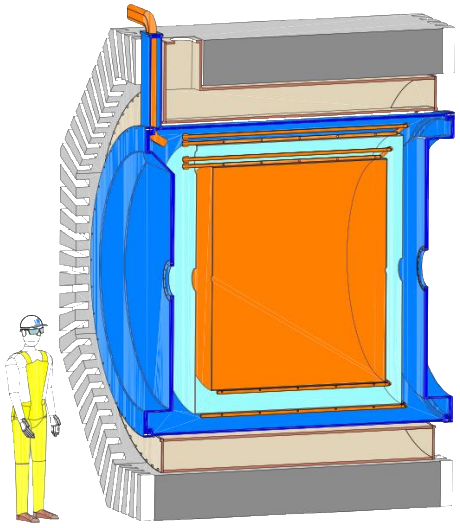


FLASH

WP2

Mechanical design and cryogenics

INFN LNF
Istituto Nazionale di Fisica Nucleare

Carlo Ligi INFN – LNF

FLASH layout

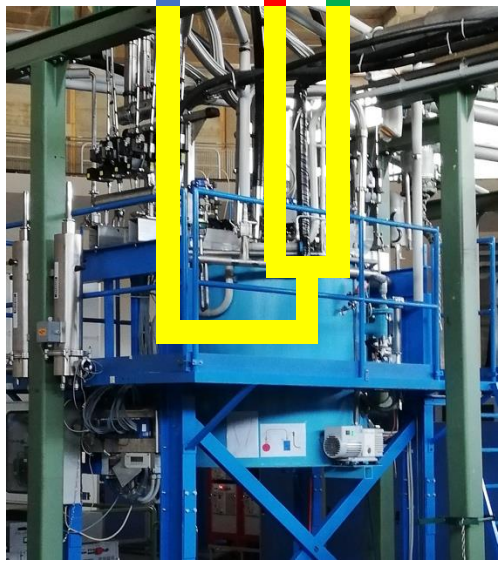
3bar/5.2K SCHe

5bar/70K GHe

New Transfer Line

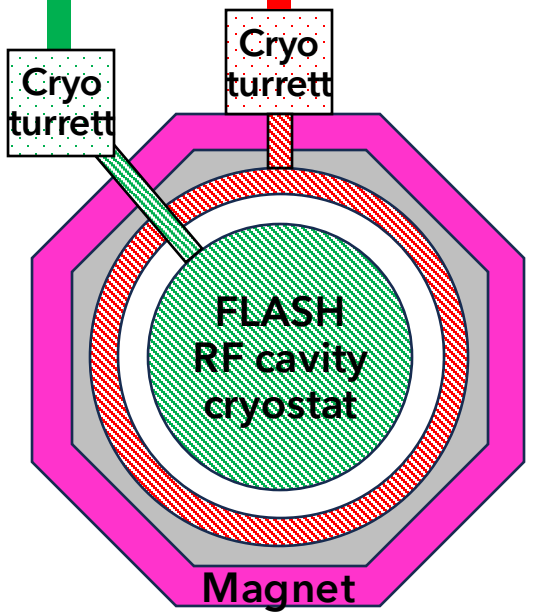
Cryogenic hall

LINDE He refrigerator/liquefier

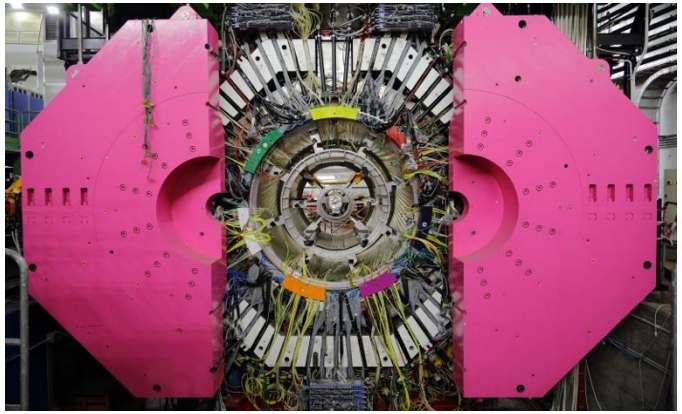


Valve Box

possibly 2 Kelvin

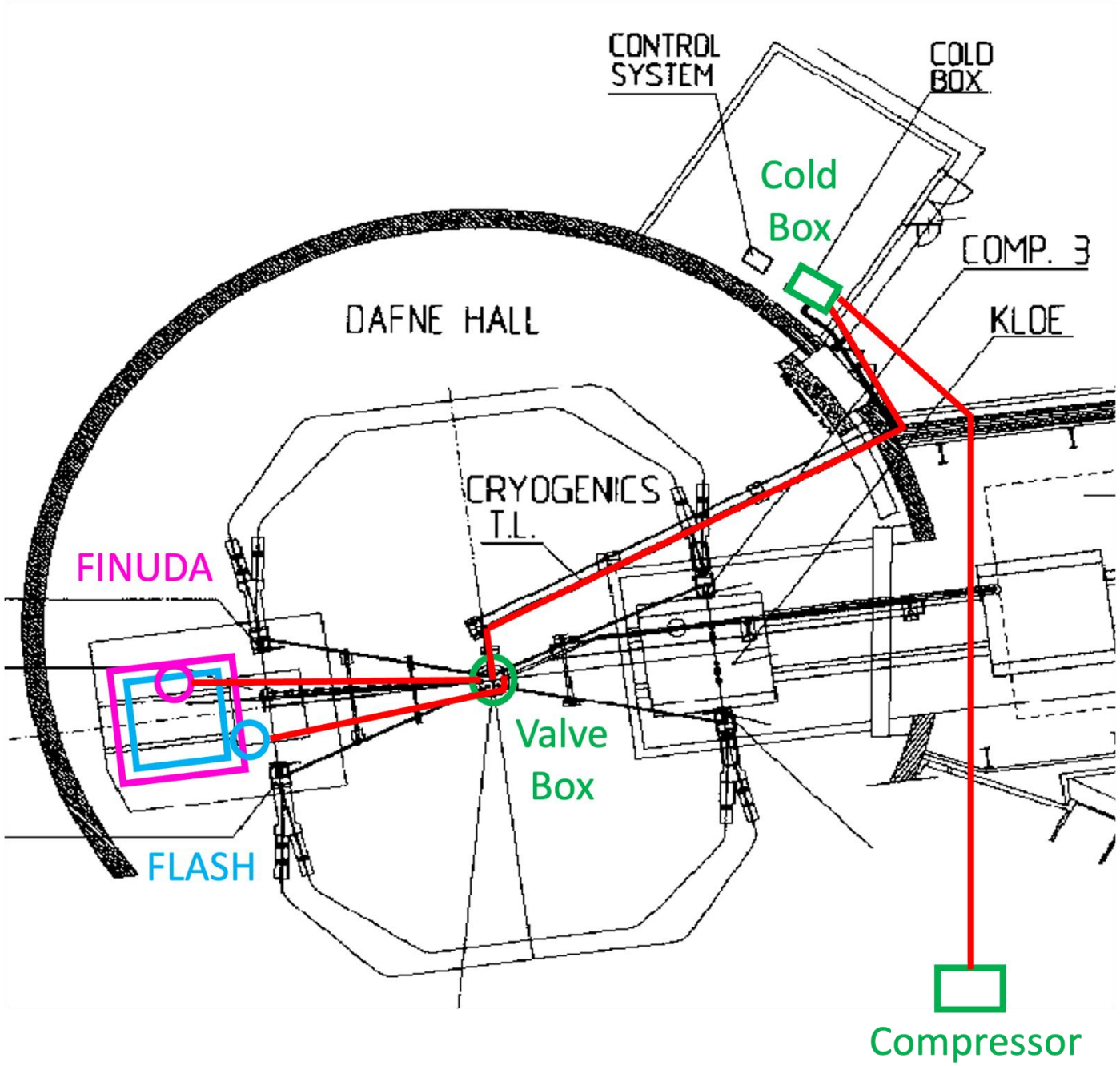


DAΦNE hall

