

# Test campaign at 2K of the BETA 0.35 spoke cryomodule prototype with a MTCA.4-based LOW LEVEL RF SYSTEM prototype within the MYRRHA/MINERVA R&D

*Wednesday 6 December 2023 16:15 (15 minutes)*

Within the framework of the first phase of MYRRHA (Multi-purpose hYbrid Research Reactor for High-tech Applications) project, called MINERVA, IJCLab was in charge of a fully equipped Spoke cryomodule prototype development, to be tested at 2K. It integrates two superconducting single spoke cavities, the RF power couplers and the Cold Tuning Systems associated.

On the control side, a MTCA.4-based Low Level Radio Frequency (LLRF) system prototype and the Software/EPICS developments has been realized by IJCLab and SCK CEN in collaboration with IOxOS Technologies. The final version of the global system and the results of the tests at 2K will be shown with some perspectives for the future.

**Primary authors:** JOLY, C. (IJCLab, Orsay); DE COCK, Wouter (SCK-CEN)

**Co-authors:** GAUDIN, C. (IOxOS Technologies SA, Gland, Switzerland); LHOMME, C. (IJCLab, Orsay); TOURRES, D. (LPSC, Grenoble); BOULY, F. (LPSC, Grenoble); CHATELE, F. (IJCLab, Orsay); MAVILLA, G. (IJCLab, Orsay); OLIVIER, G. (IJCLab, Orsay); SAUGNAC, H. (IJCLab, Orsay); GARCIA-ALFONSO, I. (IOxOS Technologies SA, Gland, Switzerland); YANICHE, J.-F. (IJCLab, Orsay); BOLLI, J.-L. (IOxOS Technologies SA, Gland, Switzerland); PIERENS, M. (IJCLab, Orsay); VANDERLINDEN, M. (SCK CEN, Mol, Belgium); GANDOLFO, N. (IJCLab, Orsay); BOURRION, O. (LPSC, Grenoble); DELLA FAILLE, P. (SCK CEN, Mol, Belgium); BERTHELOT, S. (IJCLab, Orsay); BLIVET, S. (IJCLab, Orsay); GOMEZ-MARTINEZ, Y. (LPSC, Grenoble)

**Presenters:** JOLY, C. (IJCLab, Orsay); DE COCK, Wouter (SCK-CEN)

**Session Classification:** Session VI