

Abstract Submitted
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First Iron Opacity Experiments on the National Ignition Facility¹ THEODORE PERRY, EVAN DODD, TANA CARDENAS, BARBARA DEVOLDER, KIRK FLIPPO, HEATHER JOHNS, JOHN KLINE, MANOLO SHERRILL, TODD URBATSCH, Los Alamos Natl Lab, ROBERT HEETER, MARYUM AHMED, JAMES EMIG, CARLOS IGLESIAS, DUANE LIEDAHL, RICHARD LONDON, MADISON MARTIN, MARILYN SCHNEIDER, NATHANIEL THOMPSON, BRIAN WILSON, Lawrence Livermore Natl Lab, YEKATERINA OPACHICH, JAMES KING, ERIC HUFFMAN, RUSSEL KNIGHT, National Security Technologies, JAMES BAILEY, GREGORY ROCHAU, Sandia Natl Lab — Iron opacity experiments on the Sandia National Laboratories Z machine have shown up to factors of two discrepancies between theory and experiment. To help resolve these discrepancies an experimental platform for doing comparable opacity experiments is being developed on the National Ignition Facility (NIF). Initial iron data has been taken at a temperature of ~ 150 eV and an electron density of $\sim 6 \times 10^{21}/\text{cm}^3$, but higher temperatures and densities will be required to address the discrepancies that have been observed in the Z experiments. The plans to go to higher temperatures and densities and how to deal with current issues with instrumental backgrounds will be discussed.

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