

Abstract Submitted
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Probing dissipation from vortices with superconducting microwave resonators. C. SONG, T.W. HEITMANN, M.P. DEFEO, K. YU, B.L.T. PLOURDE, Syracuse University, R. MCDERMOTT, University of Wisconsin — One potential source of dissipation in superconducting qubits comes from vortices trapped in the thin films. We present a design for a system of microwave resonators for studying the loss contributed by trapped flux over the frequency range from 2 - 12 GHz. This consists of a multiplexed set of superconducting resonators with a wide range of lengths that are capacitively coupled to a common superconducting feed-line. By cooling the resonators in different magnetic fields, it is possible to probe the loss from vortices as a function of field and frequency, at least at the discrete frequencies of the resonators in our set.

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