

**High  
Luminosity  
LHC**

## **CERN – Zanon discussions**

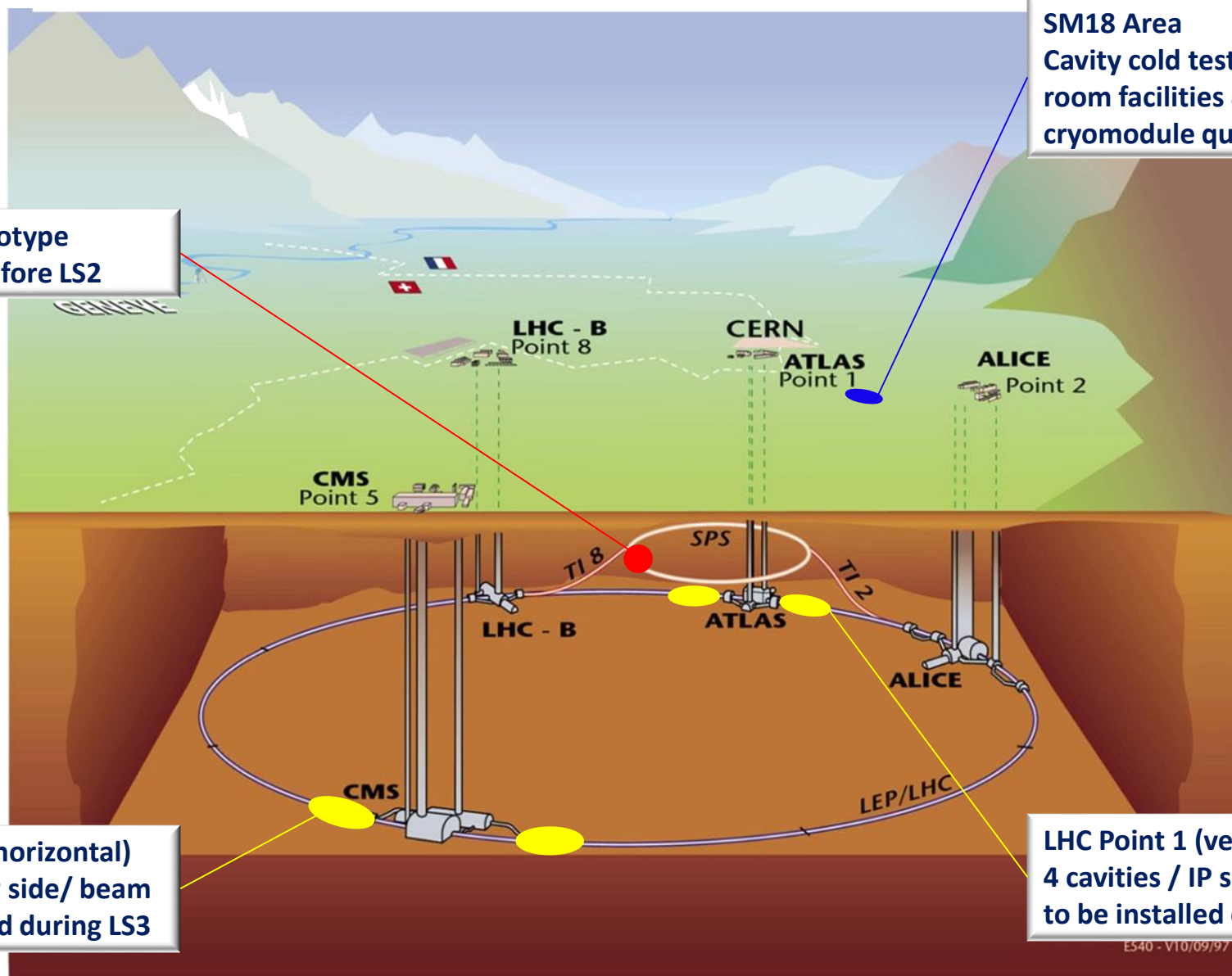
**Ongoing SRF developments  
Ofelia Capatina, on behalf of WP 4 collaboration**



The HiLumi LHC Design Study is included in the High Luminosity LHC project and is partly funded by the European Commission within the Framework Programme 7 Capacities Specific Programme, Grant Agreement 284404.



