

Deterministic Quantum Key Distribution Using Two Non-orthogonal Entangled States

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Abstract: A deterministic quantum key distribution scheme using two non-orthogonal entangled states is proposed. In the proposed scheme, communicators share key information by exchanging one travelling photon with two random and secret polarization angles. The security of the distributed key is guaranteed by three checking phases in three-way channel and the communicators' secret polarization angles.

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