Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Non-Stationary Dephasing by a Classical Intermittent Noise PASCAL DEGIOVANNI, CNRS-ENS Lyon, DAVID CARPENTIER, CNRS-ENS Lyon, MAXIME CLUSEL, ENS Lyon, JOSEF SCHRIEFL, ENS Lyon — We investigate the influence of non-stationary intermittent 1/f noise on a quantum two-level system. Adopting a simple phenomenological model for this (collective) noise, we describe exactly the corresponding dephasing in various regimes. The non-stationarity and pronounced non-Gaussian features of this noise induce new anomalous dephasing scenarii. Beyond a history-dependent crossover coupling strength, the dephasing time exhibits a strong dependence on the age of the noise and the decay of coherence is not exponential.

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Date submitted: 30 Nov 2004 Electronic form version 1.4