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Operations and Data Taking Status of ADMX

Thursday 29 July 2021 10:50 (20 minutes)

The axion is a hypothetical particle arising from the Pecce-Quinn solution to the Strong CP problem, and an excellent candidate for dark matter. The Axion Dark Matter Experiment (ADMX) is an experiment that searches for axions as a dark matter with a resonant cavity under a strong superconducting magnetic field. In previous operations, ADMX achieved sensitivity to the GUT-inspired DFSZ axion model between 2.66-3.31 eV with yocto Watt level background using a quantum amplifier and dilution refrigerator. The latest run has been in data-taking since 2020. In this run, we have improved our blind axion signal injection, improved our operating efficiency, and have new methods to distinguish true axion signals from the background. I will discuss these advances as well as the current data-taking status.

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Collaboration / Activity

ADMX

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