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HiRes Analysis of the ADMX Run 1c Data

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The Axion Dark Matter Experiment (ADMX) aims to detect the decay of axions in the galactic halo into two microwave photons within a cavity. There are two main analysis channels for the experiment. One has a frequency resolution of 200 Hz and is called medium res. The second has a frequency resolution of 20 mHz and is called HiRes. The latest data taken was for run 1c., which uses a single cavity covering a frequency range of approximately 800 MHz to 1 GHz. This frequency range corresponds to an axion mass between 3.3-4.1 μeV. We will present our objectives for the analysis along with our methods. Further, we will discuss future plans for the high resolutiong analysis team. *This work was supported by the U.S. Department of Energy through Grants No DE-SC0009800, No. DE-SC0009723, No. DE-SC0010296, No. DE-SC0010280, No. DE-SC0011665, No. DEFG02-97ER41029, No. DE-FG02-96ER40956, No. DEAC52-07NA27344, No. DE-C03-76SF00098 and No. DE-SC0017987. Fer-milab is a U.S. Department of Energy, Office of Science, HEP User Facility. Fermilab is managed by Fermi Research Alliance, LLC (FRA), acting under Contract No. DE-AC02-07CH11359. Additional support was provided by the Heising-Simons Foundation and by the Lawrence Livermore National Labora-tory and Pacific Northwest National Laboratory LDRD offices.

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