Institute of Physics ASCR, v. v. i., Na Slovance 2, 182 21 Praha 8

info@eli-beams.eu | www.eli-beams.eu

Laser-driven Plasma X-ray Source for Pump-Probe Spectroscopy and Imaging

A fs-pulsed laser-induced plasma X-ray source (PXS) generating hard X-ray radiation in the energy range of 3…24 keV has been installed and commissioned at ELI beamlines. The compact table-top PXS will provide a wide range of experimental setups for scientists and beamline operators. New methods and procedures can be studied using the PXS as a high brilliance, short-pulsed laboratory source.

A successful experiment requires a complete characterization of the X-ray source, i.e. spectrum, photon flux, pulse duration, source size, etc.

The student will learn about X-ray generation using ultrafast lasers and the multitude of applications enabled by this kind of source. He/she will have the opportunity to help developing and deploying experimental techniques for spatial and/or temporal diagnostics of X-ray pulses. The goal is to establish permanent measurement tools for in-situ characterization of X-ray pulses during any experiment.

Requirements:

An affinity to experimental work as well as basic experiences in programming (e.g. C, Java, Python and/or Matlab) is welcome. Interested students are encouraged to contact us any time. We will try to arrange a meeting quickly and provide you with the necessary information.

The partial employment during the project is possible in the case of active cooperation.

For further details please contact:

Dr. Dong-Du Mai, Dipl. Phys., du.mai@eli-beams.eu, tel.: +420 266 051 464

FZU Institute of Physics of the Czech Academy of Sciences

EUROPEAN UNION
European Structural and Investing Funds
Operational Programme Research, Development and Education

MINISTRY OF EDUCATION, YOUTH AND SPORTS