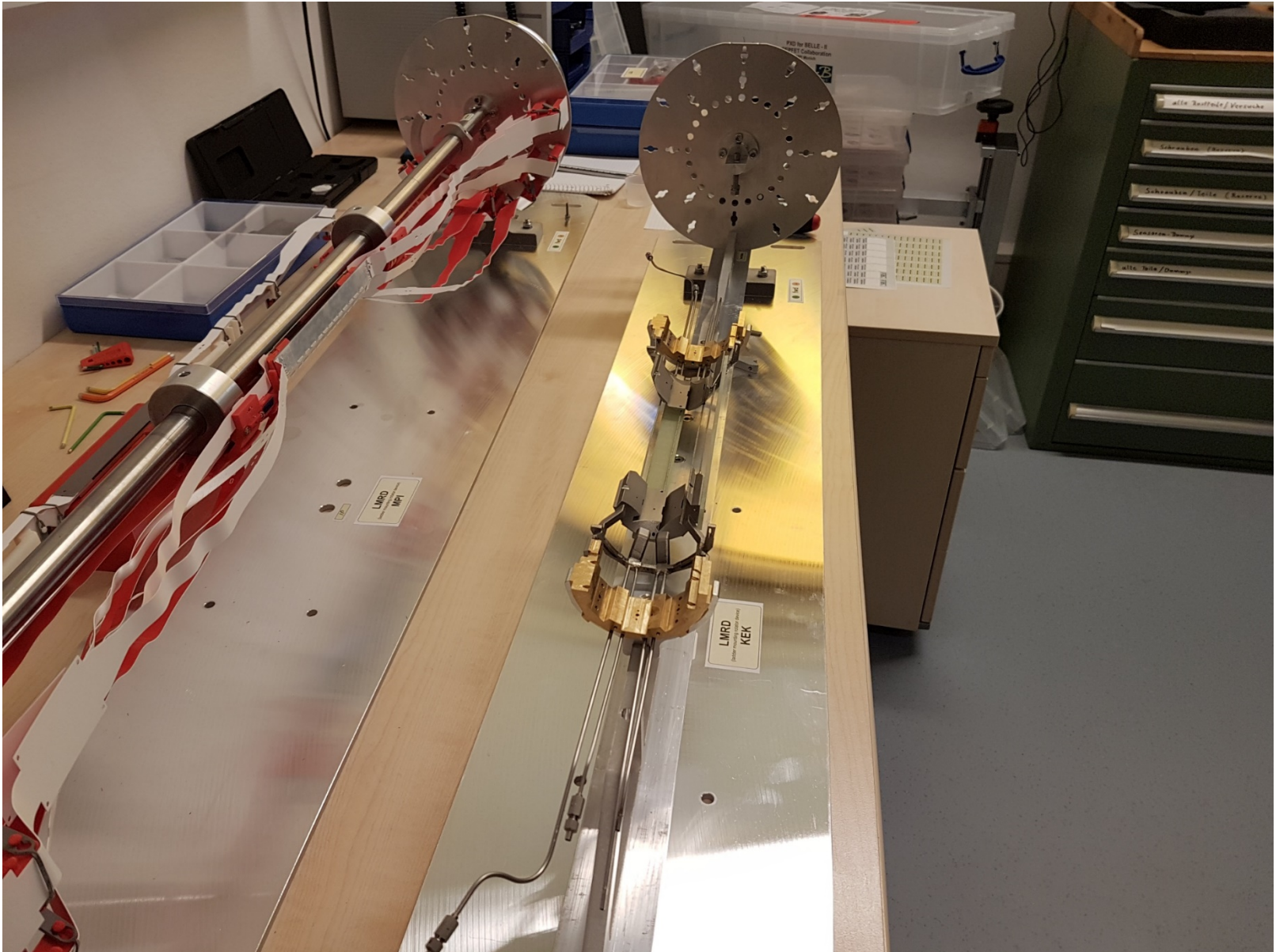


Mounting layer 1:
Connect both ends
by (blue) bridge
[mounted first]

