

Section 2

NATIONAL LASER USERS FACILITY NEWS

NLUF activity during the second quarter of FY92 included experiments on GDL for the University of Illinois and target fabrication for the University of Maryland and the University of Florida. OMEGA shots for both Maryland and Florida have been scheduled.

The University of Illinois, in collaboration with **H. Elsayed-Ali** at LLE, is conducting an AFOSR-funded experiment to study the effect of laser irradiation of weldments. The GDL laser is used to irradiate welded samples, which are then taken back to the University of Illinois where their physical properties are measured. The energy of the GDL laser allows large-area illumination of the weld. This is a continuing experiment and more GDL shot time is anticipated.

Targets for a series of experiments by **H. Griem's** group at the University of Maryland were fabricated during this quarter by LLE's Target Fabrication Group. These targets are Ne and Ne-seeded D₂ gas-filled plastic shells. The shells are overcoated with an aluminum shinethrough barrier layer that also acts as the gas retention barrier. These targets will measure the line shape of hydrogen-like Ne x-ray spectra from dense cores.

C. Hooper from the University of Florida is having a series of Ar and Ar-seeded D₂ gas-filled plastic shells made for an experiment measuring the effect of density on the shape of the Ar x-ray line spectra from ICF cores. This is to be a time-dependent, line-shape measurement using the SPEAXS instrument and a streak camera connected to a flat crystal spectrograph.