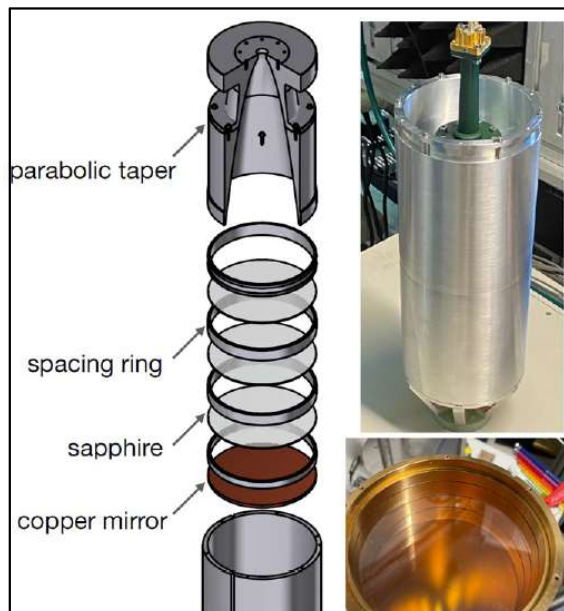


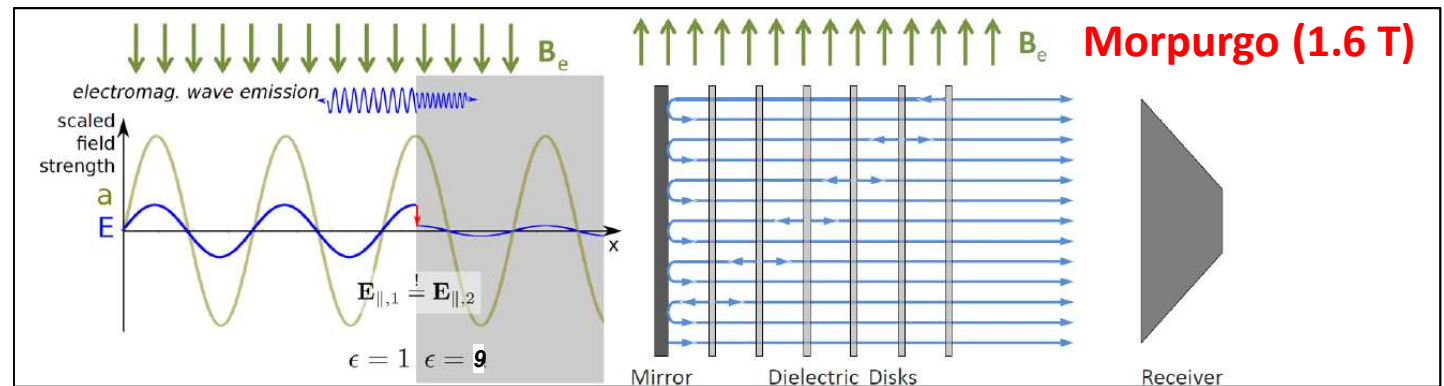
# MADMAX @ Morpurgo (H8)