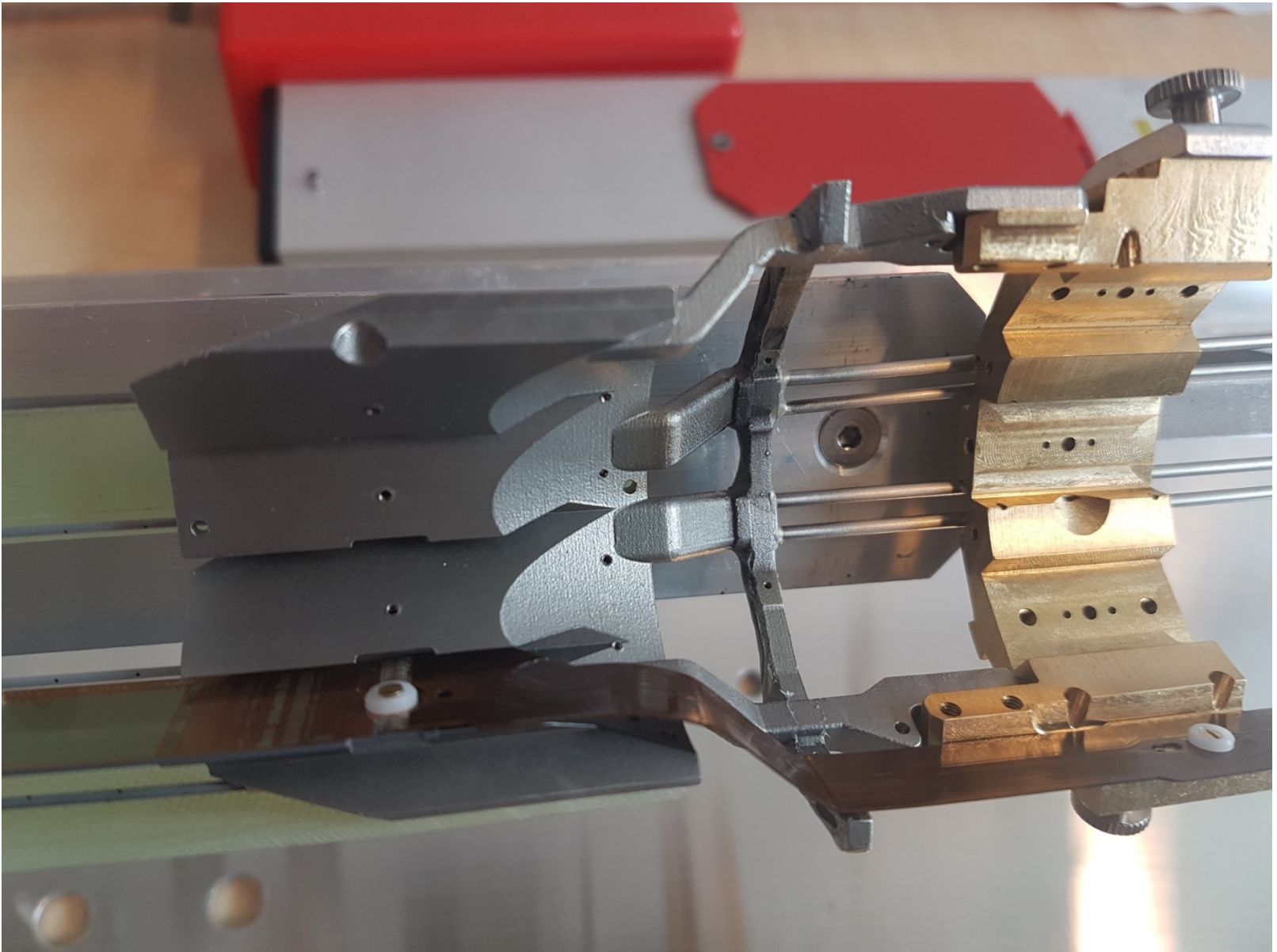
Fix SCB-HS to LMRD



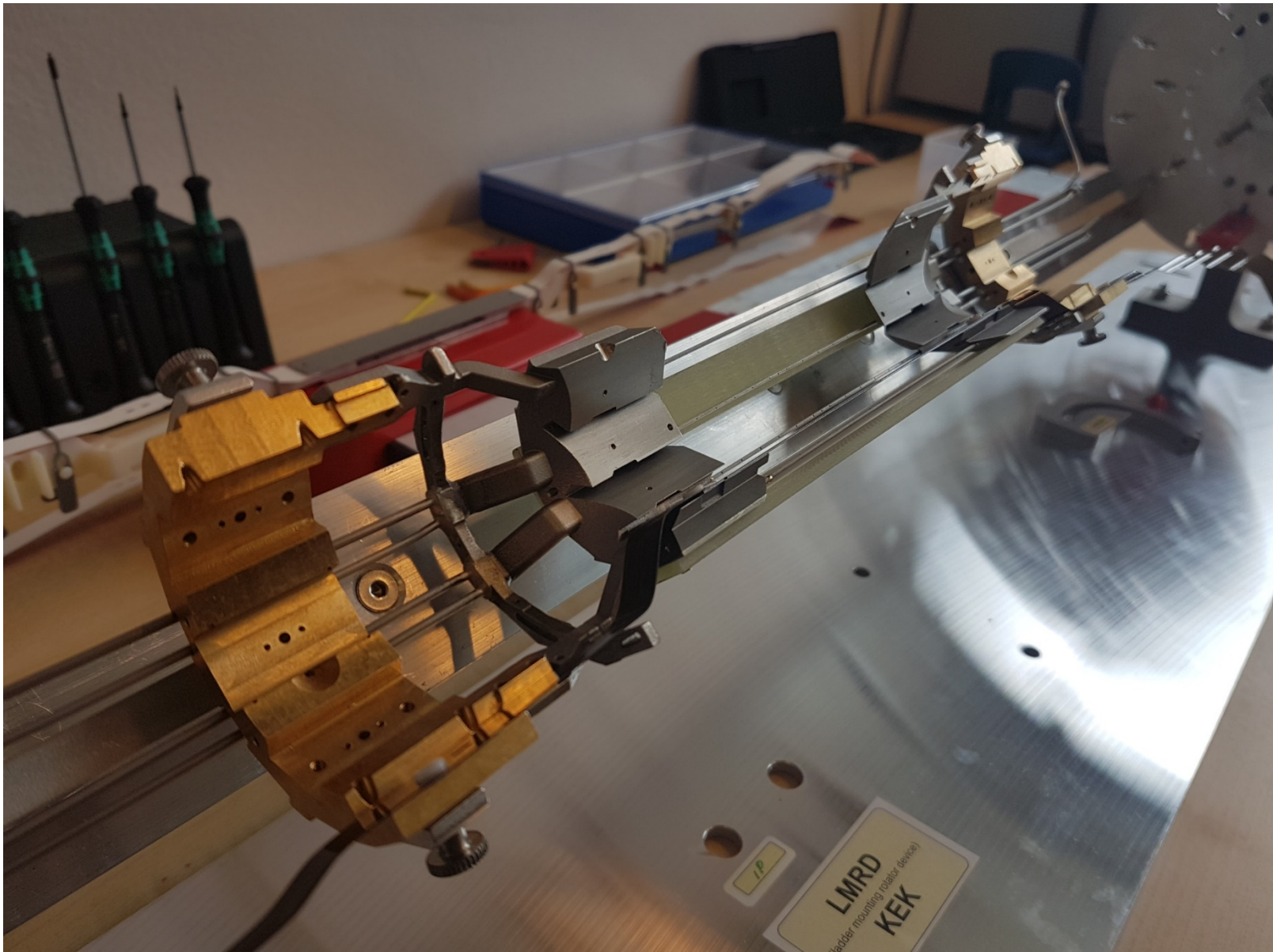
SCB-HS fixed to LMRD



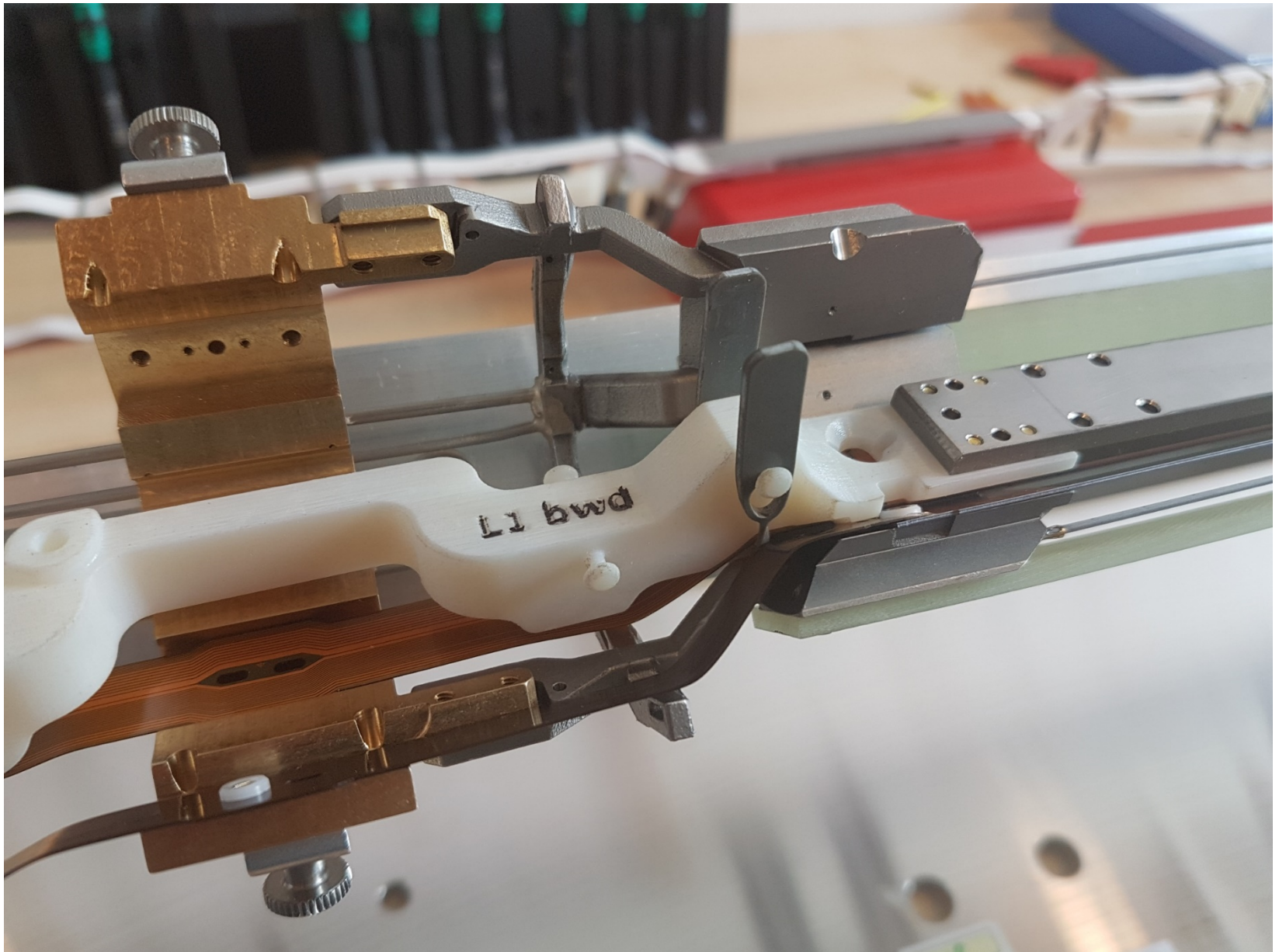
Ladder 1 Mounted: Closeup FWD



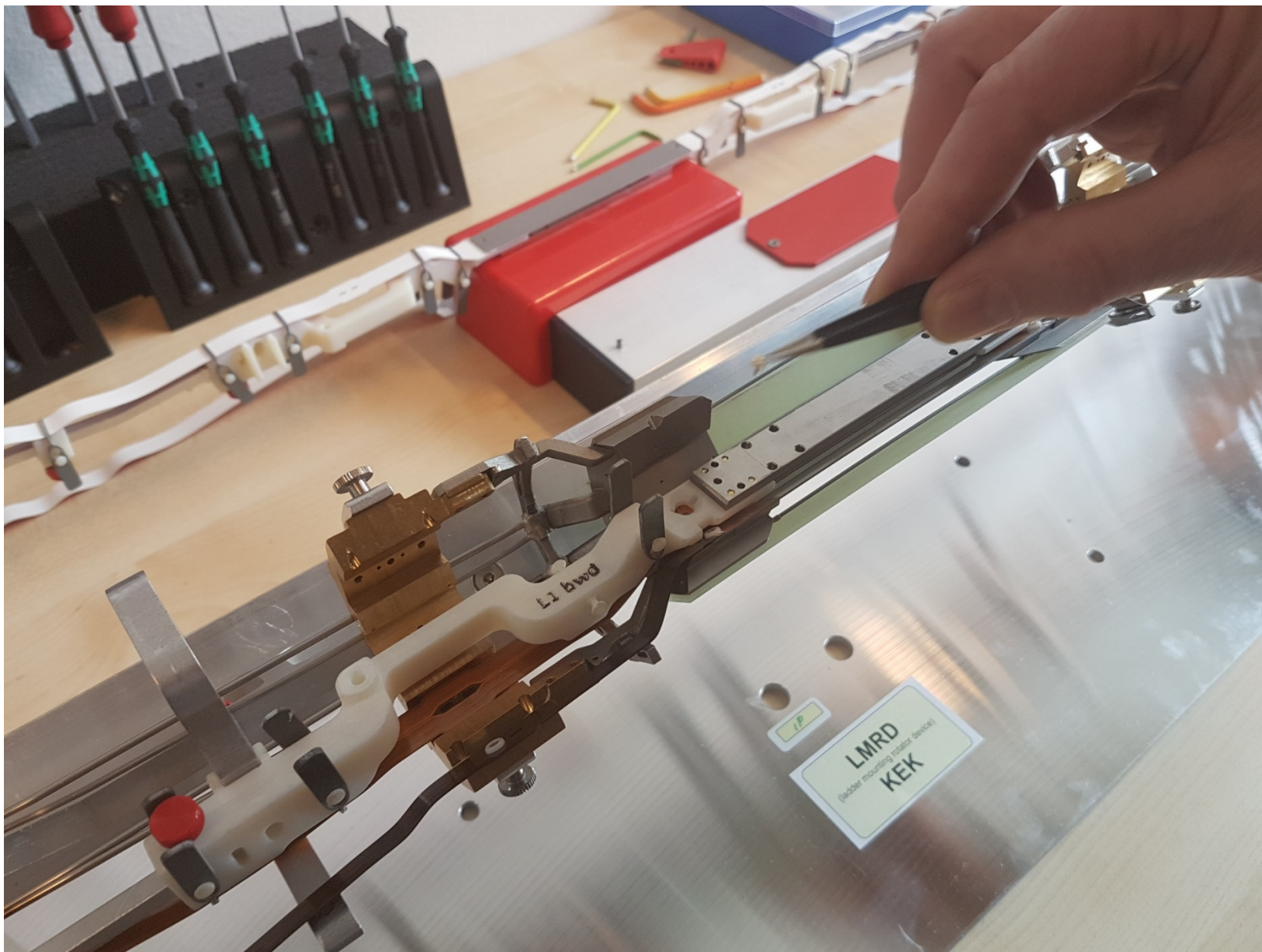
LMRD Rotated to Receive Ladder 2



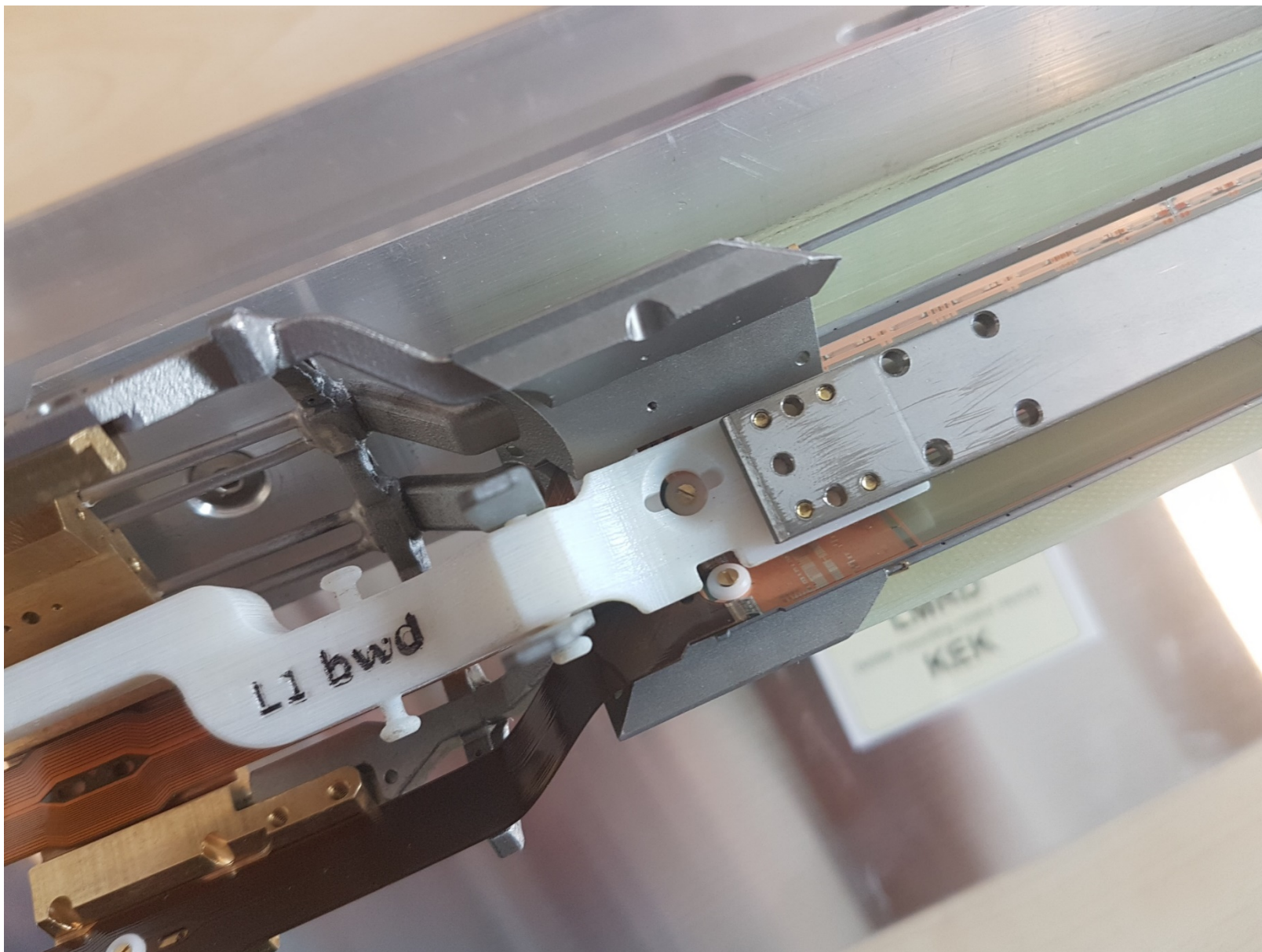
Ladder2 Rotated, in Position (BWD)



Ladder2 Ready to be Fixed (BWD)

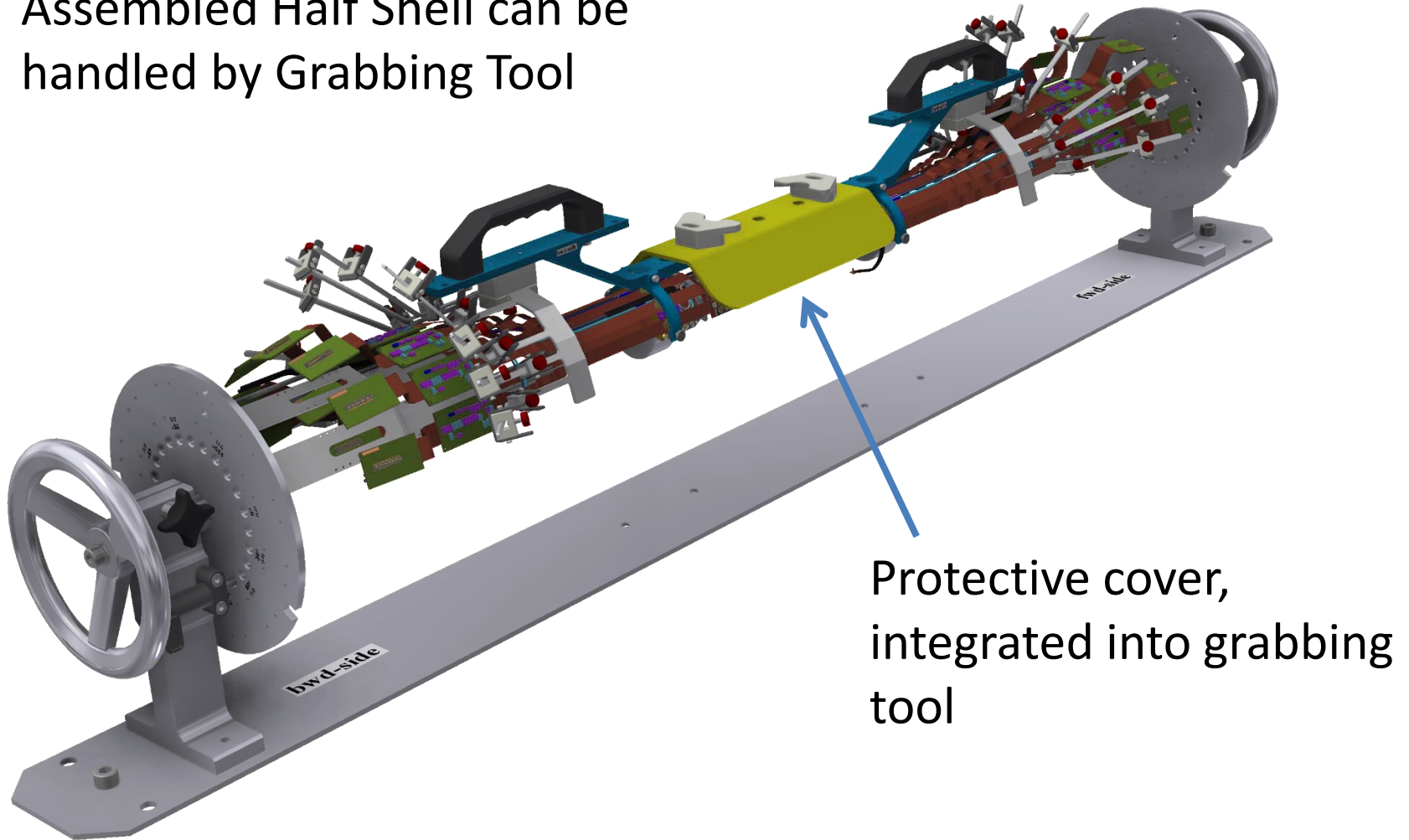


Ladder2 Fixed (BWD)

