universität wien

Quantum Optics, Quantum Nanophysics & Quantum Information

Institut für Quantenoptik und Quanteninformation

INVITATION

to a talk given by

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Dissipatively driven entanglement of two macroscopic atomic ensembles

Abstract :

Up to date, the live time of entangled states is very short, due to their fragility under decoherence and dissipation. Therefore, they are created under strict isolation conditions. In contrast, new approaches harness the coupling of the system to the environment, which drives the system into the desired state. Following these ideas, we present a scheme for the generation of steady state entanglement between two distant atomic ensembles.
Our scheme relies on the interaction of the atomic system with the modes of the electromagnetic field which act as environment. The dissipative evolution can be controlled such that long-lived entanglement is created under realistic experimental condition using current technology.

Thursday, 18th February, 2010

14:00

Ernst-Mach-Hörsaal, Boltzmanngasse 5, 2nd floor, 1090 Wien