

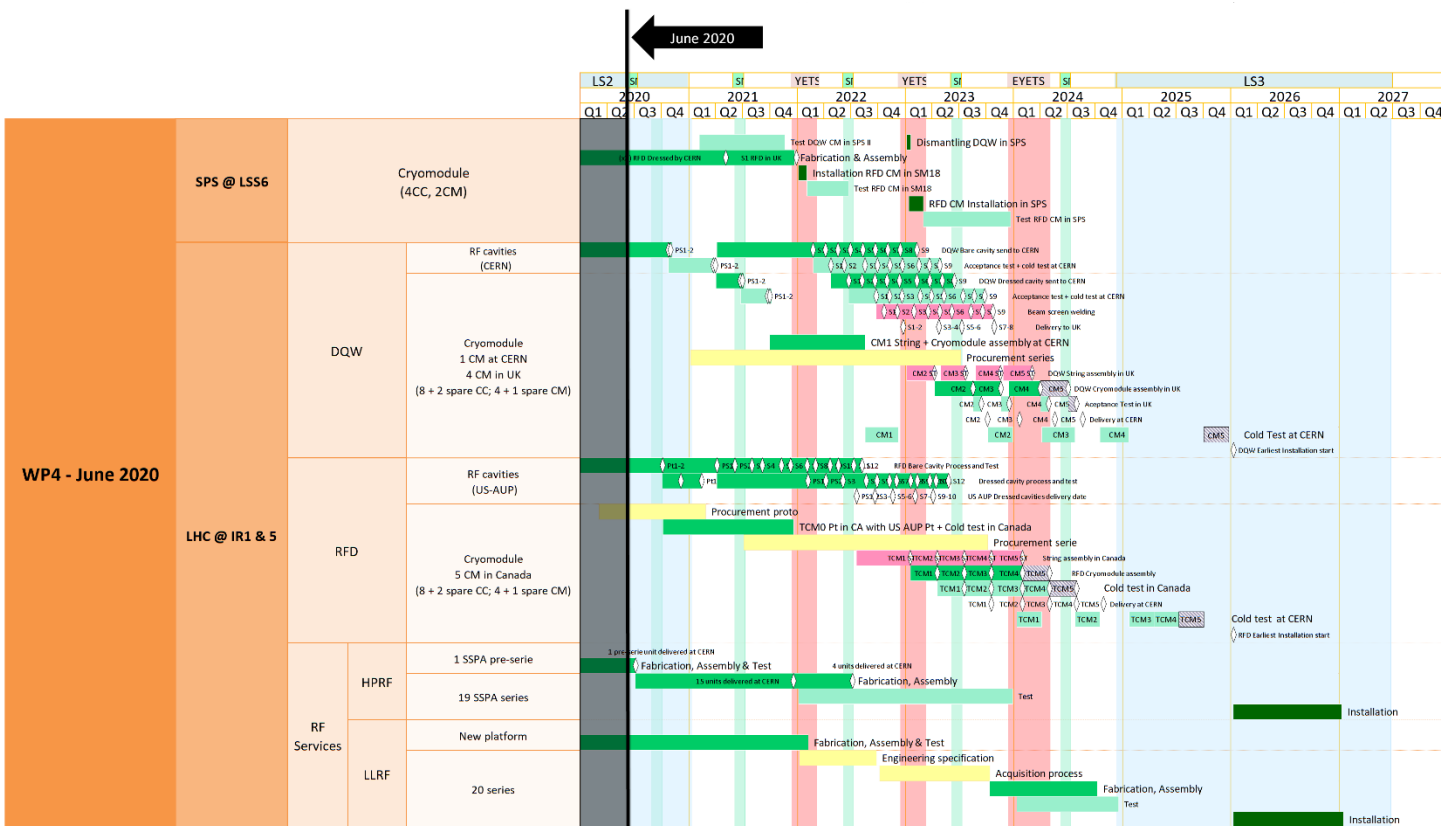


# Next steps for RF Dipole crab cavities & cryomodule status in UK

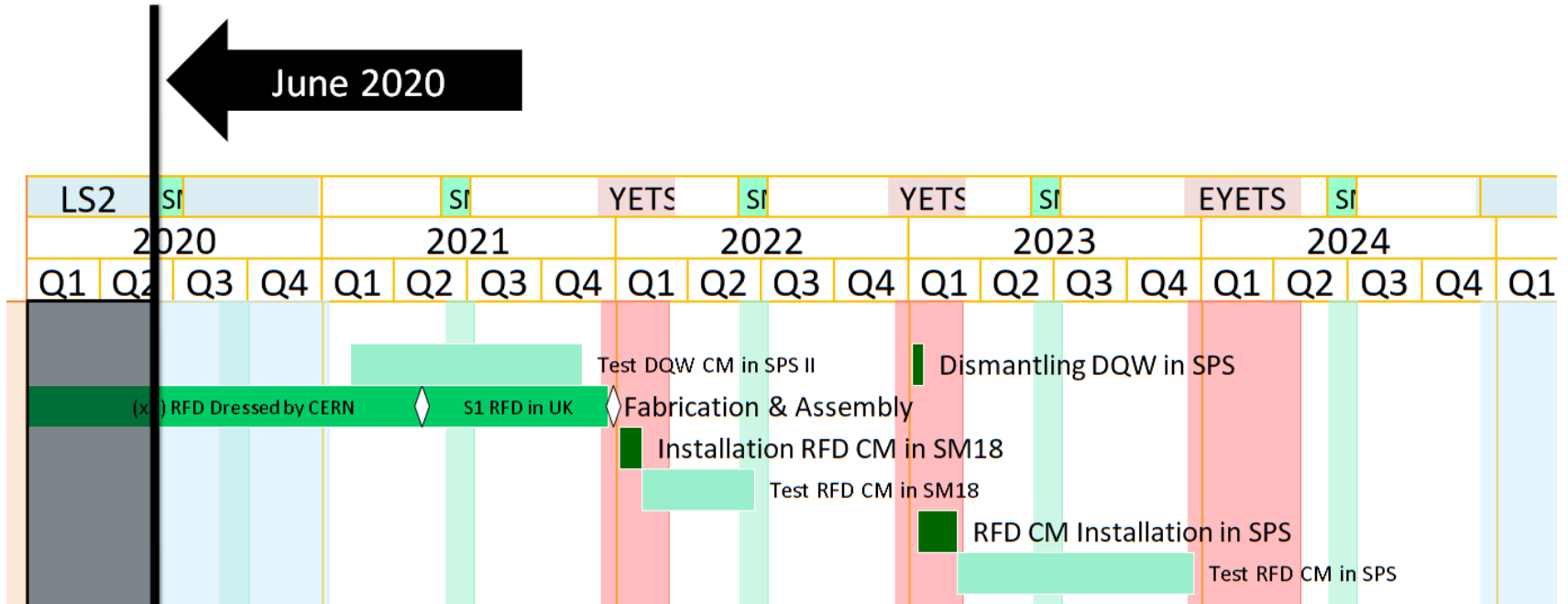
HL-LHC WP4  
O. Capatina

CERN, 8 September 2020

# WP4 Master Plan



# WP4 Master Plan



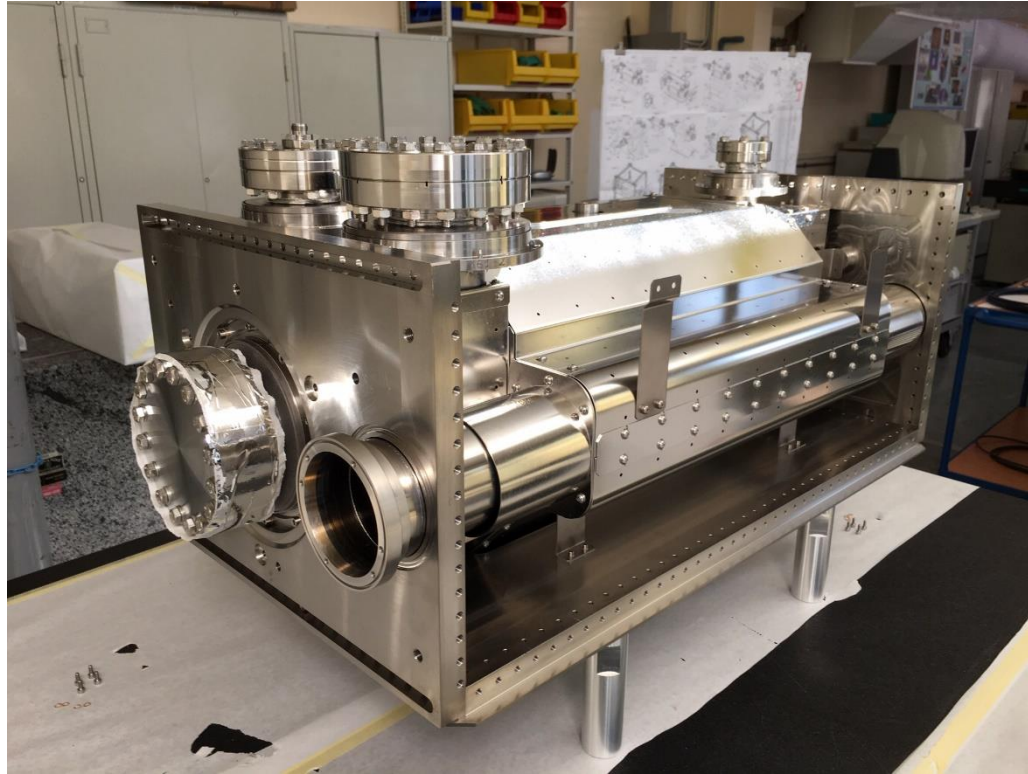
# Status of main components

- Cavities:
  - RFD2 jacketing assembly finished including Cold Magnetic Shields procured by STFC; Helium vessel welding ongoing at CERN
  - RFD1 will start jacketing assembly this week
- Cryomodule beam lines (adjacent to cavities and second beam line):
  - Beam screens – manufacturing ongoing at CERN
  - UHV vacuum chambers with RF fingers full drawing folder finished and sent to the workshop, some minor pending discussions with TE-VSC
  - Sectorization valves procured by TE-VSC
- Outer Vacuum Vessel (OVC):
  - Contract placed by STFC for manufacturing of the OVC (same manufacturer as the OVC for the SPS DQW)
  - Procurement of the material ongoing
  - All detailed drawings for OVC are finalized very small modifications are ongoing and will be finished this week
- Thermal screen:
  - STFC is in charge of the design and they are finalizing the detailed model
  - CERN will then make the manufacturing drawings and the fabrication of the thermal screen
- Cryogenic circuit:
  - Main design finalized by CERN, pending final calculation validations
  - The manufacturing will be then launched by STFC
- Warm magnetic shield:
  - Detailed design by STFC close to final stage
  - Will be procured by STFC
- RF internal lines (Eric and his team):
  - Our understanding is that the design of the top lines is close to final
  - Lower lines are not yet finalized.