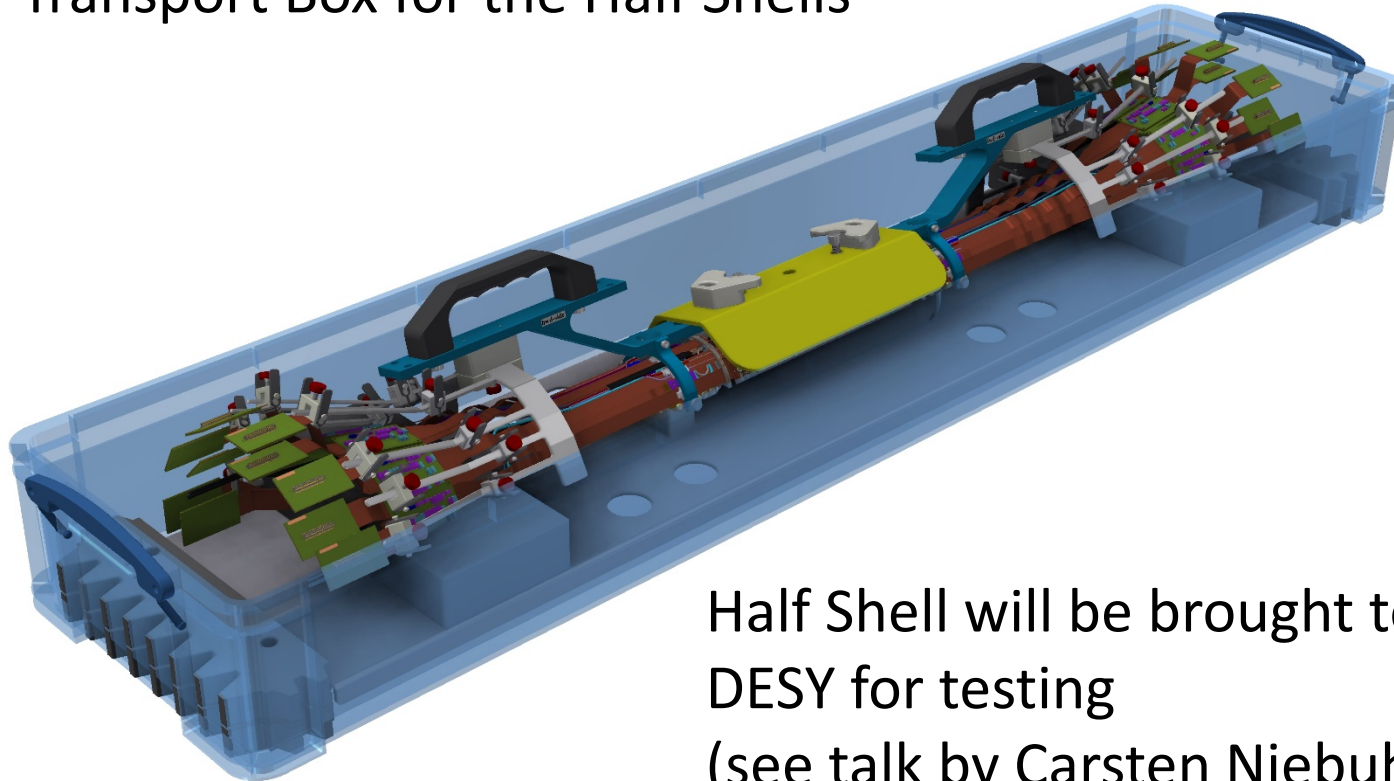


Mounting on Beampipe: Grabbing Tool

Assembled Half Shell can be handled by Grabbing Tool



Transport Box for the Half Shells

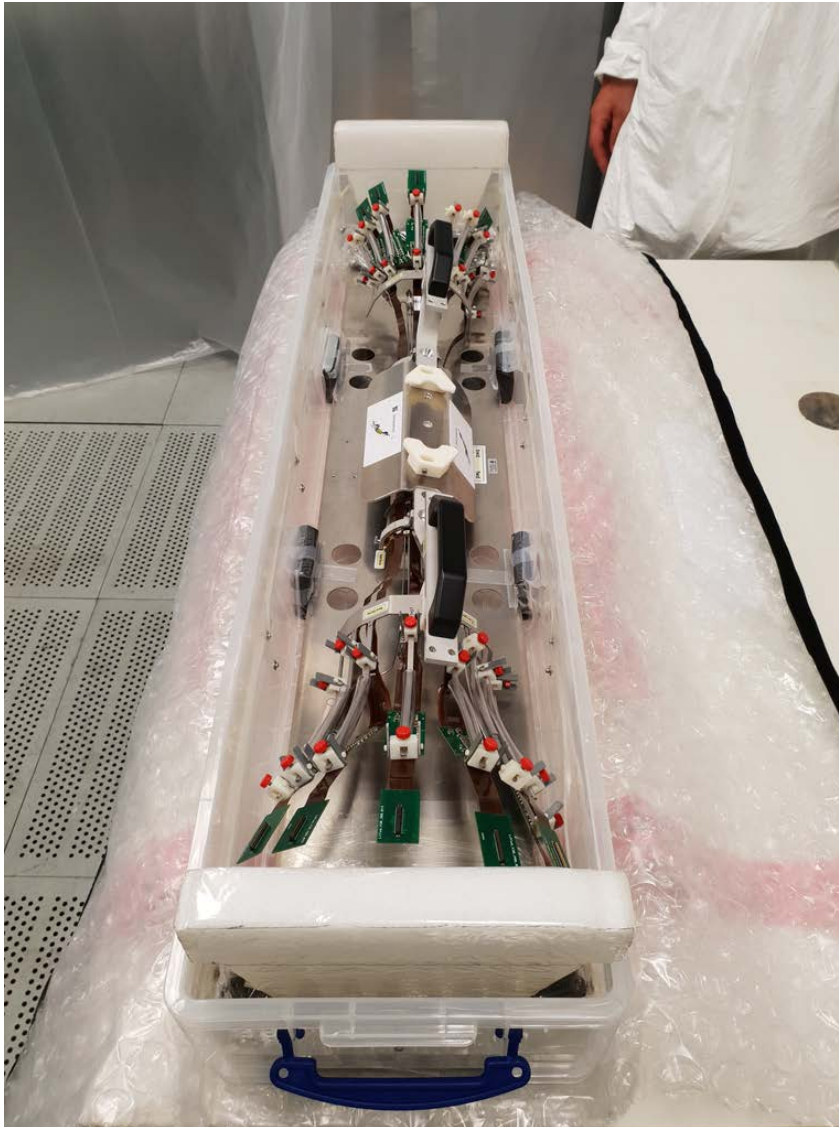


Half Shell will be brought to
DESY for testing
(see talk by Carsten Niebuhr at
Oct 2017 B2GM)



After DESY test half shell goes to KEK

Test of Half Shells at DESY



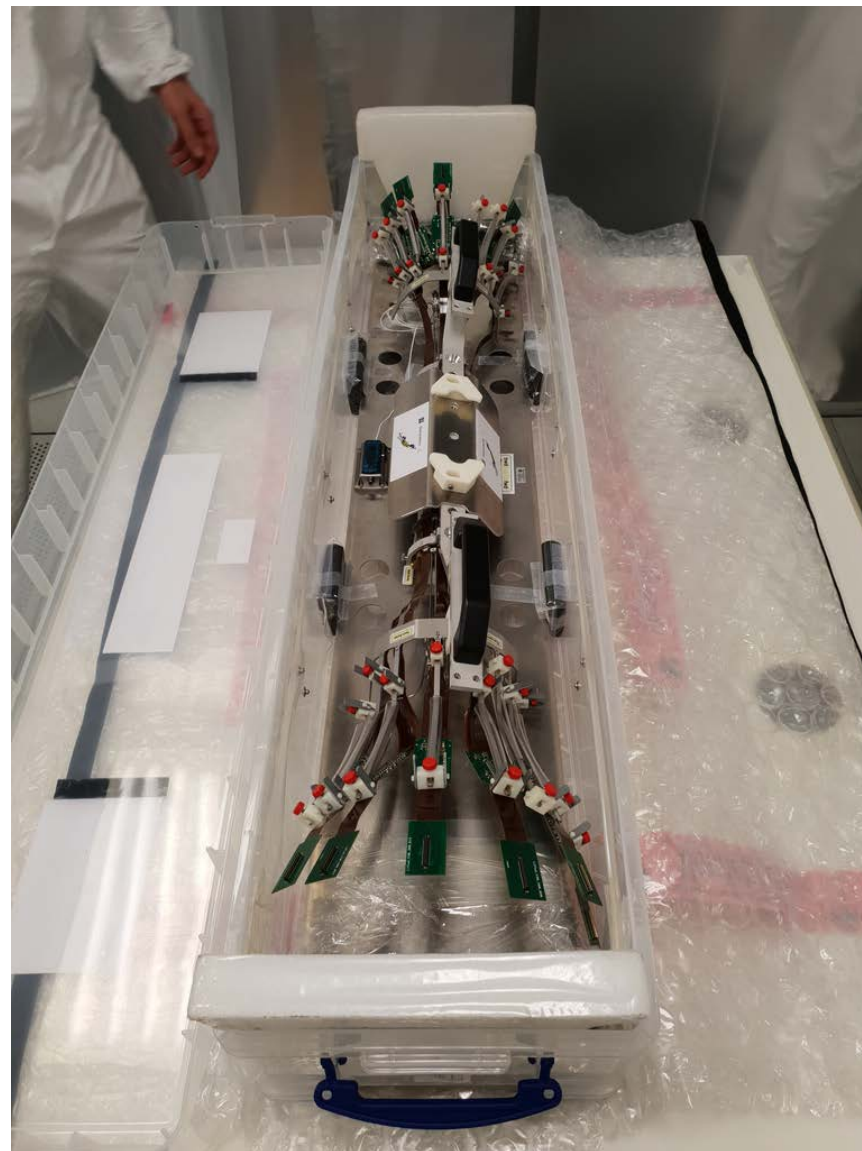
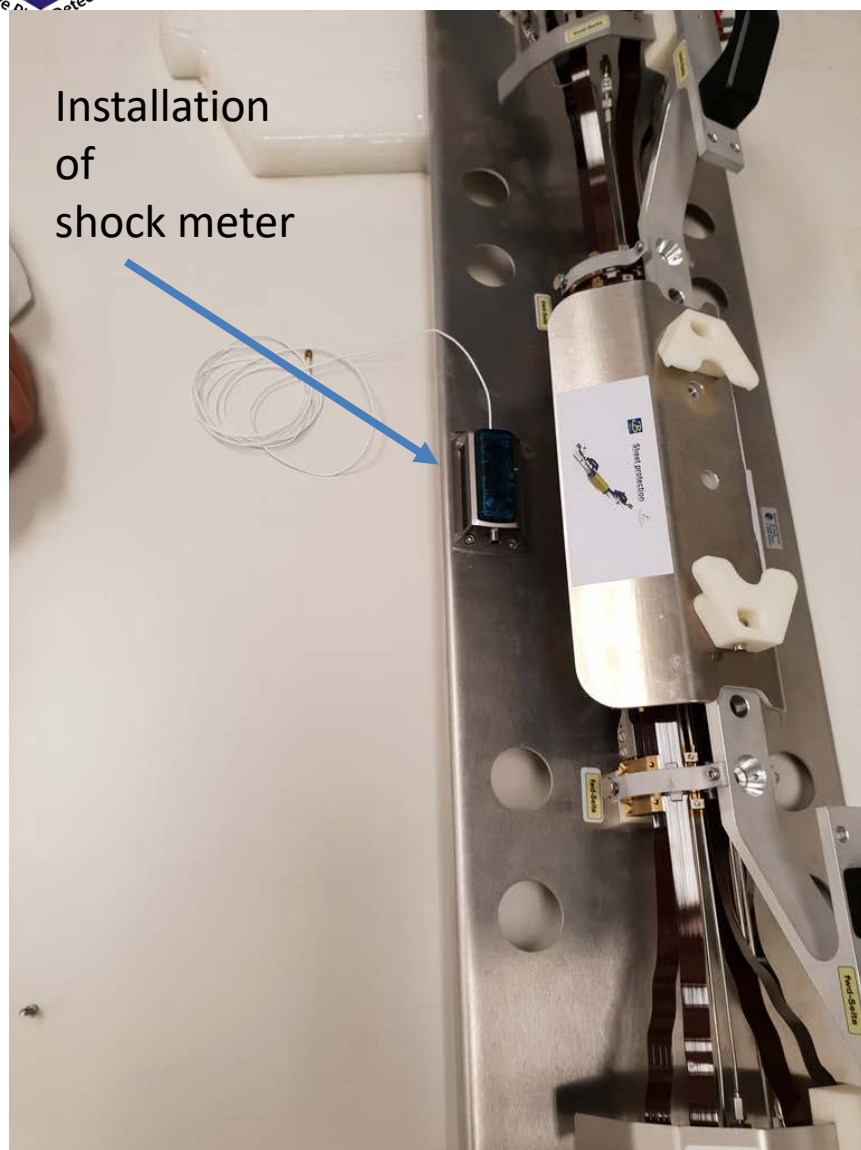
Transport to DESY by car

Installation in Cleanroom

CO₂ Cooling („MARCO“)