# Crab cavities



**SM18 Area**  
Cavity cold testing, clean room facilities & cryomodule qualification

**SPS Test Prototype Module(s) before LS2**

**CMS**  
Point 5

**LHC - B**  
Point 8

**CERN**  
**ATLAS**  
Point 1

**ALICE**  
Point 2

**LHC - B**

**ATLAS**

**ALICE**

**CMS**

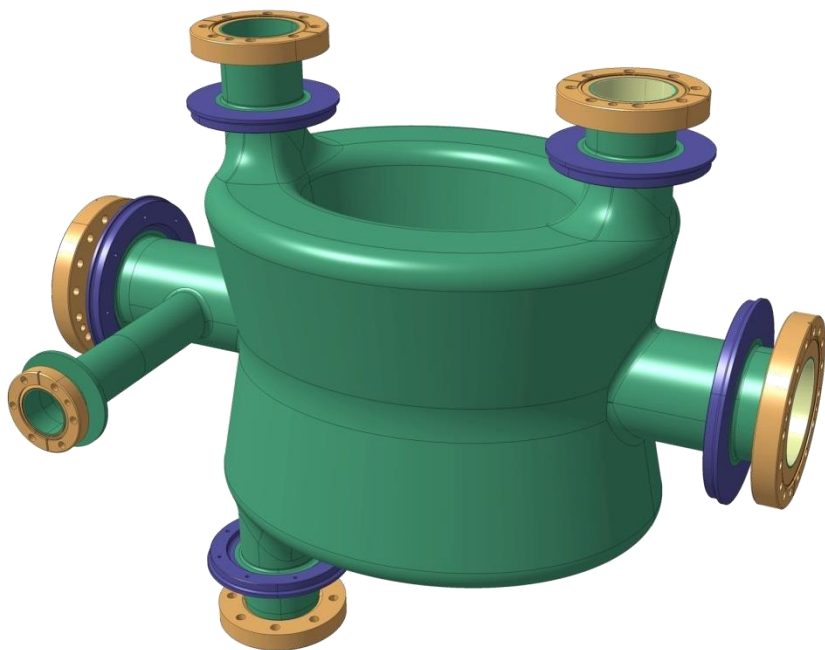
**LEP/LHC**

**LHC Point 5 (horizontal)**  
4 cavities / IP side/ beam  
to be installed during LS3

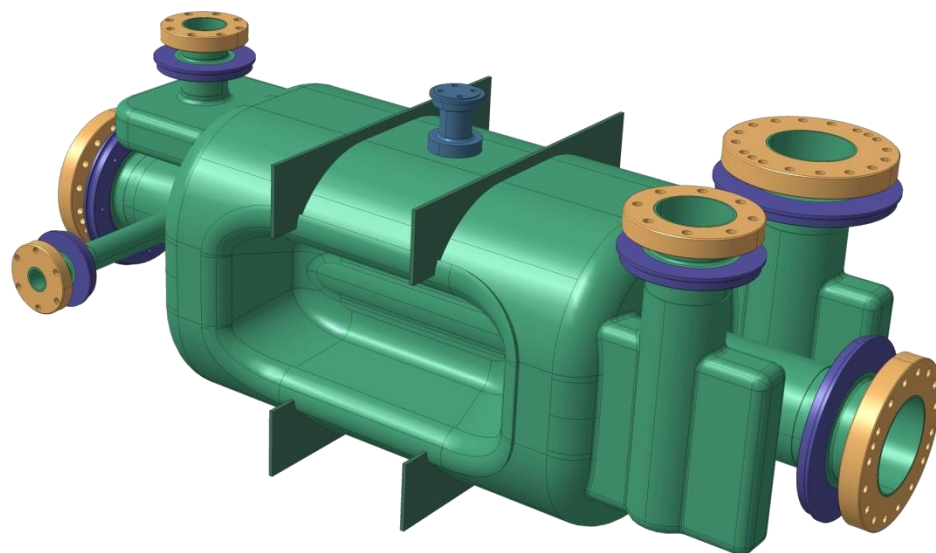
**LHC Point 1 (vertical)**  
4 cavities / IP side/ beam  
to be installed during LS3

E540 - V10/09/97

# Cavities

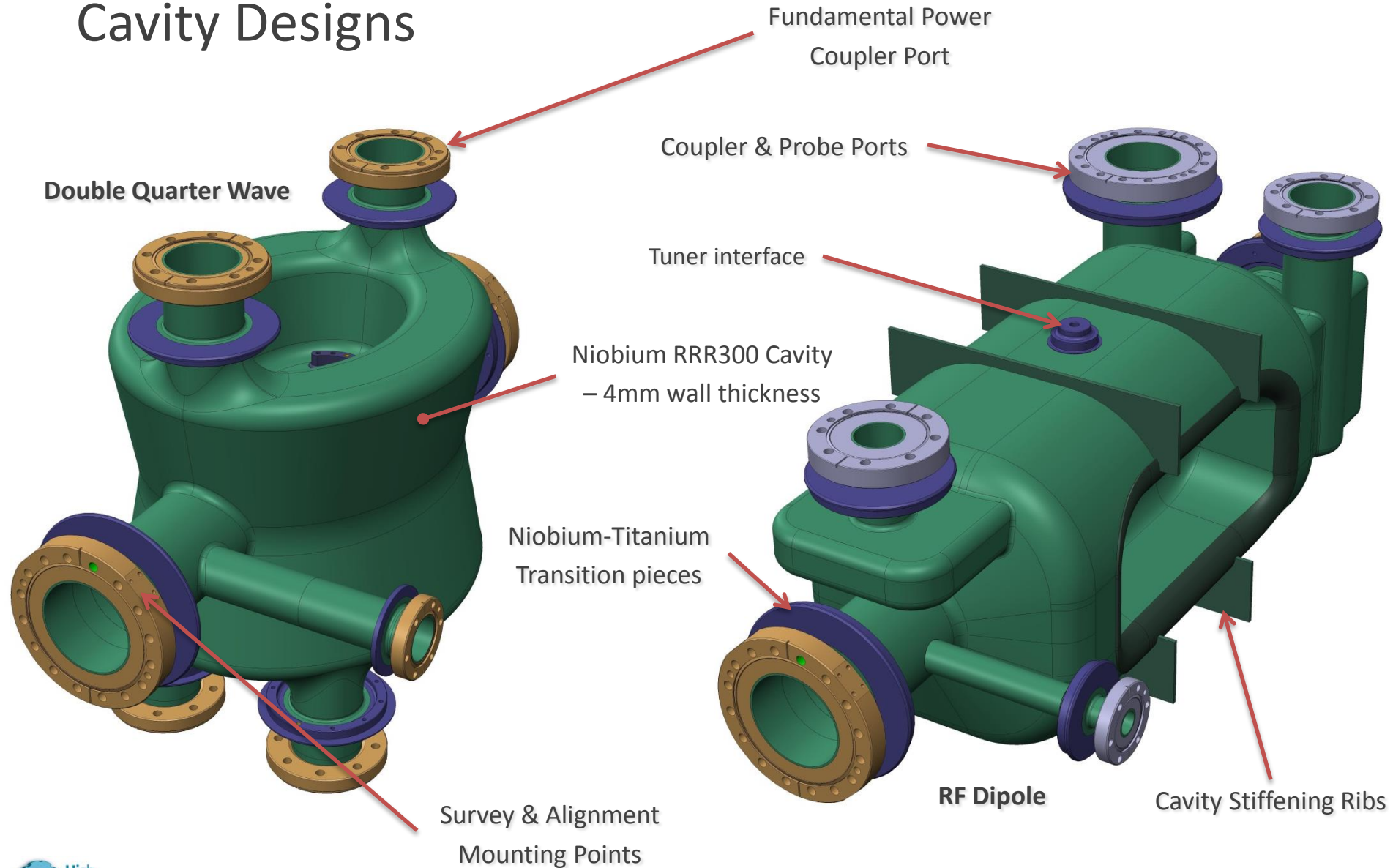


Double Quarter Wave (DQW) cavity

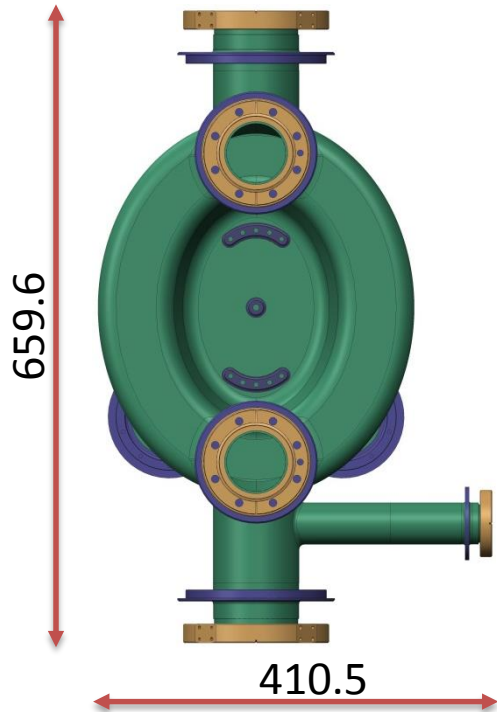


RF Dipole cavity – Horizontal – to be used in Point 5 (CMS)

