

Abstract Submitted  
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**Searching for dark matter axions with ADMX** DMITRY LYAPUSTIN, University of Washington, AXION DARK MATTER EXPERIMENT COLLABORATION — Axions are hypothetical elementary particles that may help provide the answer as to why QCD preserves the discrete symmetries P and CP. Light axions also have properties that make them ideal dark-matter candidates. The Axion Dark Matter eXperiment (ADMX) has been at the forefront of the dark-matter axion search for over two decades, and is currently being upgraded to improve its sensitivity to where it will either be able to detect the QCD dark-matter axion, or reject the hypothesis at high confidence. I will motivate the existence of axions, discuss ADMX and its previous results, and highlight the state of the current upgrade.

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