

Abstract Submitted  
for the DPP15 Meeting of  
The American Physical Society

**ARES Simulations of a Double Shell Surrogate Target** RYAN SACKS, ROBERT TIPTON, FRANK GRAZIANI, Lawrence Livermore Natl Lab — Double shell targets provide an alternative path to ignition that allows for a less robust laser profile and non-cryogenic initial temperatures [1,2,3]. The target designs call for a high-Z material to abut the gas/liquid DT fuel which is cause for concern due to possible mix of the inner shell with the fuel. This research concentrates on developing a surrogate target for a double shell capsule that can be fielded in a current NIF two-shock hohlraum [4]. Through pressure-density scaling the hydrodynamic behavior of the high-Z pusher of a double shell can be approximated allowing for studies of performance and mix. Use of the ARES [5] code allows for investigation of mix in one and two dimensions and analysis of instabilities in two dimensions. Development of a shell material that will allow for experiments similar to CD Mix is also discussed [6,7]. This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under contract DE-AC52-07NA27344, Lawrence Livermore National Security, LLC. Information Management release number LLNL-ABS-675098.

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Date submitted: 24 Jul 2015

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