

CO2 cooling – tests and preparation



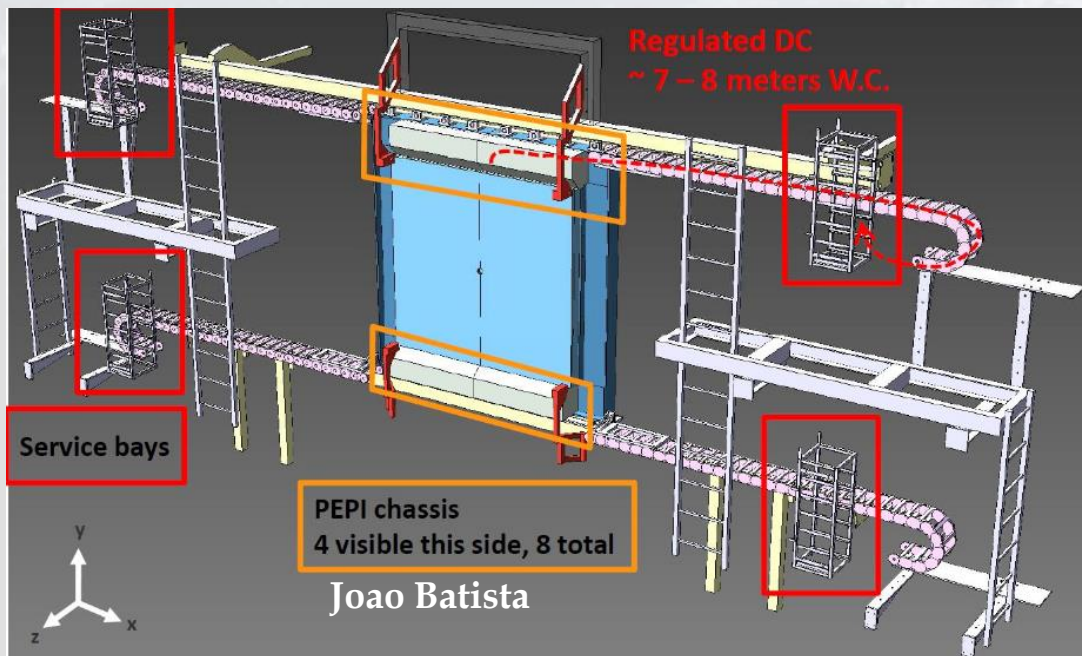
LUCASZ commissioning

Understanding the thermal behavior of the box and the beam pipe

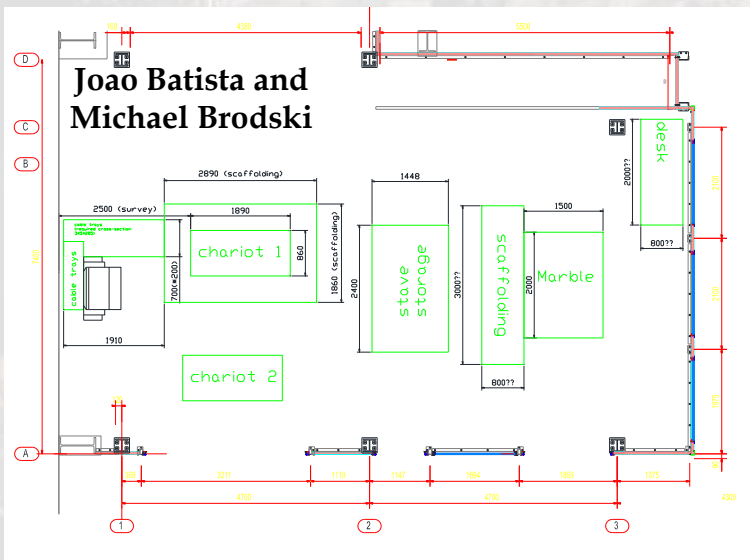
Close collaboration with LHCb groups:
Jacky Rochet
Petr Gorbounov
Edyta Pilorz
Support by LHCb TC

DT participant name	FTE 2018	FTE 2019-2020
Joao Carlos Batista Lopes	0.9	0.9
Michal Galka	0.9	0.1 (until Feb 2019)
Michael Brodski	1.0	1.0 (until mid 2020)

