

Abstract Submitted
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Simulations of NIF 3-D capsule modulation growth experiments¹

S.V. WEBER, D.T. CASEY, D.S. CLARK, J. FIELD, S.W. HAAN, V.A. SMALYUK, LLNL, A. NIKROO, N. RICE, General Atomics — Growth of 3-D modulations in NIF CH ablator capsules has been measured by inflight radiography of imploding shells through a reentrant keyhole. Gated images are taken near the time of peak shell velocity at a convergence ratio of about five. We have looked at shells with native roughness and with outer surface roughness enhanced by a factor of about four. Three-dimensional simulations have been carried out using surfaces reconstructed from measured power spectra and also from point by point metrology of the actual capsule surface. Comparison of measured and simulated radiographs tests our understanding of modulation growth as well as addressing whether there are significant seeds for growth that have been overlooked.

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