

Abstract Submitted
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Experimental Evidence for a non-Globally Trace-Preserving POVM RAYMOND JENSEN, Northern State University — A well-known experiment from 1986 involving entangled photon pairs is examined. The data, which until now have not been modeled quantitatively, are shown to be in agreement with quantum theory upon application of a positive operator valued measure (POVM). The POVM has a peculiarity: it is not complete (trace-preserving) on the entire Hilbert space but on a proper subset although they are positive semidefinite observables on the entire space. In spite of this, the state vector of the aforementioned experiment is in the subset where completeness holds.

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