Power supplies + DAQ system

Half Shell from DESY to MPI



Half Shell from DESY to MPI



Half Shell from DESY to MPI



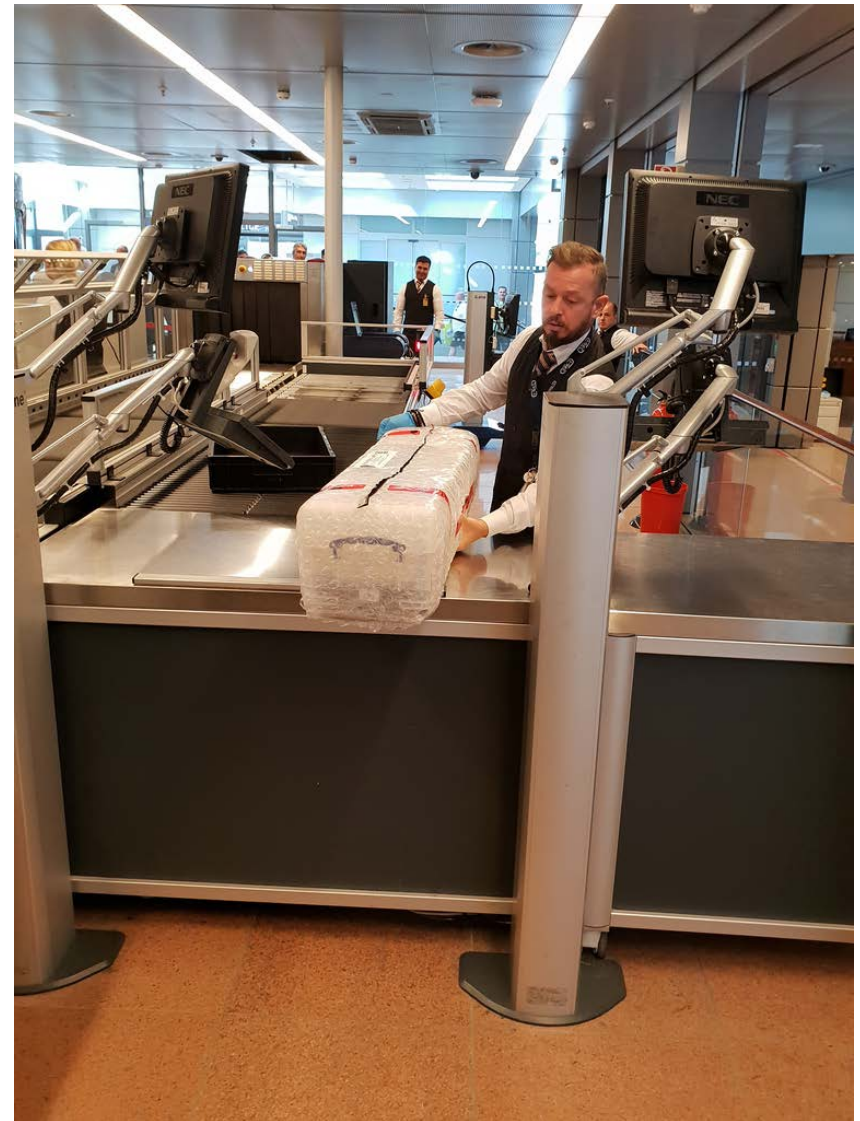
Half Shell from DESY to MPI



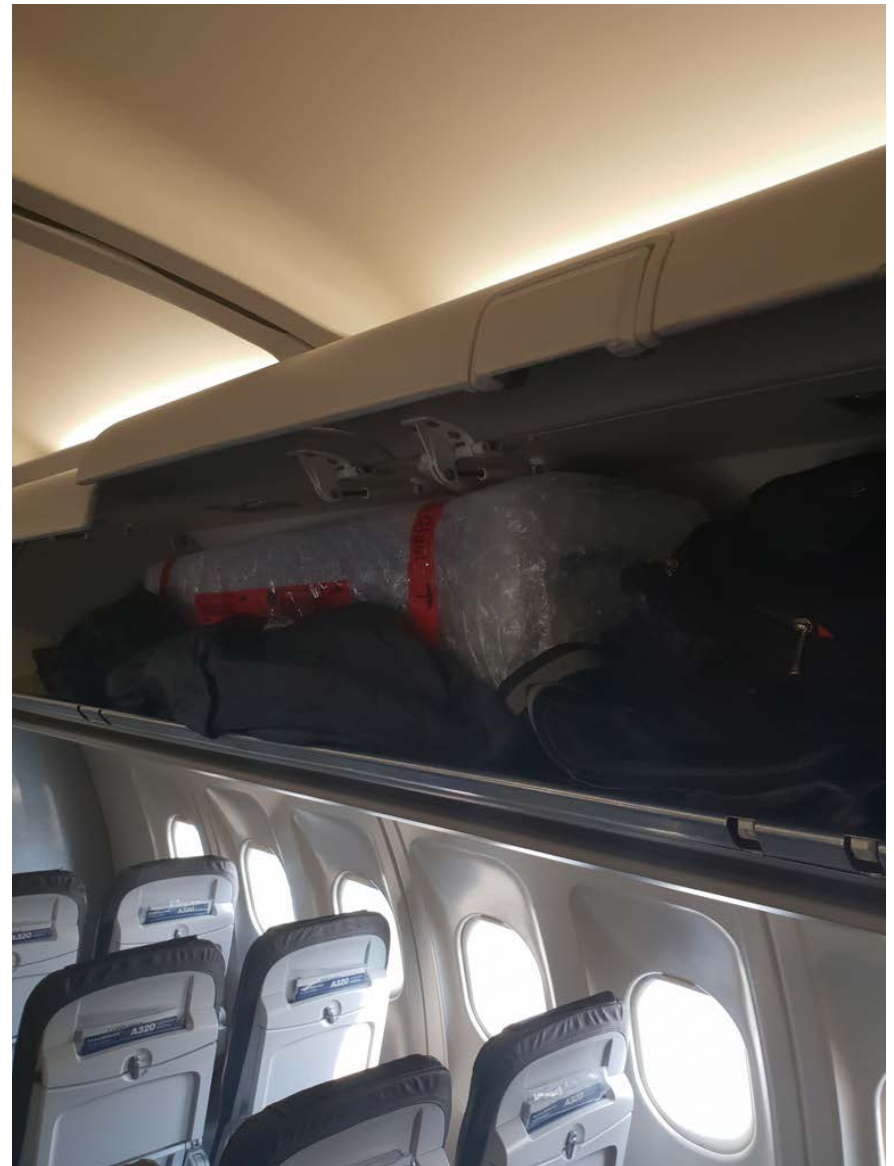
Half Shell from DESY to MPI



Half Shell from DESY to MPI



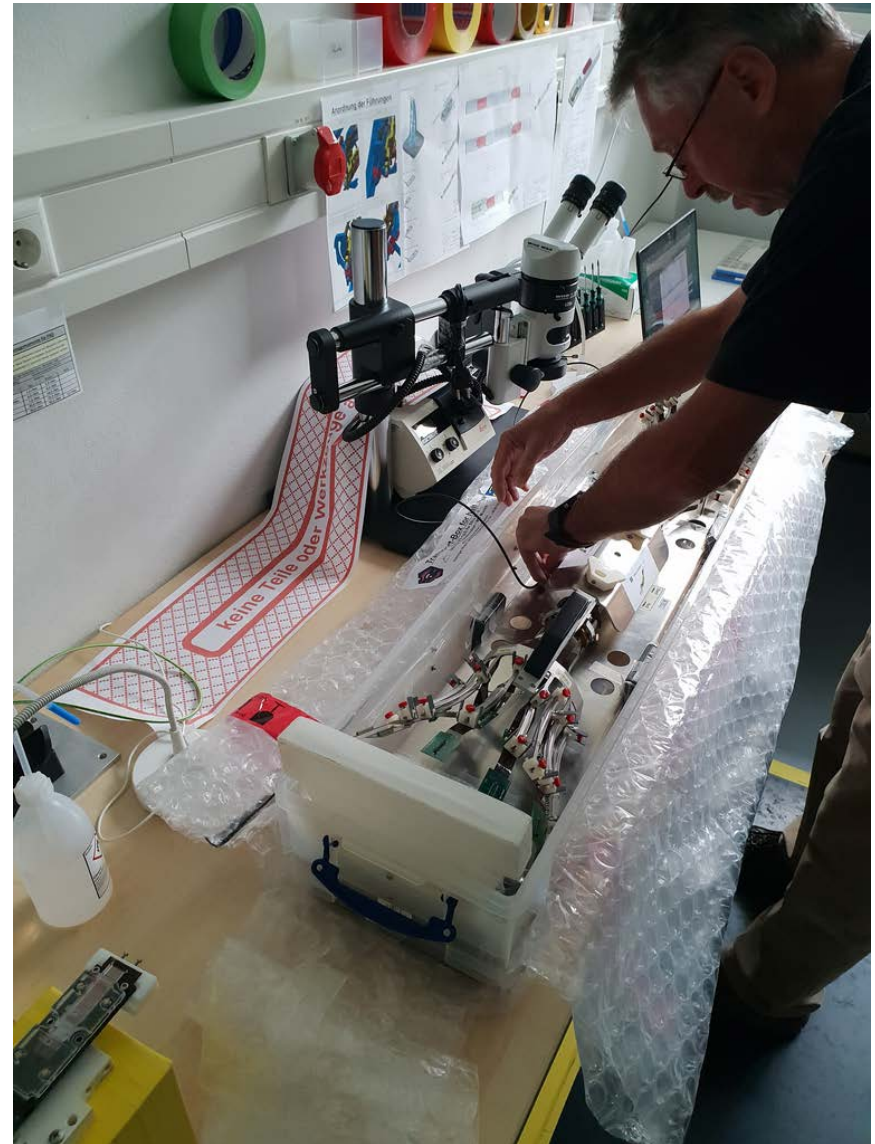
Half Shell from DESY to MPI



Half Shell from DESY to MPI



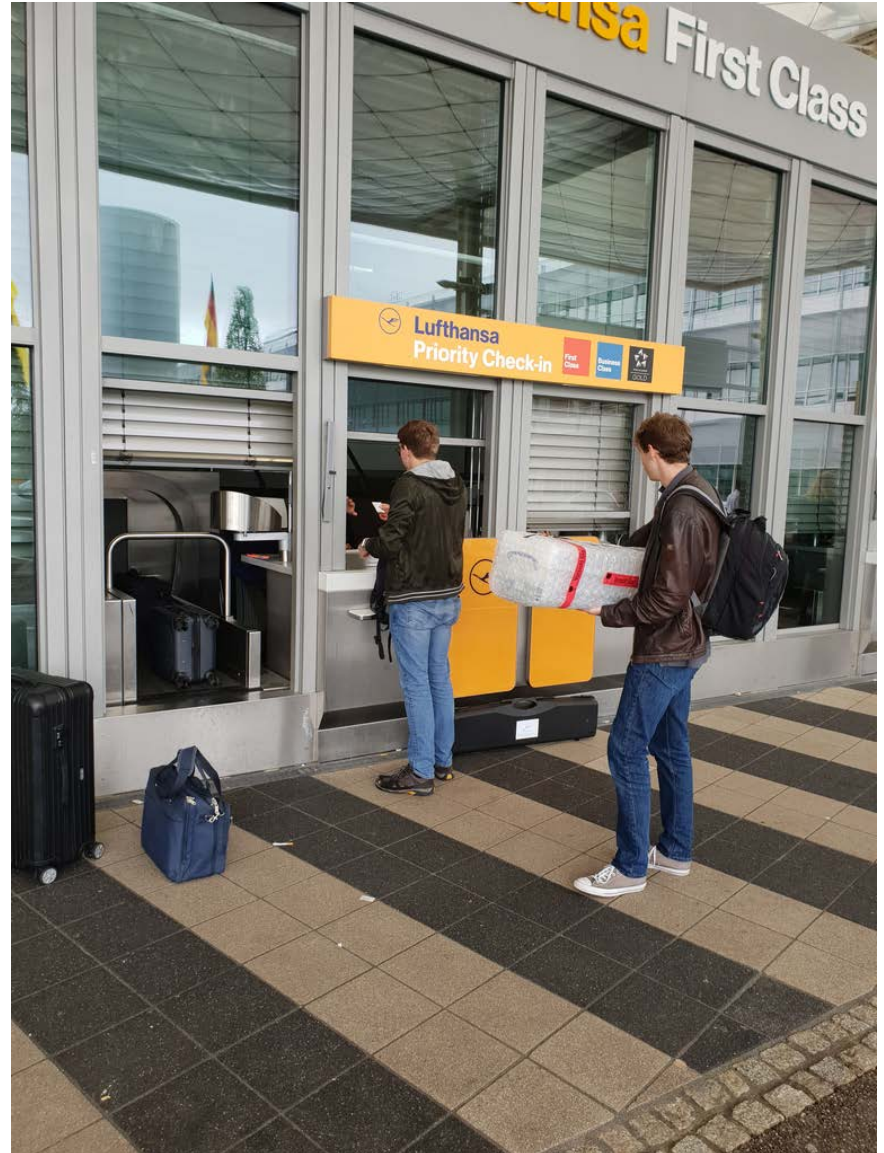
Half Shell from DESY to MPI



