

Abstract Submitted
for the DNP06 Meeting of
The American Physical Society

The High Resolution Search for Axions in Galactic Halo Sub-structure LEANNE DUFFY¹, University of Florida, AXION DARK MATTER EXPERIMENT (ADMX) COLLABORATION — The Axion Dark Matter eXperiment uses a Sikivie microwave cavity detector to search for dark matter axions. The new, high resolution channel is designed to search for discrete flows of axions passing through the detector. Such flows are expected to be present in our galactic halo from tidal stripping of dwarf galaxies and from late infall of dark matter on our galactic halo. A discrete flow of axions with small velocity dispersion will appear as a narrow peak in the output of a microwave cavity detector. Such a peak can be searched for with high signal-to-noise ratio using the high resolution channel. This new channel increases the sensitivity of ADMX by a factor of 3, compared to using ADMX's medium resolution channel only.

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Date submitted: 30 Jun 2006

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