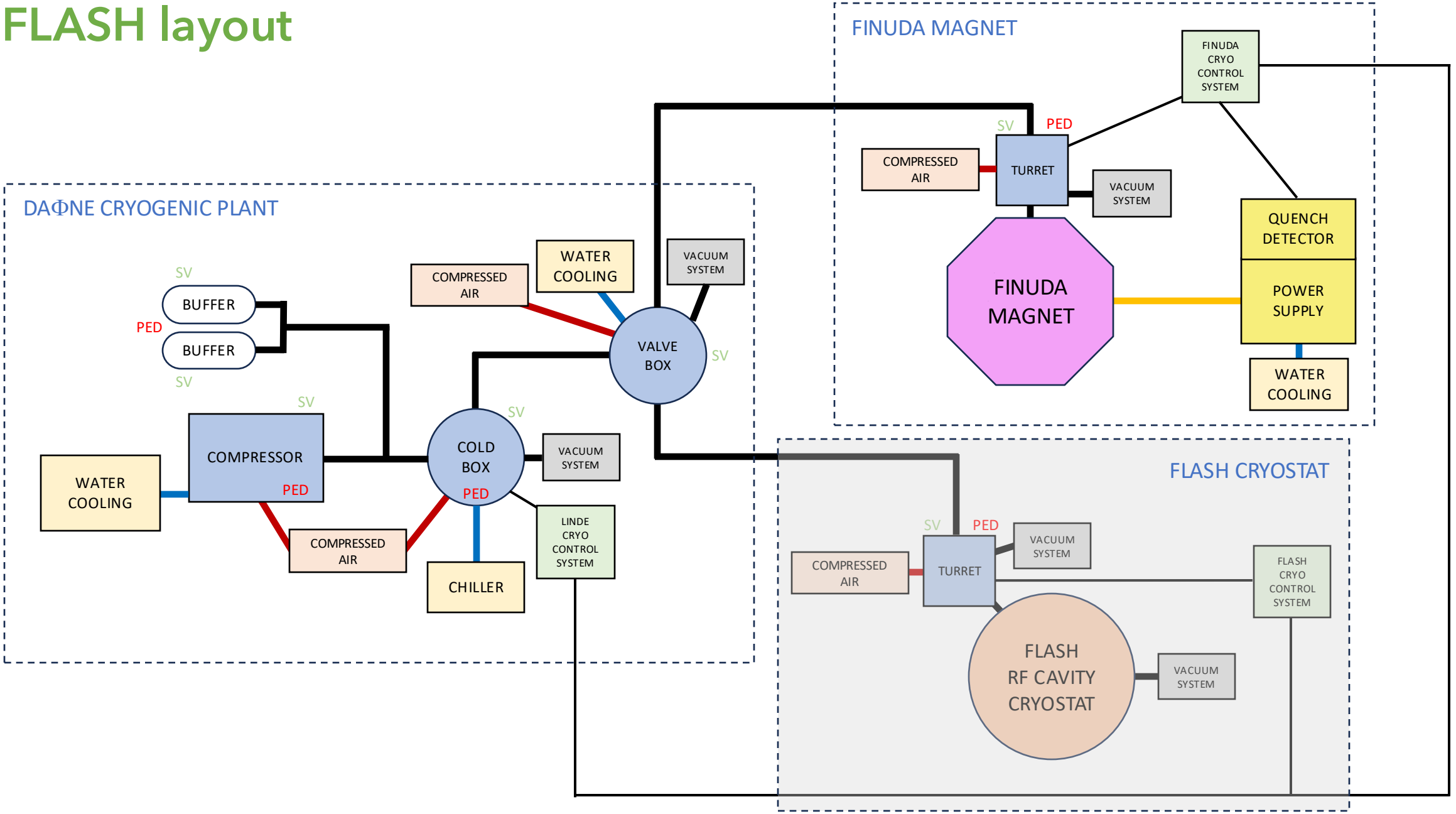


FINUDA magnet

FLASH layout

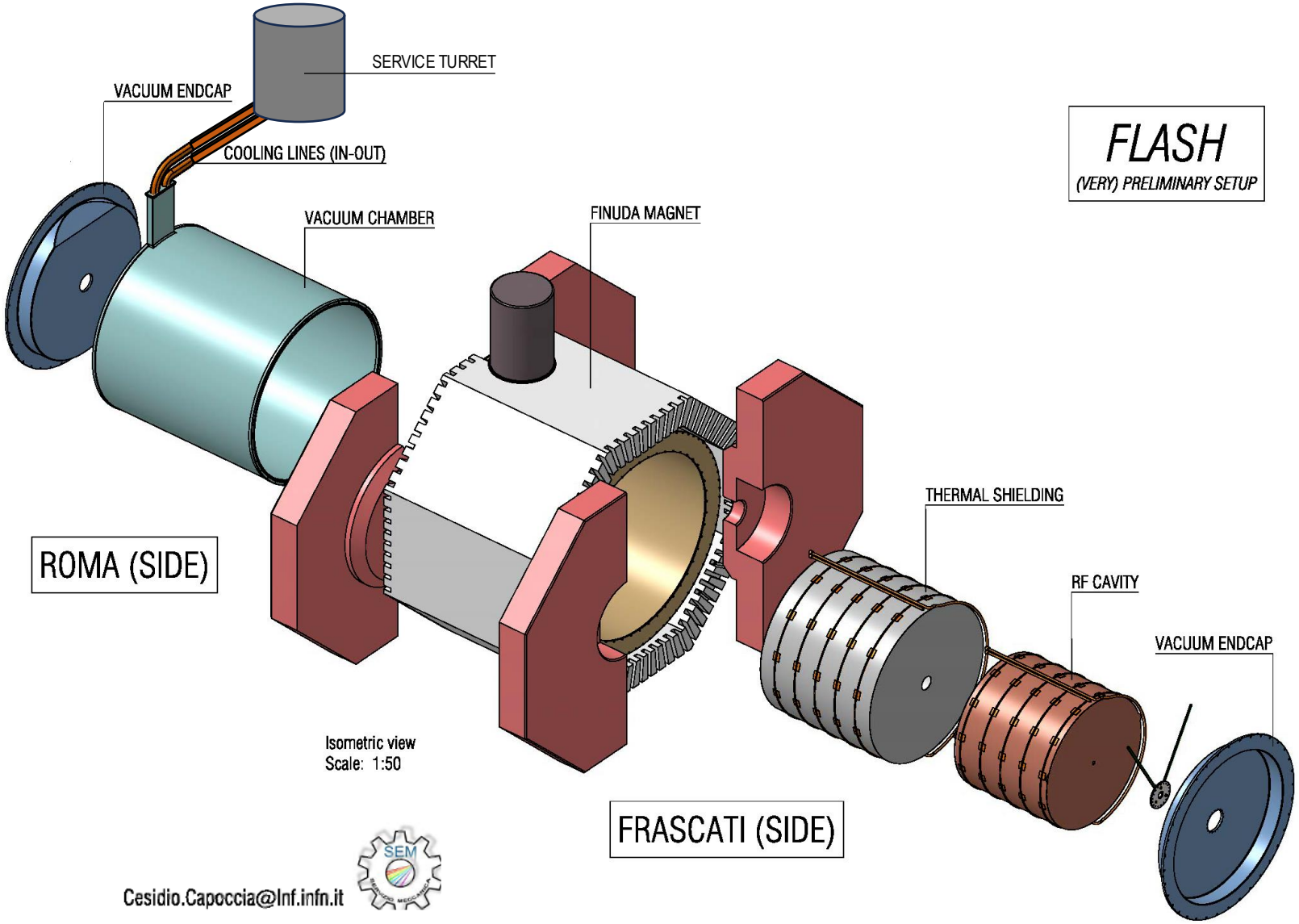


FLASH layout



PED = PED directive
SV = safety valves

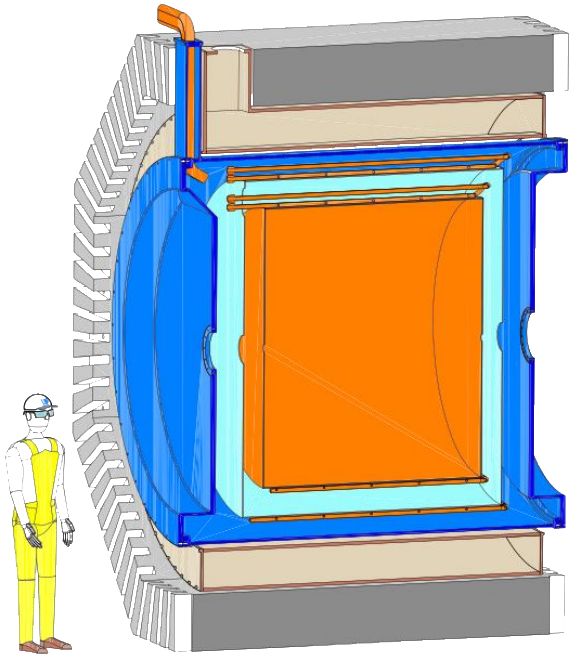
Cryostat cryo/mechanical design



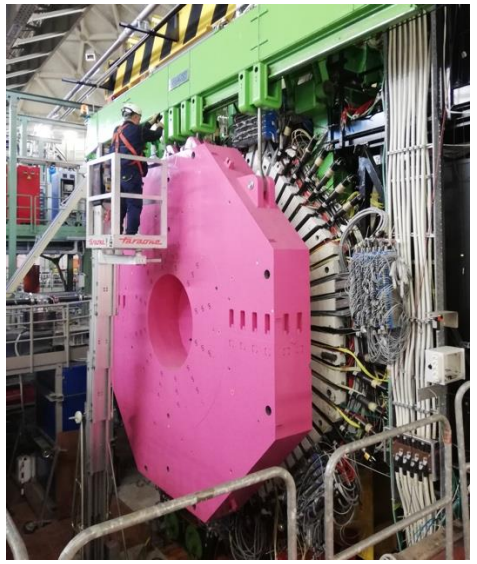
Cesidio.Capoccia@lnf.infn.it

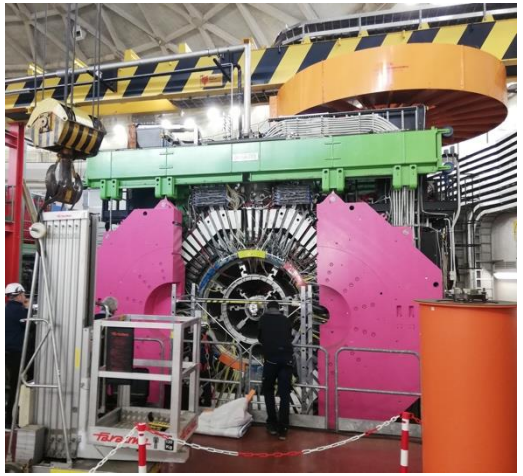
Status

- FLASH Cryostat cryo/mechanical design
  - contact with the CERN cryogenic group (A. Perin) for consultancy about the thermo-mechanical design
