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1 MJ National Ignition Facility Capsule-Hohlraum Studies PAUL BRADLEY, DOUGLAS WILSON, Los Alamos National Laboratory — Recent plans for ignition on the National Ignition Facility (NIF) call for the first ignition attempt to utilize about 1 megajoule (MJ) of laser energy. We have been working on 2-D capsule-hohlraum implosion calculations for the NIF that utilize a laser drive pulse that peaks at 300 eV and uses less than 1 MJ of energy. We base our design on the H/He gas filled hohlraums that predict successful ignition at 1.8 MJ (1.35 MJ in the calculation). We start our effort with a 0.3 atom% uniformly Cu doped beryllium ablator capsule that has an inner ice radius of 753 μm, and inner ablator radius of 825 μm, and an outer ablator radius of 1000 μm. The baseline hohlraum has a diameter of 5.02 mm and a length of 8.56 mm. After describing the conditions required for our best yield, we will also describe our sensitivity studies to changes in the laser pulse for shock timing and different pointing positions of the inner and outer laser cones for symmetry control.This work performed under the auspices of the U.S. Department of Energy by Los Alamos National Laboratory under Contract W-7405-ENG-36.

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