

Abstract Submitted
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Demonstrating Entanglement in a Classical Device¹ BRIAN LA COUR, The University of Texas at Austin — We describe a proposed experiment to measure entanglement in a classical device. The experimental procedure and data analysis protocol follow that of a previous experiment to measure an entanglement witness with polarized photons prepared in a mixed state [M. Barbieri *et al.*, Phys. Rev. Lett. **91**, 227901 (2003)]. Numerical simulations suggest excellent agreement can be achieved with both the aforementioned photon experiment and quantum mechanical predictions.

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