
Irreversible processes in quantum teleportation

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The influence of different decoherence models of quantum channel on irreversible transformation of the pure state during its transmission through the teleportation protocol is considered. It has been revealed that in the case of dephasing and dissipation of one of channel particles there is an optimal basis for coding of classical bit of information. The possibility for considerable improvement of channel quality at high dissipation degree for asymmetric quantum channels has been explored.

Keywords: *irreversibility, causality, quantum teleportation, time.*

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