

Recent Results from Axion Dark Matter eXperiment (ADMX).

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The QCD axion is a compelling dark-matter candidate. The axion is a hypothetical particle, arising from the Pecci-Quinn solution to the strong CP problem in quantum chromodynamics. The Axion Dark Matter eXperiment (ADMX) is searching for cold dark matter axions in the halo of our galaxy. ADMX is the largest operating axion haloscope. It consists of a high- Q microwave resonator immersed in a strong magnetic field, which serves to convert the axions into microwave photons. The axion-photon coupling is somewhat model dependent, but the DFSZ model is particularly compelling. After recent upgrades, ADMX has successfully completed axion searches with sensitivity to DFSZ axions, a milestone in axion research. Key to this result were low physical temperatures from a dilution refrigerator and a low noise microwave receiver based on quantum electronics. We will present an overview of ADMX and the recent axion search results. We will also outline our future search plans.

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