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DMRadio-50L Overview and Status Update

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The axion is one of the most compelling dark matter (DM) candidates and a solution to the strong charge-parity problem. DMRadio-50L is a resonant lumped-element detector with a toroidal magnet searching for axions in the range 5 kHz - 5 MHz (20 peV - 20 neV) with a target sensitivity to axion-photon-photon coupling 5×10^{-15} GeV⁻¹. DMRadio-50L also acts as an innovation platform and technology test bed for quantum sensors that will enable a next-generation search for GUT-scale axions in this mass region (DMRadio-GUT). This talk will provide an overview of the DMRadio-50L experiment as well as an update of its ongoing construction.

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