

## **STATUS AND PROGRESS OF THE NATIONAL IGNITION FACILITY AS ICF AND HED USER FACILITY**

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Since the National Ignition Campaign in 2012 that completed the facility capability to conduct ignition experiments and conducted initial campaigns using layered DT ignition CH targets, the National Ignition Facility has made great progress towards its transformation into the state-of-the-art user facility, enabling breakthrough experimental progress in the NNSA's Stockpile Stewardship mission. Efficiency improvements have also significantly increased experimental opportunities for fundamental science and National Security users.

We will describe the progress made by the National Ignition facility in the user office and management, facility capabilities, target diagnostics and diagnostics development. We will also discuss the results of a major effort to increase the shot rate on NIF. An extensive set of projects, developed in conjunction with the HED community and drawing on best practices at other facilities, improved shot rate by over 50% and recently enabled us to meet the 300 target shot goal for FY15 ahead of schedule.

Through an updated experimental set-up and review process, computer controlled set-up of the laser and diagnostics and disciplined operations, NIF also set a new standard for experimental reliability, precision and repeatability. New and complex platforms are introduced with a high success rate.

Finally we discuss how new capabilities and further efficiency improvements will enable the successful execution of ICF and HED experimental programs required to support the quest for Ignition and the broader Science Based Stockpile Stewardship mission



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