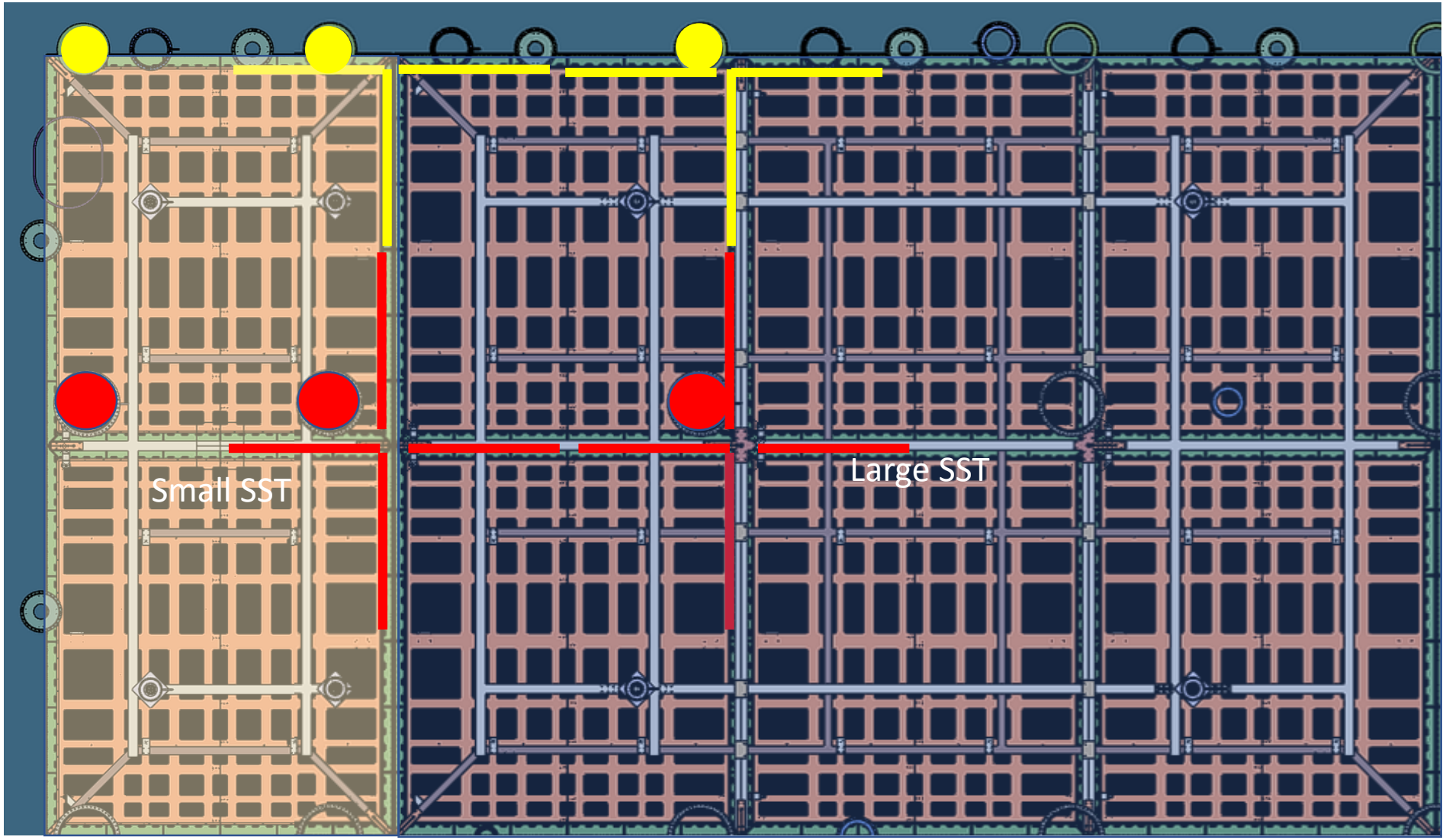
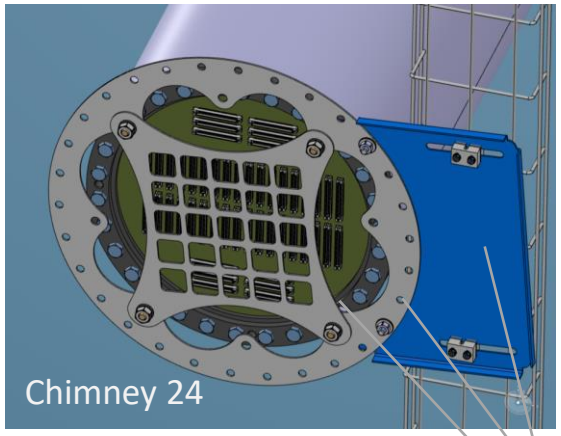
Status of LAPP components and development for the CERN installation test