  - there is a candidate for the position of a cryogenic engineer to help us to design the cryostat. He will be trained by CERN cryogenic group
  - we are working to understand the feasibility of the 2 K cavity cooling



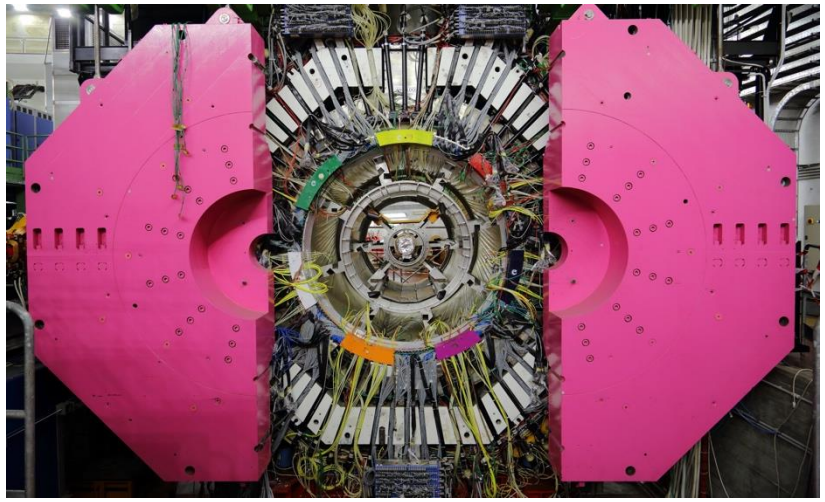
- FINUDA detector dismantling
  - magnet endcaps re-opened last week
  - works for the racks/cables dismantling started
  - detector clepsydra will be moved out in the next months
  - details on WP6 talk by S. Gazzana





Work to do

- FLASH cryogenic control system design and procurement
  - new PLC for sensors measurement and valves control
  - new software for the slow control
- FINUDA works:
  - new cryogenic control system design and procurement
  - power supply refurbishment + quench detector procurement
  - cooling water for the power supply
- DAΦNE cryogenic plant extraordinary maintenance
  - cryoplant maintenance
  - control system's PLC replacement
  - cryoplant new chiller procurement
  - Helium compressor maintenance
  - new compressor's dry cooler procurement
  - new transfer line for FLASH



Cavity prototype

- We want to test the RF cavity features building a 1:6 scale OFHC copper prototype
- It will be cooled inside a cryostat with a Pulse Tube we have waiting for delivery
- Design of the cryostat flanges in progress
- The cavity should be an exact copy of the final one
- See WP3 talk for details about the RF cavity design