IN BRIEF

This edition of the LLE Review contains articles on new developments in thin film coating research, OMEGA uniformity experiments, plasma theory, and laser fusion target fabrication. Some of the highlights of work described in this issue are as follows:

- Modulated transmission ellipsometry has been used to measure, with spatial resolution of 20 µm, the distribution of anisotropic stress around defects in dielectric thin films. With this technique it will be possible to study the relationship between coating stress and laser-induced damage for coating materials and designs of interest to LLE.
- The performance of ablatively driven laser fusion targets on OMEGA with respect to irradiation uniformity is reported. It has been found that even high aspect ratio shells maintain their integrity when the uniformity is sufficiently good.
- Thermal smoothing of nonuniformities in laser deposition on target was examined using a steady-state ablation model. Saturation of the heat flux is found to reduce the laser intensity required for smoothing substantially below the value previously estimated using only classical transport.
- An experimental investigation of biased sputter deposition shows that improved surface smoothness is produced on target pusher layers. This technique also provides improvements in the microstructure and density uniformity of the pusher layer material.

• An information management system has been established for the Target Fabrication Group on the CYBER 175 computer. This system provides automated data entry and retrieval during the processing and use of OMEGA implosion targets.

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Georg Albrecht, LLE staff scientist, is preparing for fine adjustment of a Kuizenga oscillator, part of which is visible in the lower left. In the background are the electronic controls for two of these oscillators.