

Abstract Submitted
for the DPP10 Meeting of
The American Physical Society

Measurements of THD Implosions for the Prediction of Ignition Implosion Performance¹ BRIAN SPEARS, LLNL — The National Ignition Campaign (NIC) will use non-igniting “THD” capsules to study and optimize the hydrodynamic assembly of the fuel without burn. These capsules are designed to simultaneously reduce DT neutron yield and to maintain hydrodynamic similarity with the DT ignition capsule. We will discuss nominal THD performance and the experimentally observable ignition threshold factor (ITFX) for both CH and Be targets. We will also cover simulated xray and nuclear diagnostic signatures produced by the suite of THD diagnostics. We will finally explore enhancements of the ITFX metric via combinations of xray and nuclear measurements.

¹Prepared by LLNL under Contract DE-AC52-07NA27344. LLNL-ABS-442654.

Brian Spears
LLNL

Date submitted: 16 Jul 2010

Electronic form version 1.4