

Dear Professor Mourou

August 20, 2012

By this letter we want to express our enthusiasm to join the International Zetta-Exawatt center IZEST, which was created a year ago (Nov29th 2011) under the initiative of the ECOLE POLYTECHNIQUE and the COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES.

This letter of support will be replaced within six months by an MOU between APRI(Advanced Photonics Research Institute, GIST) and IZEST.

The APRI(GIST) subscribes 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
  - vacumm structure
  - dark matter search
  - TeV Astrophysics and to the development of very high intensity lasers.
  - societal application like proton therapy, nuclear transmutation.

The APRI which is funded by Korean government and affiliated institution of GIST is the unique optical science research center in ultra-high power lasers and ultra high field science, where many pioneering works have been demonstrated.

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

- High peak power and high average power lasers and their applications.
- Laser-based particle acceleration(electron, proton, heavy ions, etc.),
- Novel sources of high energy radiations and particles and their applications,
- Laser in the relativistic lambda cubed regime, etc.

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

The APRI 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 the Ecole Polytechnique and the CEA. The participant council provides also constant scientific and technical guidance to its management.

Lastly, it is APRI's 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

Prof. Jongmin Lee



Dr. Jeong Tae Moon ( Lab. Head )

APRI, GIST

Gwangju, Korea

e-mail : [leejm@gist.ac.kr](mailto:leejm@gist.ac.kr) , [jeongtm@gist.ac.kr](mailto:jeongtm@gist.ac.kr)