

Abstract Submitted
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**2-D Simulations of a 1-MJ CH-Foam Ignition Target on the NIF
with 0.5 THz of 1-D Multi-FM SSD Bandwidth Using an Analytic Model**

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U. of Rochester — The 1-D multiple-frequency-modulator (Multi-FM) smoothing
by spectral dispersion (SSD) system smoothes efficiently by taking advantage of
multiple color cycles dispersed across the laser-beam cross section. An analytic SSD
model has been enhanced to handle multiple modulators in one or both orthogonal
directions. Previously, modeling Multi-FM required an ensemble of simulations that
employed random flipping of phase states at every coherence time. The analytic
model incorporates the necessary statistical averaging, so only a single simulation is
required. An ensemble of random flipping simulations is compared to a simulation
of the analytic model. The simulations use the 2-D radiation-hydrodynamics code
DRACO of a 1.0-MJ CH-foam ignition target on the NIF with 0.5 THz of bandwidth.
Dynamic bandwidth reduction is used to increase the angular divergence during the
foot of the pulse. This work was supported by the U.S. Department of Energy
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