

Photon quantum teleportation

Quantum teleportation describes the transmission of a quantum state without physically transmitting the particle which is in this state. This is achieved by using shared entanglement and performing certain operations to transfer the quantum state. These operations depend on the results of a measurement performed by the sender which can be transmitted with 2 bits of classical information. It is believed that quantum teleportation is useful for quantum repeaters and the transfer of qubits for quantum computation. In this talk we will focus mainly on the theory of quantum teleportation with photons and their recent experimental realisations.

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