

Section 4

LASER SYSTEM REPORT

4.A GDL Facility Report

There were 227 GDL laser shots during the third quarter of FY92. The University of Illinois used 62 target shots for a NLUF experiment; 119 shots were used for laser-damage testing on laser optics; there were 37 laser-system test shots, and finally, 9 miscellaneous target shots were taken. The modifications on GDL to conduct the OMEGA Upgrade prototype tests began on 22 May.

The shot summary for the GDL laser this quarter is as follows:

Laser system	37
Target	<u>190</u>
TOTAL	227

4.B OMEGA Facility Report

The OMEGA system fired 470 shots during the third quarter of FY92, including shots for laser testing, diagnostics development, implosion experiments, and NLUF user experiments. We continued some of the power-conditioning refurbishment activity necessitated by the age of the system. In the first 14 years of its life, OMEGA has logged more than 24,000 shots.

Experiments conducted during this quarter included diagnostics-development shots for a high-speed, framing x-ray camera; a time-framed, x-ray ring aperture microscope; a neutron streak camera; MEDUSA system calibration; and x-ray backlighting. Implosion experiments were carried out with surrogate cryogenic CD shells and on deuterium-filled CH targets. NLUF experiments from the University of Maryland were also conducted.

The shot summary for the OMEGA laser this quarter is as follows:

Driver line	292
Laser development	82
Target	93
Software test	<u>3</u>
TOTAL	470

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