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# Axion Haloscope Meets the Electric Field

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I will discuss emerging ideas in resonant haloscope searches for axionic dark matter. Axion like particles, like those from string orgin, have a very broad mass range and can lie outside the optimal range for a traditional EM resonance cavity design. Front-end narrow band frequency selection can be provided via electronic resonances that provide the necessary high Q quality factor for a via haloscope setup. Using the electric field as the axion-photon conversion medium is also proposed as a promising design, with unique features such as time and directional modulation, avoidance of laboratory magnetic field exposure, etc.

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