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Observation of photon blockade in circuit QED using second-order correlation function measurements

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Circuit quantum electrodynamics (QED) provides an attractive platform to effectively study photon-photon interactions mediated by their strong and resonant coupling to a superconducting qubit embedded into a transmission line resonator. Driving the coupled system with a coherent microwave frequency tone the anharmonicity of the Jaynes-Cummings ladder blocks the transmission of more than a single photon through the resonator at a time. Using on-chip microwave beam splitters, linear amplifiers, and quadrature amplitude detectors we observe fluorescence and Rayleigh scattering in Mollow-triplet-like spectra [1].

[1] D. Bozyigit *et al.*, *Nature Physics* **7**, 154-158 (2011).

☐ Invited Talk
☐ Prefer Contributed Oral Presentation
☒ Prefer Poster Presentation

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Topic: Superconducting circuits