

Abstract Submitted
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Measurement of emission from a radiatively collapsed shock A. VISCO, R.P. DRAKE, M.J. GROSSKOPF, N. GJECI, R.S. GILLESPIE, J.D. SHULTZ, D.A. CAMPBELL, J. HUMAN, University of Michigan — Radiatively collapsed shocks are systems in which radiation transport causes the shock to “collapse” or compress to high densities. Such shocks are present in supernova remnants, passing through interstellar medium, and other such astrophysical systems. With the advent of large laser facilities, conditions can be created so that radiatively collapsed shocks can be studied in quantitative way. Recent experiments have been performed on the Omega laser at the Laboratory for Laser Energetics to study the dynamics of these shocks. Measurements of radiative emission from the collapsed shock and precursor region have been made using a streaked optical pyrometer from which the temperature of the system can be calculated. Details of the experiment and results will be discussed. This research was sponsored by the NNSA through DOE Research Grants DE-FG52-07NA28058, DE-FG52-04NA00064, and other grants and contracts.

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