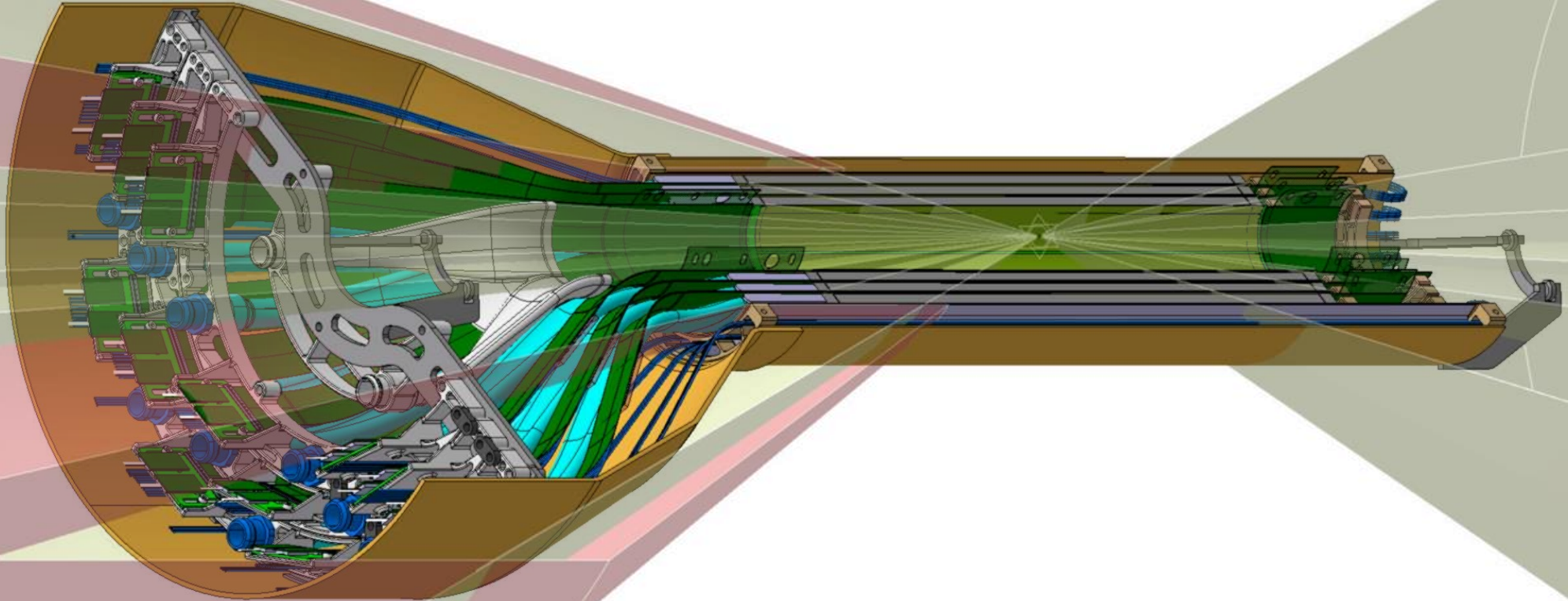


# ITS3 updates 03-2024

Extensive work done on the patch panels and air ducts

To fit everything into the small volume and the acceptance cone

To make the electronics assembly and eventual troubleshooting as simple as possible