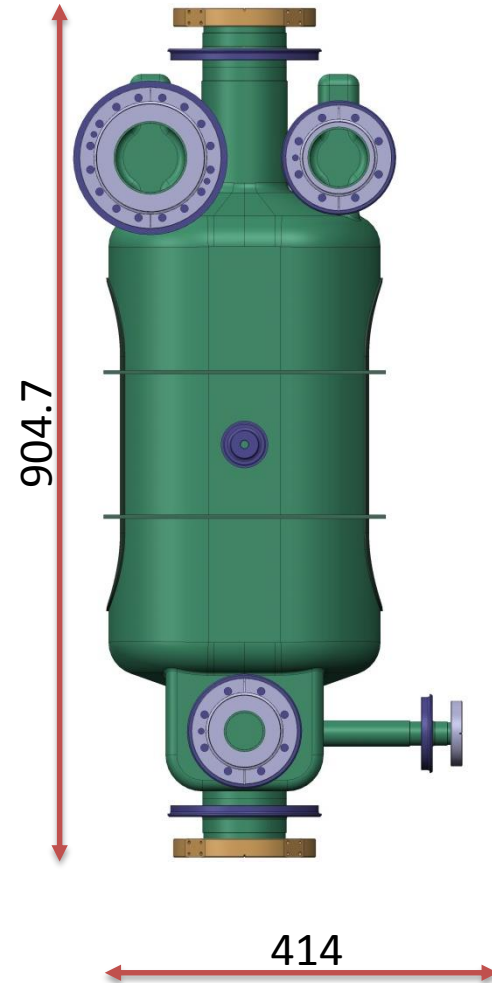
# Cavity Designs



# Double Quarter Wave



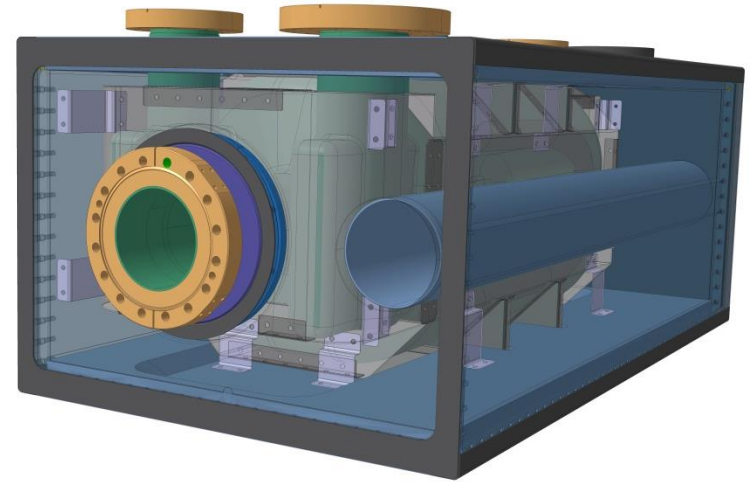
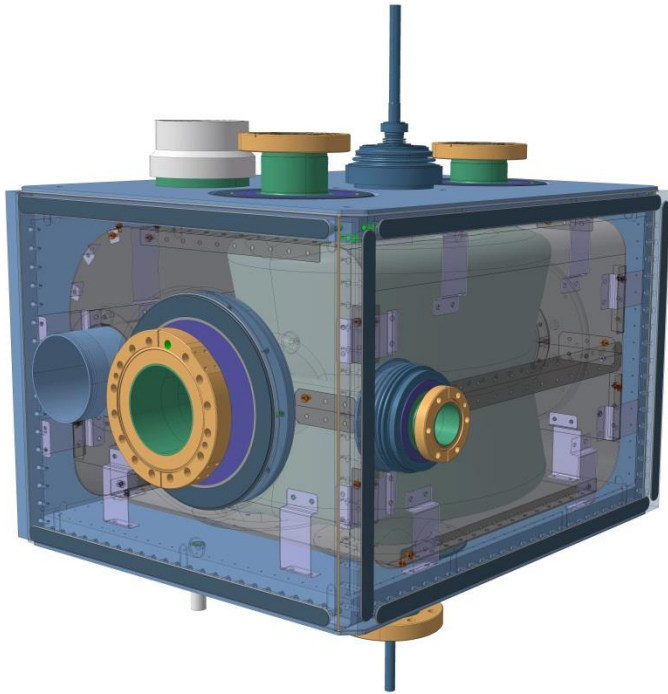
Mass: 55kg



