

# Quantum measurement at microwave frequencies with superconducting circuits

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Recent progress in the fabrication and control of quantum coherent superconducting circuits has enabled new experiments that probe the fundamental physics of quantum measurement. I will describe our recent experiments that harness near quantum limited parametric amplifiers and superconducting qubits to study physics ranging from examining quantum trajectories associated with spontaneous emission to extending thermodynamics into the quantum regime in a experimental realization of a quantum Maxwell's demon.

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