Pascal Pralavorio (CPPM) – PS-SPS meeting 30/03/2023

Search for Dark Matter axion with a new booster (mirror + disks) concept



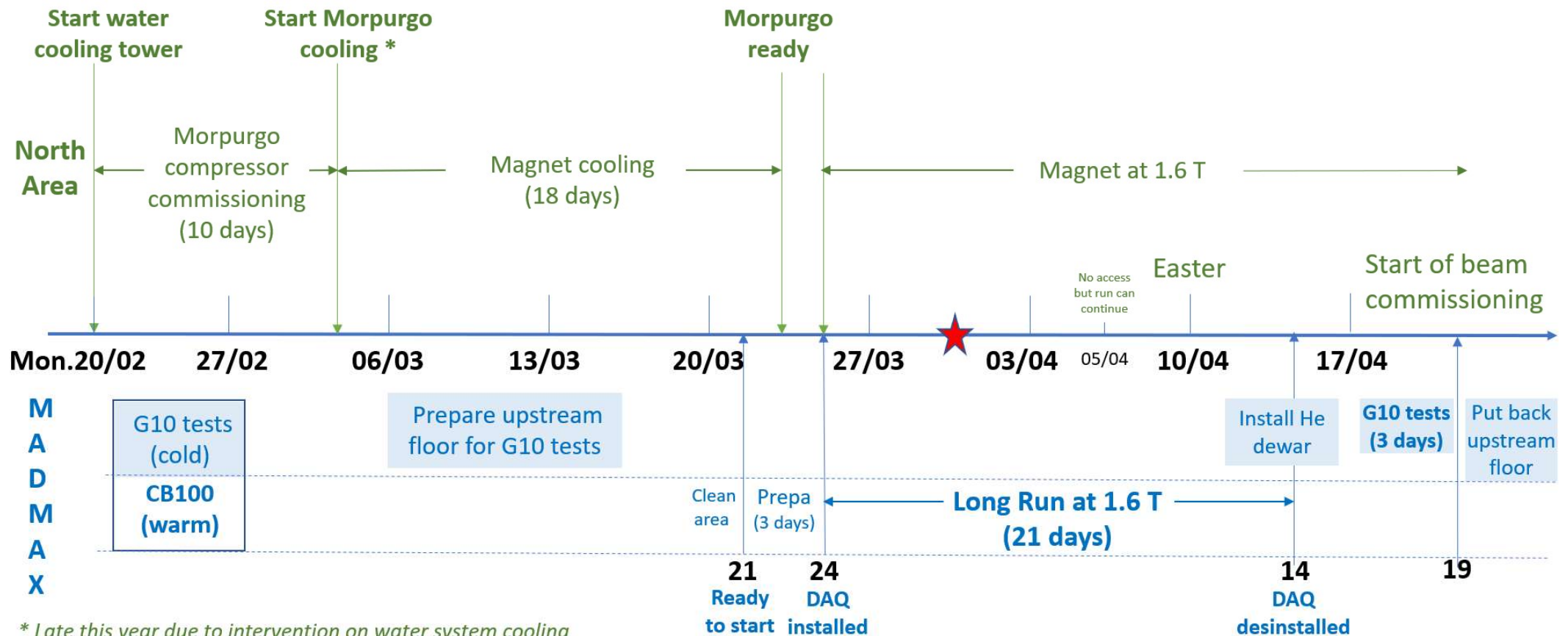
**CB100 3-disk prototype**  
**( $\phi=10$  cm  $L=50$  cm)**



Validate the booster concept with prototypes under Morpurgo magnet during beam shutdown in North Area :

