Coherent-Entangled State in Three-Mode and Its Applications

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Abstract: We introduce the new concept of coherent-entangled state (CES). By virtue of the technique of integration within an ordered product of operators we introduce a new kind of three-mode CES $|\beta,\gamma,x\rangle$, which exhibits both properties of the coherent state and the entangled state. $|\beta,\gamma,x\rangle$ makes up a new quantum mechancial representation. Its applications in quantum optics are also presented.

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