Continuous teleportation of the photon statistics of squeezed state

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Abstract

In this work, we study the oscillations that appear in the photon statistics of a squeezed state in a process that allows teleportation of continuous spectrum variables. In some cases, comparisons are made with the theory of photodetection. The most remarkable result is observed when the fidelity of teleportation is optimized, in that case the teleported statistics is equal to the counting statistics of photoelectrons in non-ideal photocount measurements. We also determine the effect of one-photon subtraction from each arm of the Einstein–Podolsky–Rosen source to enhance the quality of the teleportation process.