

Abstract Submitted
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Design of Axion Dark Matter Experiment (ADMX) Upgrade¹

DMITRY LYAPUSTIN, University of Washington, ADMX COLLABORATION, ADMX-HF COLLABORATION — Axions are hypothetical elementary particles that may provide the answer as to why QCD preserves the discrete symmetries P and CP and may also be the dark matter of the universe. The ADMX experiment has been at the forefront of the search for dark-matter axions for over a decade, and has recently undergone upgrades to dramatically improve its sensitivity. Construction of the first phase of the upgrade (dubbed Phase IIa) is now complete and we will be data taking for much of the upcoming year. I will give a very brief motivation for axions, then go into the mechanical details of ADMX, and finally look at the upgrades we plan to make in the near future.

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Dmitry Lyapustin
University of Washington

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