

Abstract Submitted
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Reverse Radiative Shock Experiments Relevant to Accreting Stream-Disk Impact in Interacting Binaries¹ CHRISTINE KRAULAND, R.P. DRAKE, C.C. KURANZ, C.M. HUNTINGTON, F.W. DOSS, M.J. GROSSKOPF, D.C. MARION, S. KLEIN, R.P. YOUNG, University of Michigan, T. PLEWA, Florida State University — In many Cataclysmic Binary systems, mass onto an accretion disk produces a “hot spot” where the infalling flow obliquely strikes the rotating accretion disk. It has been argued (Armitage & Livio, *ApJ* 493, 898) that the shocked region may be optically thin, thick, or intermediate, which has the potential to significantly alter its structure and emissions. We report two experimental attempts to produce this type of radiative reverse shock in a colliding plasma stream. In the laboratory this requires producing a sufficiently fast flow (>100 km/s) within a material whose opacity is large enough to produce energetically significant emission from experimentally achievable layers. The experiments have been performed at the Omega-60 laser facility. We will discuss the astrophysical context, our experimental design, and the available data.

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