

Abstract Submitted
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Nike Facility Diagnostics and Data Acquisition System YUNG CHAN, Plasma Physics Division, Naval Research Laboratory, YEFIM AGLITSKIY, SAIC, MAX KARASIK, DAVID KEHNE, STEVE OBENSCHAIN, Plasma Physics Division, Naval Research Laboratory, JAECHUL OH, RSI, VICTOR SERLIN, JIM WEAVER, Plasma Physics Division, Naval Research Laboratory — The Nike laser-target facility is a 56-beam krypton fluoride system that can deliver 2 to 3 kJ of laser energy at 248 nm onto targets inside a two meter diameter vacuum chamber. Nike is used to study physics and technology issues related to laser direct-drive ICF fusion, including hydrodynamic and laser-plasma instabilities, material behavior at extreme pressures, and optical and x-ray diagnostics for laser-heated targets. A suite of laser and target diagnostics are fielded on the Nike facility, including high-speed, high-resolution x-ray and visible imaging cameras, spectrometers and photo-detectors. A centrally-controlled, distributed computerized data acquisition system provides robust data management and near real-time analysis feedback capability during target shots. Work supported by DOE/NNSA.

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