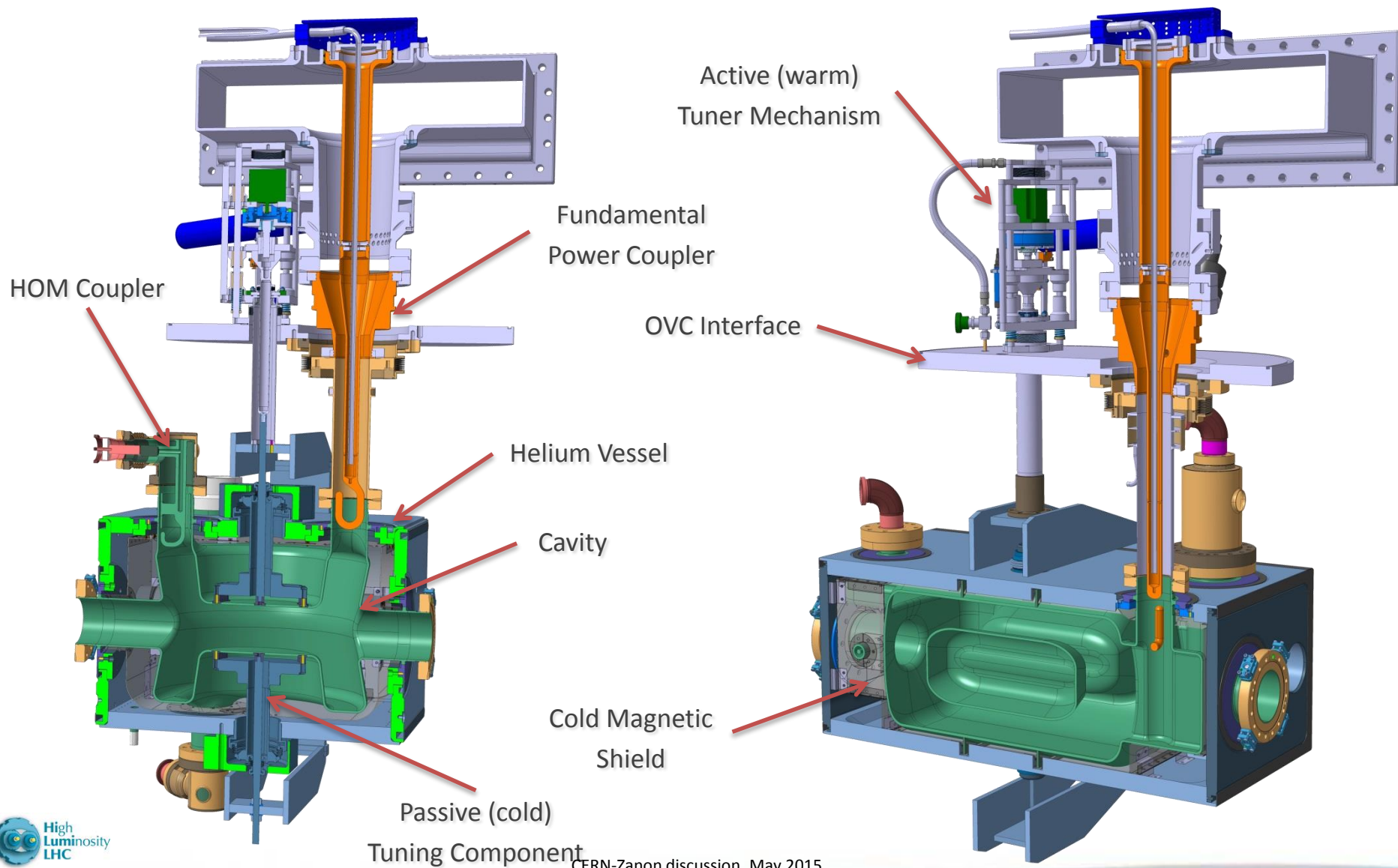
Mass: 50kg



# Dressed cavities



# Dressed Cavities

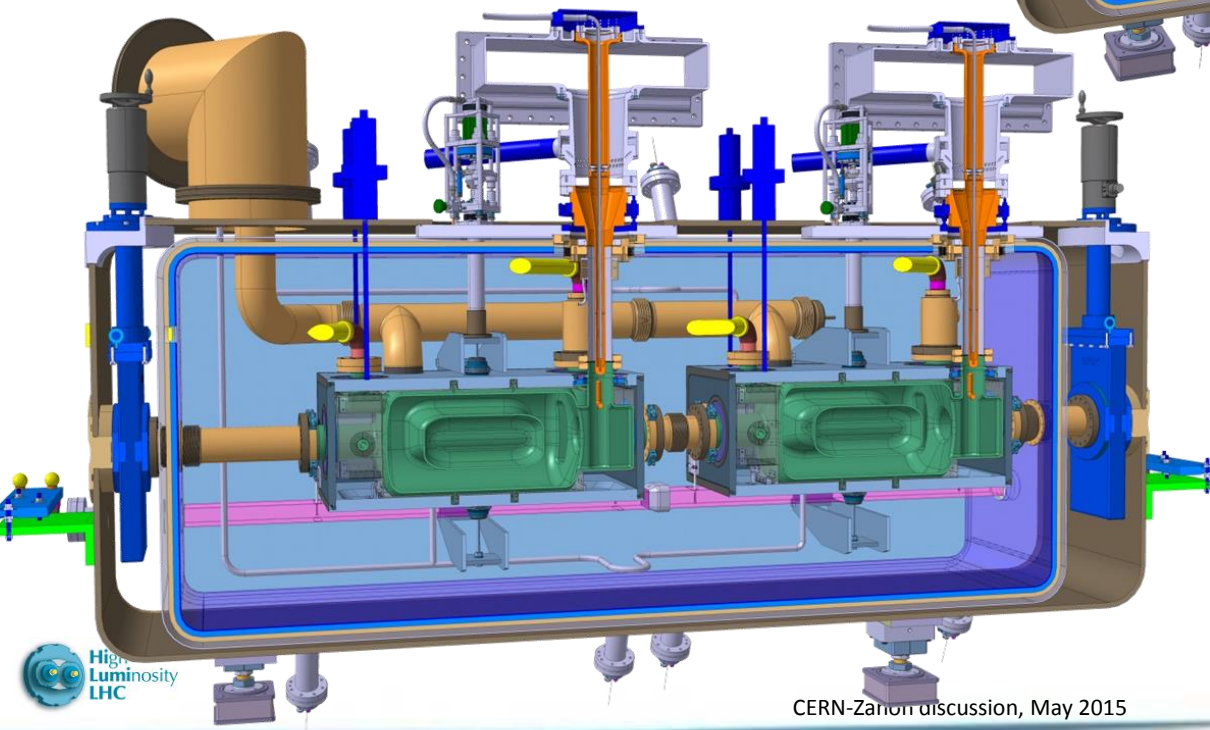
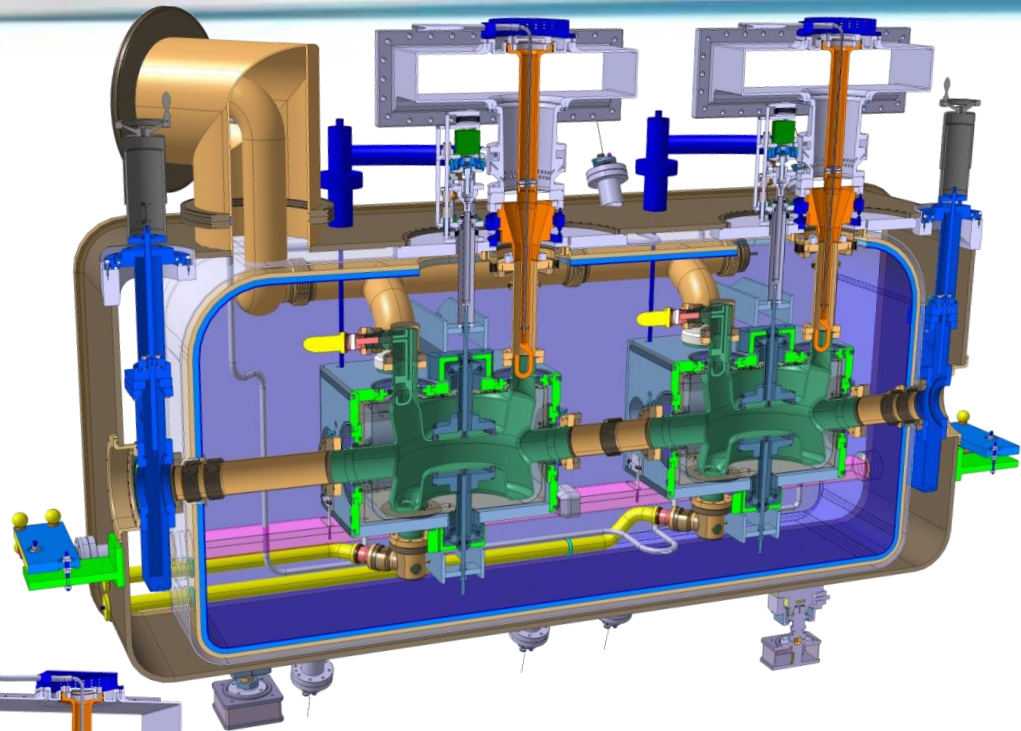


