

Abstract Submitted  
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**Limits on thermally-distributed halo dark-matter axions from ADMX** MICHAEL HOTZ, S.J. ASZTALOS, R. BRADLEY, G. CAROSI, C. HAGMANN, J. HOSKINS, J. HWANG, D. KINION, L. ROSENBERG, G. RYBKA, P. SIKIVIE, D.B. TANNER, K. VAN BIBBER, ADMX collaboration — The Axion Dark Matter eXperiment (ADMX) at Lawrence Livermore National Laboratory searches for dark-matter axions through their Primakoff conversion to microwave photons in a strong magnetic field, resonantly enhanced by a high-Q cavity. The ADMX medium resolution analysis assumes that halo axions are thermalized with the local virial velocity of the Milky Way, about  $270 \frac{km}{sec}$ , which implies a spectral line-broadening of one part per million. ADMX has set limits on halo axions for the KSVZ model from  $1.6eV$  to  $3.6eV$ . The experiment is the most sensitive spectral receiver in the world, able to detect signals from  $400MHz$  to  $900MHz$  well below a yoctowatt. This talk will outline the experimental technique, data analysis and results for the medium-resolution search.

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