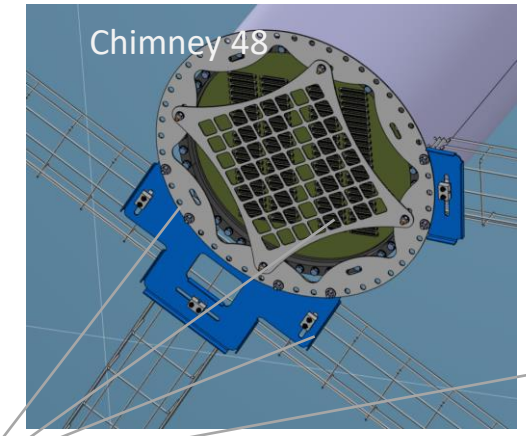
D. Duchesneau

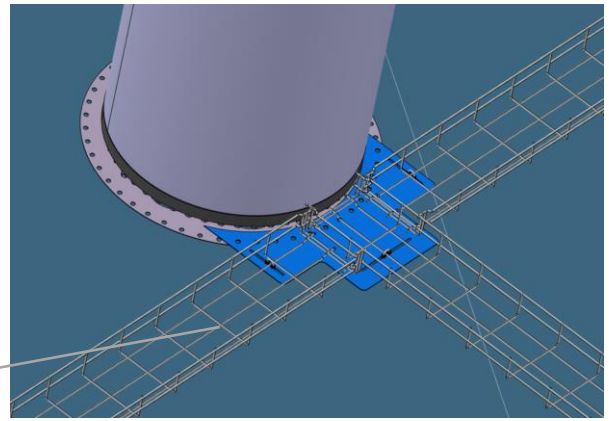
Topology of the CRP installation test at CERN



Cable trays and components





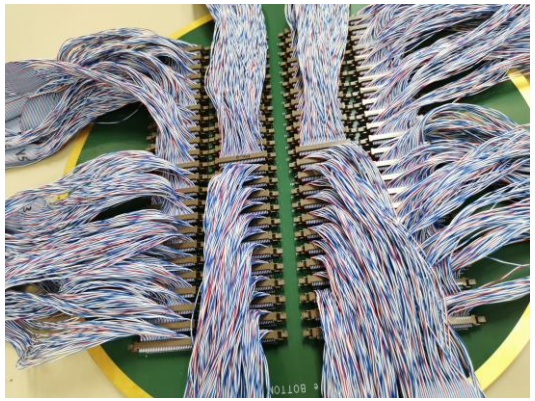


Design being finalised; Parts will be purchased end of January for testing prototype => **all parts end of February**

Cold flanges (metallic ring + PCB): 2 large and 2 smalls from IJClab
Older version but nearly ok for cable connector positioning: already existing

Warning: the interface and the system to attach and position the flanges on the structure penetrations has to be clarified and discussed with CERN