EP-DT is in charge of the UT assembly and integration

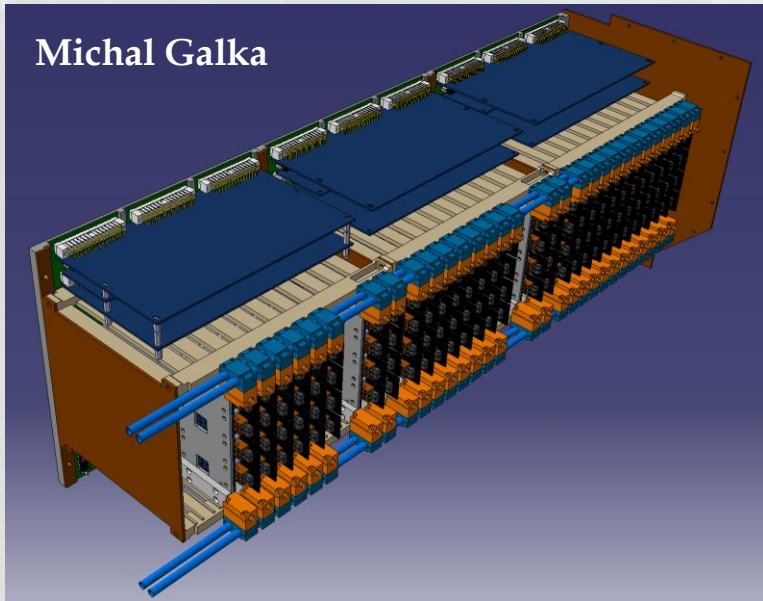


Very precise mounting of the staves (~300 um) tested on a mockup (with LHCb)



Preparation of the assembly area and the installation underground (with LHCb)

PEPI design, cooling and SBC rack



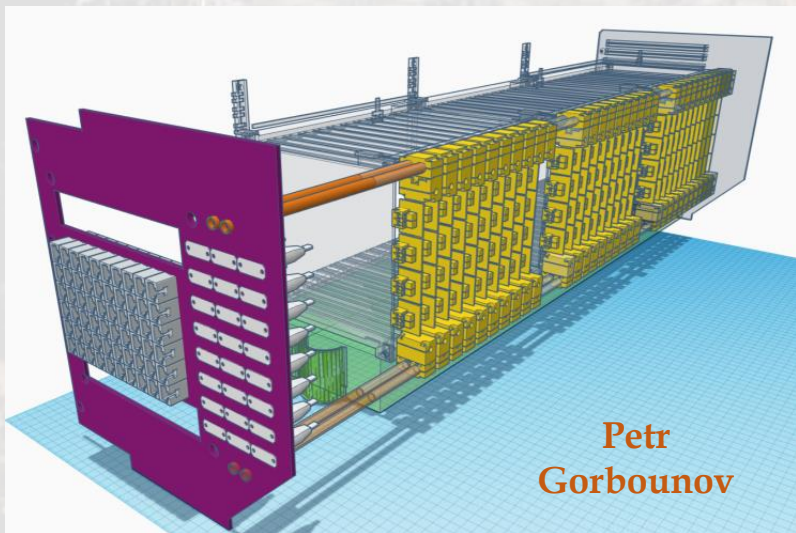
Cables from cable chain

Marathon cables

720kg of cables



Patch panels for the UT



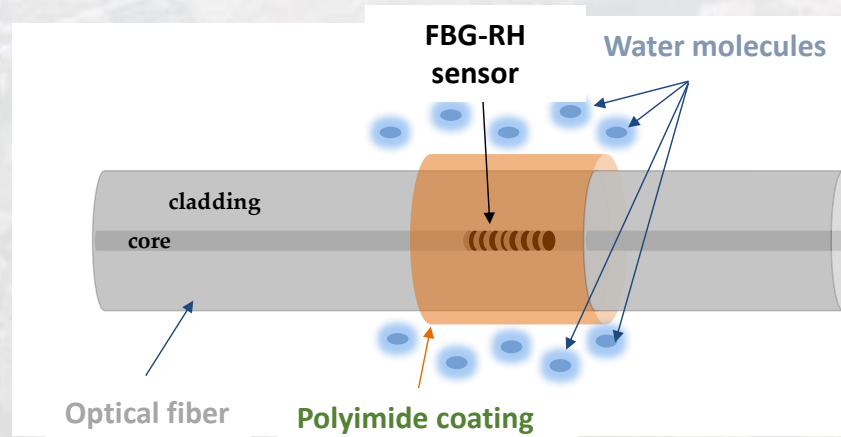
PEPI cooling tests

Preparation of C-frame with UT box, PEPI pigtails for stave installation by autumn 2019

An aerial photograph of a city, likely Geneva, with a large white circle and a smaller white circle overlaid on it. The word "BACKUP" is written in large, bold, black capital letters in the center of the image.

BACKUP

Radiation hard relative humidity sensors



Water molecules absorbed by the hygroscopic coating

Coating expansion ("Swelling effect")

Strain induced on the FBG

Bragg wavelength shift ($\Delta\lambda_B$)

RH sensors developed by DT are considered for the UT