

Abstract Submitted
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Quantum limited amplifiers for the Axion Dark Matter eXperiment (ADMX)¹ RAKSHYA KHATIWADA, ANA MALAGON, Univ of Washington, ADMX COLLABORATION — The Axion Dark Matter eXperiment (ADMX) uses the most sensitive microwave receivers in the world to look for photons that might come from axions, hypothetical elementary particles which may constitute the dark matter. The “Generation 2” of ADMX is in commissioning for its first ultra-high-sensitivity run this summer. Recent upgrades to ADMX include a dilution refrigerator and tunable quantum-noise-limited amplifiers. These upgrades will significantly decrease the system noise, thereby substantially increasing the experimental sensitivity. I will present an overview of the current status of ADMX and what it aims to achieve in terms of sensitivity improvement with these newly-added components, focusing mainly on the quantum-limited amplifiers.

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