

Abstract Submitted  
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**Probing the Release of Shocked Material** D.N. POLSIN, T.R. BOEHLY, S. IVANCIC, M.C. GREGOR, C.A. MCCOY, D.D. MEYERHOFER, Laboratory for Laser Energetics, U. of Rochester, D.E. FRATANDUONO, P.M. CELLIERS, LLNL — The behavior of shocked material as it releases to lower pressures is important for equation-of-state experiments and inertial confinement fusion research. We present results of experiments that used a 10-ps, 263-nm probe beam to image the release plumes of various target material shocked to multi-megabar pressures by the OMEGA EP laser. One-dimensional streaked x-ray radiography also provided a time-resolved trajectory of the release wave. Simultaneous VISAR (velocity interferometer system for any reflector) measurements provide the initial shocked state from which these materials release. Models for the optical properties of the released material is presented. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

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