

Abstract Submitted
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Current research on the Magnetized Dusty Plasma Experiment (MDPX) device¹ EDWARD THOMAS, UWE KONOPKA, Auburn University, ROBERT MERLINO, University of Iowa, MARLENE ROSENBERG, University of California - San Diego, MDPX TEAM TEAM — The Magnetized Dusty Plasma Experiment (MDPX) device at Auburn University is a highly flexible, high magnetic field ($B > 3$ T) research instrument with a mission to serve as an open access, multi-user facility for the dusty plasma, basic plasma, and fusion plasma research communities. In the last year, the MDPX device has extended its operational capabilities by incorporating different experimental chambers, performing new studies of particle growth at high magnetic field, and performing new experiments and modeling to gain insights into pattern formation in both the background plasma and the dusty plasma due to the high magnetic field. This presentation will summarize results from these studies and will present initial design concepts for the next generation of plasma and dusty plasma diagnostics and experimental capabilities for the MDPX device.

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