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Results from a search for non-virialized halo axions with the Axion Dark Matter eXperiment JEFF HOSKINS, C. MARTIN, P. SIKIVIE, N. SULLIVAN, D. TANNER, University of Florida, M. HOTZ, D. LYAPUSTIN, L. ROSENBERG, G. RYBKA, A. WAGNER, University of Washington, S. ASZTALOS, G. CAROSI, C. HAGMANN, D. KINION, LLNL, K. VAN BIBBER, LLNL/NPS, R. BRADLEY, NRAO, J. CLARKE, UC Berkeley, ADMX COLLABORATION — The Axion Dark Matter eXperiment (ADMX) High Resolution (HR) Channel searches for non-thermalized halo axions using the inverse Primakoff Effect. Such axions, having very low velocity dispersion, would produce a peak in the power spectrum with correspondingly narrow broadening. Capable of reaching sub-hertz resolution, the HR Channel is sensitive to narrow peaks, resulting in a higher signal to noise ratio for these axions then than would be achieved using ADMX's 125 Hz resolution data acquisition channel. We present results from an analysis of the HR data in the 800 MHz range (3.3 micro-eV), where sub-spectra are combined to further improve the signal to noise ratio. Conservative estimates of the daily and annual signal modulations constrain the frequency bin width of this analysis to 10.8 Hz.

Jeff Hoskins
U. of Florida

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