# RFD cavity jacketing assembly



# RFD cavity jacketing assembly





# RFD cavity jacketing assembly



# RFD cavity jacketing assembly





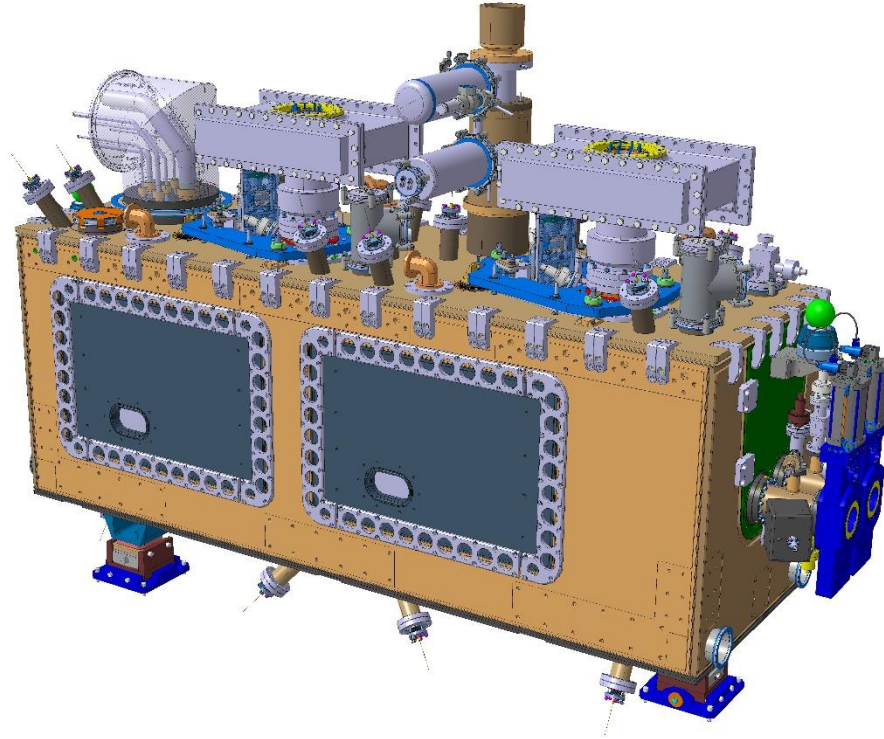
