



Contribution ID: 282

Type: Oral Presentation

## Axion-like dark matter search using ferromagnetic toroids

*Wednesday 31 July 2019 16:00 (17 minutes)*

We report on a laboratory-scale experiment searching for axion-like dark matter in the mass range from about 50 peV to several neV. The electromagnetic interaction between a background axion-like field and the azimuthal magnetization of a ferromagnetic toroid creates an oscillating axial magnetic field. We use SQUID magnetometers to search for this field. The apparatus is placed inside a liquid-helium cryostat and screened with two layers of superconducting material to prevent external electromagnetic interference. The current status and preliminary results of the experiment will be presented.

**Author:** GRAMOLIN, Alexander (Boston University)

**Co-authors:** AYBAS, Deniz (Boston University); JOHNSON, Dorian (Boston University); ADAM, Janos (Boston University); SUSHKOV, Alexander (Boston University)

**Presenter:** GRAMOLIN, Alexander (Boston University)

**Session Classification:** Dark Matter

**Track Classification:** Dark Matter