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Recent Advances in the Modeling of the Transport of Two-Plasmon–Decay Electrons in the 1-D Hydrodynamic Code *LILAC* J.A. DELETTREZ, J.F. MYATT, B. YAAKOBI, Laboratory for Laser Energetics, U. of Rochester — The modeling of the fast-electron transport in the 1-D hydrodynamic code *LILAC* was modified because of the addition of cross-beam-energy-transfer (CBET) in implosion simulations.[1] Using the old fast-electron with source model CBET results in a shift of the peak of the hard x-ray (HXR) production from the end of the laser pulse, as observed in experiments, to earlier in the pulse. This is caused by a drop in the laser intensity of the quarter-critical surface from CBET interaction at lower densities. Data from simulations with the laser plasma simulation environment (LPSE) code[2] will be used to modify the source algorithm in *LILAC*. In addition, the transport model in *LILAC* has been modified to include deviations from the straight-line algorithm and non-specular reflection at the sheath to take into account the scattering from collisions and magnetic fields in the corona. Simulation results will be compared with HXR emissions from both room-temperature plastic and cryogenic target experiments. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

[1]C. J. Randall, J. R. Albritton, and J. J. Thomson, Phys. Fluids **24**, 1474 (1981).
[2]J. F. Myatt *et al.*, "A Numerical Model for Two-Plasmon–Decay Hot-Electron Production and Mitigation in Direct-Drive Implosions," this conference.

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