Abstract Submitted
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Evaluation of the Effects of Cross-Beam Energy Transfer in NIF Polar-Drive Exploding-Pusher Experiments P.W. MCKENTY, F.J. MARSHALL, M. HOHENBERGER, R.S. CRAXTON, J.A. MAROZAS, J.A. DELETTREZ, A. SHVYDKY, D.H. FROULA, D.T. MICHEL, D.H. EDGELL, W. SEKA, P.A. OLSON, S. TO, Laboratory for Laser Energetics, U. of Rochester, D. CAO, G. MOSES, U. of Wisconsin, S. LE PAPE, A.J. MACKINNON, T. MA, LLNL — Polar-drive (PD)[1] target implosions have been designed and fielded for neutron diagnostic development on the National Ignition Facility (NIF). Experimental results evaluating the overall hydrodynamic assembly have previously indicated a significant discrepancy with *DRACO* predictions of the in-flight shell evolution. New physics models, addressing nonlocal electron thermal transport and cross-beam energy transfer within the incoming laser light, have been implemented into *DRACO*. Results detailing comparisons of experiments with simulations using these models will be presented that indicate significantly better agreement and may provide insight into the application of these models in other inertial confinement fusion experiments. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

[1]A. M. Cok, R. S. Craxton, and P. W. McKenty, Phys. Plasmas **15**, 082705 (2008).

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