

Probabilistic Teleportation of Multi-particle d-Level Quantum State

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Abstract: The general scheme for teleportation of a multi-particle d-level quantum state is presented when m pairs of partially entangled particles are utilized as quantum channels. The probabilistic teleportation can be achieved with a successful probability of $\prod_{N=0}^{d-1} (C_0^N)^2 / d^M$, which is determined by the smallest coefficients of each entangled channels.

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Key words: multi-particle, d-level quantum state, probabilistic teleportation

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