

The National Direct-Drive Inertial Confinement Fusion Program

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The National Direct-Drive Inertial Confinement Fusion Program consists of the 100-Gbar Campaign on the 30-kJ, 351-nm, 60-beam OMEGA Laser System and the MegaJoule Direct Drive (MJDD) Campaign on the 1.8-MJ, 351-nm, 192-beam National Ignition Facility (NIF). The main goals of the 100-Gbar Campaign are to demonstrate and understand the physics for hot-spot conditions and formation relevant for ignition at the MJ scale, while the MJDD Campaign seeks to understand the laser plasma interactions, energy coupling, and laser imprint for ignition-scale direct-drive coronal plasmas. An overview of the multi-year, systematic effort that is underway for the National Direct-Drive Inertial Confinement Fusion Program, including laser, target, and diagnostic improvements that are in progress, as well as recent results from the 100-Gbar Campaign on OMEGA and MJDD Campaign on NIF will be presented.

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