

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 junior physicist in the field of experimental hadron physics with a focus on detector R&D and simulations for the future Electron-Ion Collider (EIC) project. The position is for one year, renewable for a second year with funding already secured.

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.

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 post-doctoral position is part of the broader local 4-year research program "Gluodynamics", which aims at the investigation of nucleon and nuclear geometry in view of the investigation of the QCD force and QCD radiation within QCD fluids, and the conceptual and practical connections between these two fields of research and future projects for QCD research at the LHC and at the EIC.

The successful candidate will participate in the prototyping 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.

Applicants should have completed a PhD in experimental nuclear or high-energy physics, have expertise in data analysis using object-oriented programming and GEANT Monte-Carlo simulations for a maximum of a six years experience after the PhD. 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 May 31th 2020 to francesco.bossu@cea.fr. Questions related to the postdoc opening may be sent to the same email address.