

Abstract Submitted
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Measurement of hard x-ray bremsstrahlung emission from indirectly driven capsules at peak of the laser drive¹ TILO DOEPPNER, E.L. DEWALD, S.H. GLENZER, N. IZUMI, O.L. LANDEN, N. MEEZAN, Lawrence Livermore National Laboratory, S.P. REGAN, Laboratory for Laser Energetics Rochester, H.F. ROBEY, C.A. THOMAS, Lawrence Livermore National Laboratory — There is currently significant interest in understanding the fraction of hot electrons impinging on the capsule in indirectly driven implosions on the NIF. They may degrade implosion performance by causing pre-heat and potentially sending an additional shock wave into the capsule at the rise of the main pulse. In order to quantify their impact during the rise and the peak of the laser drive, we are fielding a high aspect ratio pinhole imager with 400 μm resolution, 2x magnification viewing through a Laser Entrance Hole and equipped with both a gated x-ray detector and absolutely calibrated imaging plate. By differentially filtering we will record images of the bremsstrahlung emission from both the capsule and hohlraum in the energy range between 50 - 100 keV, and also normalize the results by the spatially integrating absolutely calibrated time-resolved hard x-ray-spectrometer FFLEX.

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