Abstract Submitted
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Searching for new light bosons with the Axion Dark Matter Experiment (ADMX)[1] GIANPAOLO CAROSI, Lawrence Livermore National Laboratory, ADMX COLLABORATION — The axion is a neutral pseudoscalar boson predicted to exist as a consquence of the Peccei-Quinn solution to the Strong-CP problem. Axions with masses between μeV - meV are also a natural dark matter candidate. The Axion Dark Matter Experiment (ADMX) searches for dark matter axions by looking for their resonant conversion to detectable photons via the Primakoff Effect in a microwave cavity immersed in a strong static magnetic field. Here I will discuss the operating principles of the ADMX experiment along with results from recent data runs and progress towards the next phase of the experiment currently being constructed at the University of Washington. The sensitivity of ADMX to other new light bosons such as chameleon particles and hidden-sector-photons will also be discussed.

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