

Abstract Submitted
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Thermal relaxation of shocked CsI with a LiF window and optical characterization of shocked LiF to 42 GPa¹ DAVID BONESS, Seattle University Physics Department — In order to measure temperature from opaque shocked solids, such as metals of interest in condensed-matter physics and geophysics, somewhat transparent window materials have been used, especially LiF or sapphire, to carry the shock front past the interface between the two materials, while optical pyrometry measurements are made. Unfortunately, very few transparent window materials of suitable shock impedance exist. I report on several previously unpublished experiments on the transparency of shocked LiF from two-stage gas gun experiments at LANL, as well as on two experiments shocking a CsI-LiF sandwich with a known gap with fliers of 1100 Al, to a shock pressure of 42 GPa, in order to test the thermal interface relaxation predictions of Urtiew and Grover.

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David Boness
Seattle University Physics Department

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