CERN-Zanon discussion, May 2015



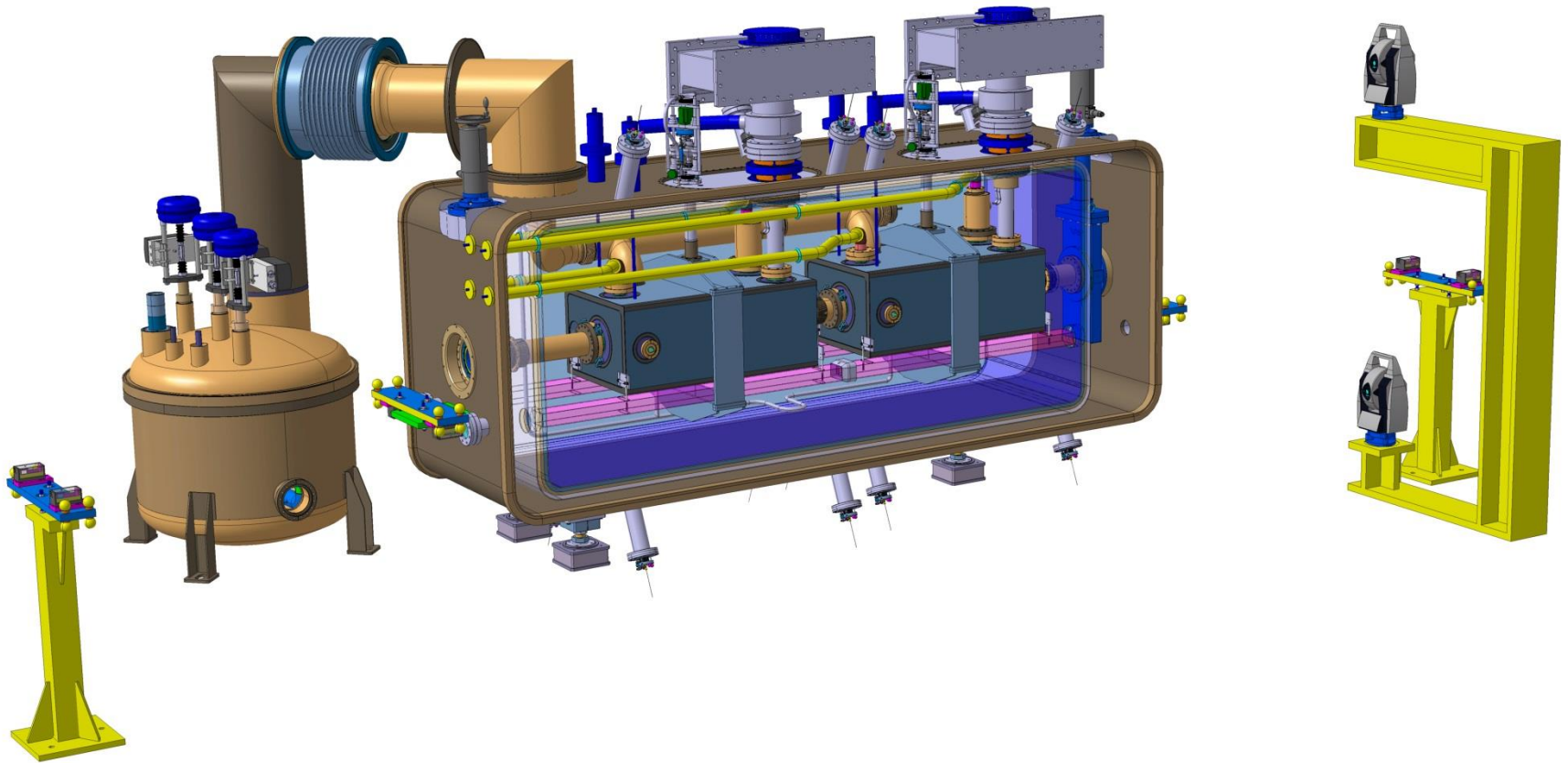
# Cryomodules

Double Quarter Wave,  
Vertical Deflection

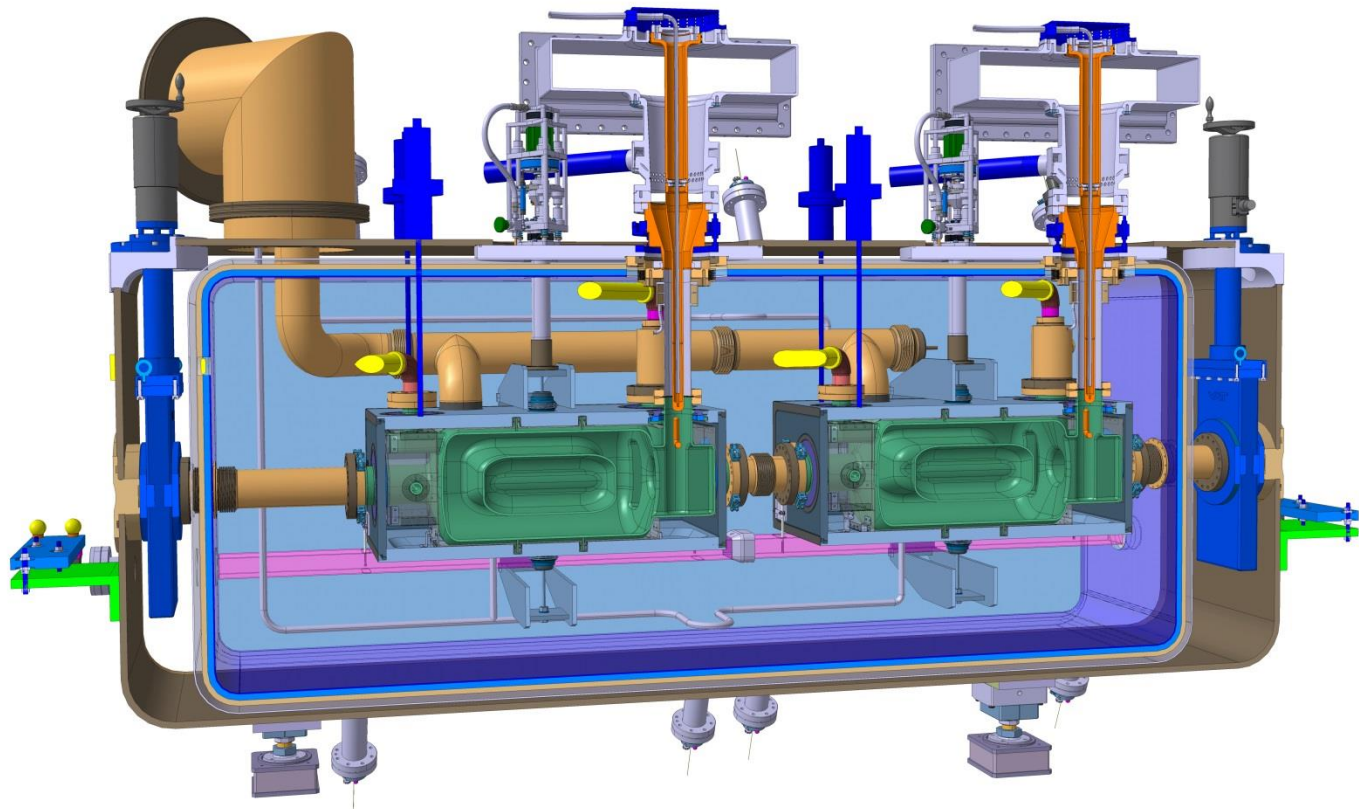


