

### **Section 3**

## **NATIONAL LASER USERS FACILITY NEWS**

National Laser Users Facility (NLUF) activity during the second quarter of FY87 centered on two activities. The first activity was support of experiments being done on OMEGA and GDL. The second activity was a review of proposals for FY88 by the NLUF Steering Committee.

**Dr. F. Marshall** of LLE is collaborating with **Dr. J. G. Jernigan** from the Space Sciences Laboratory at the University of California, Berkeley, on the development of a two-dimensional active readout array to replace film in an x-ray pinhole camera mounted on the OMEGA target chamber. Data were collected that show an x-ray image from an imploding laser-driven target. These data are being analyzed and an evaluation of the two-dimensional readout array is being made. This work will continue during all of FY87.

**Dr. David Bradley** from the Lawrence Berkeley Laboratory (LBL) has been collecting data from CH targets containing Al tracer layers with the SPEAXS instrument, in support of **Dr. Burton Henke's** NLUF experiment. A new filter and two Langmuir-Blodgett multilayer spectral analyzers have been sent from LBL. With these pieces installed into the SPEAXS instrument, the x-ray sensitivity will be extended to energies below 600 eV.

All of the optics needed to steer the GDL beam into **J. Reader's** (National Bureau of Standards) target chamber are in house. This experiment will use the frequency-doubled output of GDL to study XUV

emission from a laser-produced plasma. This experiment will be done during the third quarter of FY87.

The NLUF Steering Committee reviewed the FY88 proposals on 27 February 1987. Members of the Steering Committee are

- Dr. Dwight Duston**      OSD/SDIO;
- Dr. Peter Eisenberger**    EXXON Research and Engineering Co.;
- Dr. Damon Giovanielli**    Los Alamos National Laboratory;
- Dr. William Kruer**        Lawrence Livermore National Laboratory;
- Dr. David Nagel**         Naval Research Laboratory; and
- Prof. Ravindra Sudan**     Cornell University.

The Steering Committee was chaired by **Dr. Bruce Arden** of the University of Rochester. Of the eleven FY88 proposals considered, five were for experiments and diagnostic development related to laser-fusion research, three were for XUV or x-ray studies related to x-ray laser development, two were for experiments related to materials studies, and one was for x-ray microscopy of biological samples. Six of the proposals were for continuation of previous work started at LLE and five were new submissions. Table 30.I contains a list of the considered proposals.

Table 30.I  
FY88 NLUF Proposals

No.	Investigator	System	Requested Shots
128	<b>T. R. Fisher</b>	OMEGA	30
129	<b>H. R. Griem</b>	OMEGA	45
130	<b>A. A. Offenberger</b>	OMEGA & GDL	108
131	<b>J. G. Jernigan</b>	OMEGA & GDL	10
132	<b>W. B. McKnight</b>	GDL	30
133	<b>J. S. DeGroot</b>	OMEGA & GDL	200
134	<b>H. L. Marcus</b>	GDL	400
135	<b>U. Feldman</b>	OMEGA & GDL	60
136	<b>P. Cheng</b>	GDL	200
137	<b>R. R. Whitlock</b>	GDL	50
138	<b>C. F. Hooper</b>	OMEGA	30

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