

Laser Lessons News Letter



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Special Workshop Edition

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Introduction

The 10th Annual Department of Energy (DOE) Laser Safety Officer (LSO) Workshop was held at Lawrence Livermore National Laboratory (LLNL) August 19-21. This Special Edition is devoted to recapping the activities of that event.

To all that came, a huge Thank You for making it a monumental success. This workshop was special because for the 10th anniversary it was brought back to where it began. In 2005 the first workshop was conceived and held at LLNL. This year was also the last time the workshop will be held annually. Unfortunately an annual event is becoming more difficult to support and will now be held on the off years of the International Laser Safety Conference. We will meet again in 2016 at Fermi National Accelerator Laboratory.

10th Annual DOE LSO Workshop Recap

Preregistration began the evening of August 18 at the Four Points Sheraton. Many took advantage of this opportunity to avoid the morning registration rush and reconnect with old friends. With the perennial traveler, Frank Rainer, in town, we were able to gather three generations of National Ignition Facility (NIF) LSOs for a photograph (right).

A side note... Many thanks to all who came forward and

provided car-pooling to and from the daily events.

Tuesday morning came, and thanks to the great signs provided by NIF Document Services, not a single person got lost. Everyone was quickly in by Trina Voelker and her crew (Mila Shapovalov, Emily Brannan) and we were off.

The event started with a welcome from Dr. Frances Alston, Director of LLNL ES&H and Mr. Sam Brinker from the DOE Livermore Field Office. The key note, *Explosion of Intense Laser Activities Around the World and Related Petawatt Activities at LLNL* by Dr. Christopher Barty really set the tone for the workshop.

The next session was on High Powered Lasers. Dr. Todd Ditmire, University of Texas, gave an energized



NIF LSOs (left to right): Jamie King (current), Ken Barat (retired), Frank Rainer (retired—first)

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talk on *Overview of The Texas Petawatt Laser and Operation of a Student Laser Facility at a University*. Anyone who knows Todd knows that he is as passionate about safety as he is about his work.

Our goal for this event was to evenly distribute talks so that our attendees from government labs, academia, and industry were well represented. The remaining three talks did just that. Dr. Csaba Toth presented a talk on the *Berkeley Lab Laser Accelerator (BELLA)*, Tom Lieb discussed *High Powered Industrial Lasers*, and your humble author gave an overview of *Laser Safety at the National Ignition Facility*.

After a short break and some exchanging of business cards, we quickly shifted gears and had a session on *Typical Laser Safety in a Small Lab*. Dave Marshall (Newport) presented his view from Industry (below). Elvet Potter (Michigan State University) gave the Academia perspective and Dr. Jeff Corbett (SLAC) discussed their PLC-based Laser Safety System.

A group photo was taken, which is on

the first and last page and is also linked from the LSO Workshop website.

The last afternoon session was all about *The LSO Toolbox*. Mr. Ken Barat gave an intriguing talk on *Problem Based Learning for Laser Users*. Mr. Kevin Goodwin discussed *Automating Your Laser Safety Program* and the day's talks were completed with Ms. Barbara Krantz talk on *Laser Barriers*.

That evening we were treated to the vendor sponsored banquet dinner at the Palms Event Center. For all who attended it was a magnificent way to cap off the first day's activities. To all of the vendors THANK YOU!

The second day started off with a session on Standards and Regulations. Mr. Bill Ertle discussed the ANSI Z136 Series, including recent releases. Mike Woods presented a summary of findings from a crosswalk of the Z136.1-2014 with the Z136.1-2007 and the Z136.8-2012. A final report of the findings is due out late this calendar year and will be posted on the EFCOG-Laser Safety Subgroup website.

The final speaker in this session was Mr. Wes Marshall, who gave a tutorial

session on Hazard Calculations using the Z136.1-2014. This is definitely one that you will want to go back and review the slides on.

The next session included a talk from Mr. George Johnson from the FBI, *Laser Strikes on Aircraft*. There is a special link to the FBI's website which includes some really good information on this rising threat to aircraft. Ms. Deana Luke was up next with the talk on the *National Renewable Energy Lab's (NREL) Process for Safe, Efficient Laser Service Subcontractor Work*. Closing out the session was an excellent talk by Dr. Gary Dreifuerst titled *Electrical Safety 101 for the LSO*. This important topic is often overlooked by many LSOs. This is another presentation worth reviewing again.

