

Abstract Submitted
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Status of the Madison Plasma Dynamo Experiment¹ JOHN WALLACE, MIKE CLARK, CAMI COLLINS, NOAM KATZ, DAVE WEISBERG, CARY FOREST, University of Wisconsin-Madison — Construction of the Madison Plasma Dynamo Experiment (MPDX) is complete. This facility creates large, unmagnetized, fast flowing, hot plasma for investigating magnetic field self-generation and flow driven MHD instabilities. A 3 meter diameter spherical vacuum chamber lined with a series of high strength samarium cobalt magnets provides plasma confinement. The plasma will be stirred from the magnetized edge using electrodes to produce $J \times B$ flows. Plasma sources will include lanthanum hexaboride cathodes and electron cyclotron heating utilizing five 20KW magnetrons. This poster will describe the operational status of the facility including laboratory infrastructure, cast aluminum vacuum chamber, magnets, stirring electrodes, sources, diagnostics and currently produced plasma parameters. Construction was funded by the NSF Major Research Instrumentation program.

¹National Science Foundation Major Research Instrumentation

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