

Abstract Submitted
for the DPP09 Meeting of
The American Physical Society

Improving predictive simulation of high-energy-density physics experiments: effects of Coulomb and Fermi corrections¹ ERIC MYRA, IGOR SOKOLOV, ALEXANDER POTASHEV, University of Michigan — The work of Sokolov et al. (also in this poster session) discusses the important effects of Coulomb and Fermi corrections to the thermodynamic properties and emissivity of dense plasmas. In this presentation, we apply these equation-of-state corrections to a set of test problems to help gauge their importance in the predictive simulation of an HEDP experiment. The simulations are performed with the CRASH code, which is a radiation-hydrodynamic simulation code developed at the Center for Radiative Shock Hydrodynamics at the University of Michigan.

¹This work was supported in part by the US DOE NNSA under the Predictive Science Academic Alliance Program by grant DE-FC52-08NA28616.

Eric Myra
University of Michigan

Date submitted: 20 Jul 2009

Electronic form version 1.4