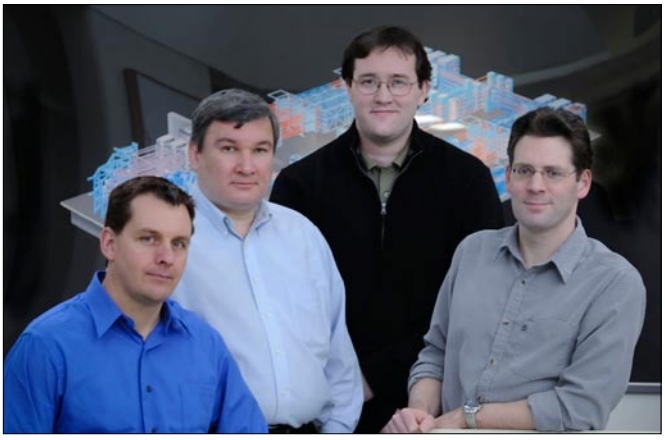
About the Cover:

Kilojoule-class high-intensity lasers offer the promise of generating a relativistic electron–positron pair plasma for the first time in controlled laboratory experiments (see "Optimizing Electron–Positron Pair Production on kJ-Class High-Intensity Lasers for the Purpose of Pair-Plasma Creation" on p. 161). Graduate student Michael Storm (The Institute of Optics) (right) and LLE scientists Jason Myatt (seated) and Andrei Maximov are shown in the OMEGA EP Control Room. Four beamlines of OMEGA EP can be seen in the display monitor to the right of Dr. Myatt. Two of these beamlines can be compressed in the grating compressor chamber (white structure seen in the monitor to the left of Dr. Myatt) to "relativistic intensities." These scientists describe how pair production can be optimized for irradiation conditions achievable on these two high-intensity beamlines. They also estimate the likelihood of successful pair-plasma creation.



The inside cover photo shows (from left to right) graduate student Michael Storm (experimental), scientist Andrei Maximov (plasma/theory), scientist Philip Nilson (experimental), and scientist Jason Myatt (plasma/theory). These researchers are currently exploring the implications of the new physical regimes that have recently become accessible with the OMEGA/OMEGA EP Laser Facilities, particularly those related to volumetric heating and energetic particle production.

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-FC52-08NA28302, 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 A06
Microfiche A01

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