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Calculations of NIF Ignition Hohlräum at 1 MJ Laser Energy NORMAN DELAMATER, PAUL BRADLEY, DOUG WILSON, GLENN MAGELSEN, Los Alamos National Laboratory — Preliminary results of a 2-D design study using the LASNEX hydrodynamics code are presented for a SiO₂ foam filled hohlraum containing a Cu-doped Be ignition capsule. The hohlraum wall consists of a Au-U-Dy “cocktail” designed to maximize the amount of x-ray energy for the capsule to absorb, given the 1 MJ laser energy into the hohlraum. The foam fill acts to minimize wall expansion while maintaining symmetric drive on the capsule. Various foam densities and laser pointings for most efficient drive are considered. Sensitivities to drive asymmetries during the long “foot” portion of the laser drive are also considered as well as possible symmetry measurement techniques for NIF foot conditions, such as using a reemission ball. This work was performed under the auspices of the U.S. Department of Energy by the Los Alamos National Laboratory, under Contract No. W-7405-Eng-36. [LA-UR-05-5266]

Norman Delamater
Los Alamos National Laboratory

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