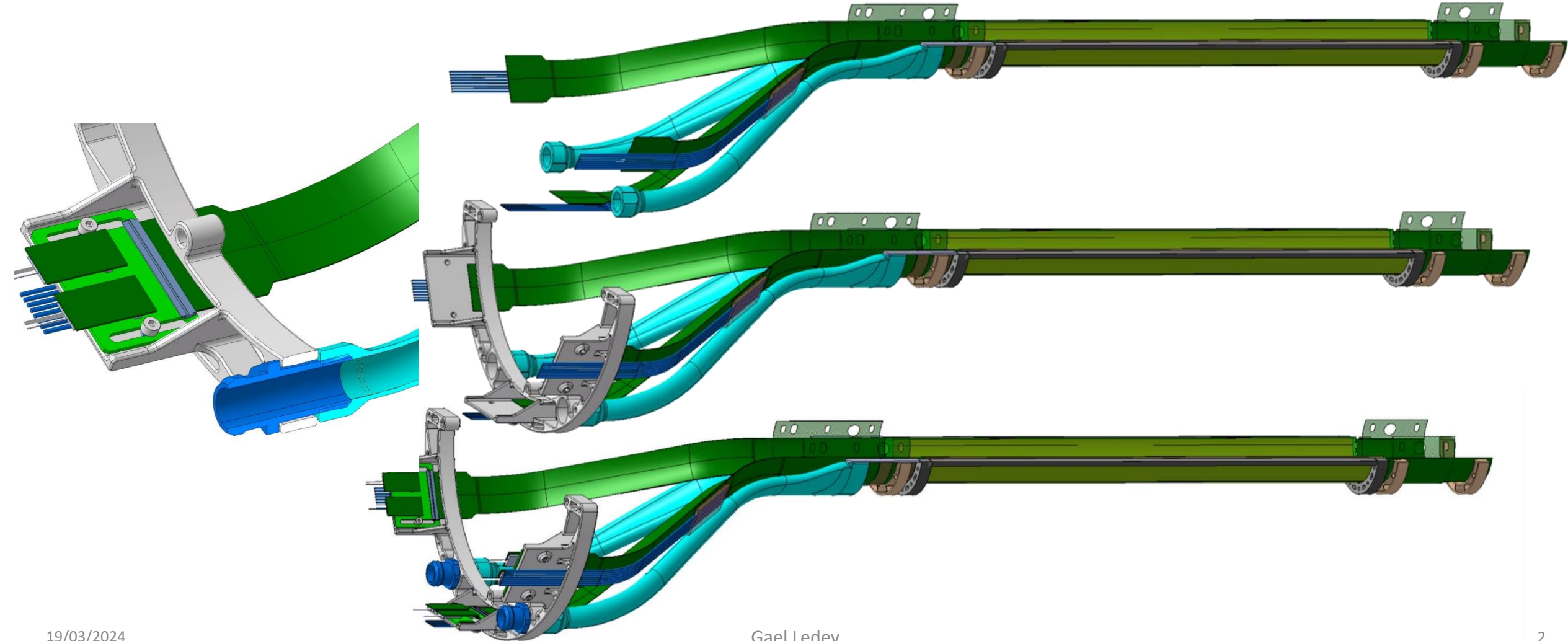
# ITS3 updates 03-2024

Air ducts are now in 3 parts

So we can move the equipped patch panel to access other layers, or change that patch panel

