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Analysis of Laser-Imprinting Reduction in Spherical-RT Experiments with Si-Doped Plastic Targets S.X. HU, G. FIKSEL, V.N. GONCHAROV, S. SKUPSKY, Laboratory for Laser Energetics, U. of Rochester — Nonuniformities seeded by both long- and short-wavelength laser perturbations[1] grow during shell implosion as a result of the RT instability, affecting the target performance.[2] To study the effect of high-Z dopants in the ablator material on laser imprint, spherical-RT experiments have been performed at the Omega Laser Facility using Si-doped plastic targets in the cone-in-shell configuration.[3] Compared to the pure plastic target, radiation preheating from the dopant is expected to decrease the mass density at the ablation front and increase the stand-off distance between the ablation front and laser-deposition region, reducing the imprinting efficiency and the RT growth.[4] Analyses of experimental data using two-dimensional *DRACO* simulations for cases with and without dopants 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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