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**Simulations of Directly-Driven Cone-in-Shell Implosions**[1] R.P.J. TOWN, D.S. CLARK, M.M. MARINAK, H.D. SHAY, M. TABAK, D.S. HEY, P.K. PATEL, Lawrence Livermore National Laboratory, K.S. ANDERSON, R. BETTI, W. THEOBALD, Laboratory for Laser Energetics, U. of Rochester — In fast ignition a short-pulse high intensity laser is used to generate relativistic electrons that subsequently deposit their energy into the compressed fuel to initiate a propagating burn wave. A high-density cone is often inserted into the capsule to allow a clear path for the ignition laser to the compressed fuel. The presence of the cone alters the dynamics in two ways from a spherically symmetric implosion. First, x-ray preheat can be absorbed by the cone causing the cone material to expand ahead of the imploding fuel leading to mixing of the high-Z cone material into the fuel. Second, the stagnation of the fuel near the cone can launch a jet into the cone increasing the transport distance of the short-pulse generated relativistic electrons. This paper reports on HYDRA simulations of directly driven OMEGA-scale plastic capsule implosions.

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