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Two-Dimensional Numerical Evaluation of 1-D Multi-FM SSD Experiments on OMEGA EP A. SHVYDKY, M. HOHENBERGER, J.A. MAROZAS, M.J. BONINO, D. CANNING, T.J.B. COLLINS, T.J. KESSLER, B.E. KRUSCHWITZ, P.W. MCKENTY, D.D. MEYERHOFER, T.C. SANGSTER, J.D. ZUEGEL, Laboratory for Laser Energetics, U. of Rochester — Adequate single-beam smoothing is crucial for successful direct-drive target implosions. One-dimensional, multi-FM smoothing by spectral dispersion (SSD) has been proposed to provide the required level of smoothing.[1] A prototype multi-FM SSD system has been integrated into one beamline of the OMEGA EP Laser System and has been used in laser-driven planar-foil experiments to study the effectiveness of multi-FM SSD in reducing laser imprint. Recent experiments have achieved significantly improved signal-to-noise by employing a newly-qualified soft x-ray imaging diagnostic. Results of 2-D *DRACO* simulations will be compared with the available experimental data. The simulations include realistic time-dependent far-field spot intensity calculations that emulate the effect of the SSD and have a sufficiently fine computational mesh to resolve speckles. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

[1]J. A. Marozas, J. D. Zuegel, and T. J. B. Collins, Bull. Am. Phys. Soc. **55**, 294 (2010).

P.W. McKenty
Laboratory for Laser Energetics, U. of Rochester

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