

Abstract Submitted
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Intensity auto- and cross-correlations for a driven two-mode cavity coupled to a three-level atom¹ PATRICK HEMPHILL, JAMES CLEMENS, Miami University — We calculate two-time intensity auto- and cross-correlations for light transmitted through a weakly driven optical cavity with two degenerate modes of orthogonal linear polarization coupled to a single three-level atom in the Λ configuration. We compare the resulting autocorrelations with the two-level atom coupled to a single optical cavity mode and identify a transition from photon bunching to photon antibunching as a function of the coupling to the third atomic level.

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