Update on requirements and specifications for ignition experiments on NIF

STEVEN HAAN, Lawrence Livermore National Laboratory, NATIONAL IGNITION CAMPAIGN COLLABORATION — The National Ignition Campaign (NIC) on the National Ignition Facility plans to use an indirectly driven spherical implosion to assemble and ignite a mass of DT fuel. Requirements describing the specifics of the ignition implosion and the corresponding expected performance were established several years prior. These requirements include laser features, target fabrication and characterization, and data obtained from pre-ignition experiments. Since those requirements were originally set, the NIC has conducted a variety of experiments using surrogate targets, meant to define various aspects of the future ignition experiment. Results from this experimental campaign, as well as progress in understanding the laser performance and issues raised by target fabrication, have motivated updates to the target designs and pre-established requirements. A summary of these updates, and their implications for ignition campaign planning, will be presented.

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