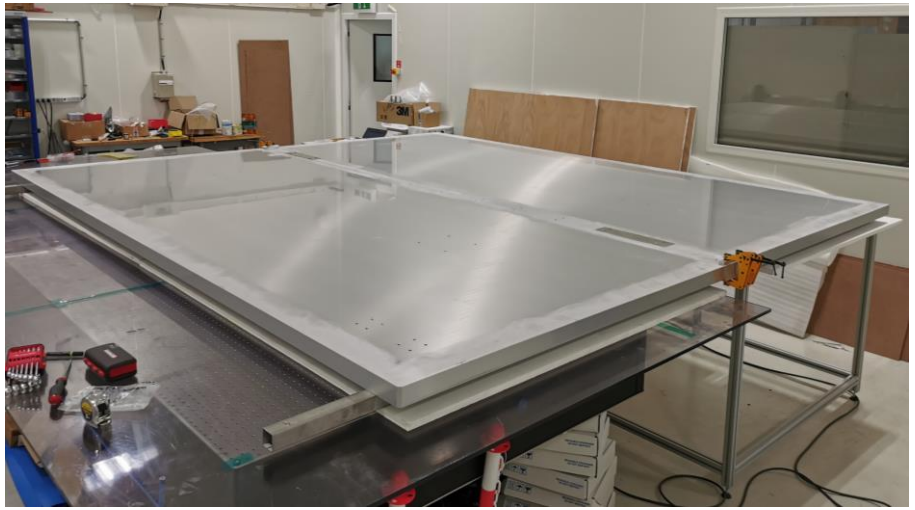
Cables: at least 200 cables to purchase and put KEL connectors on both ends)



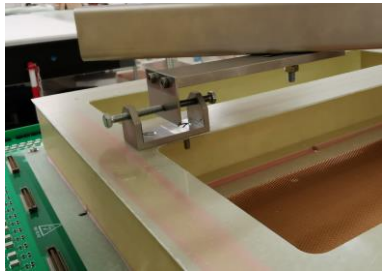
KEL connectors to purchase end of January => Available in March => recondition Icarus cables with these connectors
=> End of April

Fake CRPs

6 Fake CRPs have been produced and received at CERN (1 half has been damaged during transport and will be replaced)
They will be used for adjustments on SST before raising; and at CERN on the Installation mockup

