Abstract Submitted
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**Simulations of Polar-Drive NIF Targets Optimized for High Neutron Yields** R.S. CRAXTON, P.W. MCKENTY, J.A. MAROZAS, A.M. COK, Laboratory for Laser Energetics, U. of Rochester — Thin-shell, DT-filled, room-temperature targets driven directly on the NIF using polar drive[1] promise high fusion yields for neutron diagnostic development. These targets have been modeled with three codes: *LILAC*, to optimize the 1-D design; *SAGE*, to optimize the pointing uniformity; and *DRACO*, to predict the yield from 2-D implosion simulations. The predicted yields (in the range of $10^{15}$ to $10^{16}$ neutrons for laser energies from 350 kJ to 1 MJ) are consistent with earlier data on OMEGA ($10^{14}$ neutrons at 30 kJ). This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement No. DE-FC52-08NA28302.

[1]A.M. Cok, R.S. Craxton, and P.W. McKenty, "Polar-Drive Designs for Optimizing Neutron Yields on the National Ignition Facility," submitted to Phys. Plasmas.

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