

Abstract Submitted  
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**Progress in iron transmission measurements relevant to the solar convection/radiation boundary** JAMES BAILEY, Sandia National Laboratories, G.A. ROCHAU, S.B. HANSEN, P.W. LAKE, T.J. NASH, D.S. NIELSEN, R.D. THOMAS, SNL, C.A. IGLESIAS, LLNL, J. ABDALLAH, M.E. SHERRILL, LANL, J.J. MACFARLANE, I. GOLOVKIN, Prism, R.C. MANCINI, UNR, C. BLANCARD, PH. COSSE, G. FAUSSURIER, F. GILLERON, J.C. PAIN, CEA, A.K. PRADHAN, S.N. NAHAR, M. PINSONNEAULT, OSU — Iron plasma opacity influences the internal structure of the sun. However, opacity models have never been experimentally tested at stellar interior conditions. Initial experiments at the Sandia Z facility reached temperatures high enough to investigate the iron charge states that exist near the convection/radiation zone (CZ) boundary. In these experiments the density was an order of magnitude lower than at the CZ boundary, preventing studies of important effects such as line broadening. New experiments have reached higher densities and temperatures. Progress to solidify these results and use them to examine opacity models will be described.++Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy under contract DE-AC04-94AL85000.

James Bailey  
Sandia National Laboratories

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