

Production of nonclassical states of a cavity field

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Abstract: We derive the exact solution of the evolution equation for the density matrix of the field in a lossless micromaser cavity with the injected atoms prepared in their ground state. The time development of photon statistics and of the fluctuations in the field quadratures is analytically and numerically investigated. It is shown that a squeezed state with sub-Poissonian photon statistics can be created at the onset of evolution. ?? 1991 The American Physical Society.

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