

Omega Laser Facility Users Group (OLUG) Workshop: A capacity crowd of 115 researchers from around the world gathered at LLE on 23–25 April for the Sixth Annual Omega Laser Users Group (OLUG) workshop. OLUG consists of 350 researchers from 38 universities and from the national laboratories of U.S., Britain, and France.

At this year's workshop, 90 posters were presented in three poster sessions, the majority by students and postdocs. These presentations covered a wide spectrum of experimental research, diagnostics, analysis methods, and simulation capabilities directly relevant to the Omega Laser Facility and, more generally, to high-energy-density (HED) science. Three of the posters were from LLE summer high school students who presented research performed during the previous summer. The research of one of the high-school students garnered an Intel semi-finalist standing. Ten of the posters given by LLE engineers and scientists focused on improvements and upgrades to the facility, partly in response to the OLUG Findings and Recommendations (F&R's) of previous workshops. These facility-oriented posters are extremely popular with the attendees since they explain many of the essential details needed to implement a successful campaign at the Omega Laser Facility. Fifty-three of the student and postdocs in attendance (see Fig. 1), all of whom presented posters of their research, received financial aid from the National Nuclear Security Administration in support of their travel costs to the workshop.



Figure 1. Student-postdoc attendees at the Sixth Annual Omega Users Workshop, 23–25 April 2014.

Highlights to the workshop included an address by Dr. Keith LeChien, Acting Director of the Office of Inertial Confinement Fusion (Fig. 2); outstanding HED talks by world authorities; a well-attended evening tutorial session in which the *FLASH* simulation code and its applicability to a wide-range of problems of interest to the attendees was presented; an enjoyable evening at the Meliora; tours of OMEGA and OMEGA EP, which offered new researchers a first-hand look of the facilities; an engaging and spirited town meeting of students and postdocs, in which they aired their concerns and recommendations regarding the facility and operations; a session in which an overview of HED research at LANL, LLNL, SNL, and LLE was presented; and, very importantly, a full day of discussion of ongoing and new user findings and recommendations for the facility. These F&R's will be spelled out in much greater detail in the forthcoming Workshop Proceeding. A sampling of them include: (1) the decoupling of Beam 25 for Thomson scattering on OMEGA; (2) the capability of Thomson scattering on OMEGA EP with the $4\omega_0$ probe laser; (3) $4\omega_0$ interferometry on OMEGA EP; and (4) improvements in the tritium purity. All of the F&R's will be reviewed and discussed at the fall DPP meeting in New Orleans on Tuesday, 28 October. Next year's annual workshop will take place on 22–24 April 2015.



Figure 2. Dr. Keith LeChien, Acting Director for the Office of Inertial Confinement Fusion, addressed the users, praising the quality and the wide spectrum of cutting-edge research that the users presented.

Omega Facility Operations Summary: The Omega Facility conducted 215 target shots with an average experimental effectiveness of 94.9% during April (171 on OMEGA and 44 on OMEGA EP with an experimental effectiveness of 96.5% and 88.6%, respectively). The ICF program accounted for 69 target shots for experiments led by LLE, LLNL, and SNL, while the HED program had 66 target shots for teams led by LLNL, LANL, and LLE. Four NLUF campaigns led by scientists from the University of California, Berkeley and MIT carried out 33 target shots, and the LBS program accounted for 21 target shots for experiments led by LLNL scientists. Two shot days (26 shots) were dedicated to a Defense Threat Reduction Agency (DTRA) campaign.