

Abstract Submitted  
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**Ablation Rate and Implosion Velocity in ICF Capsules at the NIF**<sup>1</sup> R.E. OLSON, SNL, D.G. HICKS, N.B. MEEZAN, D.A. CALLAHAN, O.L. LANDEN, O.S. JONES, LLNL, J.L. KLINE, D.C. WILSON, LANL, A.B. ZYLSTRA, H.G. RINDERKNECHT, R.D. PETRASSO, MIT — For ICF ignition at the National Ignition Facility (NIF), it is thought that the spherically imploding capsule must be tuned so that 90-96% +/- 1% of the original ablator (the percentage of ablated mass depends upon ablator type and capsule design details) is removed at the time when the rocket payload (the DT fuel plus remaining ablator mass) reaches a peak implosion velocity of about 370 um/ns. An assessment of the accuracy of the integrated (hohlraum with capsule) design code predictions of capsule ablation rate together with hohlraum radiation temperature, implosion velocity, ablator remaining mass, shock flash areal density, shock flash time, and x-ray bang time is provided by comparing the simulated diagnostic outputs from the integrated calculations to the measurements made in convergent ablation experiments at the NIF.

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