

Abstract Submitted
for the APR20 Meeting of
The American Physical Society

Design of the ADMX G2 Experiment¹ NICK DU, University of Washington, ADMX COLLABORATION — Axions are hypothetical elementary particles developed as a solution to the Strong CP problem in QCD physics. The properties of light axions also make them a viable candidate for making up all the dark matter in our Universe. In 2018, ADMX probed the 2.81-3.31 μeV axion mass range for axion-photon couplings predicted by the well-motivated DFSZ QCD axion. I will discuss the quantum electronic and cryogenic systems necessary to achieve this sensitivity. I will also discuss improvements made to the system and the current status of the experiment which is in the process of taking data in a new, unexplored, regions of parameter space.

¹This work was supported by the U.S. Department of Energy through Grants Nos. DE-SC0009723, DE-SC0010296, DE-SC0010280, DE-SC0010280, DE-FG02-97ER41029, DE-FG02-96ER40956, DE-AC52-07NA27344, and DE-C03-76SF00098. This presentation has been authored by Fermi Research Alliance, LLC under Contract No. DE-AC02-07CH11359 with the U.S. Department of Energy, Office of Science, Office of High Energy Physics. Additional support was provided by the Heising-Simons Foundation and by the LDRD offices of the Lawrence Livermore and Pacific Northwest National Laboratories.

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Date submitted: 10 Jan 2020

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