

Salamanca, 2012, 23th August

Dear Professor Mourou

By this letter we want to express our enthusiasm to join the International Zetta-Exawatt centre, IZEST, which was created a year ago (Nov 29th 2011) under the initiative of the ECOLE POLYTECHNIQUE and the COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES.

It is our intention that this letter of support will be replaced within six months by an MOU between CLPU and IZEST. The CLPU, subscribe fully to IZEST mission that is:

1. to definite novel laser architectures and road map of the next generation of ultra high peak power/Intensity and also the high average power lasers.
2. to facilitate the scientific and technical coordination among members of the international scientific community eager to discover new paradigms under pinned by extreme high intensity lasers. Particular attention will be devoted to:
 - prompt acceleration
 - high energy fundamental physics, physics beyond the Standard Model
 - vacuum structure
 - dark matter search
 - TeV Astrophysics and to the development of very high intensity lasers.
 - societal application like proton therapy, nuclear transmutation.

The Spanish Pulsed Laser Centre (Centro de Láseres Pulsados, CLPU) is a research facility open to the domestic and international scientific community. The Center is a Consortium between the Spanish Ministerio de Economía y Competitividad, the Regional Government of Castilla y León and the University of Salamanca. The objectives of the Centre are: to build and operate a Petawatt Laser in Salamanca; to develop ultra-short-pulse technology in Spain; to make significant advances in intense, compact laser technology; and to promote the use of such technology in new fields. CLPU is the reference facility for the ultrashort-ultraintense laser technology and applications in Spain. CLPU coordinates all that effort in Spain through the Consolider Ingenio Program SAUUL (Science and Applications of Ultrashort Ultraintense lasers), and CLPU has the mission to enhance the Spanish participation in the existing and future international facilities related to this technology such as European XFEL, HIPER and particularly ELI.

CLPU contribution to IZEST will be in several areas such as:

- novel theoretical descriptions of the interaction of atoms and plasmas with intense fields
- advanced study of the quantum vacuum
- technological developments in laser-assisted vacuum science
- novel sources of high flux protons and other charged particles.
- novel schemes for high peak power and high average power lasers.
- attosecond sources
- as well as other areas that appear during the evolution of the centre.

CLPU will actively seek funding in the IZEST's relevant area of interest.

CLPU is expected to be an active member of the participant council formed by the heads of the IZEST supporting laboratories. By meeting twice a year the participating council will help to define IZEST's strategy before it is submitted for approval by the steering committee composed of the Ecole Polytechnique and the CEA. The participant council provides also constant scientific and technical guidance to its management.

At this early stage, CLPU will be represented for those scientific and strategic issues by Luis Roso (Director of CLPU), Ricardo Torres (Head of the Scientific Area), and David Novoa (scientist in charge of the relationship with ELI).

Lastly, it is CLPU intention to participate at the first Participant Council that will be held at the next IZEST Conference on Laser-based High Energy Physics at Strathclyde, Scotland on November 12th, this year.

Sincerely,



LUIS ROSO
Director of CLPU