

Three-Particle Einstein-Podolsky-Rose Eigenstate and Its Application in Quantum Dense Coding

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(Received: 2003-9-8; Revised:)

Abstract: We study the properties of the three-mode Einstein-Podolsky-Rose (EPR) eigenstate and its application in quantum dense coding. Our result shows that the three-mode EPR eigenstate provides a convenient way to realize quantum dense coding when the quantum channel is a three-mode squeezed state.

PACS: 03.65.-w, 42.50.Lc

Key words: three-particle EPR eigenstate, quantum dense coding, entangling operator

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