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Mitigation of Fast-Electron Production by the Two-Plasmon-Decay Instability in Directly Driven Targets. W. SEKA, D.H. EDGELL, J.F. MYATT, A.V. MAXIMOV, R.W. SHORT, R.S. CRAXTON, Laboratory for Laser Energetics, U. of Rochester, D. RUSSELL, Lodestar, D.F. DUBOIS, LANL, H.X. VU, U. of California, San Diego — Under certain conditions the fast-electron production caused by the two-plasmon-decay (TPD) instability can be mitigated through modulation of the laser pulse shape. This mitigation can be enhanced when combined with a target that contains a high-Z material. Planar- and spherical-target experiments on OMEGA that show this mitigation are diagnosed using hard x-ray diagnostics and Thomson scattering for the TPD plasma waves. The results of these experiments will be presented. This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement No. DE-FC52-08NA28302.

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