

Feasible Teleportation Schemes with Five-Atom Entangled State

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Abstract: Teleportation schemes with a five-atom entangled state are investigated. In the teleportation scheme Bell state measurements (BSMs) are difficult for physical realization, so we investigate another strategy using separate measurements instead of BSM based on cavity quantum electrodynamics techniques. The scheme of two-atom entangled state teleportation is a controlled and probabilistic one. For the teleportation of the three-atom entangled state, the scheme is a probabilistic one. The fidelity and the probability of the successful teleportation are also obtained.

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Key words: quantum teleportation, entangled atomic states, CQED, feasible

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