

Abstract Submitted
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Classical Model for Measurements of an Entanglement Witness¹

BRIAN LA COUR, E.C. GEORGE SUDARSHAN, The University of Texas at Austin — We describe a classical model that may serve as an analog for joint and local measurements of an entanglement witness. The analogous experimental procedure and data analysis protocol of the model follow those 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 show excellent agreement with both experimental results and quantum mechanical predictions.

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