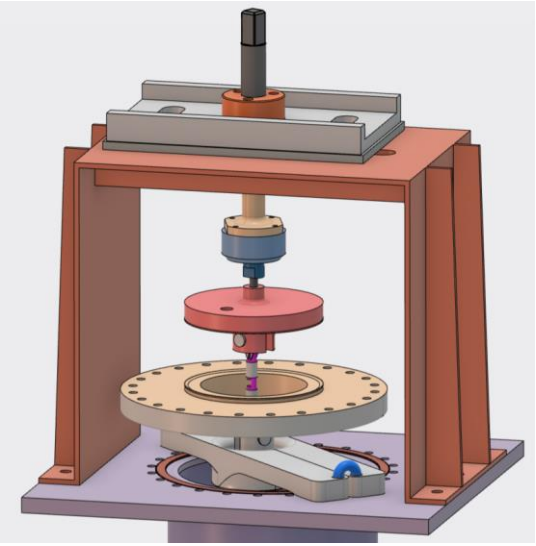


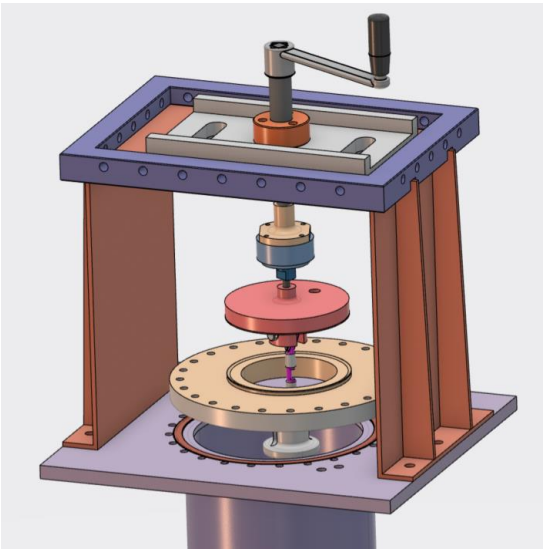
CRP decoupling and attachments devices

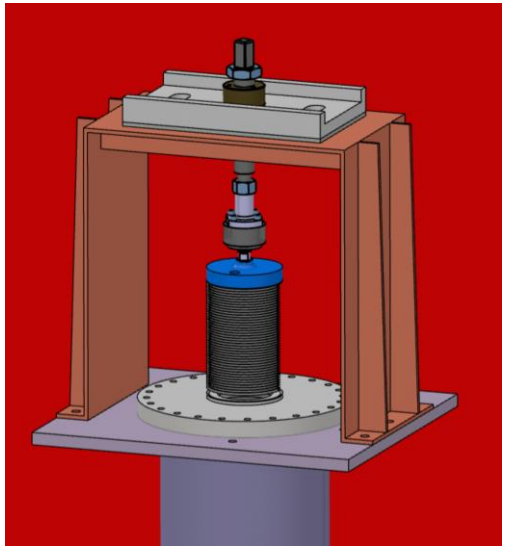


- Design finalised; FEA report to be submitted to compliance office
- Fabrication of the double ball piece + base foreseen at LAPP (24 items)
- **Should be available in February**

Suspension mechanics







- Design being finalised; FEA report to be submitted to compliance office in January.
- Base plate design need to be prototyped and welded
- Parts for 8 systems will be purchased in February => **all parts end of March**

Electrical Hoists system (4 hoists + common controller)

Several providers identified:

- Harrington - Keto in US
- Comepal in Europe

Both systems seems to be working at 110-220V and 50-60 Hz
4 hoists can be controlled at the same time

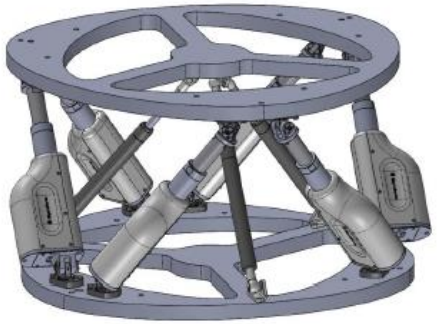
Can share the hoists with FC needs: to decide with I&I

Wait the test ongoing at Ash River (cf: Bill)

Specific tooling

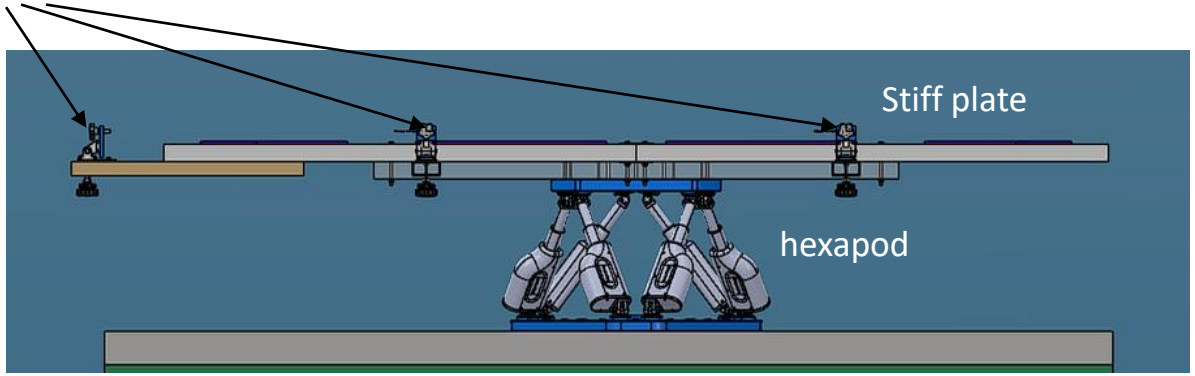
Hexapod: call for tender is completed; the company is chosen and the contract is being prepared

