

Abstract Submitted  
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**NIF Convergent Ablator Performance Measurements<sup>1</sup>** DAMIEN HICKS, OTTO LANDEN, BRIAN SPEARS, LLNL, RICK OLSON, SNL, DAVID BRAUN, DEBBIE CALLAHAN, GILBERT COLLINS, LLNL, JOHAN FRENJE, MIT, STEPHAN FRIEDRICH, LLNL, FRED GIRARD, CEA, STEVE GLENN, ROBERT HEETER, JOE HOLDER, LLNL, LAURENT JACQUET, CEA, JOHN KLINE, LANL, ANDREW MACPHEE, NATHAN MEEZAN, LLNL, RICHARD PETRASSO, HANS RINDERKNECHT, FREDERICK SEGUIN, MIT, DOUG WILSON, LANL, ALEX ZYLSTRA, MIT — Assessing the ablator performance around the time of peak implosion velocity is an important step towards achieving ignition. Using x-ray radiography the time-resolved velocity, mass, and areal density of the remaining unablated shell were measured near peak velocity on NIF implosions. With the simple rocket model this allowed the ablation pressure and mass ablation rate to be estimated. Spectrally-resolved D-3He proton measurements were used to determine the combined unablated and ablated areal density. Together these information-rich diagnostics provide tight constraints on the conditions in the ablator at its maximum kinetic energy.

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