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PRESS RELEASE

Secondary sources beamline contract for ELI Laser Research Centre in Szeged signed

A project kick-off ceremony was held today in Szeged, part of the project ELI laser research centre implementation (ELI-ALPS), in the major project phase 2 of ELI-HU Non-profit Ltd. On the ceremonial event, the company's coordination director, the research technology director and the corporate partner signed the project opening document for designing, assembling, and testing of a new attosecond source, worth 152 000 euros. The total amount of this project is 387 000 euros. The amount of financial support for the first implementation phase of ELI-ALPS Research Centre is 40.052 billion HUF, 85% of which is provided by the European Union's Regional Development Fund.

This morning, a project kick-off ceremony was held in Szeged, on the occasion of a research agreement within the Laboratoire d'Optique Appliquée, France (LOA) and the ELI-ALPS laser research centre being built in Szeged, Hungary. At the event, Dr Viktória Tölgyesi, coordination director of ELI-HU Non-Profit Ltd., Prof. Károly Osvay, research technology director of ELI-HU Non-Profit Ltd. and Dr Stefan Haessler, Principle Investigator of the R&D project on behalf of LOA opened the project of ELI-ALPS's custom developed surface high-order-harmonic generation secondary source (SHHG) driven by ELI-ALPS SYLOS laser system and signed the project opening document.

According to the contract, the winner of the open public procurement will be responsible for the design and commissioning of this secondary sources beamline from today to March, 2018. The contract is worth 152 000 euros.

Prof. Károly Osvay, research technology director of ELI-HU Non-profit Ltd. has pointed out on the scientific importance of the agreement: „The project launched today involve our partner in engineering the custom developed surface high-order-harmonic generation secondary source (SHHG) driven by ELI-ALPS SYLOS laser system. While the design will be made in the LOA premises, the assembly and testing will be carried out jointly with our partner in Szeged, after the arrival of the laser in the Spring of 2016. “

Dr Katalin Varjú, head of the Secondary Sources Infrastructure Division for ELI-HU Non-profit Ltd. said: “The beamline, that is the subject of the contract signed today, relies on attosecond pulse generation from dense plasmas created by the intense laser pulse on solid surfaces. This beamline should provide users of the ELI-ALPS facility with intense single attosecond pulses and different auxiliary pulses to perform pump-probe experiments with attosecond time synchronization.”

D. Viktória Tölgyesi, coordination director of ELI-HU Non-Profit Ltd. emphasised on the ceremony: “It is my pleasure to announce that according to this contract, the planning of the attosecond sources for the laser systems that have already been procured and are under construction, can now be continued. This beamline will provide a perfect opportunity for our colleagues and freelance users as well to achieve their scientific objectives.”

Dr Stefan Haessler, Principle Investigator of the R&D project on behalf of LOA pointed out: „In the last 5 years, the Laboratoire d'Optique Appliquée pioneered the technology for plasma-mirror-based attosecond pulse sources at kilohertz repetition rate. These are highly promising, both for the study of laser-plasma interaction in extreme conditions as well as for harnessing second-generation high-power attosecond pulses. The ELI Attosecond project will provide a new class of enabling laser drivers, ideally suited to realize this potential. We are excited to run this R&D project and transfer our technological know-how to the European research endeavor ELI.”

The main object of ELI-ALPS (Extreme Light Infrastructure Attosecond Light Pulse Source) project is creating a unique European research centre, providing the international research community with laser pulses and further sources based on these. The Szeged facility will stand out from the institutes producing the highest intensity laser pulses in the world with its highest repetition rate and shortest pulses.

This facility is expected to lead to reaching outstanding results not only in the field of ultrafast physical processes but also in biological, medical and materials sciences.

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