

PhD Position at ELI-Beamlines Research Group and Hamburg University

Topic: Development and commissioning of the LUX beamline for ELI Beamlines petawatt laser

The ELI (Extreme Light Infrastructure) Project is an integral part of the European plan to build the next generation of large user and research facilities. ELI-Beamlines, as a cutting edge laser facility, is currently being constructed in Prague, Czech Republic. ELI will enable interaction of light and X-ray with matter at extremely high intensities. One of important experimental projects at ELI is the Laser Undulator X-ray (LUX) source, which will be commissioned in 2016 towards a user beamline. The LUX source is currently being developed in collaboration with the LAOLA collaboration (laola.desy.de) at DESY/Hamburg University.

A successful candidate shall significantly contribute to the design, construction, commissioning and initial experiments of the LUX laser-driven wakefield accelerator (LWFA) with focus on its operation with ELI petawatt class laser system. The successful candidate will work in the field of laser-plasma driven electron beam accelerators and their applications as drivers for next-generation light sources. Possible field of work include gas target development, electron beam optics, diagnostics and radiation generation. The project will be defined considering the preferences of the successful candidate.

Requirements

The PhD position requires a Master title in experimental physics. Knowledge in plasma and particle physics, optics and/or detector technologies is an advantage, but not a necessity. Good computing, hardware and software skills of the candidate are desirable.

The position is for 3 years and it is expected to lead to the writing and defence of a PhD thesis at the Hamburg University. First two years the student will be based at DESY Hamburg, visiting ELI Prague regularly. In the third year the student will be based at ELI Prague, involved in the LUX beamline commissioning and initial experiments with the petawatt laser at ELI Beamlines new site at Dolní Břežany, Czech Republic.

Applications

The position will be filled as soon as possible. Interested candidates are requested to send (preferably via email) a short letter of application, CV, the names and email addresses of two references and, if applicable, a list of publications to the tutor.

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