Abstract Submitted for the DPP07 Meeting of The American Physical Society

Influence and measurement of mass ablation in ICF implosions¹ BRIAN SPEARS, D. HICKS, C. VELSKO, M. STOYER, H. ROBEY, D. MUNRO, S. HAAN, O. LANDEN, Lawrence Livermore National Lab, D. WILSON, Los Alamos National Lab, A. NIKROO, General Atomics — Point design ignition capsules designed for the National Ignition Facility use an xray-driven Be(Cu) ablator to compress the DT fuel. Ignition specifications require the mass of unablated Be(Cu), called residual mass, be known to within 1% of the initial ablator mass when the fuel reaches peak velocity. We discuss the impact of variations in residual mass on the relevant capsule failure modes based on one- and two-dimensional radiation hydrodynamics. Experiments designed to measure and to tune the amount of residual mass are being developed as part of the National Ignition Campaign. We also discuss a set of measurement techniques that aim to measure the residual mass along with the peak velocity of the DT fuel. UCRL-ABS-232765

¹This work was performed under the auspices of the Department of Energy by the Lawrence Livermore National Laboratory under contract number W-7405-ENG-48.

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Date submitted: 17 Jul 2007 Electronic form version 1.4