Abstract Submitted
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Modeling Mix in ICF Implosions[1] C.R. WEBER, D.S. CLARK, B. CHANG, D.C. EDER, S.W. HAAN, O.S. JONES, M.M. MARINAK, J.L. PETERSON, H.F. ROBEY, Lawrence Livermore National Laboratory — The observation of ablator material mixing into the hot spot of ICF implosions correlates with reduced yield in National Ignition Campaign (NIC) experiments. Higher Z ablator material radiatively cools the central hot spot, inhibiting thermonuclear burn. This talk focuses on modeling a "high-mix" implosion from the NIC, where greater than 1000 ng of ablator material was inferred to have mixed into the hot spot. Standard post-shot modeling of this implosion does not predict the large amounts of ablator mix necessary to explain the data. Other issues are explored in this talk and sensitivity to the method of radiation transport is found. Compared with radiation diffusion, Sn transport can increase ablation front growth and alter the blow-off dynamics of capsule dust.

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