

Workshop
“Science with High-Power Lasers and Pulsed Power”
July 28 – 30, 2009
Santa Fe, NM

Invitation

You are invited to attend a 2½-day workshop to discuss ideas for broad-interest, exciting science experiments that can be performed using the high-power lasers and pulsed power facilities at Sandia National Laboratories (SNL) and the University of Texas (UTX). The workshop is being held under the auspices of the [Institute for High Energy Density Science](#), joint between UTX and SNL.

Objectives

The objective of the meeting is to discuss and propose projects worthy of further pursuit, which will likely satisfy the following:

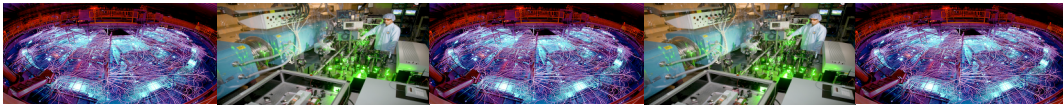
- Be performed using the UTX or SNL or both; high power lasers, pulsed power or both
- Facilitate a proposal to a specific funding agency (e.g. DoE, NSF, NIH, ...)
- Produce great science in the broadest national interest
- Produce results publishable in high-impact journals
- Produce results in either a short term (~3 year) or longer term (~5 year) timeframe
- Be in either basic or applied science areas

Location and dates

The meeting will be held on Tuesday, July 28, Wednesday, July 29 and Thursday, July 30 (a half day) at the Hilton Santa Fe Historic Plaza. In addition, there will be a reception on the evening of Monday, July 27 (travel day).

Registration

Please complete the registration form and return it to [Emily Hooks](#) by Thursday, June 25, 2009. There is no registration fee for the workshop. The registration form is attached to this message and is also available online at <http://www.ph.utexas.edu/~iheds/index.html>. Updates on workshop arrangements will also be available online.



Lodging Information

Hilton Santa Fe Historic Plaza

Reservation Deadline (for discounted rate): Saturday, July 4, 2009

Guest room rates: \$86 single/double

Group Code: SCI

For reservations click

<http://www.hilton.com/en/hi/groups/personalized/SFEHIHF-SCI-20090725/index.jhtml> or call (800) 336-3676.

Tentative Agenda

Ideas will be, where possible, collected into 5 topical areas (we have 5 break-out rooms on the second day), with 8 to 10 scientists in each area for a total of 40 to 50.

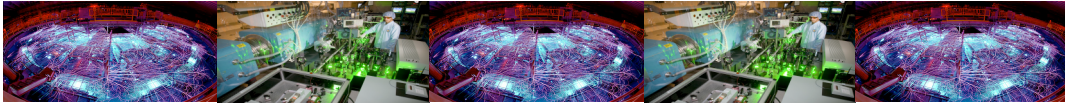
Day 1 (Tuesday, July 28) will consist of

1. Opening remarks by Alan Wootton (UTX)
2. Opening presentations on current and potential facility capabilities at UTX and SNL by Todd Ditmire (UTX) and John Porter (SNL), respectively.
3. For each topical area (and for ideas that do not fit these areas),
 - A presentation / discussion of what is currently being done at SNL and UTX
 - Comments on what is happening on the broader national and international scene
 - A summary of ideas that have been discussed for possible future work

Day 2 (Wednesday, July 29) will consist of

1. Continue topical area presentations
2. Break-out sessions, in which participants will refine ideas in each topical area.

Day 3 (Thursday, July 30) will be a half-day, in which working group ideas are presented to the group as a whole. These reports should, where possible, propose specific experiment(s), collaborations (SNL, UTX, and others), and significant additional hardware requirements. Include timeframes, expected outcomes, targeted funding agency(s), and a wag at the proposal cost.



Topical areas

The likely topical areas to be covered by the workshop, and the area leaders / organizers, are shown in the table:

Topical area ¹	Leader (affiliation)
Materials science	Clint Hall (SNL) / Tom Mehlhorn (SNL)
Fusion science (include high magnetic fields)	Mark Herrmann (SNL) / Francois Waelbroeck (UTX)
Astrophysics	Greg Rochau (SNL) / Edison Liang (Rice)
Photon & particle beam science	Briggs Atherton (SNL) / Todd Ditmire (UTX)
High density plasma physics	Gilliss Dyer & Aaron Bernstein (UTX) / Ray Lemke (SNL)

Workshop Contacts

Scientific and Technical

Dr. Alan Wootton

[wootton1 at comcast.net](mailto:wootton1@comcast.net)

(865) 806 1709

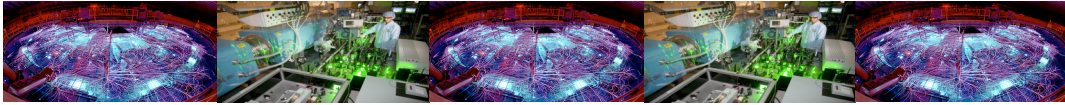
Administrative

Emily Hooks

[ehooks at mail.utexas.edu](mailto:ehooks@mail.utexas.edu)

(512) 471 1485

¹ (Include diagnostics under relevant area – Ray Leeper coordinates)



The Joint Institute for High Energy Density Science (IHEDS)

This virtual institute, joint between Sandia National Laboratories and the University of Texas, was created in 2008, with the following objectives:

- To provide an intellectual center and support for the exploration of fundamental and applied science and technology using the high intensity lasers and pinches at the Sandia National Laboratories and the University of Texas
- To enhance access to the unique facilities at the Sandia National Laboratories and the University of Texas to the larger scientific community
- To contribute to science education, strengthen existing programs, and develop new initiatives

The current staff includes the Interim Director Alan Wootton, with Ray Leeper at Sandia National Laboratories and Roger Bengtson at the University of Texas.