

Abstract Submitted
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Flux Noise in SQUIDs due to Hyperfine Interactions of Spins on Metals¹ JIANSHENG WU, CLARE YU, University of California, Irvine — Recent experiments at Stanford and Wisconsin have found evidence for magnetic defects on the surface of elemental metals like aluminum, niobium, and gold, but a much reduced signal on silicon. Fluctuations of these impurities are the source of flux noise in SQUIDs, and a major obstacle to the realization of using superconducting qubits to construct quantum computers. We discuss the possibility that the flux noise arises from hyperfine interactions and ways to test this hypothesis.

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Jiansheng Wu
University of California, Irvine

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