

Abstract Submitted
for the SHOCK09 Meeting of
The American Physical Society

Time Resolved Optical Signatures For Hugoniot State Measurements From Shock Compressed Composition-B¹ TOM THORNHILL, Ktech Corp., LALIT CHHABILDAS, Air Force Research Laboratory, Eglin A.F.B., WILLIAM REINHART, Sandia National Laboratories — Broadband photo-diodes sensitive over the visible and near infrared electromagnetic spectrum are used to monitor impact flash luminosity versus time. Based on careful experimental layout and impact timing the prompt portion of the impact flash signatures reveal the shock propagation timing through a Composition-B target plate. Application of Rankine-Hugoniot Jump equations to this waveform timing provides Hugoniot state measurements of shock compressed Composition-B in the 25 to 50 GPa range. This data will be discussed in detail, along with comparison to previous work below the Composition-B detonation pressure.

¹Sandia is a multi-program laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

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Date submitted: 13 Feb 2009

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