# RFD cavity helium vessel welding



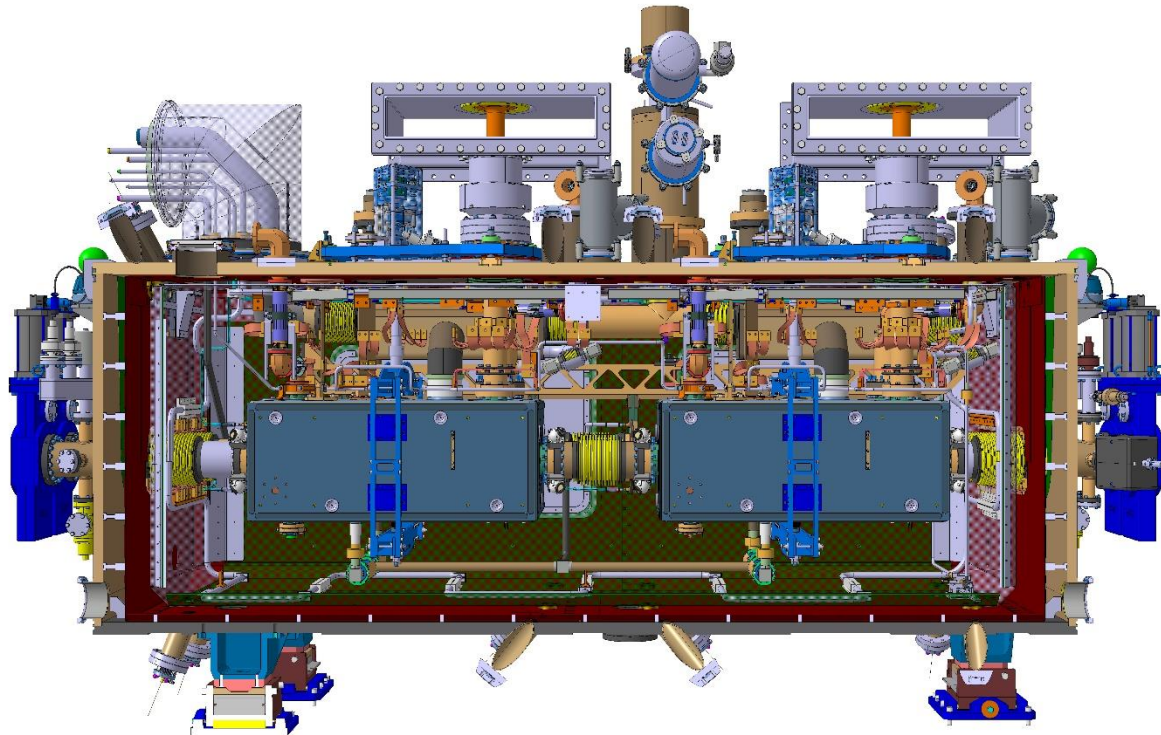
# RFD cavity helium vessel welding



# RFD Cryomodule for tests in SPS

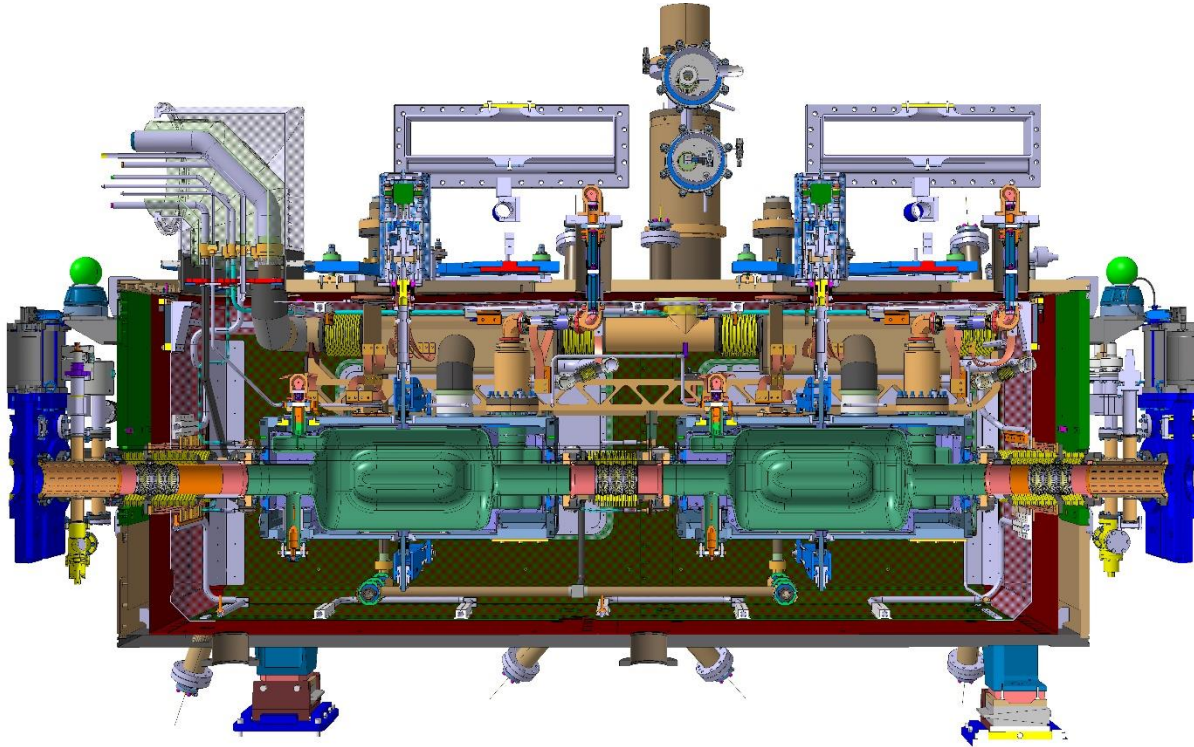