Half Shell from MPI to KEK



Half Shell from MPI to KEK



Half Shell from MPI to KEK



Half Shell from MPI to KEK



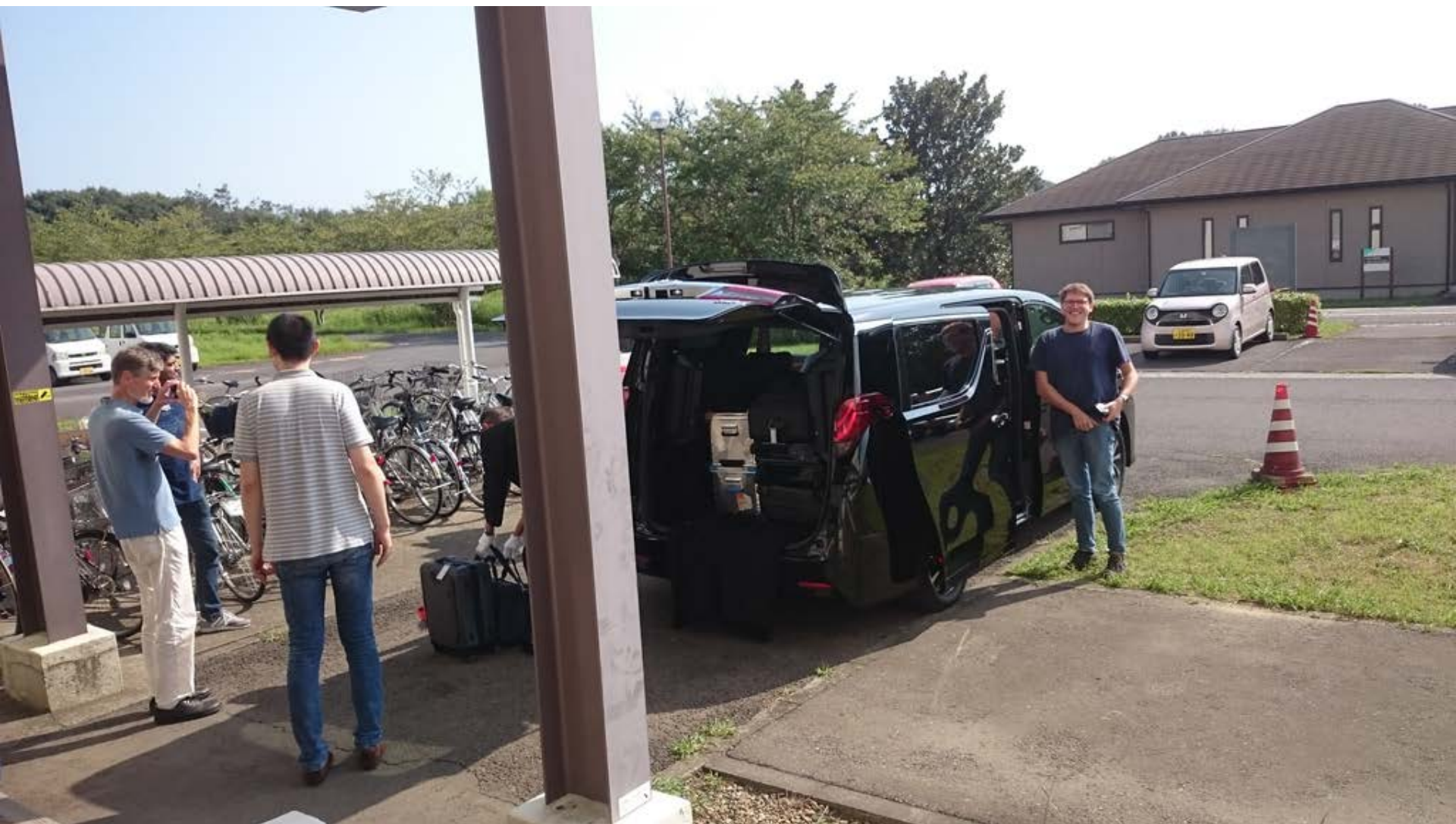
Half Shell from MPI to KEK



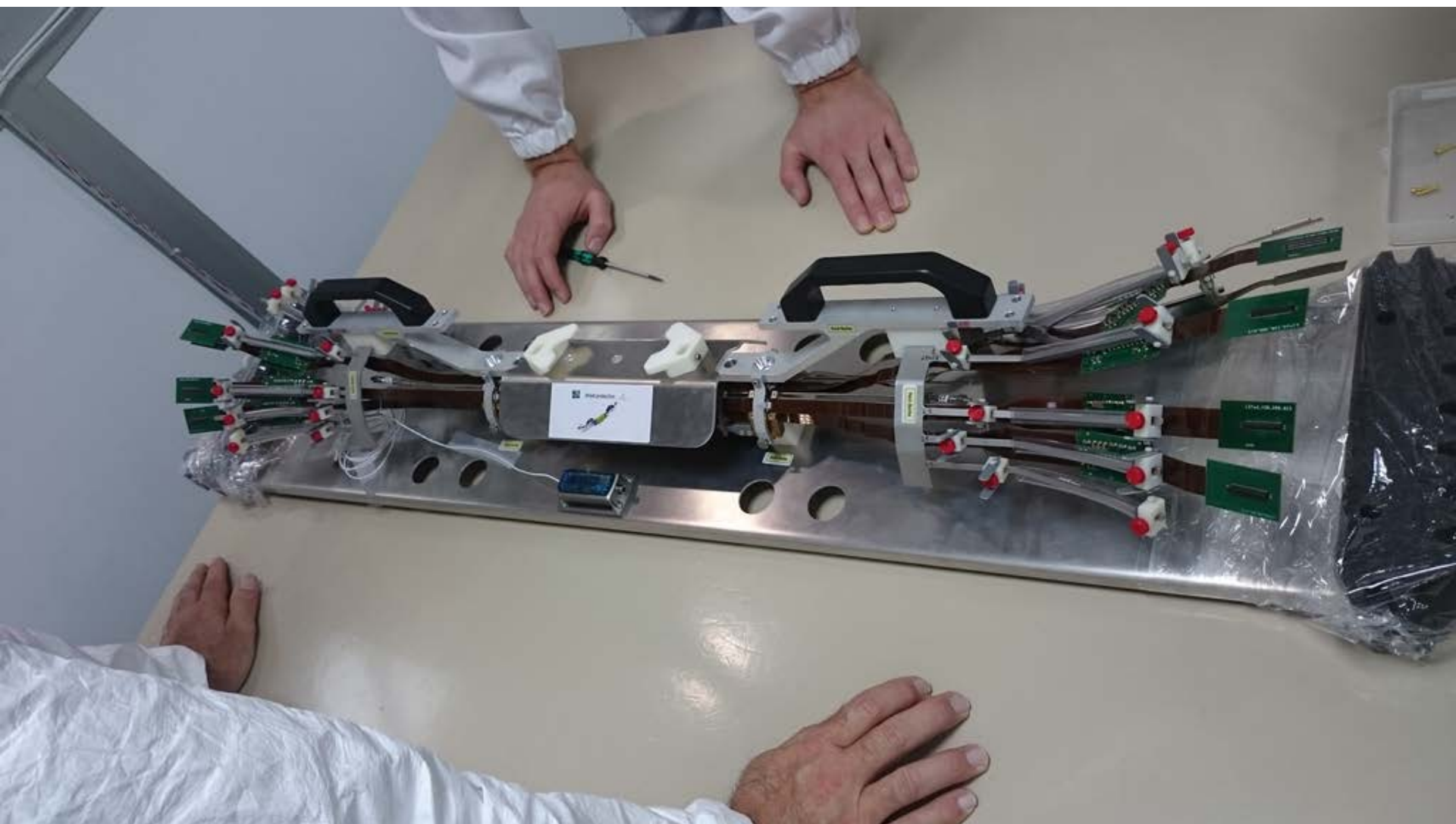
Half Shell from MPI to KEK



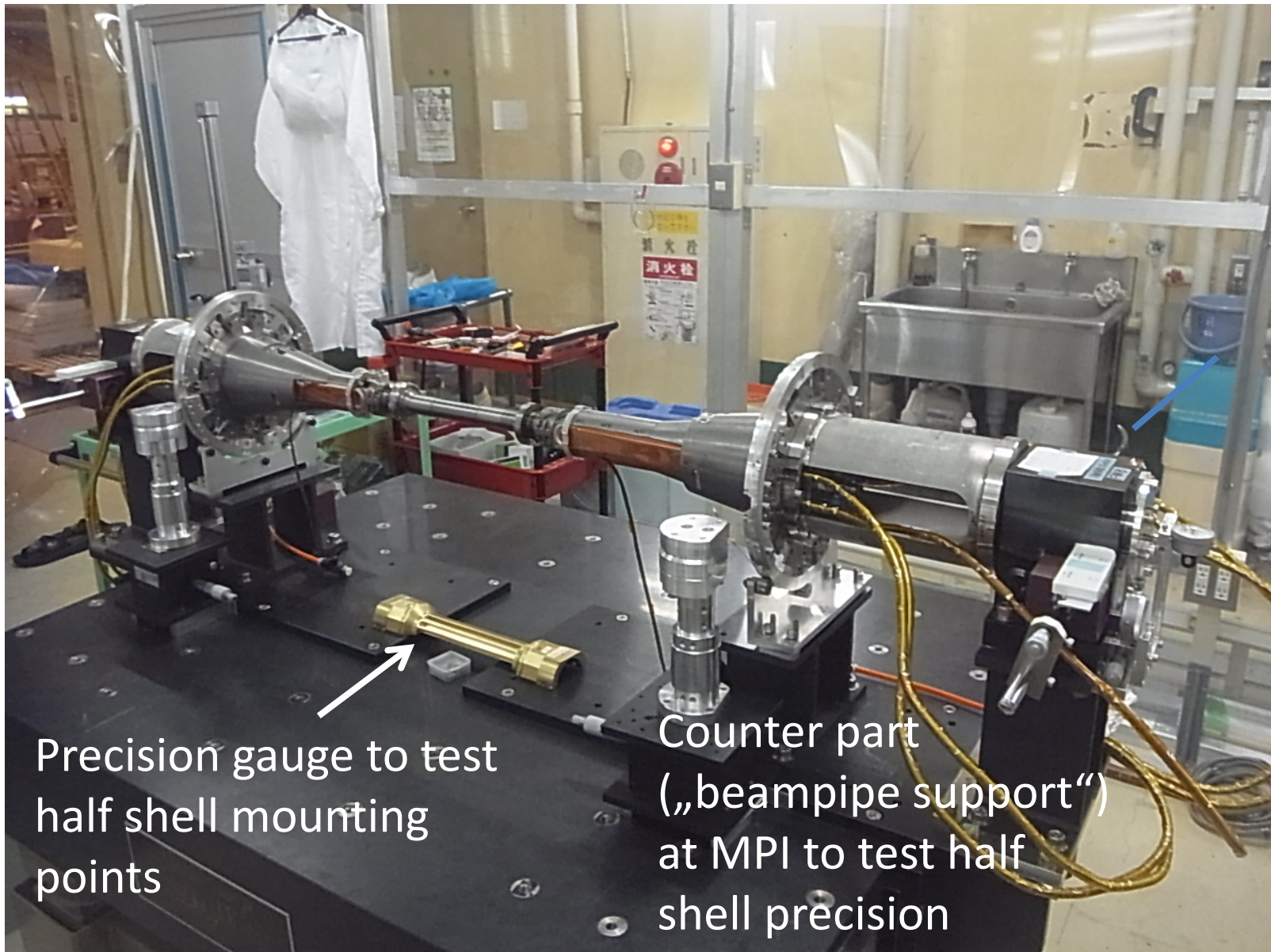
Half Shell from MPI to KEK



Half Shell from MPI to KEK



Half Shell Mounting in KEK Clean Room



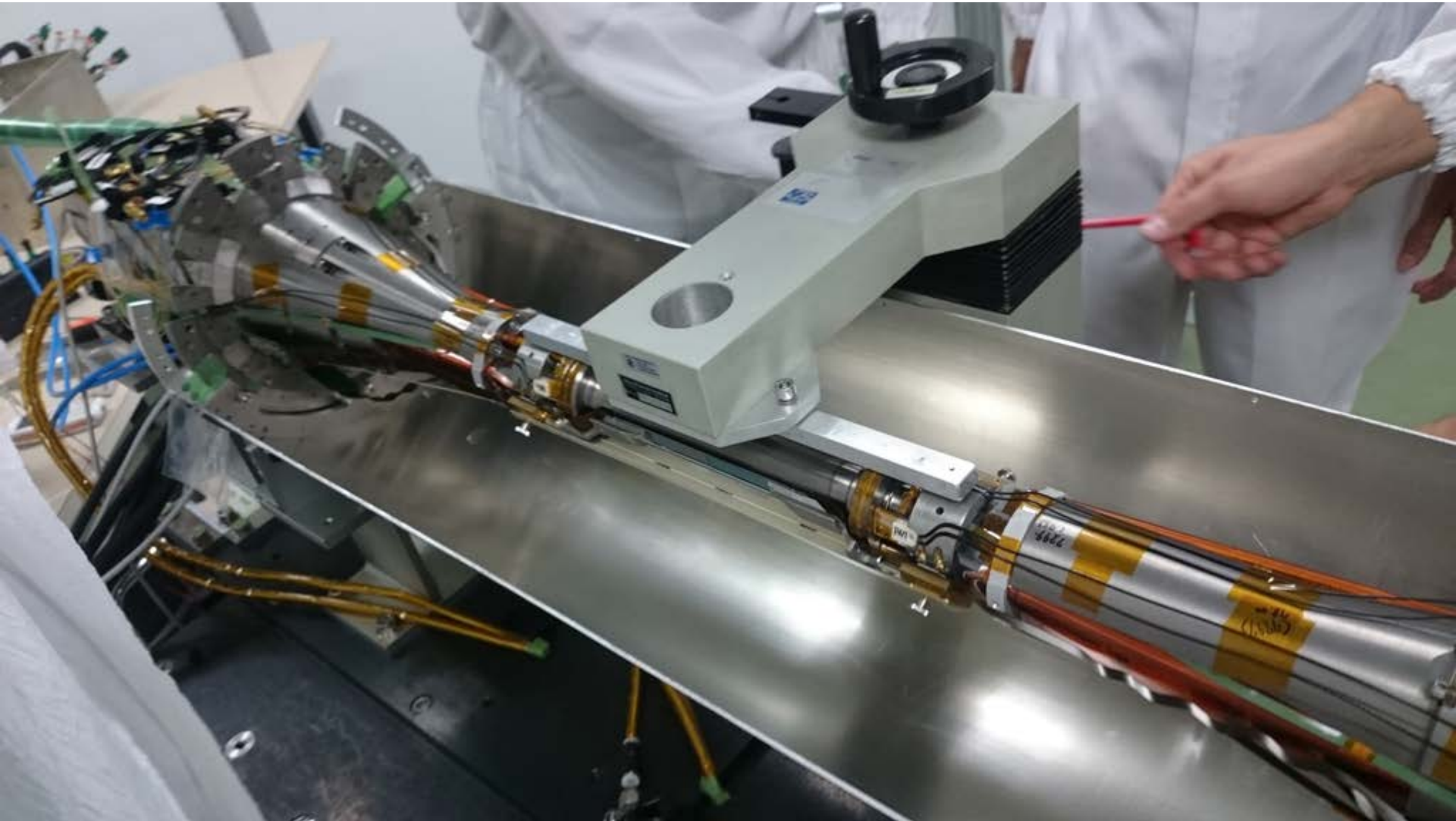
Precision gauge to test
half shell mounting
points

