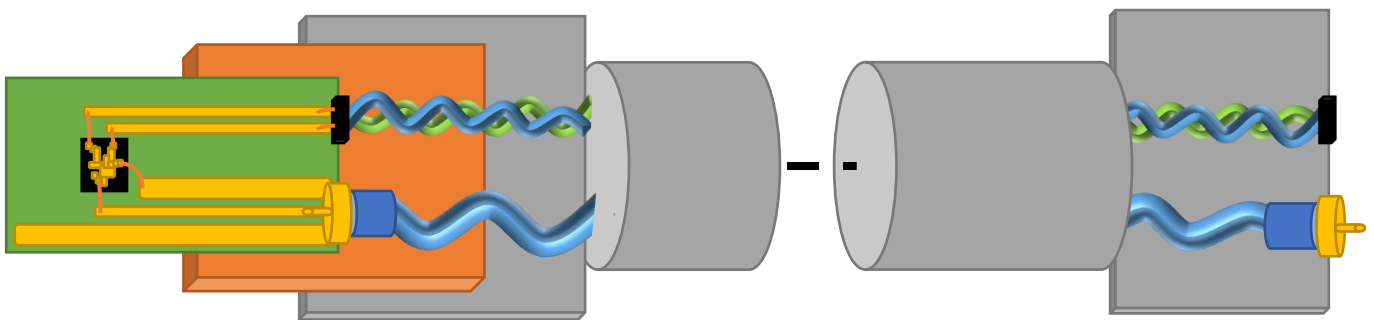


Design, realization and testing of a cryogenic probe for sensors characterization

Semester project / Master project

(Section: microengineering, mechanical engineering, physics, microelectronics)

The low temperature characterization is of paramount importance in some fields and for some sensors. A proper characterization requires an optimized probe system used to expose the sample to a low temperature environment, allowing at the same time to retrieve in real time the information of interest from the sensor under test. This project aims at designing and testing a low temperature probing system, both for RF and DC signals, to be used with dewars of liquid nitrogen (LN2, 77K) and dewars of liquid helium (LHe, 4K), starting from the requirements forced by the environment and by the sensors to be characterized.



Work description:

- Requirements analysis
- Design of the probe, mechanical and electronics parts (DC and RF)
- Realization of the probe
- Testing of the probe in LN2 / LHe by characterization of one of the sensors it was designed for.

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