

Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Reduction of loss in quantum entanglement by temperature increase JULIO CESAR GONZALEZ HENAO, JOSE ANTONIO ROVERSI, State University of Campinas, Unicamp — In this study we investigate the effect of coupling between a system of two qubits initially prepared in an entangled state and a nonlinear thermal bath. Under these conditions we can find an analytical solution for the system that allows us analyze the effects of temperature. We can also demonstrate that the increases of the thermal reservoir temperature produces a reduction of losses in the entanglement of the two-qubit system.

Julio Cesar Gonzalez Henao
State University of Campinas, Unicamp

Date submitted: 09 Nov 2012

Electronic form version 1.4