

Conference Grant Report  
July 5, 2017

Submitted to the

**U. S. Department of Energy**  
Attn: Dr. Sean Finnegan

By the

University of California, San Diego  
9500 Gilman Drive  
La Jolla, California 92093

On behalf of the

**Fifth International Conference on High Energy Density Physics**

August 23-27, 2015 in San Diego, USA

Support Requested: \$10,000  
Amount Expended: \$10,000

Performance Period: 1 June 2015 to 30 May 2016

Principal Investigator

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## **I. Background**

The Fifth International Conference on High Energy Density Physics (ICHED 2015) was held in the Catamaran Hotel in San Diego from August 23-27, 2015. This meeting was the fifth in a series which began in 2008 in conjunction with the April meeting of the American Physical Society (APS). The main goal of this conference has been to bring together researchers from all fields of High Energy Density Science (HEDS) into one, unified meeting.

## **II. Meeting Report**

HEDS encompasses high energy density (HED) astrophysics, extreme HED physics (quark/gluon plasmas), HED laboratory plasmas, and ultra-fast/ultra-intense laser-matter interactions. Important applications of HEDS research include basic science, energy generation, biomedical science, material science, and advanced HED technologies research and development. HEDS also spans fundamental topics from strong-field physics to creating new states of matter (including radiation-dominated, high-pressure quantum and relativistic plasmas) and ultra-fast lattice dynamics on the timescale of atomic transitions. All these topics are at the forefront of HEDS and will be covered in this meeting. More focused attention will be on the following topics:

- Material science and planetary physics
- Laboratory astrophysics
- Inertial confinement fusion physics
- Laser plasma physics
- Nuclear and particle acceleration physics
- Magnetized plasmas
- Diagnostics for HED

Eighty-two (82) participants attended the 2015 ICHED and seventy-four (74) abstracts were submitted. There were fifty (50) oral presentations and thirty-three (33) posters. Eight (8) students gave oral presentations and thirty-one students (31) presented posters.

## **III. Budget Report**

We requested funding to cover the cost of students' room nights at the conference hotel, audio/video equipment and poster boards rentals. Student travel funding applications were judged by the Steering Committee of the International Conference on High Energy Density Physics. Funding was provided to students, who gave oral presentations and were in the senior years. Seven (7) students were funded with lodging and some travel covered. The total amount expended was \$10,000.