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Solution of the photon propagation paradox AMY WEST, ADAM HOUK, CHARLES REGAN, Texas Tech University, AYRTON BERNUSSI, LOUIS GRAVE DE PERALTA, Texas Tech University — We present an experimental study on the formation of surface plasmon polariton (SPP) standing waves. We demonstrate that SPP tomography in a quantum eraser arrangement permits the detection of the photons passing through the dark fringes of the observed interference pattern. We present a comprehensive explanation of how photons could pass undetected across the regions occupied by the dark fringes.

Amy West

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