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Thomson scattering measurements at the hohlraum laser entrance hole JAMES ROSS, Lawrence Livermore National Laboratory, DUSTIN FROULA, Laboratory for Laser Energetics, JOE RALPH, LAURANT DIVOL, PIERRE MICHEL, RICHARD LONDON, CHUCK SORCE, DEBBIE CALLAHAN, SIEGFRIED GLENZER, Lawrence Livermore National Laboratory — Thomson scattering measurements of the plasma flow velocity and electron temperature at the laser entrance hole (LEH) of a gas-filled hohlraum have been performed for multiple LEH diameters. These measurements are compared to hydrodynamic simulations to assess calculations of crossed-beam energy transfer; a laser-plasma interaction process that is being applied on the National Ignition Facility to transfer large amounts of laser energy between beam cones. This process is used for tuning the capsule implosion symmetry and predictions rely on our detailed understanding of electron temperatures and plasma flow velocity in the LEH region. This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

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