

Abstract Submitted
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**A Systematic Study of Laser Imprint for Direct Drive—
from Seeds to Integrated Implosions** JAMES KNAUER, R. BETTI, V.
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MCKENTY, J. L. PEEBLES, P. B. RADHA, S. P. REGAN, T. C. SANGSTER,
C. STOECKL, University of Rochester — A study of laser imprint for laser direct
drive is presented through measurements of the seeds of laser imprint, the associated
growth rates of the hydrodynamic instabilities, and a study of the performance of
imploded cryogenic DT ice and gas-filled shell targets. By varying the bandwidth
on smoothing by spectral dispersion (SSD) the imprint level is varied in fine steps.
The seeds were characterized using a 2-D VISAR diagnostic and compared to re-
sults from radiation-hydrodynamics simulations. The integrated experiments use
measured data from nuclear, x-ray, and optical diagnostics to gauge the implosion
performance versus SSD bandwidth. This material is based upon work supported by
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