Abstract Submitted
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Challenges to understanding radiative shocks[1] R.P. DRAKE, F.W. DOSS, B. FRYXELL, M.J. GROSSKOPF, J.P. HOLLOWAY, B. VAN DER HOLST, C. HUNTINGTON, C.C. KURANZ, E.S. MYRA, K.G. POWELL, I.V. SOKOLOV, Q.F. STOUT, G. TOTH, A.J. VISCO, University of Michigan — Shock waves driven above a threshold velocity near 100 km/s become strongly radiative, converting most of the incoming energy flux into radiation. We produce such shock waves in Xe or Ar by using a laser to shock, ionize, and accelerate a Be plate into a gas-filled shock tube. Structure develops in these systems due to both radiative energy transfer and hydrodynamic instability. We are conducting such experiments, implementing a code to model them, and implementing software to assess the predictive capability of the code in our Center for Radiative Shock Hydrodynamics. This presentation will discuss the challenges and show our progress.

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