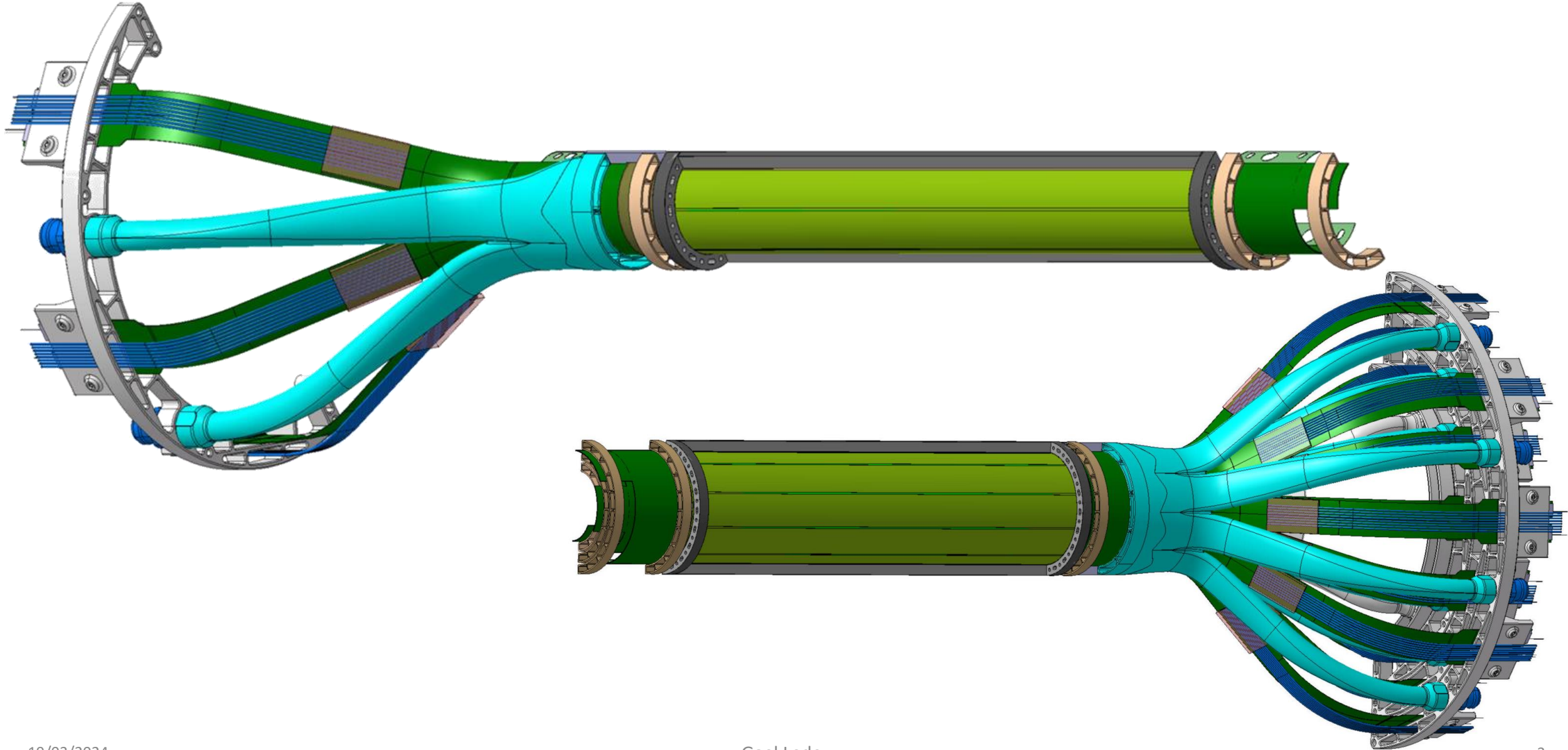
Leave some flexibility between air ducts and patch panels to prevent potential thermal expansion and vibration ( $\pm 0,5$  mm in every direction)

Fixation of VTRX boards allows for length displacement to avoid problems we had with ITS2



