Abstract Submitted
for the DPP11 Meeting of
The American Physical Society

NIF capsule modeling[1] S.V. WEBER, C.J. CERJAN, M.J. EDWARDS, D.G. HICKS, H.F. ROBEY, P.T. SPRINGER, B.K. SPEARS, R.P.J. TOWN, LLNL, G. KYRALA, D.C. WILSON, LANL, R.E. OLSON, SNL — Implosions have been carried out at the National Ignition Facility (NIF) of three capsule types, symmetry capsules (SymCaps), convergent ablation capsules. and THD capsules. These capsules are surrogates of the ignition capsule design, each optimized to measure specific implosion characteristics. In addition, shock timing data was obtained with specially-designed targets. An abundance of capsule performance data has been obtained with x-ray and nuclear diagnostics, including implosion velocity, remaining ablator mass, times of peak x-ray and neutron emission, core image size, core symmetry, neutron yield, and x-ray spectra. We have attempted to match this data set with simulations, adjusting the radiation drive, capsule surface roughness, and physics uncertainties. Comparison of simulated and measured performance parameters will be shown.

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

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Date submitted: 11 Jul 2011 Electronic form version 1.4