RF Dipole,  
Horizontal Deflection

# Cryomodule

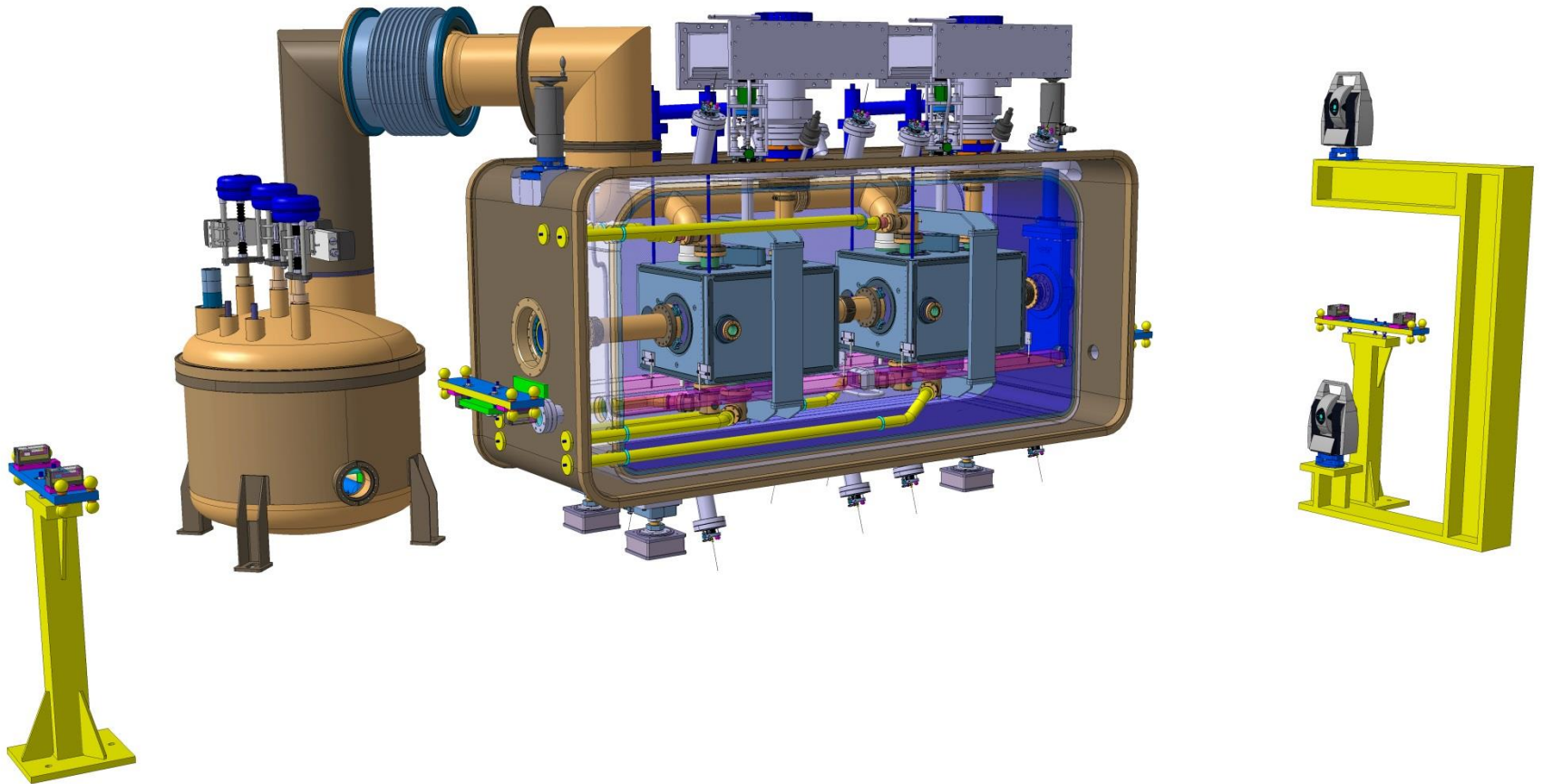


# Cryomodule

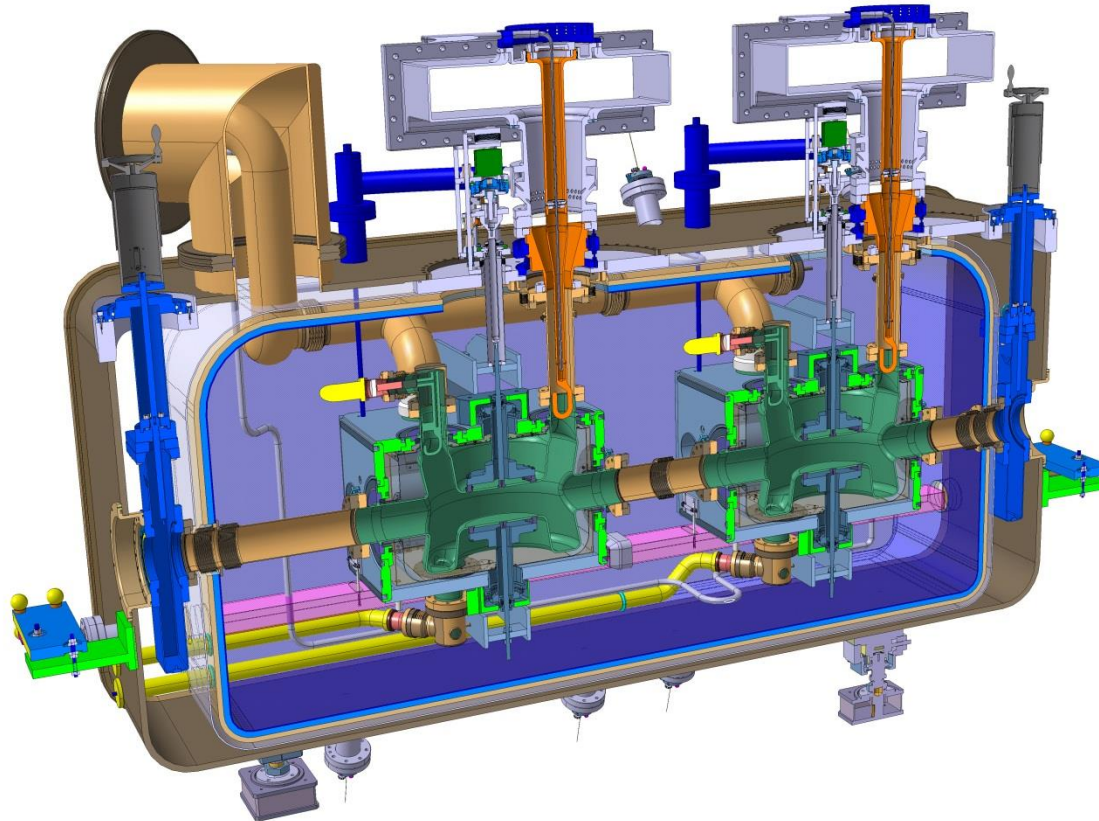




