

OLUG 2011

Findings and Recommendations of the Student/Postdoctoral Panel

Student/Postdoctoral Panel

Ryan Rygg (LLNL), outgoing Chair
Tammy Ma (LLNL), Chair
Lan Gao (LLE)
Drew Higginson (University of California, San Diego)
Channing Huntington (University of Michigan)
Nathan Kugland (LLNL)
Hans Rinderknecht (MIT)
Steven Ross (LLNL)

The student/postdoc panel session sparked a lively discussion on a wide variety of issues ranging from some of the challenges young researchers encounter in getting acquainted with the Omega facility to training programs for students in HED. The major topics of discussion are summarized here:

1. Streamlining the PI Training

While there was general consensus that the students and postdocs appreciate the informality of the principal investigator training, it can be an overwhelming amount of information for new users. PIs-in-training would benefit from a slightly more streamlined approach, with documented training summaries and checklists for proposing experiments. For example, an overview of the requirements for the two-month, two-week, and one-week Readiness Reviews would be immensely useful in ensuring that the corresponding requirements are satisfied. Students also requested a point-of-contact list with the names and roles of the relevant LLE staff members who are subject matter experts in the topics covered by the Readiness Reviews.

In addition, if the training documentation (viewgraphs, checklists) could be posted online, PIs could reference the information both in preparation for the training as well as afterwards for review.

Interest was also expressed in establishing a PI shadowing program. Currently, young researchers that graduate to PI generally learn by participating in experiments that are led by more senior students or postdocs within their collaboration. This can lead to varying degrees of preparation and instruction within a narrow experiment-type. It was suggested that the National Lab point-of-contacts coordinate with universities to match interested students to lab employee PIs, providing some supplemental labor to the PIs, and extra experience for the student.

2. *Understanding the Diagnostics*

Members of the panel expressed the benefits of “seeing” the diagnostics fielded on Omega/Omega EP, and encouraged other researchers to request to see diagnostics as well. By actually viewing how the diagnostics on a given experiment are physically assembled, students can develop a better understanding of the diagnostic and experimental configurations. This added knowledge could possibly help cut down on the cost penalty of making or requesting complex diagnostic changes on the shot day.

3. *Use of Smaller Facilities to Support Omega*

With the limited Omega experimental time, smaller-scale experimental facilities play a vital role in target-diagnostic and experimental development. The MTW laboratory at LLE was offered as a resource (open to researchers everywhere) where it is easy to get time and could allow for preliminary tests or calibrations of diagnostics. Interested scientists should contact Dustin Froula or John Zuegel.

A list will be generated by the student/postdoctoral panel of alternative smaller-scale experimental facilities that may be of potential use for diagnostic and experimental development. The list will include a write-up of each of the facilities and its capabilities to help guide students in matching their needs.

4. *Online Forums*

Suggestions were made to develop an active online forum for Omega Users, i.e. through Facebook, LinkedIn, or a Google group to allow users to interact informally. Such a forum could be self-maintained by the user community, and would allow for questions to be posted and support to be provided internally among the users. It was also proposed to create a blog or a daily/weekly facility update (similar to one SLAC sends out by email) that would keep users in the loop about Omega improvements and happenings between their experiments. This type of regular email newsletter would need to be fundamentally written and edited by LLE, although some newsletter content could be provided by the user community.

5. *Addressing the Findings from the Previous Year*

Last year’s report commented on (1) the availability of diagnostic information online, (2) posting of completed graduate theses involving Omega work online, (3) accessibility to HEDP courses and lecture materials across multi-institutions, and (4) the acquisition of jobs in the HEDP field.

LLE management has made an extensive effort to make diagnostic information easily accessible. Most EP diagnostics now feature a link on the SRF page that will immediately jump you to a summary of the diagnostic uses and setup information. This still requires implementation across the full suite of diagnostics on both facilities, but the model has been greeted with enthusiasm so far.

All graduate theses completed at LLE are already posted online. If professors and advisors from other institutions could provide the theses of their students to LLE, they can be added to the archive as a valuable reference tool for future researchers.

The 2011 OLUG meeting also featured a panel discussion on opportunities in HED physics with representatives from Los Alamos, Livermore and Sandia National Labs, from Omega, and from the university perspective. The representatives gave a short speech and then answered questions, giving insight into about potential career paths and opportunities. After the more formal presentation, representatives were available speak to young researchers directly. This was especially useful, as it provided an opportunity for young researchers to ask in depth questions and make connections with potential employers.

Below is a compiled list of useful links and URLs pertaining to the topics discussed in the 2010 student-postdoc session:

Links accessible from the main LLE website (<http://www.lle.rochester.edu/>):

1. Previous PhD theses at LLE:
<http://www.lle.rochester.edu/publications/theses.php>
2. Previous PhD theses supported by NLUF:
<http://www.lle.rochester.edu/publications/NLUFtheses.php>
3. Search previous LLE reviews (search box at top of page):
http://www.lle.rochester.edu/publications/lle_review/index.php?past
4. NLUF user's guide:
http://www.lle.rochester.edu/media/about/documents/nluf_users_guide.pdf

Links accessible from Omega operations page (<http://omegaops.lle.rochester.edu/>):

5. "Discussion forums" – diagnostic discussion forums
6. "TC Ports" – current table of ports on target chamber (also available as xls spreadsheet)
7. Diagnostic user's guides are available for a few diagnostics as a link on the shot request form diagnostic setup sheet page for the individual diagnostic. More user's guides will soon be available, and eventually a user's guide will be a required document for new diagnostics.