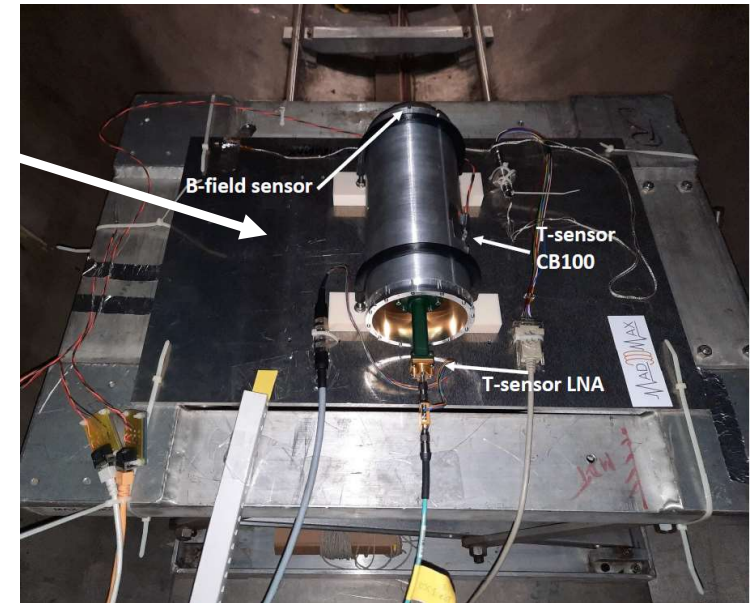
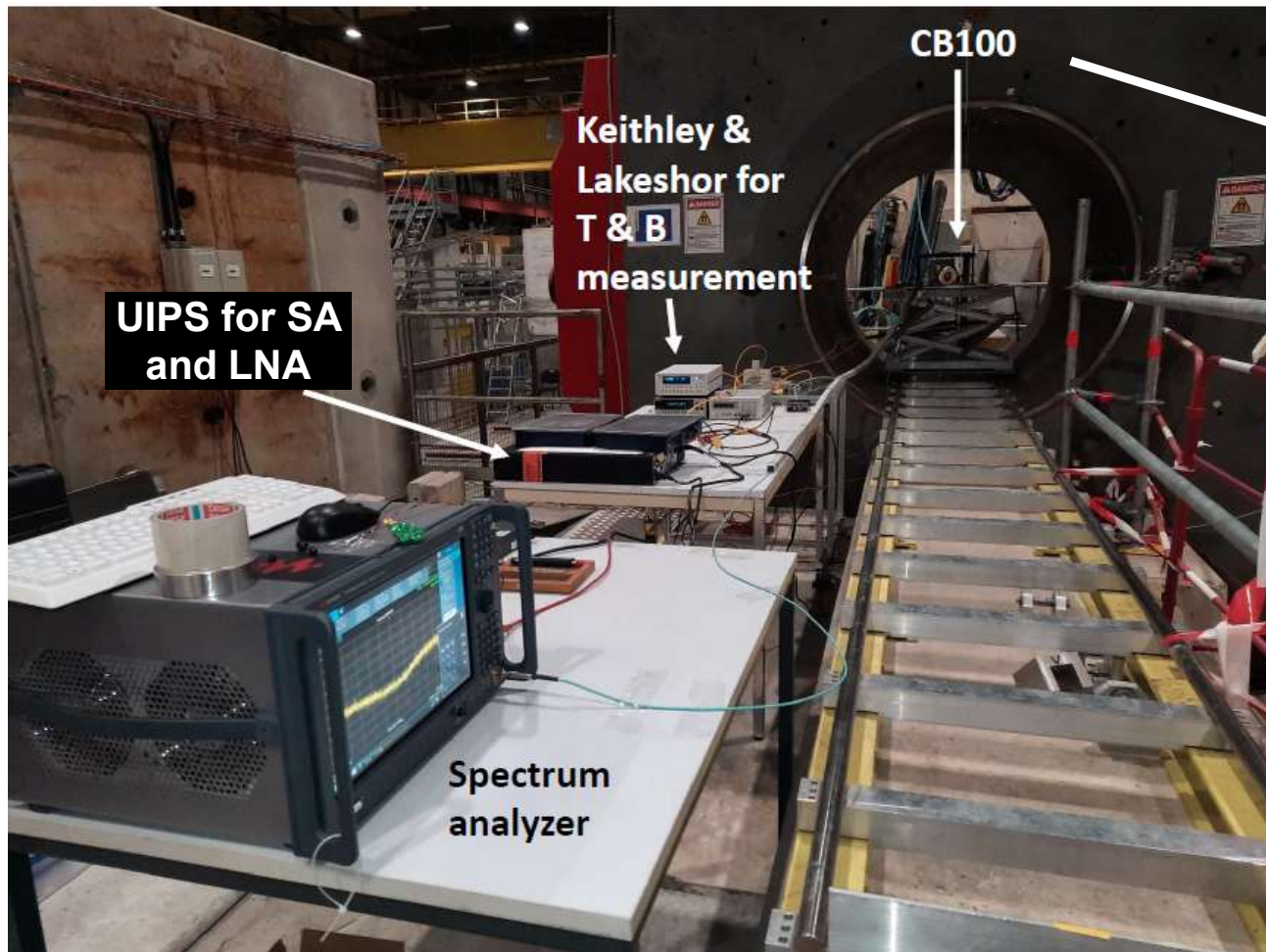
- In 2022 validate that RF environment is suitable for MADMAX proto.
- In 2023, looking for first physics results !

