

Abstract Submitted  
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**Sensitivity of Double-Shell Ignition Capsules to Asymmetric Drive**<sup>1</sup> I.L. TREGILLIS, G.R. MAGELSEN, N.D. DELAMATER, M.A. GUNDERSON, N.M. HOFFMAN, Los Alamos National Laboratory — Double-shell (DS) targets [1] present an alternative approach to ignition via the cryogenic single-shell point design [2]. Although these targets present unique fabrication challenges, they embody many attractive features, including non-cryogenic fielding and low threshold temperatures ( $\sim 4$  keV) for volume ignition [3-4]. We have used 2D radiation-hydrodynamic modeling to survey the behavior of DS targets under asymmetric temperature drive in rugby vacuum hohlraums. The yield is robust against deviations from symmetric illumination, varying smoothly as a function of the imposed  $P_2$  and  $P_4$  amplitudes. Ignition occurs even when 10% or more of the drive is contained in Legendre  $P_2$  or  $P_4$  components, with yield reductions on the order of 50% for the most extreme cases investigated here.

- [1] P. Amendt et al., Phys. of Plasmas 9, 2221 (2002)
- [2] D. A. Callahan et al., Phys. of Plasmas 13, 56307 (2005)
- [3] P. Amendt et al., Phys. Rev. Lett. 94, 65004 (2005)
- [4] W. S. Varnum et al., Phys. Rev. Lett. 84, 5153 (2000)

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