Abstract Submitted
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Improvements to the Axion Dark Matter eXperiment High Resolution Axion Search[1] J. HOSKINS, J. HWANG, C. MARTIN, P. SIKIVIE, I. STERN, N.S. SULLIVAN, D.B. TANNER, U. of Florida, C. BOUTAN, M. HOTZ, D. LYAPUSTIN, L.J. ROSENBERG, G. RYBKA, A. WAGNER, U. of Washington, S.J. ASZTALOS, G. CAROSI, C. HAGMANN, D. KINION, Lawrence Livermore National Laboratory, K. VAN BIBBER, Naval Postgraduate School, R. BRADLEY, National Radio Astronomy Observatory, J. CLARKE, U. of California, Berkeley, ADMX COLLABORATION — The Axion Dark Matter eXperiment (ADMX) High Resolution (HR) Channel searches for flows of non-thermalized halo axions, characterized by their very low velocity dispersion, via the inverse Primakoff Effect. A power spectrum would show such axion flows as a peak with spectral broadening of order Hz or lower. The HR Channel is sensitive to signals of this nature, having a spectral resolution as fine as 40 mHz. In this talk we present a means of analysis for the HR data which will improve upon ADMX's recently published results (resolution of 10.8 Hz) by performing several searches using a range of resolutions while still accounting for signal modulation due to terrestrial motion.

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