

Post-doctoral position in experimental hadron physics at CEA Saclay (DRF/Irfu/DPhN/LSN)

The Nucleon Structure Laboratory (LSN) of CEA Paris-Saclay is opening a postdoc position for a physicist in the field of experimental hadron physics with a focus on simulation for the future Electron-Ion Collider (EIC) project as well as data analysis on its current experimental program on the 3D structure of the nucleon.

The LSN is part of the Nuclear Physics Division (DPhN) of the Institute of Research into the Fundamental Laws of the Universe (Irfu) located at CEA Paris-Saclay (France). It is composed of ten permanent staff physicists working in the field of hadron physics on both theoretical and experimental aspects. Irfu is a highly dynamic scientific environment including research divisions on astrophysics, nuclear and particle physics as well as strong technical and engineering divisions in instrumentation, cryogenics and accelerator technologies. Within Irfu, DPhN focuses its research on the nucleon and the nucleus, with studies ranging from nuclear structure and reactions to hadron structure and quark gluon plasma.

The LSN has a strong commitment in the experimental and theoretical investigation of the 3D structure of the nucleon, through the study of processes such as deeply virtual Compton scattering (DVCS). In particular, LSN physicists have contributed to the analysis of existing DVCS measurements, the experimental programs using CLAS12 in Jefferson Lab and COMPASS-II at CERN, and the development of the physics case of the electron-ion collider project.

The successful candidate will participate in two main activities: firstly, in the design of tracking detectors for EIC, in particular developing Monte Carlo simulations and working closely with the Detectors, Electronics and Computing Department (DEDIP) of Irfu. She/he will also perform physics simulations using the full GEANT package, in order to refine the scientific motivation of the EIC project and study the sensitivity depending on the detector choices. Secondly, she/he will assist in analyzing the CLAS12 data recently collected at Jefferson Lab aiming at understanding the 3D structure of the proton.

Applicants should have completed a PhD in experimental nuclear or high-energy physics, have significant expertise in data analysis using object-oriented programming and GEANT Monte-Carlo simulations. A prior experience with the development of instrumentation for large-scale nuclear or particle physics experiments would be beneficial.

Applications should include:

- A 2-page cover letter with a description of previous work experience.
- An academic CV including a list of the candidate's most relevant publications, analysis notes or talks given in international conferences or workshops.
- 2 recommendation letters.

Applications should be sent before April 20th 2019 to francesco.bossu@cea.fr. More information may be requested at the same email address.

