

CNRS Job Offer # 27
unofficial translation

DEADLINE for online application : July 5th 2023

Application site (French): <https://concoursexternesit.cnrs.fr/public/campagne-2023>

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prerequisite: have a PhD in Physics

Research Engineer position

at Laboratoire de physique subatomique et de cosmologie, Grenoble, France

Mission

The recruited person will be responsible of research projects on ion sources, from the design phase to its scientific exploitation.

Activities

- Study by simulation and propose new instrument concepts in the field of accelerator and ion sources
- Write functional and technical specifications and follow the construction phase of the instruments developed
- Manage human resources and budget allocated to the project
- Lead the experimental commissioning of the instrument, measure experimental data and analyze them
- Apply to project call, build usual annual budget and follow the associated work progress
- Maintain a technological watch of the field
- Promote the results and discoveries in scientific publications and participate to international conferences

Expected skills

Knowledge

- Deep knowledge of the field of accelerator and ion sources
- General knowledge of science and techniques of engineering (mechanics, magnetism, data acquisition , etc)
- Mastering of the techniques to characterize ion beam and of the associated instrumentation
- Mastering of at least one tool dedicated to magnetic and electrical simulations or multi-physics
- Mastering of data analysis using a software like Matlab, Mathematica, Python...
- Mastering of a computer language allowing to model and simulate the Physics of the field
- The optional Mastering of beam transport dynamics and experience with a dedicated code would be appreciated
- Apply safety and security regulation rules in the field of radiation protection

- English level B1 or B2 required

Know-how

- Project management, including budget, schedule and performance management
- Lead a project team
- Provide project reporting to the appropriate bodies

Softskills

- Be a driving force in research projects and activities, and take the initiative.
- Good oral and written communication skills
- Ability to work in a team and integrate team expertise

Context

The Laboratory of Subatomic Physics and Cosmology (LPSC, approx. 230 people) is a joint research unit of CNRS-IN2P3, Université Grenoble Alpes and the Grenoble INP engineering and management institute. It is located on 2 sites: the main site in Grenoble and the national underground platform of Modane (LSM). Its activities focus on particle and astroparticle physics, particle accelerators and nuclear reactor research.

The Accelerators and Ion Sources Pole (20 people) specifically carries out R&D on particle accelerators and electron cyclotron resonance (ECR) ion sources. The fields of research cover modeling, simulation and experimentation on multi-charged heavy-ion source, ECR charge breeder, beam dynamics and radiofrequency. The Pole is supported by several experimental facilities and operates the GENESIS neutron production platform.

Reporting to the Pole manager, the recruited person will be responsible of the 60 GHz ion source project, an unique upstream research at very high ECR frequency, aiming at producing very high intensity beams for the next generation accelerators. As project manager, the person will develop the experimental program. Finally, this person will share his or her expertise and take part to ongoing and future research programs of the accelerator and ion sources pole.