

Abstract Submitted
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Analysis Results from ADMX-G2 Run 1B¹ CHELSEA BARTRAM, University of Washington, ADMX COLLABORATION — The Axion Dark Matter eXperiment (ADMX) collaboration has completed Run 1B, which tuned over axion masses 680-800 MHz (2.81-3.31 eV) with sensitivity to DFSZ (Dine-Fischler-Srednicki-Zhitnisky) couplings. We present the results from Run 1B and describe the advancements that were necessary to achieve such sensitivity. This talk will explain the analysis procedure and the techniques used to optimize signal to noise. High signal to noise was attained by maximizing the cavity quality factor and form factor, volume and magnetic field minimizing the system noise temperature. Critical to achieving such sensitivity is the usage of a Josephson Parametric Amplifier (JPA) and implementation of a dilution refrigerator operating near 150 mK.

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