Section 4
NATIONAL LASER USERS FACILITY NEWS

This report covers the activities of the National Laser Users Facility (NLUF) during the quarter 1 July to 30 September 1984. During this period two users conducted experiments on LLE facilities. In addition, preparation for next year's steering committee meeting has begun, including solicitation of proposals.

In the user experiment on the GDL system, 351-nm laser light was focused onto thin-foil targets to study the Raman spectra and hot-electron emission spectra. The participating individuals in this experiment are

- **Chan Joshi**, **Humberto Figueroa**, and **Chris Clayton** (University of California, Los Angeles): "Studies of the Two-Plasmon Decay and Stimulated-Raman-Scattering Instabilities in Long-Scale-Length Plasmas."

The user experiment on the OMEGA system was the study of time-resolved thermal transport with six beams of 351-nm light focused onto spherical targets.

- **Burton L. Henke** and **Paul A. Jaanimagi** (University of Hawaii at Manoa): "Evaluation and Application of a Streak Camera and Photographic Camera Coupled Elliptical-Analyzer Spectrograph System for the Diagnostics of Laser-Produced X-Ray Sources (100-10,000-eV Region)."

Additional information on these experiments can be obtained from the scientists associated with the experiment.

The users facility will be accepting proposals until 1 February 1985 — the deadline for proposal submission. A description of the users facility and funding opportunities is included below.

The users facility is available for experiments requiring high-intensity laser beams. Users have access to both the OMEGA and GDL facilities. Fundamental studies center around applications in high-energy-density physics. High-energy-density physics experiments utilize an intense pulse of laser light focused to a diameter of approximately 10^{-3} cm. A solid material irradiated by such an intense laser pulse rapidly becomes an ionized gas, or plasma, with a temperature of 50 million degrees. This point-source plasma thus provides the necessary conditions for studies of thermonuclear fusion, spectroscopy of highly ionized atoms, shock waves, laboratory astrophysics, or the fundamental physics of matter under high intensities.

The University of Rochester operates the users facility under agreement with the United States Department of Energy. The Department of Energy funds the operation of the users facility thus making it possible for researchers to conduct experiments without direct charge. In addition the Department of Energy provides research funds directly to users. However, these fields are limited to laser fusion, plasma physics, and associated applications. User proposals in other areas can be accepted; however, funding support for both operations and research activities must be obtained separately through other agencies (e.g., the National Science Foundation).

All proposals are reviewed by the National Laser Users Facility Steering Committee which ranks them according to scientific merit. The terms of appointment for members are staggered so that part of the membership is renewed annually. The steering committee meets annually and makes its recommendations after reviewing proposals.

Following a steering committee meeting, researchers are advised of the committee's recommendation. For approved proposals, information will be sent regarding submission of the proposal to the Department of Energy in order to qualify for user funds. The Department of Energy will take into account steering committee recommendations for allocation of user funds.

For more information about proposal guidelines and the resources available at the users facility, please contact

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