

Abstract Submitted  
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**PSI-Center Validation Studies** B.A. NELSON, C. AKCAY, A.H. GLASSER, C.J. HANSEN, T.R. JARBOE, G.J. MARKLIN, R.D. MILROY, K.D. MORGAN, P.C. NORGAARD, U. SHUMLAK, D.A. SUTHERLAND, B.S. VICTOR, University of Washington, C.R. SOVINEC, J.B. O'BRYAN, University of Wisconsin-Madison, E.D. 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>) supports collaborating validation platform experiments with 3D extended MHD simulations using the NIMROD, HiFi, and PSI-TET codes. Collaborators include the Bellan Plasma Group (Caltech), CTH (Auburn U), HBT-EP (Columbia), HIT-SI (U Wash - UW), LTX (PPPL), MAST (Culham), Pegasus (U Wisc-Madison), SSX (Swarthmore College), TCSU (UW), and ZaP/ZaP-HD (UW). The PSI-Center is exploring application of validation metrics between experimental data and simulations results. Biorthogonal decomposition (BOD) is used to compare experiments with simulations. BOD separates data sets into spatial and temporal structures, giving greater weight to dominant structures. Several BOD metrics are being formulated with the goal of quantitative validation. Results from these simulation and validation studies, as well as an overview of the PSI-Center status will be presented.

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