

Abstract Submitted  
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**The next phase of the Axion Dark Matter eXperiment**<sup>1</sup> GIAN-PAOLO CAROSI, S. ASZTALOS, C. HAGMANN, D. KINION, LLNL, K. VAN BIBBER, LLNL / NPS, M. HOTZ, D. LYAPUSTIN, L. ROSENBERG, G. RYBKA, A. WAGNER, University of Washington, J. HOSKINS, C. MARTIN, P. SIKIVIE, N. SULLIVAN, D. TANNER, University of Florida, R. BRADLEY, NRAO, J. CLARKE, University of California, Berkeley, ADMX COLLABORATION — Axions are a well motivated dark matter candidate which may be detected by their resonant conversion to photons in the presence of a large static magnetic field. The Axion Dark Matter eXperiment recently finished a search for DM axions using a new ultralow noise microwave receiver based on a SQUID amplifier. The success of this precursor experiment has paved the way for a definitive axion search which will see the system noise temperature lowered from 1.8 K to 100 mK, dramatically increasing sensitivity to even pessimistic axion models as well as increasing scan speed. Here we discuss the implementation of this next experimental phase.

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