# Cryomodule

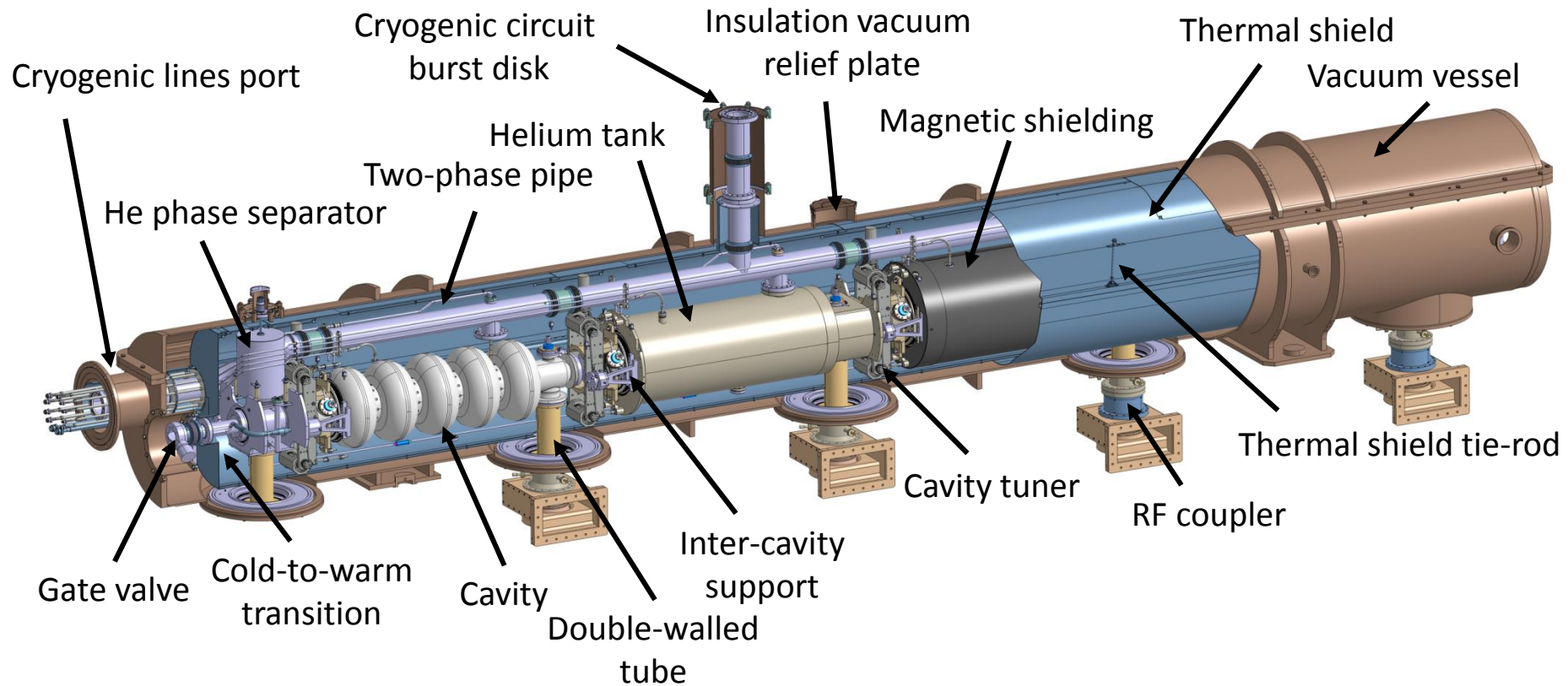


# Cryomodule

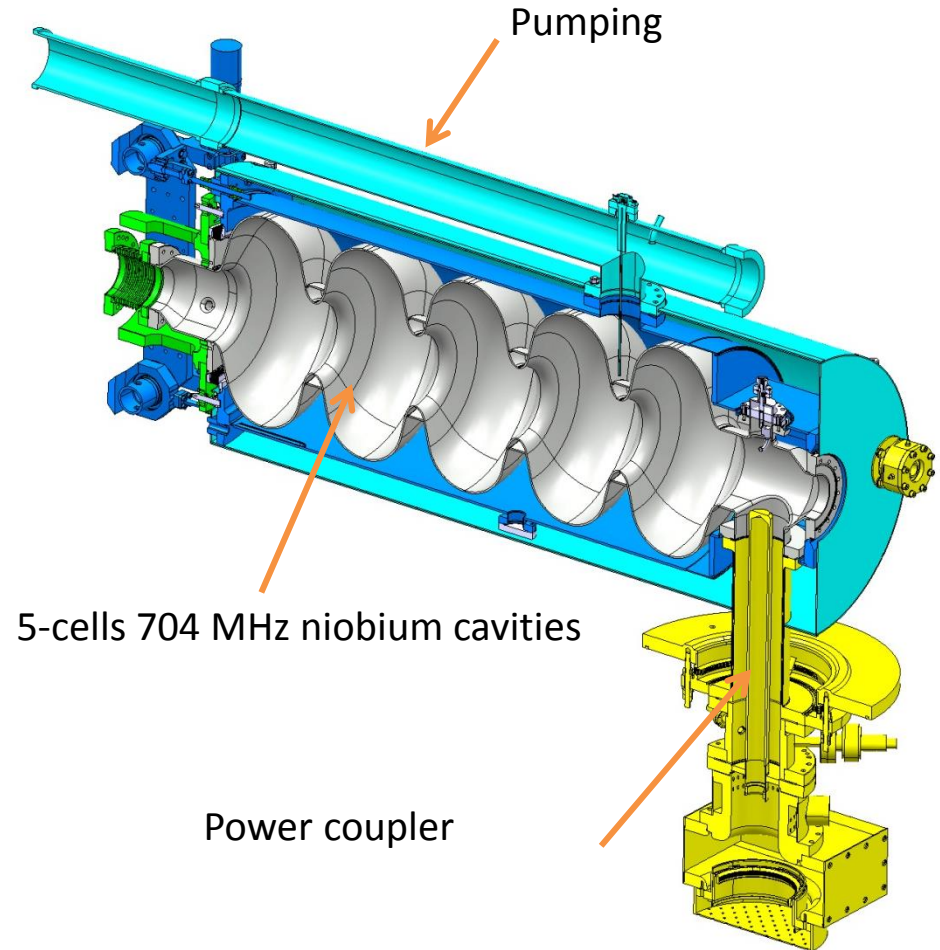
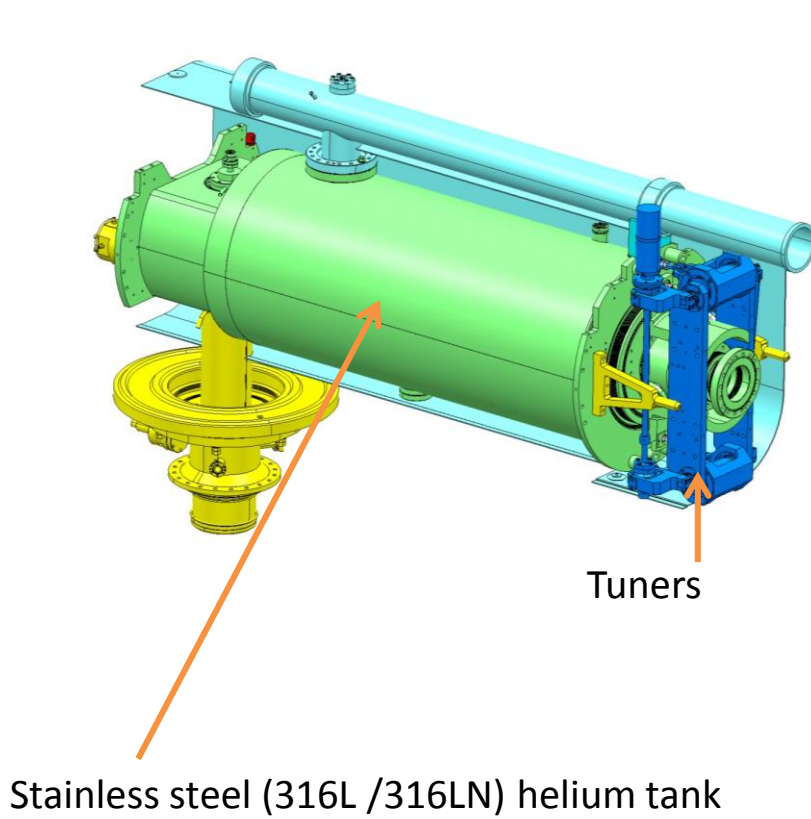