# Run 2023



- Thanks a lot to A. Amamou, X. Genillon, N. Guillotin, M. Mentink and their team
- Thanks to Michael Lazzaroni for the constant support for setting up the zone
- Get the safety clearance Friday 24-Mar @10:00
- Since Friday 24-Mar @ 12:00 we are in long run mode at 1.6 T

# CB100 Setup



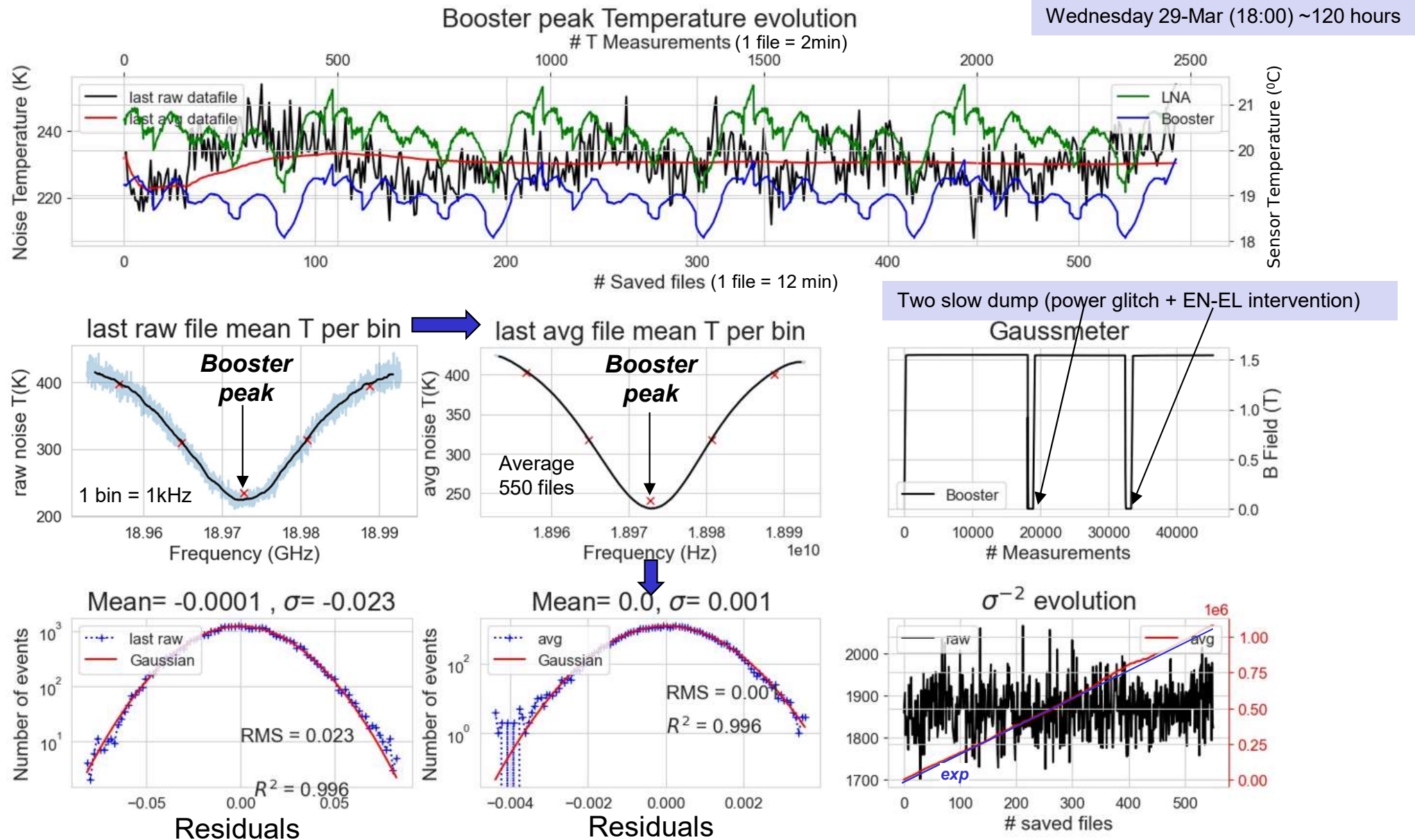
**LNA : Low Noise Amplifier**

	DM Axion + BField =19 GHz Photons	Booster @ 19 GHz	LNA	Spectrum Analyser
P (W)	$<10^{-22}$	$\times 10^3$	$\times 10^3$	$10^{-17}$