# ITS3 updates 03-2024

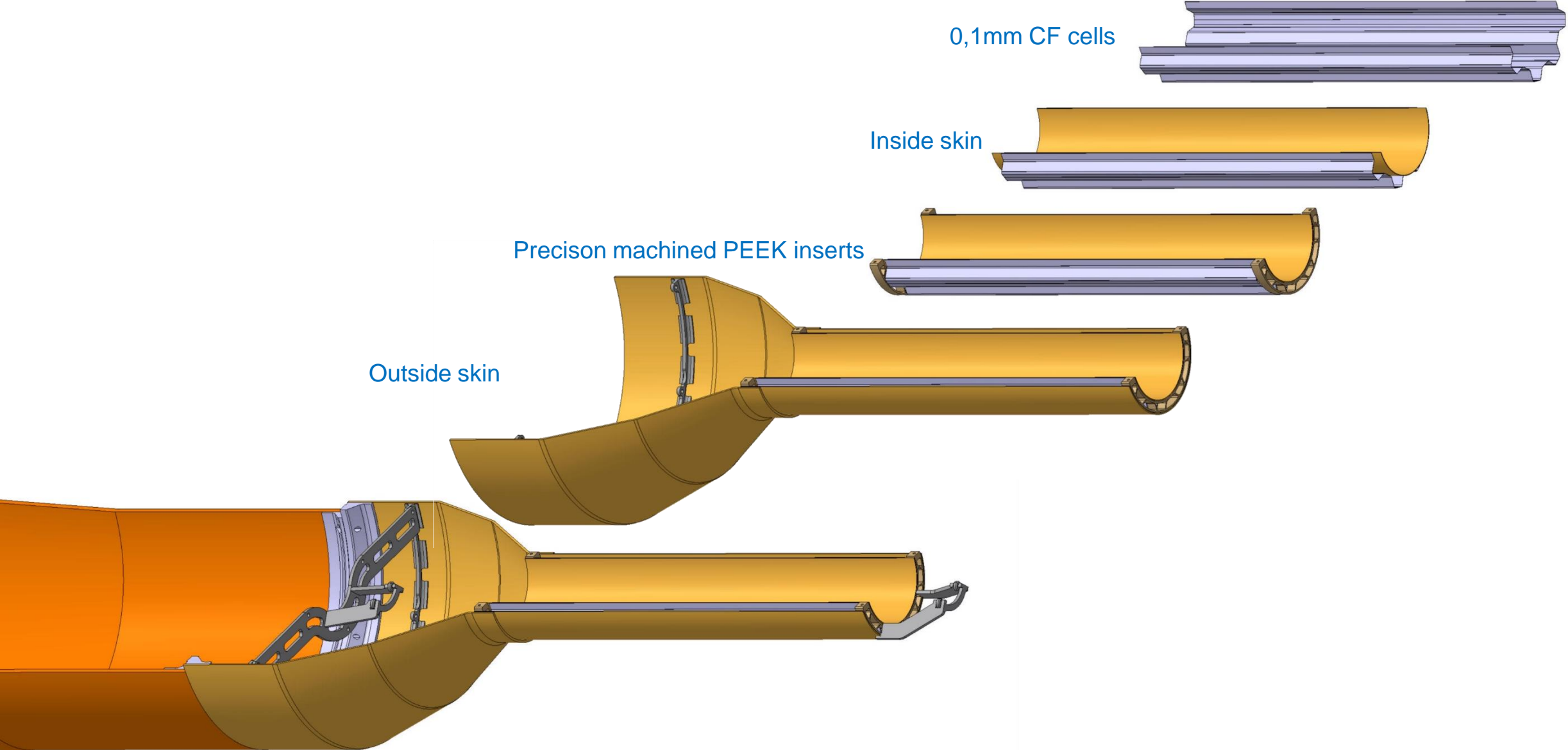
Air ducts still fit between FPCs and wires but their shape has changed to improve air flow





