

## Postdoctoral Research Fellow in Nuclear Physics: LPC-Caen, France

Type of post: Postdoctoral fellowship (fixed term appointment)

Starting date: 1 Sept 2019

Term of contract: 24 months

Contract: Fulltime

Salary: approximately € 2550 per month (gross)

Experience: up to approximately 2 years of postdoctoral experience as of the start date

### JOB DESCRIPTION:

The postdoctoral fellow will be a member of the “Nuclear Structure” research team at LPC-Caen. The group’s work focusses on the structure of nuclei far from stability using direct reactions. The present position will support principally the study of light neutron-rich systems at the RIBF facility at RIKEN (Japan). In particular the postdoctoral fellow will be a member of the SAMURAI collaboration and will be involved in the ANR funded EXPAND (“Explorations autour de la dripline”) project to upgrade the existing NEBULA neutron detector array. The successful applicant will also be involved in the analysis and publication of data acquired in previous campaigns of experiments with the SAMURAI setup including NEBULA.

The duties of the postdoctoral fellow will be:

- Involvement in the testing, setting up, commissioning and first experiments of the SAMURAI setup’s upgraded fast neutron array “NEBULA-Plus”.
- They will also undertake the analysis of the commissioning data as well as data acquired in previous experiments aimed at exploring the structure of very light neutron-rich nuclei at and beyond the neutron dripline. The interpretation and publication of the results of this work is expected.
- Depending on the scheduling of experiments at the RIBF, involvement in experiments lead by other teams within the SAMURAI collaboration is possible. Similarly, as in the case of all group members, participation in lower energy direct reaction experiments at other facilities (GANIL/SPIRAL and/or TRIUMF/ISAC) may be required.

### SKILLS AND BACKGROUND:

The successful applicant is expected to have a solid background in experimental nuclear physics (including a PhD in the field), ideally with experience in the study of nuclear structure. Experience with scintillator detectors, including (fast) neutron detectors, is highly desirable. Hands on experience with the electronics associated with state-of-the-art nuclear physics experiments is also expected. The handling and analysis of complex data sets, including the use of the ROOT analysis tool would be considered an asset. Similarly, experience with simulations (including knowledge of the GEANT4 package) would be desirable as are skills in programming in C++ and related languages.

The successful applicant should be able to work well in an international environment, such as the SAMURAI collaboration. The applicant will also be expected to take on responsibilities with the experiments and the analysis work and should be able to work, when needed, independently.

Proficiency in English is essential. Knowledge of French would be an asset.

#### WORKPLACE:

The position will be held within the “Nuclear Structure” research group which is currently composed of 4 CNRS scientists, 2 university lecturers and 2 PhD students. The group is part of the LPC-Caen (“Laboratoire de Physique Corpusculaire de Caen” – [www.lpc-caen.in2p3.fr](http://www.lpc-caen.in2p3.fr)). The laboratory comprises some 80 staff (scientists and technical support) and is supported by the IN2P3/CNRS, the ENSICAEN engineering school (“l’Ecole Nationale Supérieure d’Ingénieurs de Caen”) and the “Université de Caen Normandie”. The laboratory is situated on the “Campus 2” of the university north of the city centre, in close proximity to the GANIL laboratory.

The postdoctoral fellow will be expected to undertake international travel, in particular to Japan, for periods varying from some 1 to 4 weeks. During experiments shift work and working on weekends may be necessary. The experiments will be carried out at accelerator facilities whereby the necessary authorisations will be attributed following a yearly medical examination arranged by the laboratory.

#### APPLICATIONS:

Applications should include: a letter of motivation, a CV, a list of publications and two letters of reference.

Only applications made via the CNRS Employment platform will be accepted:

<https://emploi.cnrs.fr/Offres/CDD/UMR6534-AURGON-007/Default.aspx?lang=EN>

The closing date for applications is Wednesday 20 March 2019

Inquiries regarding the position may be made to Nigel Orr - [orr@lpccaen.in2p3.fr](mailto:orr@lpccaen.in2p3.fr)