

Abstract Submitted  
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**Hohlraum Hot-Electron Production** S.P. REGAN, T.C. SANGSTER, D.D. MEYERHOFER, W. SEKA, B. YAAKOBI, R.L. MCCRORY, C. STOECKL, V.YU. GLEBOV, Laboratory for Laser Energetics, U. of Rochester, N.B. MEEZAN, W.L. KRUER, L.J. SUTER, E.A. WILLIAMS, O.S. JONES, D.A. CALLAHAN, M.D. ROSEN, O.L. LANDEN, S.H. GLENZER, C. SORCE, B.J. MACGOWAN, LLNL — The coupling of laser energy into hot  $e^-$ 's was investigated for Au hohlraums on OMEGA using the hard-x-ray diagnostic. Forty beams smoothed with phase plates and arranged in three cones irradiated vacuum, SiO<sub>2</sub>-lined, and gas-filled targets with a 14-kJ PS26 pulse shape. Two bursts of x rays were observed from gas-filled hohlraums. The first ( $T_h \sim 100$  keV) occurs as the LEH window explodes and is likely generated by the  $2\omega_{pe}$  instability or by cooperatively driven SRS. The second ( $T_h \sim 50$  keV) coincides with SRS during the main drive. The hot  $e^-$  coupling increased with  $n_e$  from 2 to  $9 \times 10^{20} \text{cm}^{-3}$  and increases during the main drive of a CH-lined LEH hohlraum if  $n_e \leq 4 \times 10^{20} \text{cm}^{-3}$ , where  $n_e$  is the initial  $n_e$  of the fully ionized gas fill. Vacuum and SiO<sub>2</sub>-lined targets (no LEH window) had a lower-level, single-x-ray burst during the main drive. Quantitative coupling estimates will be given. This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement No. DE-FC52-92SF19460.

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