

Abstract Submitted
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Efficiency of a microwave photon detector based on a current-biased Josephson junction¹ AMRIT POUDEL, CANRAN XU, MAXIM VAVILOV, Department of Physics, University of Wisconsin-Madison — In this talk we discuss the efficiency of a microwave photon detector based on a current-biased Josephson junction driven by a classical microwave source. We consider the evolution of the junction in the presence of the environment and tunneling events to the voltage state. We calculate the switching time distribution to the voltage state and evaluate the efficiency of the photon detector as a function of input power and the junction parameters. We present conditions for the optimal power matching between the detector and the microwave source.

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