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Vacuum Hohlraum energetic experiments on the National Ignition Facility[1] JOHN KLINE, LANL, S. GLENZER, LLNL, K. WIDMANN, R. OLSON, SNL, D. HINKEL, LLNL, E. WILLIAMS, L. SUTER, J. CELESTE, E. DEWALD, S. DIXIT, W. HSING, O. LANDEN, B. MACGOWAN, A. WARRICK, J. ATHERTON, R. BERGER, D. CALLAHAN, L. DIVOL, C. HAYNAM, D. KALANTAR, J. KILKENNY, GA, S. LE PAPE, LLNL, D. LARSON, N. MEEZAN, M. SCHNEIDER — Results from vacuum hohlraum energetics experiments on the National Ignition Facility using a subset of NIF's 192 beams are presented. In these experiments, the scaling of radiation temperature for conventional gold hohlraums as well as gold hohlraums lined with a thin gold-boron liner was measured. These experiments are the first test of hohlraum drive scaling at $\sim 70\%$ of full-NIF scale. We show how these results compare with scalings developed on predecessor facilities at a fraction of the laser energy being used here. In NIF ignition hohlraums, one of the mitigation strategies for SBS is to mix boron into the inner 0.6 μm of the Au hohlraum wall. These experiments also test if, as predicted by simulations, there is no anomalous degradation of the radiation temperature due to the gold-boron liner.

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