Abstract Submitted
for the DPP17 Meeting of
The American Physical Society

Opacity data for stellar models and its uncertainties JAMES BAILEY, T. NAGAYAMA, G.P. LOISEL, G.A. ROCHAU, S.B. HANSEN, Sandia National Laboratories, C. BLANCARD, PH. COSSE, G. FAUSSURIER, F. GILLERON, J.-C. PAIN, CEA, J. COLGAN, C.J. FONTES, D.P. KILCREASE, M. SHERRILL, Los Alamos National Laboratory, I. GOLOVKIN, J.J. MACFARLANE, Prism Computational Sciences, C.A. IGLESIAS, B. WILSON, Lawrence Livermore National Laboratory, Y. KURZWEIL, G. HAZAK, Nuclear Research Center Negev, R.C. MANCINI, University of Nevada, Reno, R.M. MORE, RMorePhysics, S.N. NAHAR, C. ORBAN, A,K. PRADHAN, Ohio State University — Laboratory experiments have found iron opacity predictions are notably different from measurements performed at conditions similar to the boundary between the solar radiation and convection zone [Bailey et al., *Nature* (2015)]. The measurements help resolve discrepancies between helioseismology and solar models. However, it is essential to understand the difference between opacity predictions and measurements. New measurements with chromium, iron, and nickel are providing a systematic study of how opacity changes with temperature, density, and atomic number. This helps further evaluate experiment error possibilities and constrain hypotheses for opacity model refinements. ++ Sandia National Laboratories is a multimission laboratory managed and operated by National Technology and Engineering Solutions of Sandia LLC, a wholly owned subsidiary of Honeywell International Inc. for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525.

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Date submitted: 16 Jul 2017 Electronic form version 1.4