

Call for Papers

CLE2015



The 1st Conference on Laser Energetics - Laser Astrophysics -

Co-located with Optics & Photonics International Congress 2015
<http://www.ile.osaka-u.ac.jp/cle/>

In cooperation with

- The Institute of Laser Engineering, Osaka University
- The Laser Society of Japan
- The Japan Society of Plasma Science and Nuclear Fusion
- Division of Plasma Physics, Association of Asia Pacific Physical Societies



April 22 (Wed.) – April 24 (Fri.), 2015
Pacifico Yokohama
Yokohama, Japan

Paper Deadline: Jan. 26 (Mon.) 2015

OBJECTIVE

Recently, significant progress in high-power laser technology extends the research field of high-energy density science to an academic expanse, therefore, increasing number of International and interdisciplinary collaborations is required. The National Ignition Facility (NIF) in the U.S.A. has been continuing critical development in the field, targeting fusion ignition together with offering significant milestones for the basic science research. The LFEX petawatt laser of Osaka University is going to start full operation with 4 beams and it is expected vigorous uses for domestic and overseas users as the Joint Usage/ Joint Research Center. Moreover as ultra-intense lasers, the PULSER laser of Korean advanced Photonics Research Institute (APRI/GIST) works at 2 petawatt and the J-KAREN laser of Kansai Photon Science Institute is being up-graded. Many research themes using nano-second kilojoule lasers, require the increase in repetition and machine time to expand experimental parameters and to improve the accuracy of their experimental results. Aggrandizement of intensity is emphasized in the high-field science investigation to reach the radiation-dominated region and beyond.

In this situation, we recognize it is quite useful to have a conference which promotes international and interdisciplinary collaborations in the scientific researches using high-power lasers, and to overview the present status and future prospects of relevant fields. Thus, we propose to have an annual international conference for the laser energetics. The goal of this conference in each field is to discuss a definite theme together with overseas distinguished scientists with experiences on large-scale lasers and to encourage the number of foremost participants with related fields. In addition, the critical workings of different research fields are concentrated on the point which stimulate the expansion of discussion of various themes of Laser Energetics with obtaining the leading experts related technical information and grope for the interdisciplinary fusion of research results.

SCOPE

The core theme this time is "Laboratory Astrophysics Using Intense Lasers". Experimental research on collisionless shockwave and space plasma jets are intensively carried out all over the world, and an experiment on the NIF was initiated by the international team. Macroscopic projectiles accelerated up to 10 km/s by laser ablation have been utilized to investigate the meteorite collision. A recent development in areas such as application of the laser driven quantum beams as diagnostic probes or as an activating energy source is opening another path to the cosmic nuclear synthesis and astroparticle physics. Intense magnetic field generated by high-power lasers also provides further progress with Plasma Astrophysics. Effective approaches for conventional Plasma Physics as well as High-Pressure Condensed Matter, and Particle Physics, and Nuclear Physics are expected. Versatile ideas in the context of "Laser astrophysics" are welcome. Papers on those related

subjects are also welcome encouraging the interdisciplinary exchange.

The 1st Conference on Laser Energetics covers following topical fields:

Main topic

- Laser astrophysics
Astrophysical plasma physics, planetary physics, asteroid impact, nuclear synthesis, pair plasma, and astroparticle physics

Related physics and technology development

- Physics on Laser produced plasmas
Relativistic plasma, non-equilibrium plasma, magneto-hydrodynamic instability
- Laser driven quantum beams source (generation and applications)

FORMAT

Organized sessions will consist of invited oral presentations of 30 min. and contributed oral presentations of 15 min. duration including discussion. In addition to these regular oral sessions, poster presentation session will be planned to stimulate the discussion of the field. The author(s) of papers will be informed of the size of bulletin board for displaying summary, figures, tables, etc., when selected as poster papers.

SUBMISSION OF PAPERS

Original papers that have not been previously presented and that describe new technical contributions in the areas covered by the technical descriptions above will be accepted for presentation.

Papers should be submitted electronically, **no later than Jan. 26, 2015**. Authors are requested to submit 2-page paper written in English, that fits within frames of 17 cm x 24 cm template, including text, figures, tables, and references. The template for papers will be available on the website.
<http://www.ile.osaka-u.ac.jp/cle/>

POST DEADLINE PAPERS

A limited number of post deadline papers will be accepted for presentation at post deadline sessions. Latest significant results obtained after the regular deadline are most welcome. The deadline for submission of the paper is **April 12, 2015**

OFFICIAL LANGUAGE

The official language of CLE2015 is English.

PROCEEDINGS

Proceedings are planned to be published as a special issue of *Journal of Plasma and Fusion Research*, the journal of the Japan Society of Plasma Science and Nuclear Fusion Research. All authors of CLE2015 are strongly encouraged to submit their original papers. Submissions from invited speakers are especially welcome. The deadline for submission is May 13, 2015. Please note that all submissions will be peer-reviewed following the editorial policy of *Journal of Plasma and Fusion Research*. Manuscripts should follow *Optical Review* submission guidelines "Instructions for the Preparation of Manuscripts" and be submitted through the electronic form on the internet. Instructions for the preparation of manuscripts will be announced at the home page.

REGISTRATION

Registration Fees (Membership)

	Before/On Mar. 20, 2015	After Mar. 21, 2015
Conference (General)	¥40,000	¥45,000
(Student, Retiree)	¥18,000	¥21,000

Registration Fees (Nonmember)

	Before/On Mar. 20, 2015	After Mar. 21, 2015
Conference (General)	¥45,000	¥50,000
(Student, Retiree)	¥21,000	¥23,000

*Member of organizer, sponsor and cooperative societies.

OPTICS & PHOTONICS International Congress 2015 (OPIC 2015)

The seven international conferences held simultaneously. By registering for this conference, you can participate in all international conferences.

- The 4th Advance Lasers and Photon Sources (ALPS'15)
- Conference on Asia-Pacific Biomedical Photonics 2015 (APBP'15)
- Conference on Laser Energetics 2015 (CLE2015)
- International Conference on High Energy Density Science 2015 (HEDS2015)
- Laser Display and Lighting Conference 2015 (LDC2015)
- Conference on LED and Its Industrial Application'15 (LEDIA'15)
- The 2nd Optical Manipulation Conference 2015 (OMC'15)

OPIC2015 Web site <http://opicon.jp>

EXHIBITION

OPTICS & PHOTONICS International Exhibition (OPIE2015) will be held simultaneously on April 22 (Wed)-24 (Fri) at Pacifico Yokohama.

FURTHER INFORMATION

The latest information on the conference will be presented on the Web site:

<http://www.ile.osaka-u.ac.jp/cle/>

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CONFERENCE SECRETARIAT

Nao Mekata

e-mail: mekata-n@ile.osaka-u.ac.jp

Tel: 81-6-6879-8701

LOCATION OF CONFERENCE SITE

The CLE2015 takes place at Pacifico Yokohama, Yokohama city, Kanagawa prefecture, JAPAN. Yokohama city, the center of Kanagawa prefecture is located south of Tokyo. Pacifico Yokohama is conveniently located about 40 min. by Limousine Bus from Haneda Airport and 90 min. from Narita Airport.

Pacifico Yokohama

1-1-1 Minato Mirai, Nishi-ku, Yokohama 220-0012, Japan

<http://www.pacifico.co.jp/english/index.html>

Transportation Guide: TEL +81-45-221-2166

Information: TEL +81-45-221-2155

FAX +81-45-221-2136

