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Dear Professor Mourou,

By this letter I want to express our readiness to participate in the activity the International Zetta-Exawatt Center IZEST that was established a year ago under the initiative of ECOLE POLYTECHNIQUE and COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES. This letter of support will be replaced within six months by an MOU between the Institute of Applied Physics of the Russian Academy of Sciences (IAP) and IZEST.

The IAP fully supports the IZEST mission that is:

- 1) to define novel laser architectures and a road map of the next generation of ultra high peak power/intensity and also high average power lasers;
- 2) to facilitate the scientific and technical coordination among members of the international scientific community eager to discover new paradigms underpinned by extreme high intensity lasers.

Particular attention will be focused on:

- prompt accelerations;
- high energy fundamental physics, physics beyond the Standard Model;
- vacuum structure;
- development of very high intensity lasers;
- societal applications like proton therapy, nuclear transmutation, etc.

The IAP is a leading academic institution that hosts the most powerful laser facility PEARL in Russia and develops the XCELS project aiming at creation of an Exawatt-class laser. For more than 3 decades the IAP RAS has pioneered in a number of developments and experiments in high power electromagnetic sources and their interactions with matter, including laser-plasma accelerators.

The IAP contribution to IZEST will be in the areas of:

- generation of laser pulses with exawatt and beyond-exawatt peak power;
- fiber-based high peak power and high average power lasers;
- novel sources of high energy radiations and particles;
- nonlinear vacuum physics in the presence of extreme light.

The IAP will actively seek national funding in the IZEST's relevant area of interest.

The IAP 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 strategy before it is submitted for approval by the steering committee composed of Ecole Polytechnique and CEA. The participant council provides also constant scientific and technical guidance to its management.

Finally, it is the IAP 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 Nov.12, 2012.

Sincerely yours,
Academician A. Litvak
Director of IAP RAS
August 29, 2012