

Generation of Multi-mode Entangled Coherent States for N Trapped Ions in Strong-Excitation Regime

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Abstract: We propose a scheme to generate entangled coherent states for the vibrational modes of N trapped ions. In the scheme the first ion is sequentially excited by two travelling wave laser fields tuned to the ion transition. The scheme works in the strong-excitation regime, which is of experimental importance in view of decoherence.

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Key words: entangled coherent states, trapped ion, strong-excitation regime

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