

Abstract Submitted
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Measurements of multi-shock compressed deuterium to 500 GPa

J. RYAN RYGG, D.G. HICKS, T.R. BOEHLY, P.M. CELLIERS, R.F. SMITH, G.W. COLLINS, O.L. LANDEN — The equation of state and transport properties of compressed hydrogenic materials affect the structure of gas-giant planets and the performance of inertial confinement fusion targets. Deuterium samples were compressed up to 5 Mbar by a sequence of laser-driven shocks. Results of simultaneous pressure, temperature, and optical reflectivity measurements of these samples will be reported. This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

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