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Simulations of ICC Experiments by the PSI-Center BRIAN NELSON, University of Washington, A.H. GLASSER, T.R. JARBOE, C.C. KIM, G.J. MARKLIN, W. LOWRIE, E.T. MEIER, R.D. MILROY, U. SHUMLAK, University of Washington, C.R. SOVINEC, J.B. O'BRYAN, University of Wisconsin-Madison, E. HELD, J.-Y. JI, Utah State University, V.S. LUKIN, Naval Research Laboratory — The Plasma Science and Innovation Center (PSI-Center - http://www.psicenter.org) assists collaborating innovative confinement concept (ICC) experiments with extended MHD simulations. Collaborators include the Bellan Plasma Group (Caltech), CTH (Auburn U), FRX-L (Los Alamos National Laboratory), HIT-SI (U Wash - UW), LDX (M.I.T.), MST & Pegasus (U Wisc-Madison), PHD (UW), PFRC (PPPL), SSX (Swarthmore College), TCS (UW), and ZaP (UW). Modifications have been made to the NIMROD, HiFi, and PSI-Tet codes to specifically model these ICC experiments, including mesh generation/refinement, appropriate boundary conditions (external fields, insulating BCs, etc.), and kinetic and neutral particle interactions. Interfaces of these codes to the powerful 3-D visualization program, VisIt (http://www.llnl.gov/visit) have been developed and implemented. Results from these simulations, as well as an overview of the Interfacing Group status will be presented.

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