# RFD Cryomodule for tests in SPS

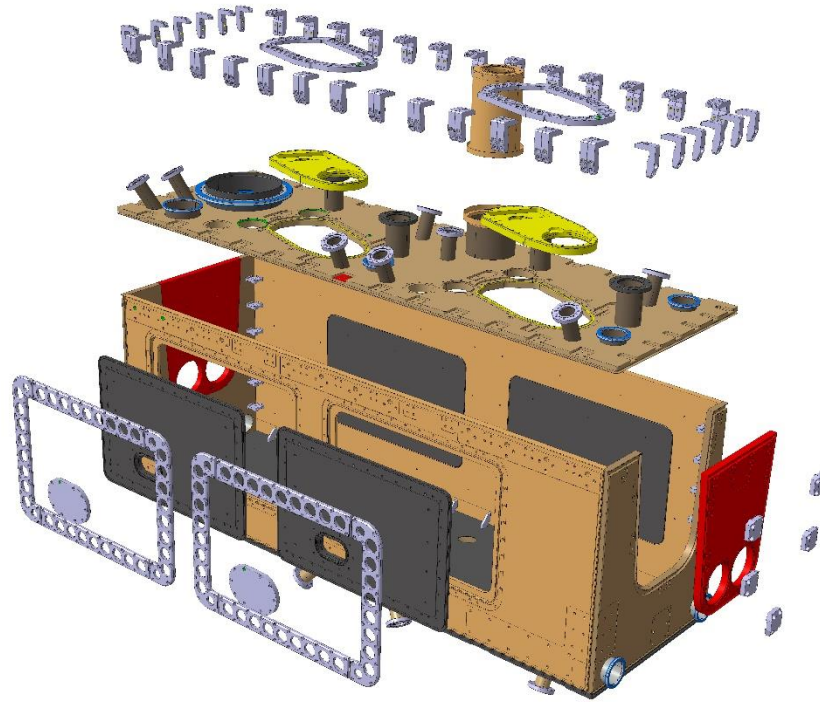




# RFD Cryomodule for tests in SPS

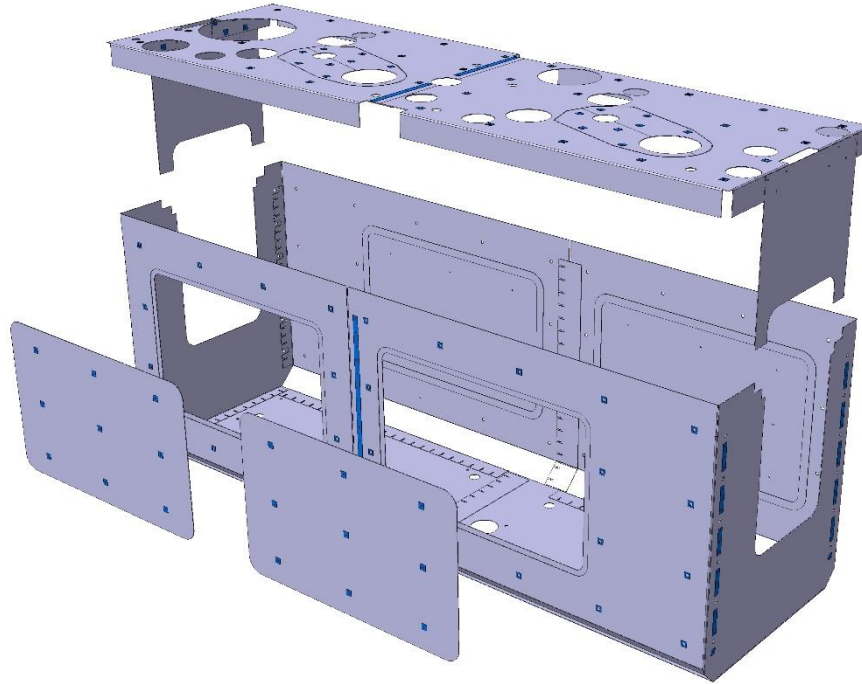


