

## POST DOCTORAL POSITION IN LHCb

### General information

Reference: UMR6533-PASPER-001

Workplace: AUBIERE

Date of publication: April 16, 2019

Type of Contract: FTC Scientist

Contract Period: 24 months

Expected date of employment: 1 September 2019

Proportion of work: Full time

Remuneration: 2617 - 3729 € gross monthly

Desired level of education: PhD

Experience required: 1 to 4 years

URL link: <http://bit.ly/2v7Wt8N>

### Missions

The post-doctoral researcher will be part of the LHCb team which has a large participation to the upgrade of LHCb, developing part of the front-end electronics of the new Scintillating Fibre tracker (SciFi) and its cooling system. The R&D is now over and the elements are under construction but he/she will have a leading role in the assembly of the SciFi detector and its commissioning and will be a member of the collaborative partnership with NIKHEF Amsterdam, CERN and Physikalisches Institut of Heidelberg.

The Clermont LHCb team has a wide range of physics interests and made substantial contributions to the measurements of radiative B decays, hadronic multibody charmless b-hadron decays and study of CP in open charmed B-decays. The postdoctoral researcher will take benefit of the large sample of data collected in the past years by LHCb having an active part in the major experimental and data analysis activities.

### Activities

The post-doctoral fellow will contribute to activities such as:

- Work in collaboration with LHCb LPC members (physicists and engineers) and with our collaborative partnership;
- Assembly and commissioning of the SciFi detector;
- Publication of one or more joint articles on the analyses of the data collected during run 1 and 2 with LHCb.

### Skills

- Education: PhD in experimental particle physics.
- Physics: knowledge in flavour physics is preferred though not mandatory.

- Programming: Skills in C++ and ROOT.
- Language: Fluency in spoken and written English. Some level of French will be useful.
- Good communication skills and ability to work in a team.

### **Context of work**

The LPC is a joint research unit of the CNRS/IN2P3 and Université Clermont Auvergne. Founded in 1958, it hosts over 155 people; 70 CNRS researchers and university faculty (experimentalists and theoreticians), 50 engineers, technicians and administrative staff, as well as 35 PhD students and postdocs. Its research fields include particle physics, cosmology, plasma physics as well as physics for health and environment. The LPC is involved in the international collaborations: ALICE, ANTARES, ATLAS, CKMFitter, FCC/ILC, LHCb, LSST and SoLid. One of the fields of research is heavy flavour physics and the study of CP and Time Reversal violations, previously pursued in ALEPH and currently carried by LHCb, CKMFitter and by the theory group.

The LPC is located in Clermont-Ferrand in the heart of the Auvergne region. Lying 400 km south of Paris, it can be easily reached by plane, train or car (being close to 4 major motorways). It is 300 km (3h30 drive) to CERN. Clermont Auvergne Metropole is home to about 300,000 inhabitants on its 300 km<sup>2</sup>, including 35,000 students (of which 1,000 enrolled in PhD programs) and 3,000 researchers (50% academic and 50% industrial). Several dynamic international companies and Start-Ups are based in the Region. The most famous is the world renowned French tyre manufacturer Michelin which has been based in Clermont-Ferrand since its creation in 1889. Michelin's corporate headquarters, its international research centre and some of its manufactories are based in Clermont-Ferrand.

Clermont-Ferrand lies in the plain next to the famous chain of volcanoes, the Chaîne des Puys, which culminates at the "Puy de Dôme". The volcano chain provides an effective shelter against wet masses of air from the Atlantic, and the city enjoys one of the driest climates in metropolitan France. The Chaîne des Puys and the Limagne Fault was recently inscribed on UNESCO's World Heritage List.

### **Constraints and risks**

Short periods travel to CERN and possibly abroad should be expected.

### **Supplementary information**

Applications should be submitted through the following web site: <http://bit.ly/2v7Wt8N>

The applicants should submit a cover letter explaining the interest in the position, a detailed Curriculum Vitae (including a description of their research with a list of publications highlighting their personal contributions) and arrange for at least two letters of recommendation to be sent directly by the referees to [pascal.perret@clermont.in2p3.fr](mailto:pascal.perret@clermont.in2p3.fr)

The deadline is 01 / 06 / 2019. We reserve the right not to make an appointment and continue searching after the closing date.