About the Cover:

The cover photo shows one of the two large-area conditioning (LAC) stations operated by LLE's Optical Manufacturing Group in support of the National Ignition Facility project. Laboratory Engineer Jason Taniguchi monitors the control and data acquisition system, while Senior Technical Associate Nelson LeBarron checks the optic substrate mounted on the translation stage. During operation, intense laser pulses are delivered to the optic via the transparent beam tube at the right. The article entitled "Functional Damage Thresholds of Hafnia/Silica Coating Designs for the NIF Laser" (p. 177) describes how the LAC was used to test candidate high-reflectivity coatings on full-sized substrates like the one shown. The device visible on the left of the cover photo is a large-optic lifting tool (LOLT). Several facilities in the large-optics manufacturing community use this basic LLE design.

The translation stage of the second LAC is shown in the foreground of the photo to the left. Visible behind the test optic (at the right in photo) is the system that detects and documents damage caused by scanning the optic with an intense pulsed beam. Visual examination by trained eyes remains an important part of the process.

The work described in this volume includes current research at the Laboratory for Laser Energetics, which is supported by New York State Energy Research and Development Authority, the University of Rochester, the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement No. DE-FC03-92SF19460, and other agencies.

Printed in the United States of America
Available from
National Technical Information Services
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161

Price codes: Printed Copy A04
Microfiche A01

For questions or comments, contact Thomas H. Hinterman, *Editor*, Laboratory for Laser Energetics, 250 East River Road, Rochester, NY 14623-1299, (716) 275-0866.

Worldwide-Web Home Page: http://www.lle.rochester.edu/