Counter part
(„beampipe support“)
at MPI to test half
shell precision

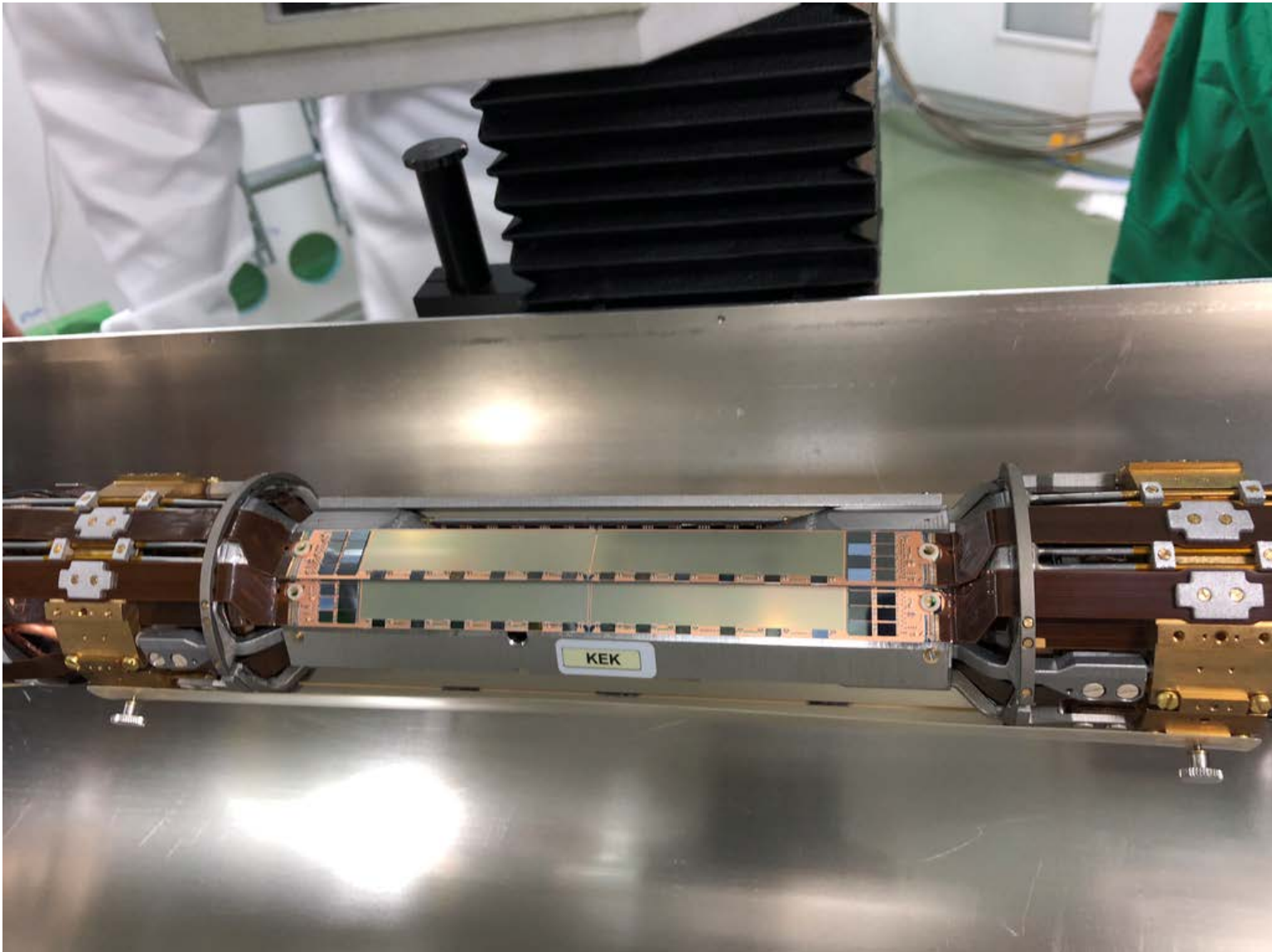
Half Shell Mounting in KEK Clean Room



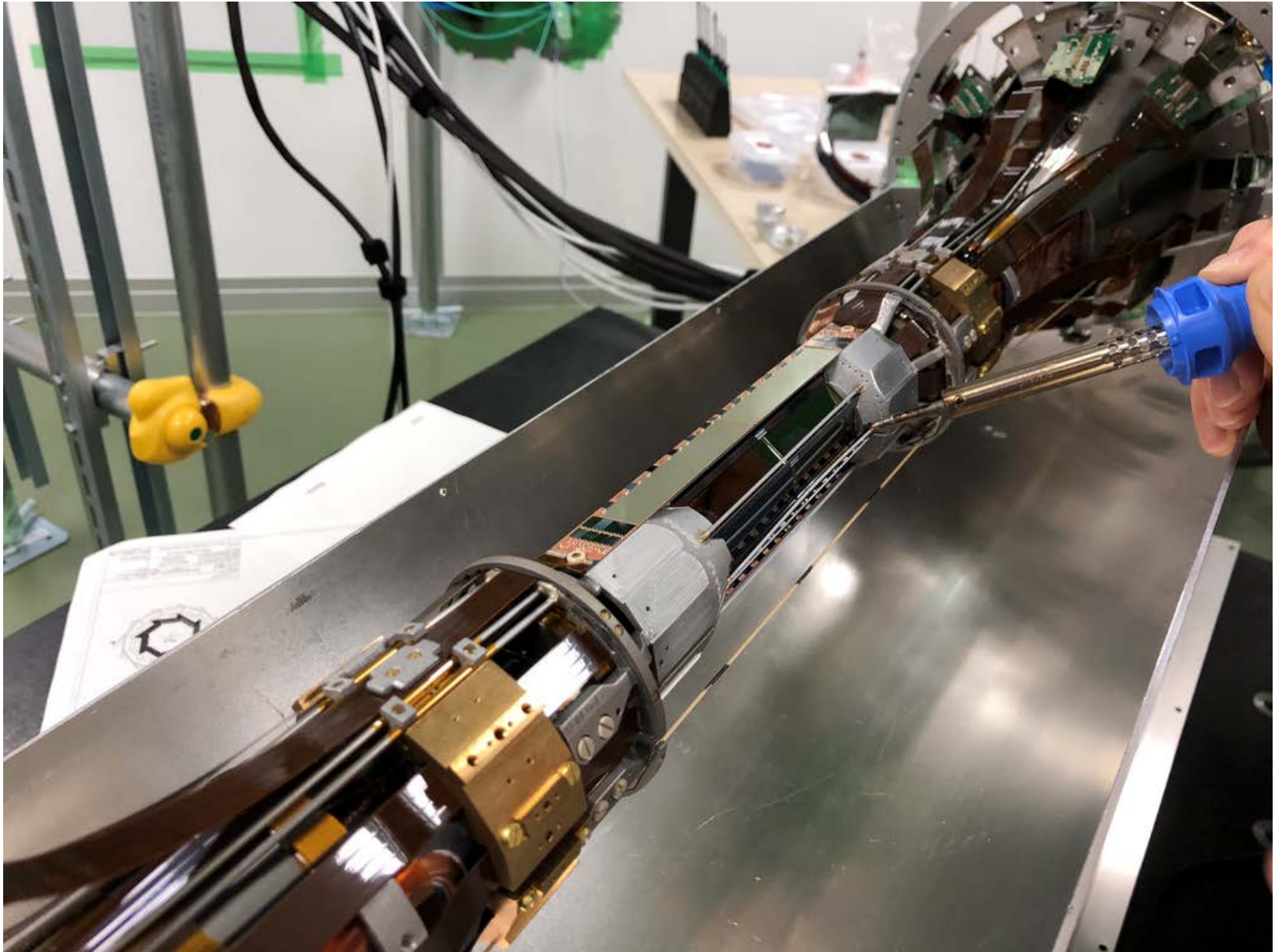
Half Shell Mounting in KEK Clean Room



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Half Shell Mounting in KEK Clean Room



