Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Non-equilibrium Entanglement and Noise in Coupled Double Quantum Dots RAMON AGUADO, Instituto de Ciencia de Materiales, CSIC, NEILL LAMBERT, University of Tokyo, Japan, TOBIAS BRANDES, University of Manchester, UK — We study charge entanglement in two capacitively-coupled double quantum dots in thermal equilibrium and under stationary non-equilibrium transport conditions. In the transport regime, the entanglement exhibits a clear switching threshold and various limits due to suppression of tunneling by Quantum Zeno localisation or by an interaction induced energy gap. We also calculate quantum noise spectra and discuss current cross-correlations as an indicator of the entanglement in transport experiments.

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Date submitted: 30 Nov 2005 Electronic form version 1.4