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Progress on the Axion Resonant Interaction Detection Experiment (ARIADNE) CHLOE LOHMEYER, NANCY AGGARWAL, ANDREW GERACI, Northwestern University, ARIADNE COLLABORATION¹ — The Axion Resonant Interaction Detection Experiment (ARIADNE) will look for monopole-dipole interactions mediated by the QCD axion field in the mass range of $1\mu\text{eV}$ 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. In this talk, I will discuss the experimental principles, the expected challenges of the experiment, as well as the latest updates.

¹Axion Resonant Interaction Detection Experiment

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