Abstract Submitted
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Development of the Axion Resonant InterAction DetectioN Experiment (ARIADNE)[1] CHLOE LOHMEYER, NANCY AGGARWAL, ZHIYUAN WANG, Northwestern University, WENXIN XIE, None, NICOLE WOLFF, ANDREW GERACI, Northwestern University, ARIADNE COLLABORATION — The Axion Resonant Interaction Detection Experiment (ARIADNE) will look for monopole-dipole interactions mediated by the QCD axion field in the mass range of 1μeV to 6meV. Modulating an unpolarized Tungsten mass in close proximity to polarized helium-3 gas creates an effective transverse magnetic field as seen by the He-3 spins, which drives a nuclear magnetic resonance transition. The experimental principles, the expected challenges of the experiment, as well as the latest updates will be discussed.

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