

# Section 1

## LASER SYSTEM REPORT

### 1.A GDL Facility Report

GDL continued operation as a 0.35  $\mu\text{m}$  irradiation facility during the third quarter of FY82.

A total of 892 shots was delivered by the facility during the period April 1 to June 30, 1982. The shot distribution was as follows:

3 $\omega$ Target Experiments	71	Shots
X-Ray Program	65	
Damage Test Facility	679	
Alignment	<u>77</u>	
TOTAL	892	Shots

A summary of the experimental work carried out in the 0.35  $\mu\text{m}$  Interaction Physics Program is given elsewhere in this issue.

### 1.B OMEGA Facility Report

During the third quarter of FY82 a total of 492 shots was fired on the OMEGA laser system. Most of the shots were fired in order to meet the needs of the participants in the National Laser Users Facility program. Most of the month of April was spent in reconfiguring the laser system to produce pulses of 100 ps nominal FWHM. At this pulsewidth, nominal 24-beam energies of 600 joules—with a high of 800 joules and a low of 300 joules—were achieved.

The distribution of OMEGA system shots during the period was:

Target Shots	164
Test Shots	<u>338</u>
TOTAL	502

The breakdown of target shots by primary user was as follows:

University of Illinois	66 Shots
University of Florida	56
US Naval Research Laboratory	32
University of Rochester	6
Diagnostic Tests	<u>4</u>
TOTAL	164 Shots

Many of the target shots were used by more than one user; this permitted a more rapid calibration and alignment of the experimental instrumentation. A summary of the activities of the users during the period is given elsewhere in this issue.

The latter part of June was spent reconfiguring the facility to produce one nanosecond (nominal) FWHM pulses for the upcoming uniformity and transport experiments. System maintenance was also performed during this period.