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The NIF Ignition Target 3D Point Design¹ OGDEN S. JONES, MICHAEL M. MARINAK, JOSE L. MILOVICH, DEBRA A. CALLAHAN, LLNL — We will discuss progress that has enabled turn around times of about a day for 3D calculations of the NIF ignition point design targets using the Hydra radiation hydrodynamics code. These are integrated calculations of the laser-heated hohlraum and the capsule (either a DT-filled ignition capsule or any of several types of diagnostic capsules). Each laser beam is set up to have its own power versus time and pointing, which enables an assessment of random errors in power and pointing. Low-mode (Legendre mode 8 or less) capsule surface perturbations and capsule centering error can also be included. By running problems on up to 1024 processors and carefully controlling the time step we can achieve run times of about 30 hours. We show results for capsule designs with plastic or beryllium ablators.

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