

Submission deadline: January 5, 2026

<https://opicon.jp/>

<https://www.ile.osaka-u.ac.jp/hedla2026/>



ANNOUNCEMENT / OVERVIEW

We are pleased to announce the 15th International Conference on High Energy Density Laboratory Astrophysics (HEDLA), to be held on April 20–24, 2026, at the Pacifico Yokohama, Yokohama, Japan. This conference will take place in conjunction with the International Conference on High Energy Density Science (HEDS) as part of the Optics and Photonics International Congress (OPIC).

HEDLA is a well-established topical conference series that was initiated in 1996 and has since been held approximately every two years. The goal of the conference is to advance the understanding of high-energy-density phenomena in the universe by employing and developing laboratory experiments under extreme conditions.

HEDS, co-located with HEDLA, highlights the broader field of high-energy-density science with high-power lasers and their diverse applications, further promoting interaction across related communities.

SCOPE

High-power lasers and pulsed-power facilities enable the creation of extreme states of pressure and temperature well beyond those attainable under terrestrial conditions. Such high-energy-density states provide a powerful platform for exploring fundamental processes in astrophysical plasmas, which remain among the most compelling subjects in modern science. Laboratory astrophysics, in particular, offers a unique and complementary research methodology, advancing our understanding of astrophysical phenomena through controlled experiments in conjunction with astronomical observations and theoretical or simulation studies, while fostering collaboration across diverse scientific communities.

Proposed Topics include, but are not limited to, the following areas of high-energy-density laboratory astrophysics:

- **Fluid and Collisional Plasma Dynamics:** jets, turbulence, dynamos, instabilities
- **Collisionless Plasmas and Particle Acceleration:** shocks, magnetic reconnection, kinetic processes
- **Transport and Atomic/Radiative Processes:** heat conduction, anomalous resistivity, diffusion, radiative transport, opacity, spectral line shapes, photoionization
- **Dense Plasma Physics:** equations of state, warm dense matter, planetary interiors
- **New Frontiers in High-Energy-Density Science:** quantum electrodynamics effects, pair plasmas, nuclear astrophysics, emerging experimental facilities, and advanced computing

COMMITTEE MEMBERS

Conference Chair

Takayoshi Sano (Univ. of Osaka)

Ryosuke Kodama (Univ. of Osaka)

Steering Committee Chair

Youchi Sakawa (Univ. of Osaka)

REGISTRATION

Registration Type		On/Before 3 April 2026	After 3 April 2026
General	Member	JPY 75,000	JPY 82,000
	Non-Member	JPY 89,000	JPY 95,000
Student	Member	JPY 25,000	JPY 29,000
	Non-Member	JPY 29,000	JPY 32,000

OPTICS&PHOTONICS International Congress 2026 (OPIC2026)

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

- ☐ ALPS - Advanced Lasers and Photon Sources
- ☐ BISC - Biomedical Imaging and Sensing Conference
- ☐ CPS-SNAP - Cyber-Physical Systems enabled by Sensing/Network/AI and Photonics Conference
- ☐ FAAP - The Future of Agriculture and Advanced Photonics
- ☐ HEDS - International Conference on High Energy Density Science
- ☐ ICNNQ - International Conference on Nano-photonics, Nano-optoelectronics and Quantum technology
- ☐ IP - Information Photonics
- ☐ LDC - Laser Display and Lighting Conference
- ☐ LEDIA -
- ☐ LSC - Conference on Laser and Synchrotron Radiation Combination Experiment
- ☐ LSSE - Laser Solutions for Space and the Earth
- ☐ META -
- ☐ OMC - Optical Manipulation and Structured Materials Conference
- ☐ OPTM - Optical Technology and Measurement for Industrial Applications
- ☐ OWPT - Optical Wireless and Fiber Power Transmission Conference
- ☐ SLPC - Smart Laser Processing Conference
- ☐ TILA-LIC - Tiny Integrated Laser and Laser Ignition Conference

SUBMISSION OF PAPERS

A 300-word abstract form should be submitted through OPIC2026 web. If you have anything to ask, please contact to “hedla2026@lie.osaka-u.ac.jp”. The abstract template will be available through the web site.

POSTER SESSION

The author(s) of poster presentations will be informed of the size of bulletin board for displaying summary, figures, tables, etc., when selected as poster papers.

POST DEADLINE PAPERS

A limited number of post deadline papers will be accepted for presentation at post deadline sessions.

OFFICIAL LANGUAGE

The official language of HEDLA/HEDS2026 is English.

PLENARY, INVITED TALKS and FURTHER INFORMATION

The speakers and latest information on the conference will be presented on the web site:

<https://www.ile.osaka-u.ac.jp/hedla2026/>

LOCATION OF CONFERENCE SITE

The HEDLA/HEDS2026 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, Kanagawa 220-0012, Japan
<http://www.pacifico.co.jp/english/index.html>

