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Photon statistics of quantum dot resonance fluorescence DISHENG CHEN, GARY LANDER, CABOT ZABRISKIE, EDWARD FLAGG, West Virginia Univ — We study the blinking behavior of a self-assembled InAs quantum dot in a planar cavity formed by AlGaAs/GaAs distributed Bragg reflectors. The quantum dot is resonantly excited through the waveguide mode of the sample while being simultaneously illuminated by a second laser with photon energy above the GaAs band gap. We characterize the fluorescence blinking behavior as a function of the above-band laser power via second-order correlation measurements and extract the local intrinsic charge density.

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