

Abstract Submitted
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Recent measurements of iron opacity on the National Ignition Facility (NIF)¹ T.S. PERRY, H.M. JOHNS, E.S. DODD, N.S. VINYARD, C.J. FONTES, J.P. COLGAN, K.A. FLIPPO, T. CARDENAS, T.H. DAY, L. KOT, T.J. URBATSCH, M.R. DOUGLAS, M.E. SHERRILL, Los Alamos Natl Lab, R.F. HEETER, Y.P. OPACHICH, R.A. LONDON, B.G. WILSON, C.A. IGLESIAS, M.B. SCHNEIDER, Lawrence Livermore Natl Lab, J.M. HEINMILLER, M.S. WALLACE, E.C. DUTRA, Nevada Natl Security Site, J.E. BAILEY, Sandia Natl Lab — Radiation transport in high energy density experiments is highly dependent on the x-ray opacity of the material. An experimental platform on the National Ignition Facility has been developed to measure the opacity of materials at densities and temperatures that are comparable to those found in the interior of the sun. The platform consists of a hohlraum to heat the material, a source of x-rays to backlight the sample, and a spectrometer to measure the spectrally resolved transmission of the sample. Experiments in the past year have focused on making measurements at different temperatures and densities. The results of these experiments on iron will be presented and compared to past results and to theoretical calculations.

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