Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Quantum non-demolition and high-efficiency detection of traveling microwave photons - part 1 BAPTISTE ROYER, ARNE L. GRIMSMO, JEROME BOURASSA, University of Sherbrooke, NICOLAS DIDIER, Inria Paris, ALEXANDRE BLAIS, University of Sherbrooke — Optical photon detectors are indispensable tools for quantum optics experiments. Realizing their microwave counterparts has, however, remained an elusive task due in part to the energy scale difference between the two frequency ranges. In this talk, we will present a possible solution to this problem by adapting a scheme for qubit readout to allow high-efficiency measurement of traveling photons. Having such photon detectors would enable a wide variety of applications ranging from quantum information processing to mesoscopic physics.

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Date submitted: 09 Nov 2016 Electronic form version 1.4