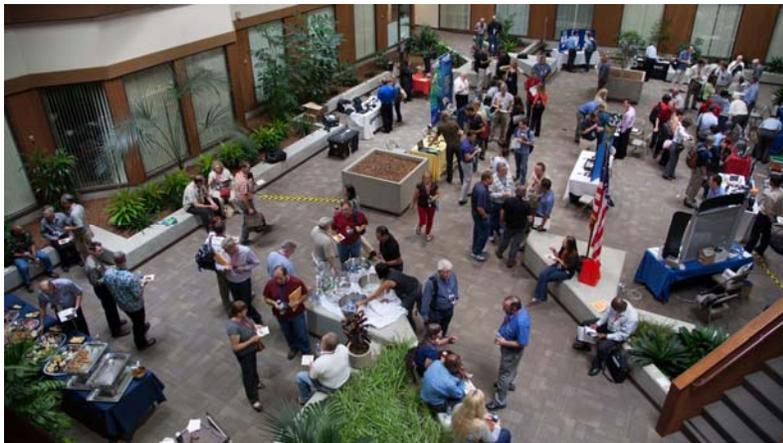
The afternoon was all about the vendors and tours. Mr. Jim Bonlie gave an overview presentation about the Jupiter Laser Facility and then personally took two separate groups on a tour. This year a full three hours of time was designated for visiting with the vendors. We ended up with thirteen different vendors exhibiting their products and services. Each one that I spent time with mentioned that they were quite happy with the turnout. Several different groups had a chance to tour the National Ignition Facility and were quite impressed with its sheer size and complexity. The activities ended at about 5:30, just in time for an LSO Appreciation Event; wine tasting at the Crooked Vine sponsored by LaserVision. It was a chance to relax, unwind, and get a taste of some of the local Livermore Valley wines.

The last day started with a *Session on*



Dave Marshall (Newport) Speaking on "Practical Examples for LCA Configuration and Safety Controls in Industry."

Laser Safety Applications and Mr. R. DeWayne Holcomb gave an excellent talk on *Fire Safety in the Laser Laboratory*. Mr. Thomas Bett (AWE), one of our international attendees, covered *Control of Multi-Fibre Output Diagnostic Lasers*. Our friends from the UK have been a constant at the workshop and we appreciate getting their views on laser safety from across the pond. This year there was one Panel Session on User Facilities. The members of this panel were Dr. Todd Ditmire, Mr. Thomas Bett, Mr. Albert Manzlak, and Dr. Mike Woods. We were able to get great insight on how each of these locations treat visitors AND students. Dr. Ditmire left us with something to think about in the treatment of students in laser labs. "If you treat them as professionals they will act like professionals." I can attest to this from a couple of visits that I made over the past few years to SLAC where many students are qualified laser operators. In interviewing them, I was quite impressed at their very high level of professionalism and attitude towards safety.



Vendor Exhibition in Building 543 Atrium

After a short break, it was time for the final session, *Tools for the Laser Safety Officer*. Mr. Casey Stack talked about Laser Entryway Control Requirements. Dr. Mike Woods went over the Incidents and Lessons Learned from the past year and Ms. Barb O'kane, Colorado School of Mines, gave enough information and variety of resources in her talk on *The Laser Safety Officer Toolbox* that there is no excuse for any LSO trying to reinvent the wheel. Finally there was just enough time to cover the past 10 years of the Workshop in a short presentation. Dr. Matt Quinn of Fermilab gave us a quick overview of our next host facility, Fermi

National Accelerator Laboratory. We will be there in 2016 after a well deserved year off and a great run of ten consecutive years. Mike Woods, chair of the EFCOG Laser Safety Subgroup (LSSG), gave a few closing remarks and the book was closed on the 10th Annual Workshop. The afternoon was dedicated to the Annual DOE EFCOG LSSG meeting and for the first time, a formal University Laser Safety Group meeting. Hosting this year's workshop gave me insight and a deep appreciation for all of the previous hosts and host facilities. There is much work involved in putting

10 years:

2005



2006



2007



2008



2009



2010



2011



2012



2013



2014



Two Nights—Two Great Events!

Top Left: Welcome Reception Dinner at the Palms Event Center



Bottom Middle: LSO Appreciation Event Hosts—LaserVision with Jamie King, LLNL and Mila Shapovalov, LLNL



Top Right : LSO Appreciation Event at the Crooked Vine Winery

on a great workshop and it would not have been possible without the help of the following Committees and Groups, to whom I wish to give a huge THANK YOU:

Local Organizing Committee:

Jamie King—Chair
Trina Voelker—Organizing Chair
Mila Shapovalov—Administrator
Emily Brannan—Workshop Tour Coordinator

Technical Chair Committee:

Jamie King—LLNL
Dave Marshall—Newport Corporation
Elvet Potter—Michigan State University
Matt Quinn—FNAL
Greta Toncheva—LBNL
Mike Woods—SLAC

Session Chairs:

Mike Woods, SLAC
Mendy Brown, SNL
Elvet Potter, Michigan State University
Ken Barat, Laser Safety Solutions
Jamie King, LLNL
Dave Marshall, Newport Corporation
Barb O’Kane, Colorado School of Mines
Matt Quinn, FNAL

NIF&PS Technical Information Department:

Brian Chavez, Workshop Logo design and graphics (posters/signs/badges/certificates)
Jason Laurea, Web Site Design/Construction and photographer
Deborah Bradford, Administrator

NIF&PS Logistical Support:

Mike Johnson
Anthony Viray
Jason Hamilton
Larry Delgadilo

And a special thanks to all of our Attendees, Speakers, and Vendors who have continued to support this event. See you in 2016 at FermiLab.

Jamie

BE SAFE!



The logo features a large black number '10' with a red sunburst pattern inside the zero. To the right of the '10' is the text 'TH ANNUAL DEPARTMENT OF ENERGY LASER SAFETY OFFICER WORKSHOP' in a sans-serif font, with a red horizontal line underlining the text.

