

Abstract Submitted  
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**Optimizing the NIF Ignition Hohlräum**<sup>1</sup> DEBRA CALLAHAN, DENISE HINKEL, LAURENT DIVOL, STEVE HAAN, OGDEN JONES, BRUCE LANGDON, PIERRE MICHEL, LARRY SUTER, RICHARD TOWN, ED WILLIAMS, LLNL — In order to optimize the hohlraum for ignition on the National Ignition Facility laser, we need to consider a variety of aspects of the system: laser plasma interactions (LPI), hohlraum energetics, capsule performance, hohlraum asymmetry, laser performance, and target fabrication. In preparation for the first ignition campaign, we have designed a suite of ignition hohlraums that span the range of temperatures consistent with initial NIF operations: 300 eV, 285 eV, and 270 eV. Experiments with 96 beams that are designed to emulate these ignition designs, coupled with flexible target fabrication and laser phase plate production, will allow us to use experiments to guide our choice of the optimal hohlraum for ignition. In this talk, we will describe the suite of ignition designs under consideration, and discuss the trade-offs between the different parts of the system for each design.

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