BREVA XL Custom Hexapod



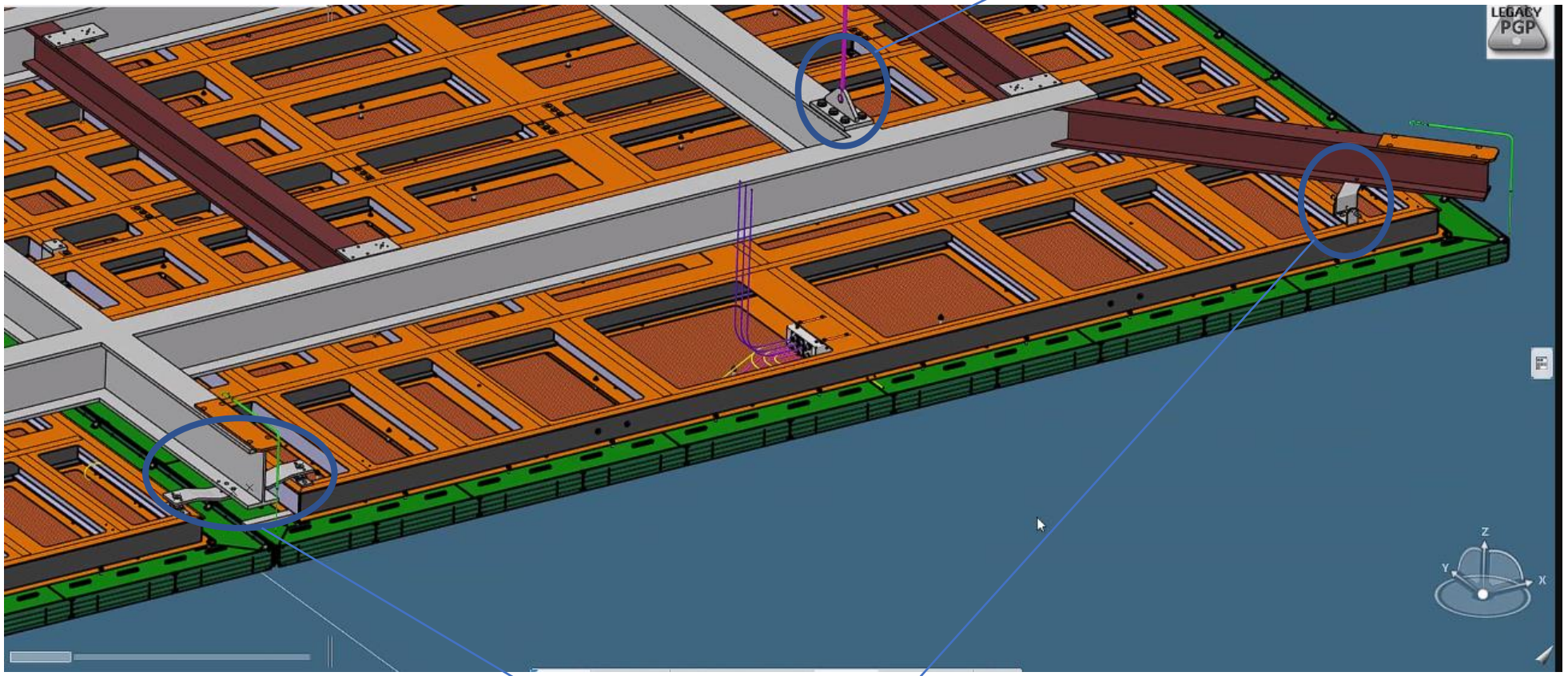
Lead time: 20 weeks => **receive end of April 2025**
=> Test first at LAPP in May 2025

Stiff plate and connection system:



- Design ongoing;
- Submit a FEA report to HSE and compliance office (end of February)
- Parts will be purchased end of January for testing purpose => **parts in March**

Who is taking care?



Fixed point and guided point parts are LAPP