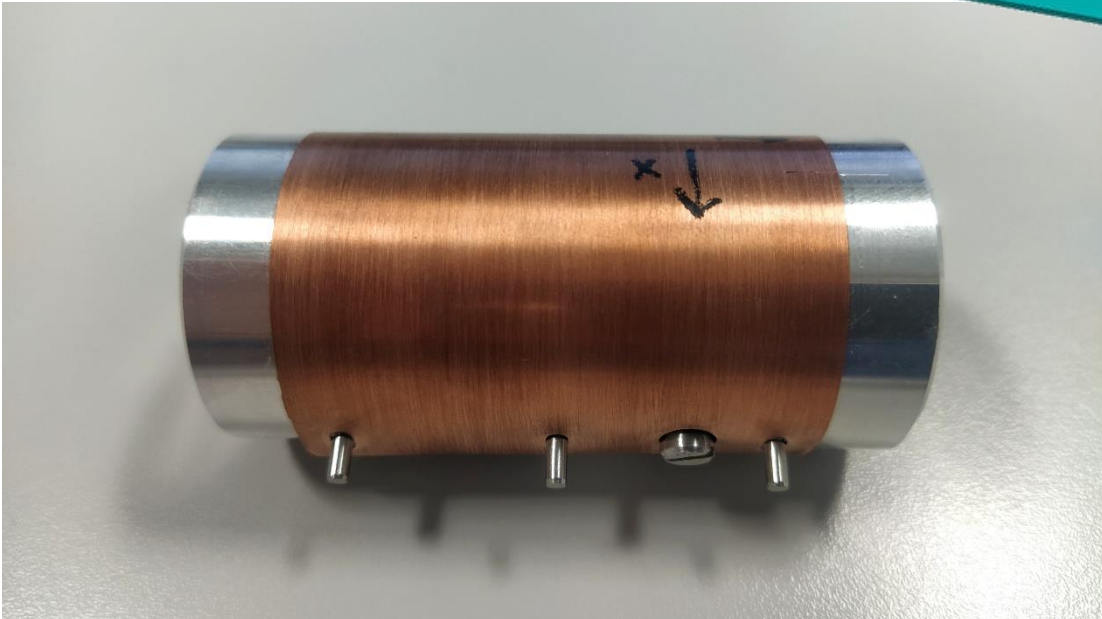
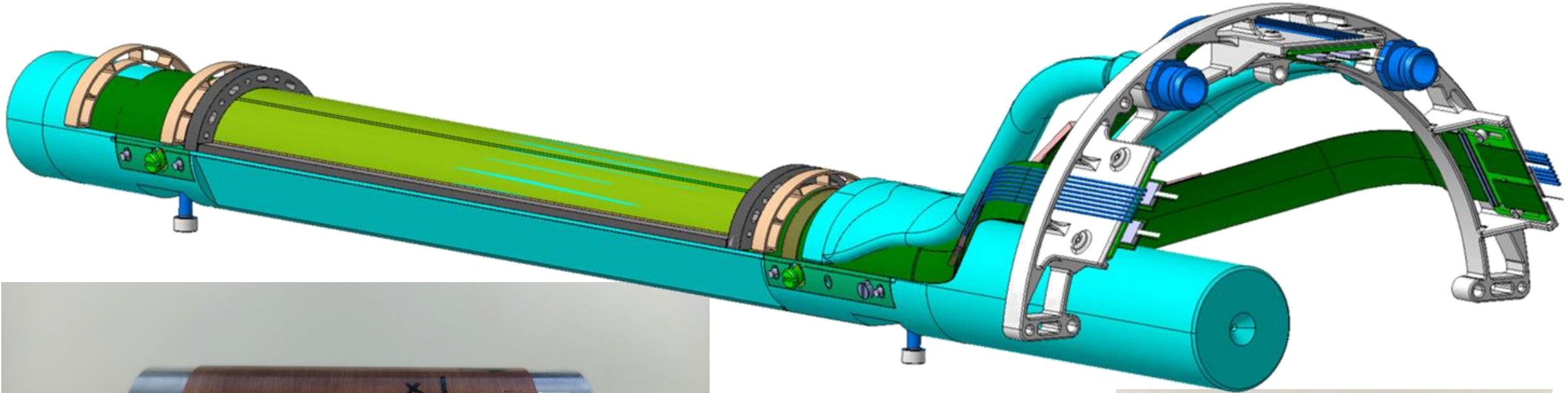
# ITS3 updates 03-2024

New CYSS design being discussed with a carbon composite supplier



# ITS3 updates 03-2024

FPC positioning device has been tested, this solution was adapted to other mandrels  
For L0, L1 and L2. Mandrels and most of the jig parts are in production between Utrecht University (machining) and LPSC Grenoble (3D printing)  
Patch panels supports, CYSS gluing and parts for EM3 will come later