# OVC

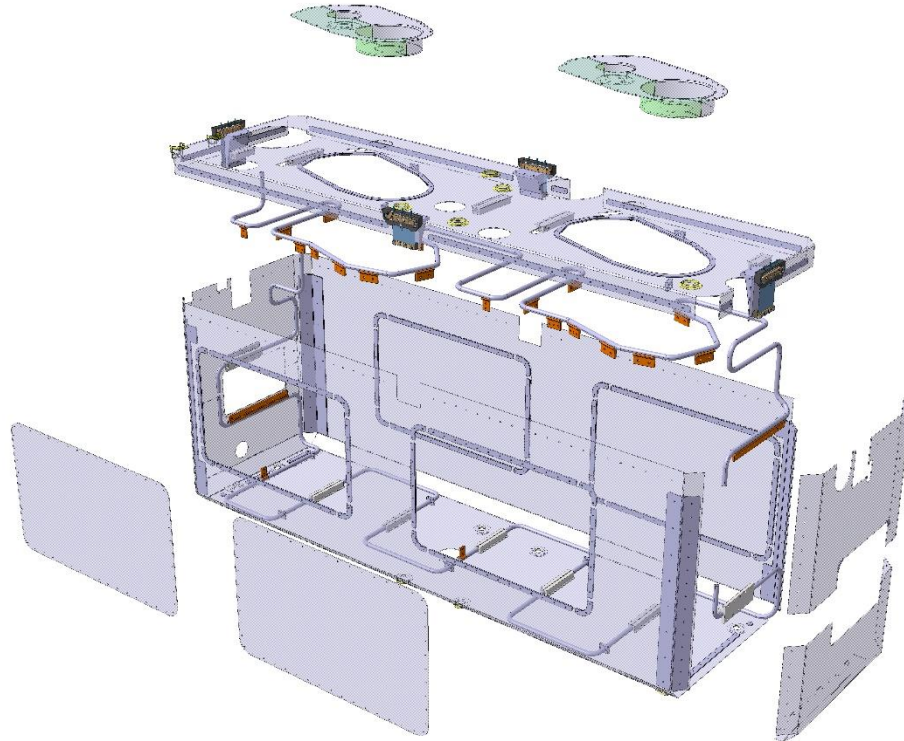




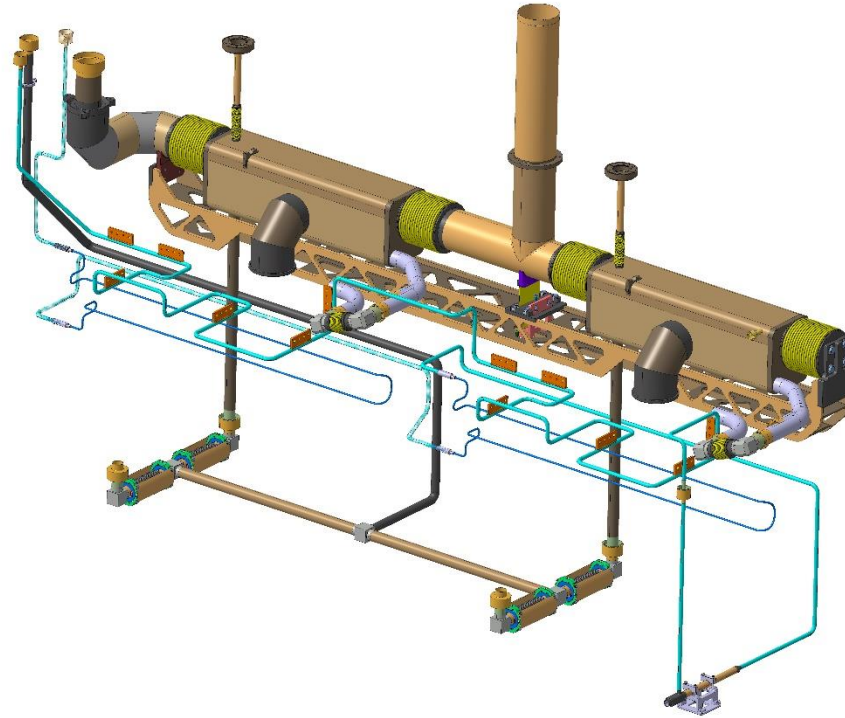
# Warm magnetic shield



# Thermal shield



# Cryogenic lines



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