

Postdoctoral or Junior Research Position (2y) on Laser Wakefield Acceleration at Ecole Polytechnique, Palaiseau, France

Laboratoire Leprince-Ringuet (LLR) at Ecole Polytechnique, France offers a junior research fellowship on LASER WAKEFIELD ACCELERATION in the context of future experiments at the APOLLON 10 Petawatt laser. The successful candidate is encouraged and expected to apply for a permanent CNRS position (junior researcher) during the second year of his term.

As a leading partner the CILEX collaboration (interdisciplinary centre for extreme light) LLR is in charge of the design and the coordination of experiments in the long-focus area of the CILEX facility. This area will be dedicated mainly to laser wakefield acceleration of electrons with the APOLLON laser starting from 2017. Multistage acceleration is foreseen to start in 2019. Radiation generation in LWFA will also be studied in this area.

The researcher will actively participate in the design, preparation and execution of the first LWFA experiments on CILEX. He/She will, in particular, take responsibilities in electron diagnostics, X-ray diagnostics, electron transport, and data analysis on the CILEX experiments and also lead preparatory experiments on smaller power lasers. In parallel, the candidate will contribute to studies for multistage acceleration (foreseen on CILEX in 2019), development of plasma sources, novel detection techniques, innovative magnet design, or user applications.

The applicant is an experimental physicist (PhD or date of defense defined) with a background in advanced acceleration techniques, ideally LWFA. Alternatively, highly motivated candidates from the following fields are encouraged to apply: accelerator physics, laser matter interaction, plasma physics, experimental high energy physics, and experimental nuclear physics. Besides outstanding academic records and documented interpersonal capabilities, he/she has demonstrated skills in several of the following domains: light optics, ion optics, magnet design, particle detection, PIC codes, data analysis with C++/Root, detector simulation with GEANT. The candidate is not required to speak French.

This position is limited to two years starting on November 01, 2016. A prolongation can be envisaged provided funding can be affected. The applicant is not required to have a postdoctoral experience but if he/she does it must not exceed 2 years. The salary (gross annual income) is aligned on the official CNRS grid and will be between 30900€ and 35652€ depending on qualification and experience¹. At the end of the contract, the candidate is offered the opportunity to compete for a permanent research position at CNRS. Applications comprising a detailed CV and the names of at least three recommendation providers should be sent to specka@llr.in2p3.fr.

¹ The corresponding net income ranges from 24800€ to 28680€.