

Abstract Submitted
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Bulk-Velocity Construction from NIF Neutron Spectral Diagnostics J.P. KNAUER, Laboratory for Laser Energetics, U. of Rochester, R. HATARIK, B.K. SPEARS, J.M. MCNANEY, J.A. CAGGIANO, LLNL, M. GATU-JOHNSON, J. FRENJE, PSFC, MIT — Target-mass and laser-intensity perturbations may induce a bulk motion of the neutron-emitting region in a National Ignition Facility (NIF) implosion. Most NIF implosions suffer from an incomplete conversion of shell kinetic energy into thermal energy. Four NIF instruments (three neutron time-of-flight detectors and a magnetic recoil spectrometer) accurately measure the neutron spectrum. Four sets of three instruments are available to construct the resultant velocity. A weighted average of the reconstructions is then used as a measure of the bulk velocity. This talk will present the resultant velocity analysis and compare NIF implosion measurements. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

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