

Abstract Submitted
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Preparing for Polar-Drive Imprint Experiments at the National Ignition Facility A. SHVYDKY, M. HOHENBERGER, P.B. RADHA, R.S. CRAXTON, V.N. GONCHAROV, J.A. MAROZAS, F.J. MARSHALL, P.W. MCKENTY, T.C. SANGSTER, Laboratory for Laser Energetics, U. of Rochester — Control of laser-induced nonuniformities is critical for the success of polar-drive-ignition experiments at the National Ignition Facility (NIF). Laser-imprint studies in laser-driven spherical shell targets will be performed at the NIF in Q1 and Q2 of FY15. Corrugated spherical, cone-in-shell targets with sinusoidal surface modulations will provide a reference for calculating the equivalent surface roughness of the imprint using the current NIF phase plates and beam smoothing. *DRACO* simulations are used to design the spherical-imprint experiments and set the initial shell thickness, cone geometry, laser pulse, and laser beam pointings. Results of *DRACO* simulations will be presented, evaluating the expected experimental x-ray radiographs. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

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