

## Section 4

# NATIONAL LASER USERS FACILITY NEWS

NLUF activities during the third quarter of FY86 included five series of experiments on OMEGA and notification of Principal Investigators of the NLUF Steering Committee's evaluation of new proposals.

**J. Seely, U. Feldman, and C. Brown** of the Naval Research Laboratory (NRL) and **W. Behring** of the NASA-Goddard Space Flight Center concluded their investigations of XUV and x-ray spectroscopy of high-Z ions. Targets of Au ( $Z = 79$ ), Pb ( $Z = 82$ ), Th ( $Z = 90$ ), and U ( $Z = 92$ ) were irradiated with the OMEGA laser. This is an extension of previous work to much higher-Z ions.

**H. Griem** from the University of Maryland conducted experiments on thermal transport of spherical laser targets. This experiment used glass and CH microballoons with a Ti layer embedded in the target. XUV and x-ray spectra were measured to determine the heating of OMEGA-irradiated targets.

**D. Duston** of SDIO and NRL and **A. Hauer** of Los Alamos National Laboratory (LANL) collaborated with LLE scientists and concluded the experiments on dielectronic satellites of Ar x-ray line emission from compressed targets. The glass targets, fabricated at LANL, are filled with Ar and  $D_2$  and then overcoated with several microns' thickness of CH. Time-integrated and time-resolved spectra of the x-ray emission and absorption were obtained.

**P. G. Burkhalter** and **J. Reader** of NRL concluded the measurement of x-ray spectra from high-Z targets. X-ray emission from Fe, CeO, Ta, BaF, HaF, Te, and W targets were recorded with a curved crystal spectrograph. These data are now being analyzed at NRL.

**U. Feldman** and **C. Brown** of NRL have collaborated with LLE scientists to implement a spectro-heliograph on the OMEGA target chamber. This instrument records spectral images of the irradiated target at x-ray line emission from 186 Å to 400 Å. Images were obtained for several CH and glass microballoons. Although preliminary, the data indicate that this instrument will prove a valuable tool for looking at XUV emission from implosion targets.

The NLUF Steering Committee reviewed 15 proposals for FY87. Nine of the 15 were recommended for facility time, and eight of the nine were recommended for DOE funding.

Proposals for consideration for the FY88 funding cycle are due by 15 December 1986.

For more information regarding proposal guidelines and the resources available at the National Laser Users Facility, please contact:

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