← FPC positioning prototype



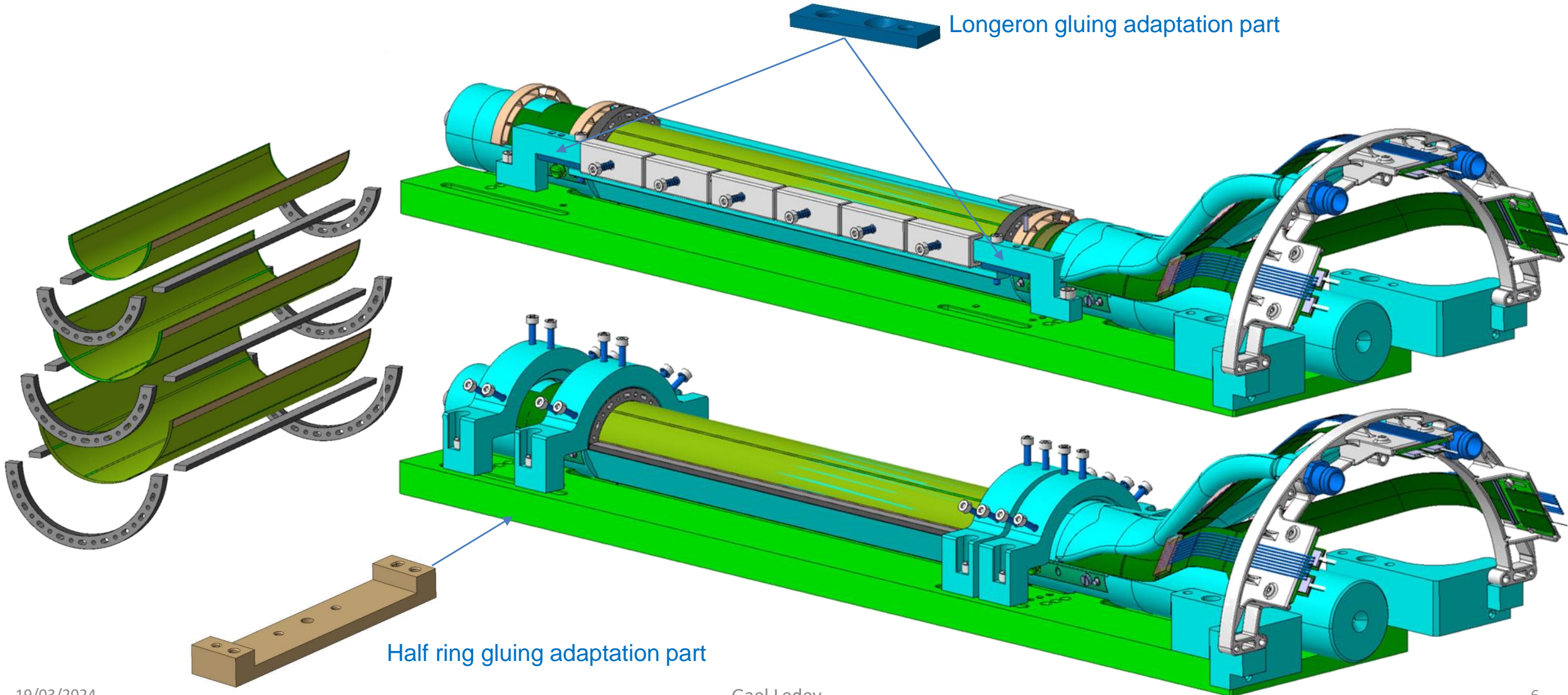
→ 3D printed parts  
(received today)

# ITS3 updates 03-2024

EM3 = Engineering Model 3

Next prototype will have shorter sensors (258,8mm instead of 266mm) and smaller carbon foam half rings (3,5mm instead of 6mm)

The jig was designed to enable this kind of adaptation





# ITS3 updates 03-2024

The chassis for beampipe insertion and extraction is in production

