

INSTITUT NEEL Grenoble

Post-doctoral position

Engineer in microfabrication of superconducting devices

Context:

The Institut Néel is a fundamental research laboratory in condensed matter physics, with an important interdisciplinary component related to advanced cryogenic instrumentation for astronomy and particle physics. The Institut Néel has for example designed and piloted the construction of the Archeops (stratospheric balloon), NIKA (Néel IRAM KID Arrays, a 30-meter diameter telescope at IRAM in Spain), NIKA2 and CONCERTO (a 12-meter diameter telescope on the Atacama Plateau, Chile) experiments, and has played a fundamental role in the construction of the Planck satellite and of the EDELWEISS detector dedicated to the search for dark matter. Most of these developments have been realized in close collaboration with the LPSC and IPAG laboratories, associated with the UGA, and the Institut de Radio Astronomie Millimétrique (IRAM).

Objectives and means available:

Your mission will be to develop and test manufacturing processes for KIDs (kinetic inductance superconducting detectors), compatible with the machines available on the PTA (CEA), Nanofab (Institut Néel) and IRAM platforms.

Main activities

- Develop and test KIDs
- Manage the resources necessary to fulfill your responsibilities
- Maintain the machines (in particular for thin film deposition, optical and/or electronic lithography, etching, cutting, packaging)
- Maintain a close collaboration with the designers and the groups in charge of the characterization of the detectors and instruments and participate with the project teams in the integration of these detectors in the instruments
- Be responsible for quality control

Expected competencies

- Strong knowledge and experience in cleanroom process development
- Fluency in English language
- Ability to work in a team environment
- Experience at the PTA-Grenoble desired
- Engineering degree or PhD required

Foreseen start for the position : May 2023

Salary : From 2109€ gross per month and according to experience. In addition to your salary, you will receive a monthly allowance of 544 €.

Duration : 12 months

To apply:

https://recrutement-candidature.univ-grenoble-alpes.fr/apply.html?jobId=QE6FK026203F3VBQBLOLOLO4X-3097&langCode=fr_FR

Link to the job profile of the University Grenoble Alpes (in french):

<https://emploi.univ-grenoble-alpes.fr/offres/ingenieur-e-en-microfabrication-de-dispositifs-supraconducteurs-1228299.kjsp?RH=1135797159702996>

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