

## Probabilistic Teleportation of an Arbitrary Two-Atom State in Cavity QED

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**Abstract:** We propose a scheme for the teleportation of an arbitrary two-atom state by using two pairs of two-atom nonmaximally entangled states as the quantum channel in cavity QED. It is shown that no matter whether the arbitrary two-atom pure state to be teleported is entangled or not, our teleportation scheme can always be probabilistically realized. The success probability of teleportation is determined by the smaller coefficients of the two initially entangled atom pairs.

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Key words: quantum teleportation, arbitrary two-atom state, cavity QED

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