

Abstract Submitted
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Polar tent for reduced perturbation of NIF ignition capsules¹

B.A. HAMMEL, L. PICKWORTH, M. STADERMANN, J. FIELD, H. ROBEY, H. A. SCOTT, V. SMALYUK, Lawrence Livermore Natl Lab — In simulations, a tent that contacts the capsule near the poles and departs tangential to the capsule surface greatly reduces the capsule perturbation, and the resulting mass injected into the hot-spot, compared to current capsule support methods. Target fabrication appears feasible with a layered tent (43-nm polyimide + 8-nm C) for increased stiffness. We are planning quantitative measurements of the resulting shell- ρR perturbation near peak implosion velocity (PV) using enhanced self-emission backlighting, achieved by adding ~1% Ar to the capsule fill in Symcaps ($^4\text{He} + \text{H}$). Layered DT implosions are also planned for an integrated test of capsule performance. We will describe the design and simulation predictions.

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Bruce Hammel
Lawrence Livermore Natl Lab

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