

Abstract Submitted
for the DPP17 Meeting of
The American Physical Society

A comparison of hydro-instabilities in CH, HDC, and beryllium ablators on NIF¹ V. A. SMALYUK, H. F. ROBEY, S. ALI, L. F. BERZAK HOPKINS, D. T. CASEY, P. M. CELLIERS, D. S. CLARK, S. J. FELKER, J. E. FIELD, S. W. HAAN, B. A. HAMMEL, W. W. HSING, J. J. KROLL, O. L. LANDEN, S. LEPAPE, A. G. MACPHEE, D. MARTINEZ, J. MILOVICH, A. NIKROO, L. PICKWORTH, M. STADERMANN, C. R. WEBER, LLNL, J. KLINE, E. LOOMIS, A. YI, LANL — A comparison of the hydrodynamic growth in plastic, high-density carbon, and beryllium ablators will be presented in indirect-drive implosions on National Ignition Facility. This comparison is based on experimentally measured instabilities in all phases of implosions for the three ablators. The 2-D and 3-D perturbations were measured at the ablation-surface with the Hydrodynamic Growth Radiography platform. In the deceleration phase of implosions, innovative self-emission and “self-backlight” techniques were used. Results of the 3-D perturbation growth including engineering features will also be presented for convergence up to 20 and compared for the three ablators.

¹This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

V. A. Smalyuk
LLNL

Date submitted: 12 Jul 2017

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