

Abstract Submitted  
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**Measuring the Ramp Equation of State of Lithium Fluoride to 1000 GPa**<sup>1</sup> SUZANNE ALI, LEO KIRSCH, DAVID BRAUN, DAYNE FRATAN-DUONO, AMALIA FERNANDEZ-PANELLA, RAYMOND SMITH, MICHELLE MARSHALL, JAMES MCNANEY, JON EGGERT, Lawrence Livermore Natl Lab — The pursuit of accurate, high-pressure data on materials requires well-validated experimental platforms and the precise calibration of equation of state (EOS) standards. Among these standards are window materials used to confine the sample material when the compression wave propagates, as opposed to allowing it to release into vacuum. This facilitates the study of phase transitions on compression and prevents complications such as spall. Lithium fluoride remains transparent at very high pressures, particularly on the isentrope, making it an ideal window material for many experiments. Determination of the hydrodynamic state of the sample material requires knowledge of both the equation of state and density-dependent refractive index of the window material. Using the NIF we have ramp compressed lithium fluoride, measuring the quasi-isentrope to  $\sim 1000$  GPa.

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