

## Effects of Different Time-Dependent Couplings on Two-Atom Entanglement

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Abstract: The effects of different time-independent and time-dependent couplings on two-atom entanglement are studied. The results show that the effects depend on the initial state. For the initial state  $|ee\rangle$ , it is found that different time-independent couplings make the case without entanglement exhibit entanglement, and time-dependent couplings turn the irregular entanglement regions into regular one. Under the case of decay, for the initial state  $|eg\rangle$ , the different time-dependent couplings have disbenefit.

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Key words: different time-dependent couplings, entanglement, quantum jump approach

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