

Abstract Submitted
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Excitation induced dephasing from indistinguishability PETER BRYANT, Physics Department, University of Texas at Austin — In a variety of experiments, Rabi oscillations suffer dephasing that often and perhaps generally depends on the Rabi frequency. This unexpected result has been called excitation induced dephasing. Explanations specific to experiments have been suggested, but here we describe a new approach to the treatment of decoherence and open systems, that allows one to address the indistinguishability of quantum systems. When physical systems are indistinguishable, excitation induced dephasing is a general phenomenon, and a preliminary model shows good agreement with a wide range of experimental results.

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