

Abstract Submitted
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Energetics and Symmetry Measurements from Shorter Wider Gold Hohlräume J.E. RALPH, S.N. DIXIT, Lawrence Livermore National Laboratory, T. DOEPPNER, Lawrence Livermore National Laboratory, S.H. GLENZER, D.A. CALLAHAN, O.S. JONES, N.B. MEEZAN, J. MILOVICH, R.P.J. TOWN, M.J. EDWARDS, D. EDER, D. FARLEY, S. GLENN, D.H. KALANTAR, K. WIDMANN, O.L. LANDEN, T. MA, B.J. MACGOWAN, A. MACKINNON, P.A. MICHEL, J.D. MOODY, M.B. SCHNIEDER, L.J. SUTER, Lawrence Livermore National Laboratory, J.L. KLINE, G.A. KYRALA, Los Alamos National Laboratory — We report on the experimental results of implosions of symmetry capsules (symcaps) on the National Ignition Facility (NIF) using a new geometry gold Hohlraum. The symcap capsules (CH shells) used in the NIF are designed as surrogates for layered fuel target capsules (containing cryogenic Tritium Hydrogen Deuterium or Deuterium Tritium) with a lower neutron yield from fusion reactions allowing for an extensive suite of diagnostics to be fielded without the risk of radiation damage. Experiments intended to produce symmetric implosions of symcaps were conducted with the full 192 beams and used a laser drive pulse with a total energy of 1.3 MJ. A discussion of measured performance of the helium filled Hohlraum with respect to x-ray Hohlraum emission, x-ray drive and laser plasma interactions will be discussed. This work performed by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

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