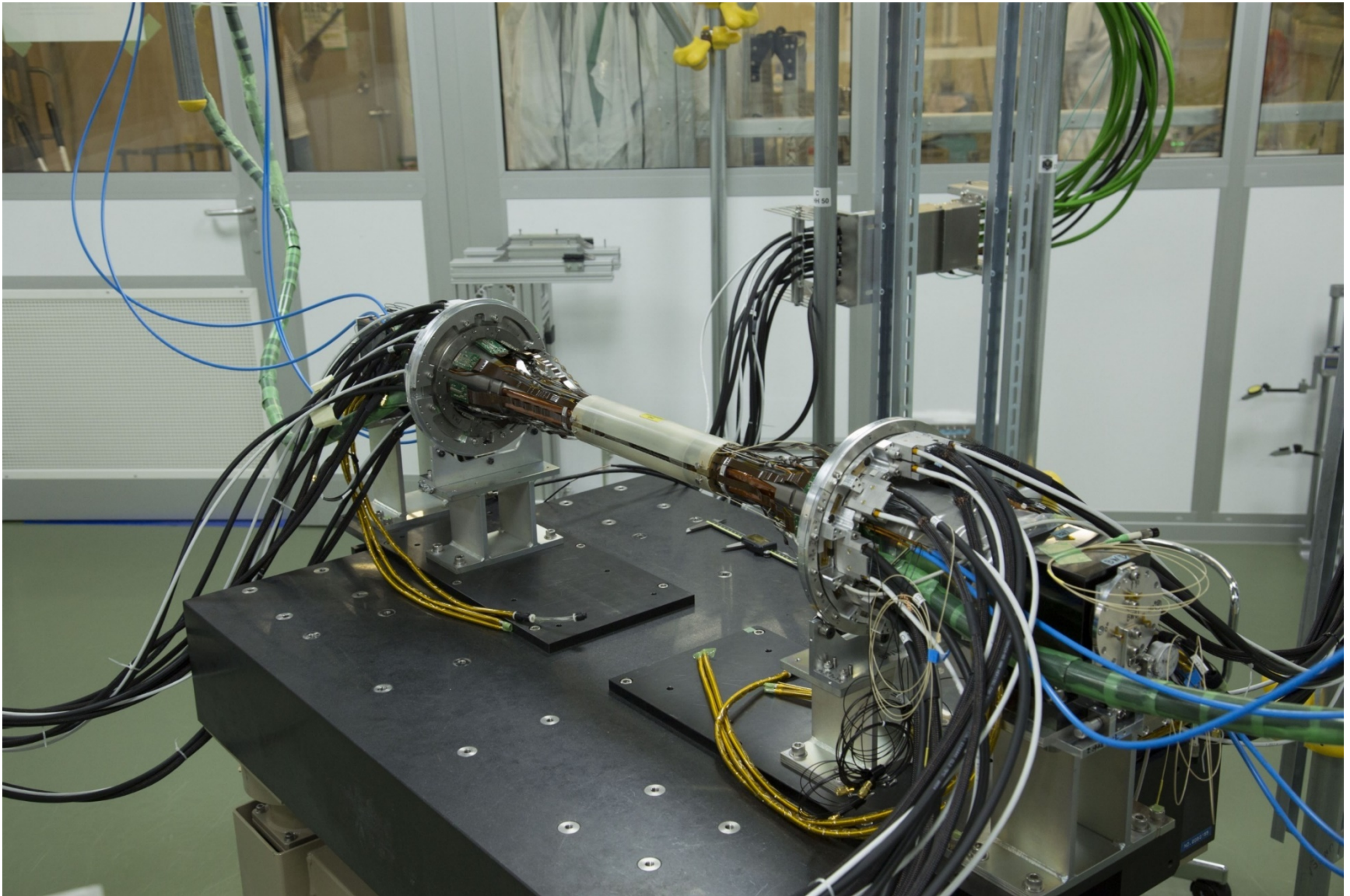
Half Shell Mounting in KEK Clean Room



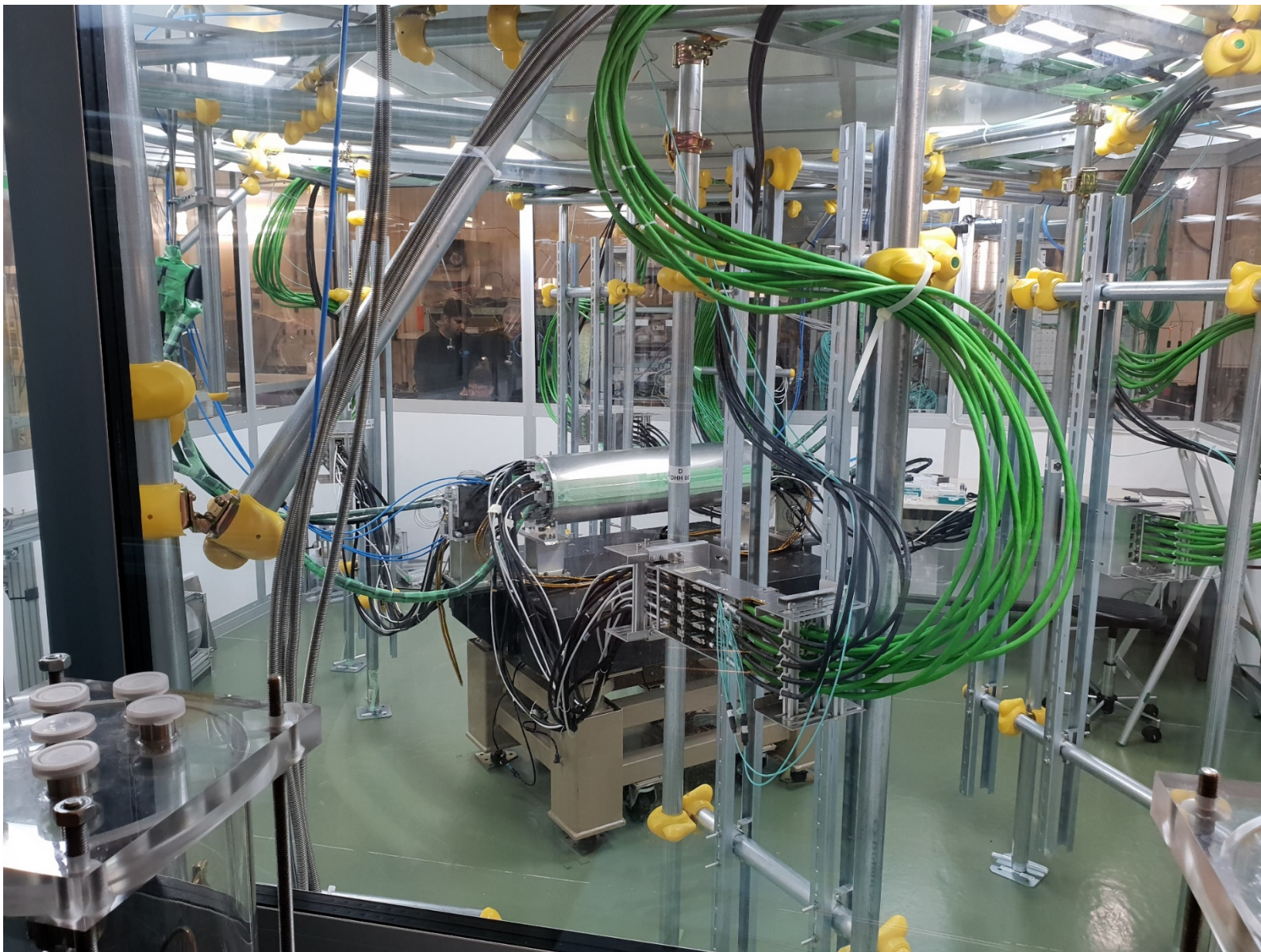
Half Shell Mounting in KEK Clean Room



Half Shell Mounting in KEK Clean Room

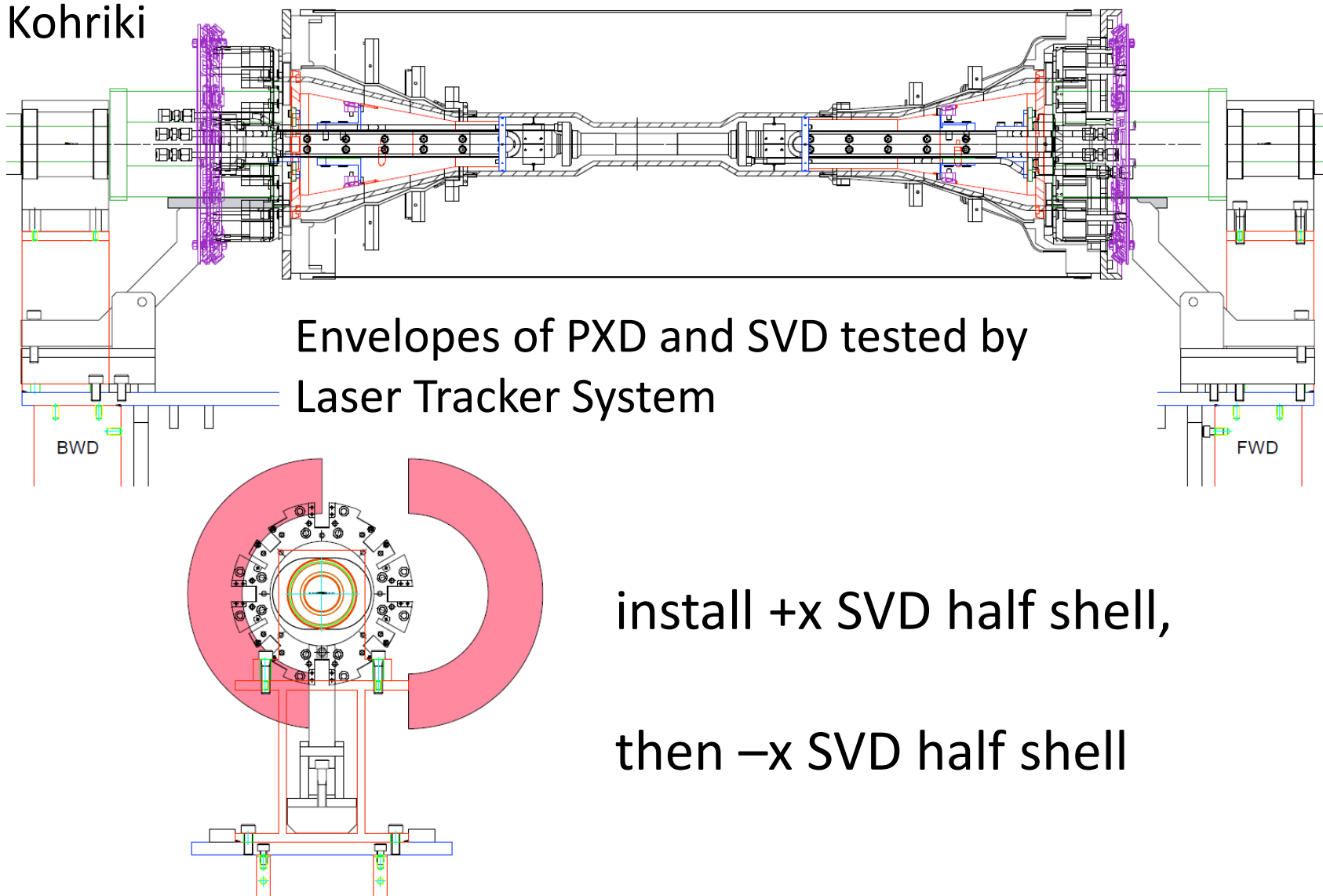


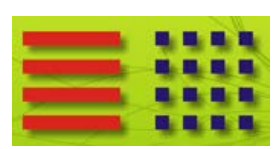
PXD Ready for Commissioning



VXD Assembly -> 1st week of October

T. Kohriki

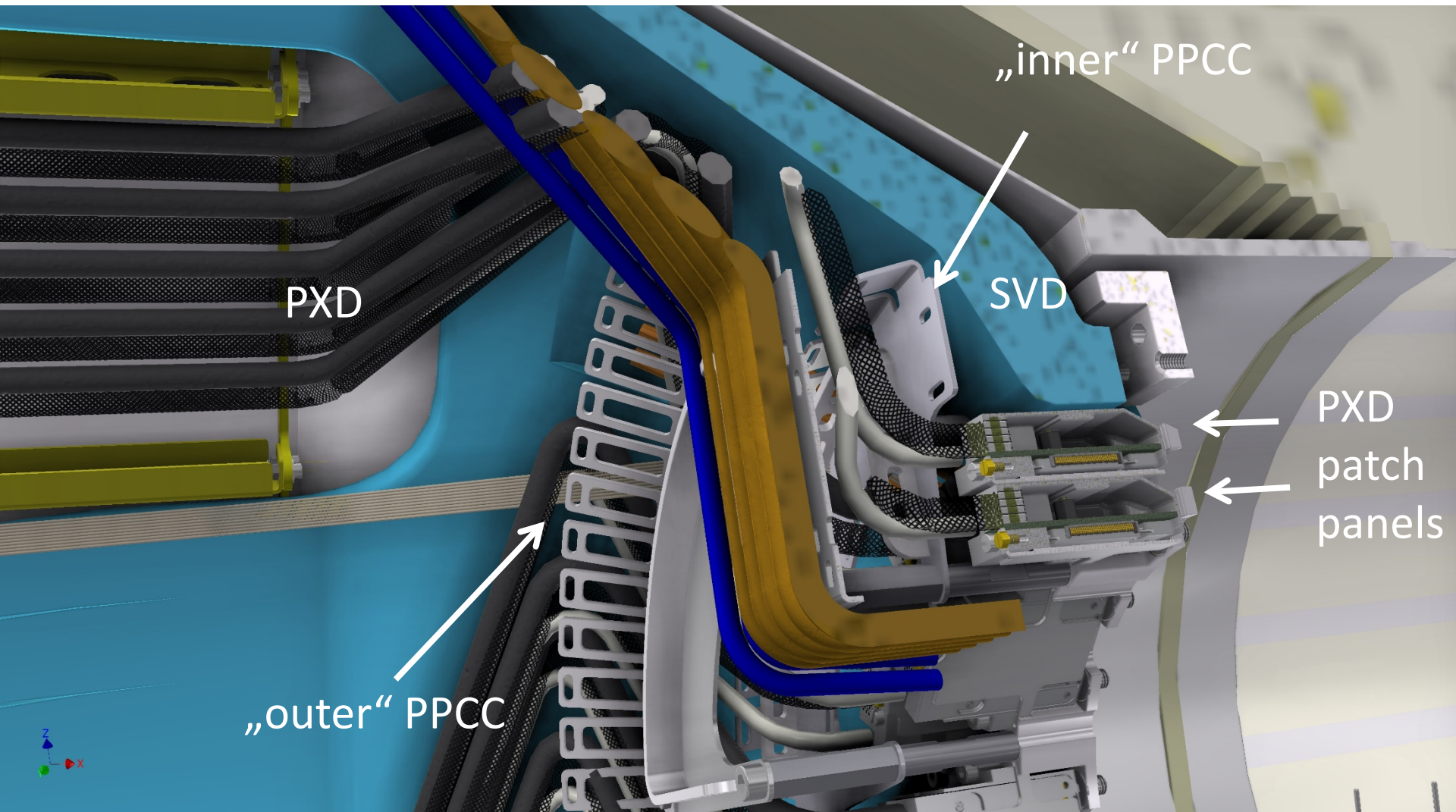


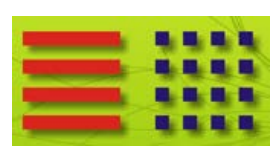


Patch Panel Cable Cage (BWD)

