

Abstract Submitted
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Recent progress on the Axion Dark Matter eXperiment (ADMX)¹ RAKSHYA KHATIWADA, Univ of Washington, ADMX COLLABORATION — The Axion Dark Matter eXperiment (ADMX) is one of the three Generation-2 direct dark matter searches and the only one dedicated to finding the axion. It looks for axions that convert into photons through the Primakoff process in the presence of a strong magnetic field. The mass of the axion is unknown but expected to be few to tens of μeV , which corresponds to photons in the GHz range. The expected signal power is of the order 10^{-24} W, which puts stringent requirements on the systems noise level. ADMX has recently started its Generation-2 data run with the recent upgrades of a dilution refrigerator, which cools the system to sub-K temperature suppressing the thermal background noise and tunable, near quantum noise-limited SQUID amplifiers. This talk will summarize the current status and operation of ADMX experiment as it searches for dark matter axions.

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