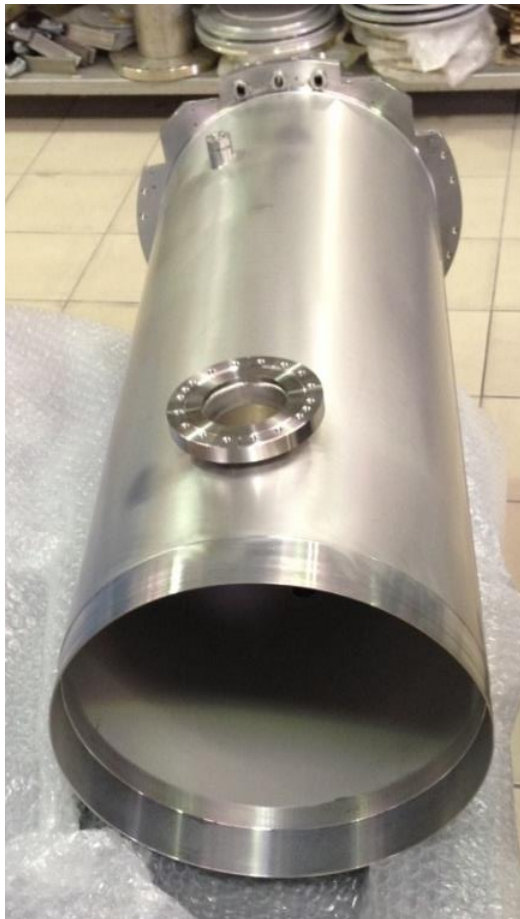


# SPL R&D Study

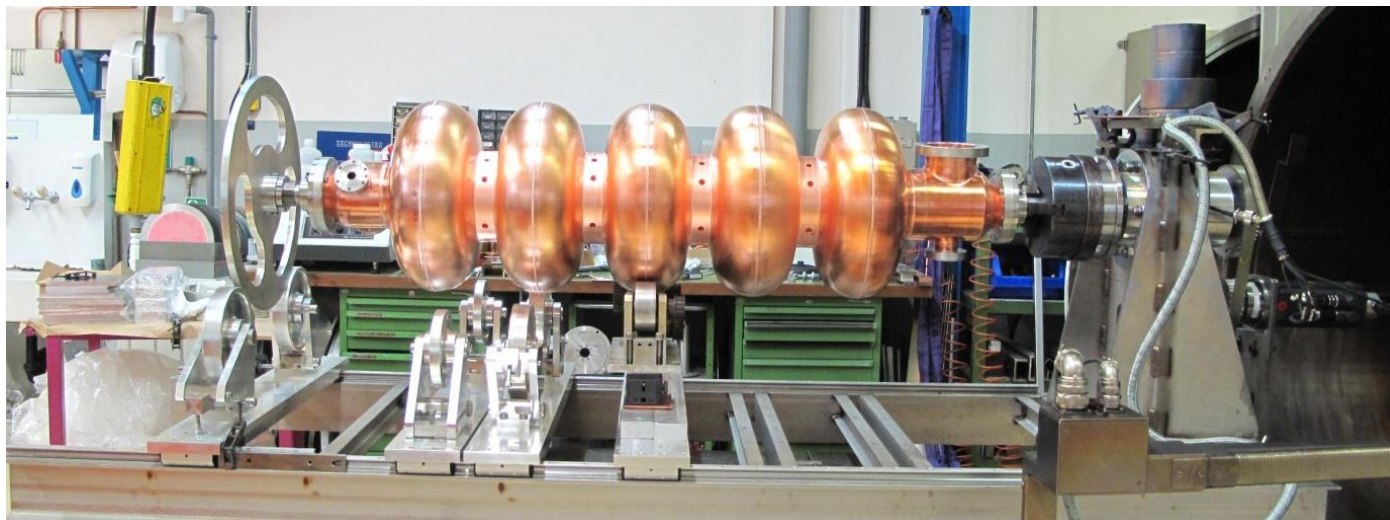


# 5-Cell Equipped Cavity









And others to come...