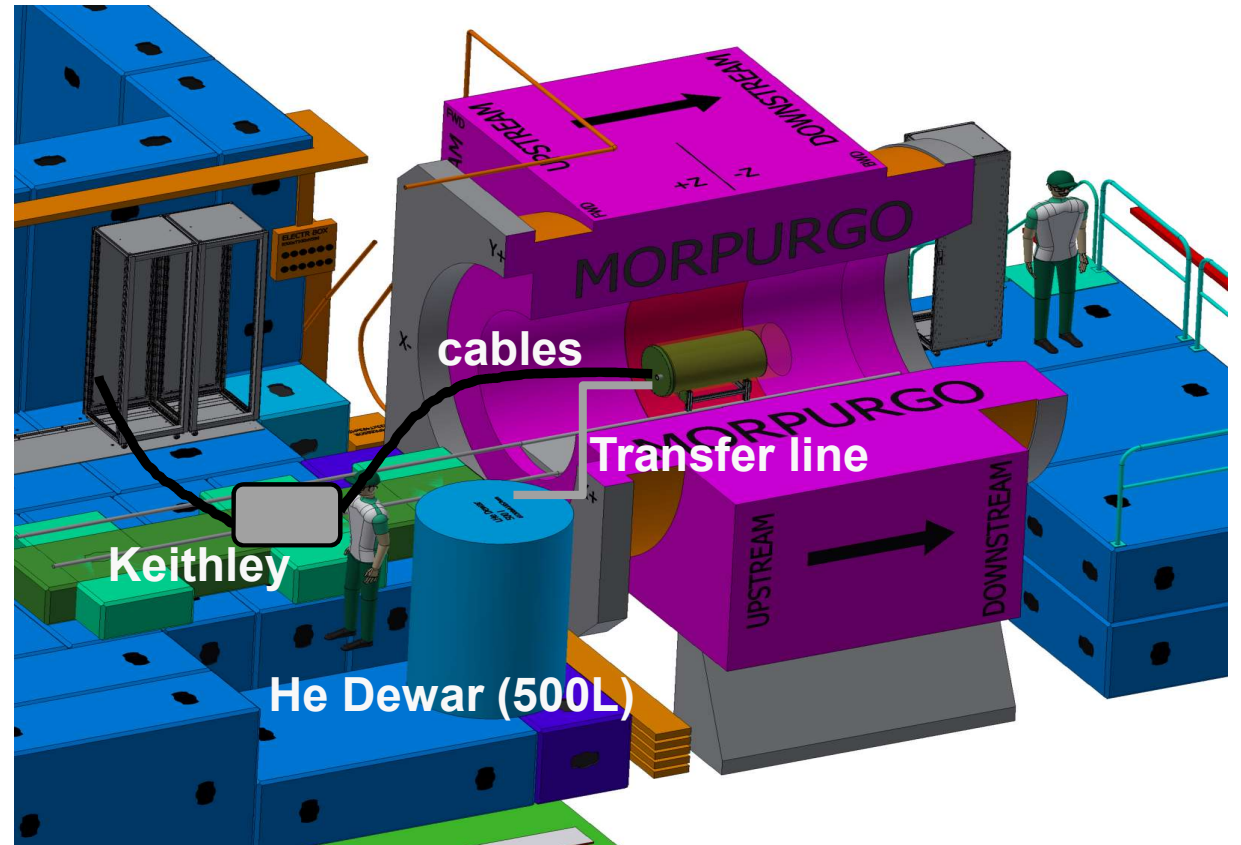
➔ Convert to Temperature (K) after Spectrum Analyser calibration



# Monitoring → smooth data taking



# G10 set-up



No Physics this year. “Just” validating that all the installation works at expected under Bfield  
*(currently tested in the cryolab)*