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Estimation of Mean Square Flux Noise in SQUIDs from Monte Carlo Simulations of the Classical 2D XY Model¹ THOMAS HINKLE, CLARE YU, Univ of California - Irvine — Magnetic spins located on the surface of superconducting quantum interference devices (SQUIDs) are known to cause flux noise in the devices. Experimental evidence indicates that the spins interact with one another. One measure of the interaction between spins is the mean square flux noise in the SQUID. We compare experimentally obtained values of the mean square flux noise with those from Monte Carlo simulations of the classical 2D XY model.

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