

Abstract Submitted
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The Release of Shocked Materials C. MCCOY, T.R. BOEHLY, P.M. NILSON, T.J.B. COLLINS, T.C. SANGSTER, D.D. MEYERHOFER, Laboratory for Laser Energetics, U. of Rochester, D.E. FRATANDUONO, P.M. CELLIERS, D.G. HICKS, LLNL — When a shock wave encounters lower-density matter, its pressure and density relax until the impedance across the material interface is constant. This process is the basis for the impedance-match equation-of-state (EOS) measurements. Frequently, only the Hugoniot of material is known and the release is assumed to follow an isentrope. At high pressures, significant entropy is produced in the shock material. This and high-pressure (>1 Mbar) phase transitions complicate this process. We present methods to measure the release behavior of shocked materials. This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement No. DE-FC52-08NA28302.

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