## 2019 Meeting of the Division of Particles & Fields of the American Physical Society



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## Constraints on Axion Dark Matter from Searches for

Type: Oral Presentation

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Axions, which can solve the Strong CP problem, and axion-like particles (ALPs), which arise naturally in many models of high-scale physics, provide theoretically compelling dark matter candidates. Axions and ALPs which couple to photons have been shown to produce observable radio emission through their conversion to photons in the magnetospheres of neutron stars, providing a means of indirect detection. In this work, we analyze 8 hours of radio data collected at the Green Bank Telescope to place novel constraints on  $\boxtimes$ eV axion dark matter. We also briefly discuss implications of dark matter substructure for this search strategy.

Radio Signals at Neutron Stars

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