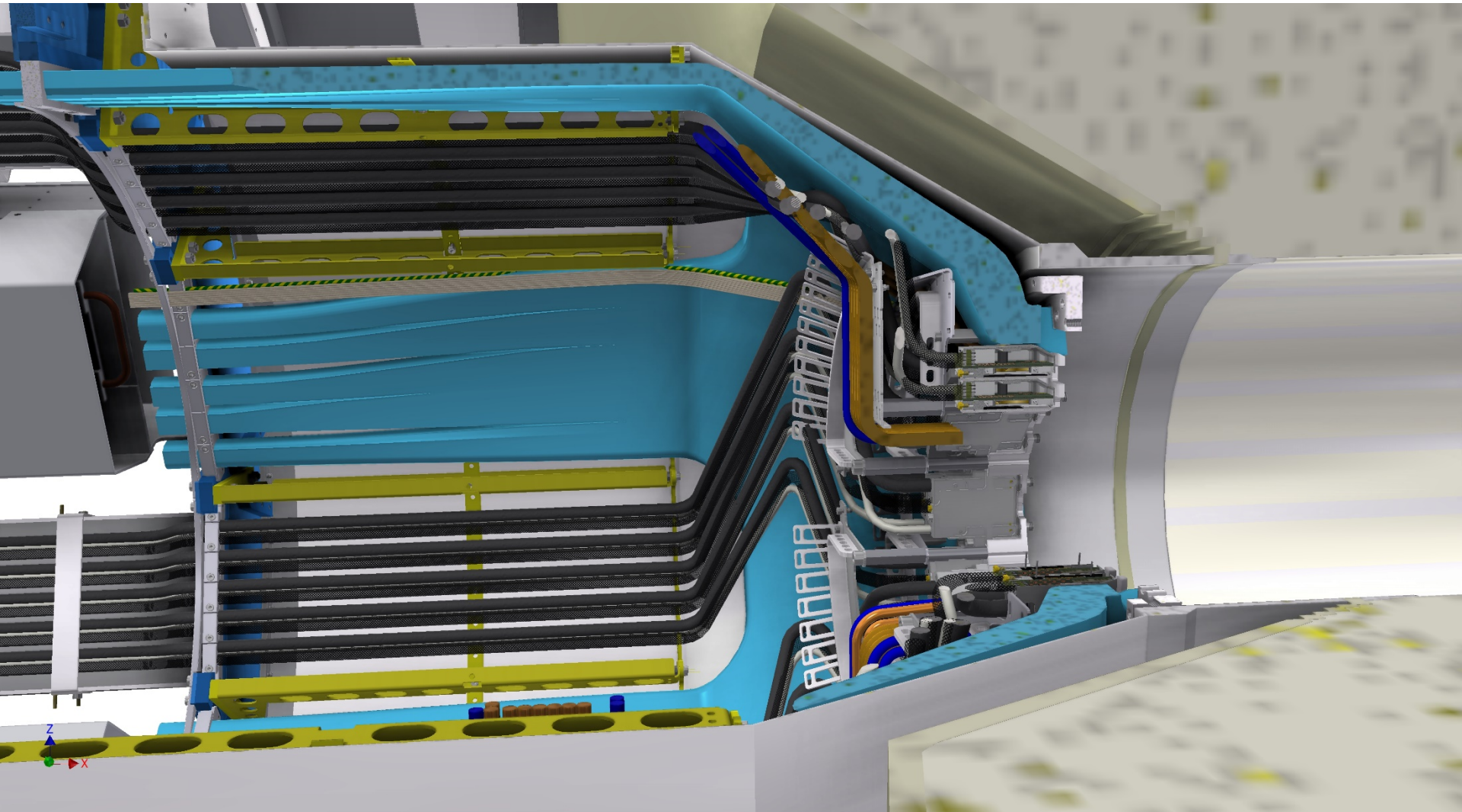


Installation into Belle last week of November / 1st week of December



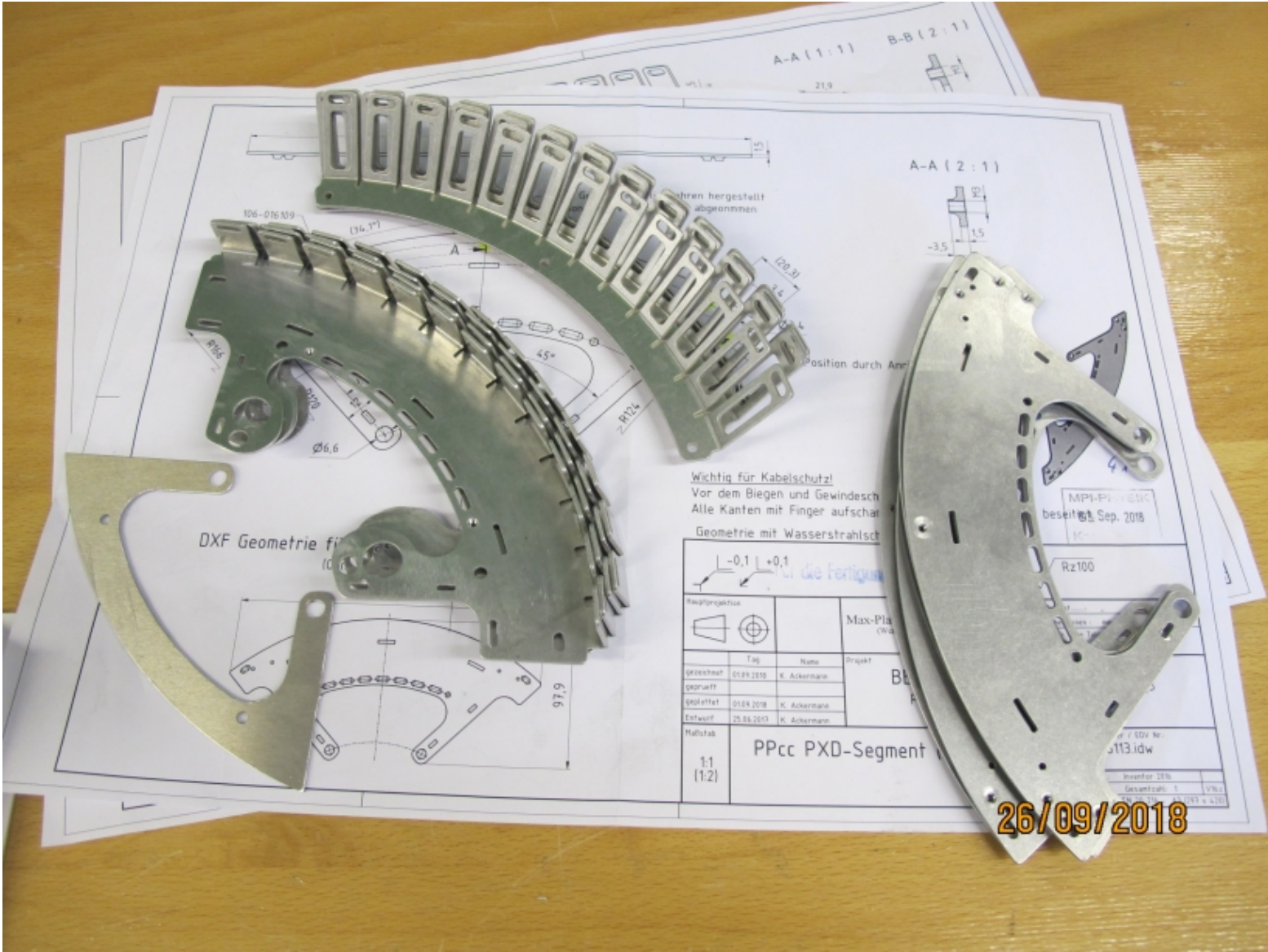


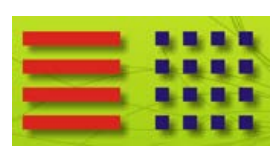
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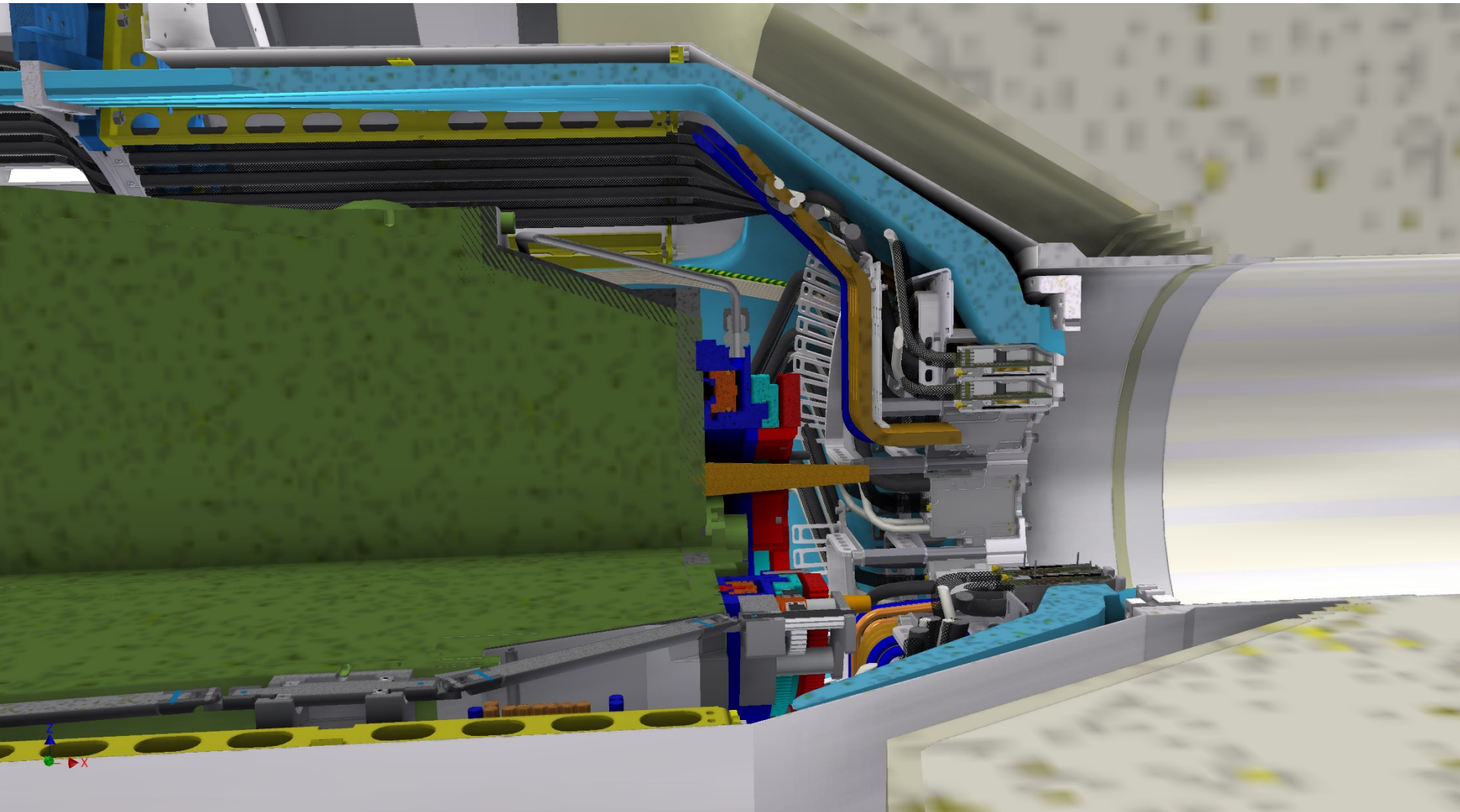


Patch Panel Cable Cage (BWD)

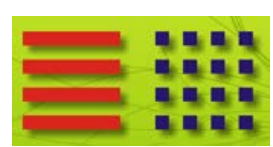




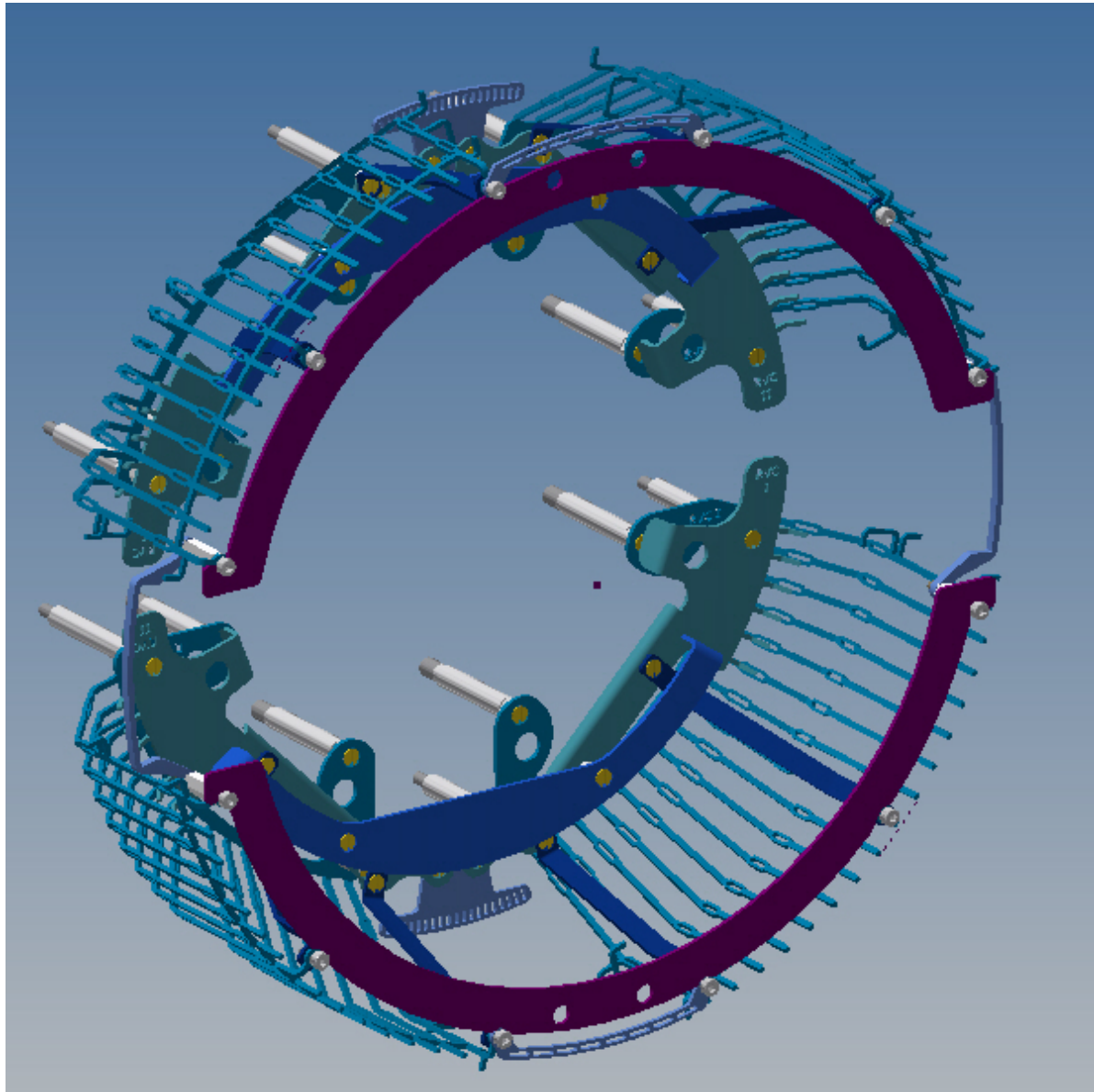
Patch Panel Cable Cage (BWD)



[FWD PPCC more difficult, design ready, in production at MPI workshop]



Patch Panel Cable Cage (FWD)





Patch Panel Cable Cage (FWD)



Assembly will be done still this week,
both PPcc will be taken to KEK next week
and installed on the PXD

Final DAQ tests then with the PPccs installed

Next: marriage with SVD in the week Oct. 2-6

