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**Drive and Symmetry Experiments in Ignition-Scale Hohlraums**[1]

N.B. MEEZAN, D.A. CALLAHAN, E.L. DEWALD, L. DIVOL, S.N. DIXIT, T. DOEPPNER, O.S. JONES, S. LE PAPE, R.A. LONDON, P.A. MICHEL, J.L. MILOVICH, J.D. MOODY, M.V. PATEL, J.E. RALPH, M.B. SCHNEIDER, C.A. THOMAS, R.P.J. TOWN, L.J. SUTER, S.H. GLENZER, M.J. EDWARDS, O.L. LANDEN, B.J. MACGOWAN, Lawrence Livermore National Laboratory, J.L. KLINE, G.A. KYRALA, D.C. WILSON, Los Alamos National Laboratory — The goal of the symmetry capsule ("symcap") experimental campaign on the National Ignition Facility (NIF) is to achieve a symmetric implosion at a radiation temperature suitable for ignition. In this talk, we describe the design of the symcap experiments, including performance predictions from the radiation-hydrodynamics code Hydra. Performance predictions are based on levels of Raman backscatter (SRS) and cross-beam transfer extrapolated from 2009 ignition-scale hohlraum experimental results. Simulated diagnostic results include x-ray drive (radiant intensity) and spectrum, laser-entrance-hole (LEH) x-ray images, imploded core self-emission brightness and emission time, imploded core shape and size, and D-D neutron yield. Recent experimental results are compared to predictions and to 2009 ignition-scale hohlraum data.

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Nathan Meezan
Lawrence Livermore National Laboratory

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