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Three dimensional simulations of NIF ViewFactor hohlraums<sup>1</sup> N.B. MEEZAN, M.B. SCHNEIDER, S.A. MACLAREN, K. WIDMANN, Lawrence Livermore National Laboratory — The ViewFactor target is a modified version of a National Ignition Facility (NIF) ignition hohlraum that allows extensive x-ray imaging of the hohlraum wall. Thus, data from ViewFactor experiments are uniquely suited for studying the physics of the hohlraum wall/laser beam interaction. This study reports on 3D simulations of NIF ViewFactor experiments using the target design code HYDRA. Simulated x-ray images show azimuthal variations in the x-ray brightness of the hohlraum wall; however, these variations are larger in magnitude in the data. This is possibly due to the 3D simulations not correctly reproducing the motion of the hohlraum wall in the laser spots. A detailed in-line cross-beam power transfer model that includes the change in laser beam intensity due to transfer is tested and compared with the data.

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