Contribution ID: **273** Type: **Parallel**

# Recent Results from the Axion Dark Matter Experiment (ADMX)

*Tuesday, 29 May 2018 16:30 (20 minutes)*

The nature of dark matter is one of the great mysteries of modern physics today and is likely new particles beyond the Standard Model. The Axion, originally conceived as a solution to the strong-CP problem in nuclear physics, is one well-motivated candidate. The Axion Dark Matter Experiment (ADMX) was started at LLNL in the mid-1990s and ran until 2010 before it was moved to the U. of Washington where it is now a DOE Gen 2 project. ADMX uses a large microwave cavity immersed in a strong static magnetic field to resonantly convert dark matter axions to detectable photons. Recently ADMX has completed its first data run with unprecedented sensitivity in the classical QCD-axion mass range of several $\mu$eV. In this talk I will describe the history of axion dark matter searches, describe the recent ADMX results, and give a survey of the R&D efforts currently underway to explore the entire axion dark matter mass window.

## E-mail

carosi2@llnl.gov

## Collaboration name

ADMX collaboration

## Funding source

DOE Office of Science HEP Cosmic Frontier

**Primary author:** Dr CAROSI, Gianpaolo (Lawrence Livermore Natl Lab)

**Presenter:** Dr CAROSI, Gianpaolo (Lawrence Livermore Natl Lab)

**Session Classification:** Dark Matter

**Track Classification:** DM