

Influence of Decoherence on Interference Between Two Bose-Einstein Condensates

ZENG Ai-Hua¹ and KUANG Le-Man²

¹ Department of Physics, Shaoyang College, Shaoyang 422004, China

² Department of Physics, Hunan Normal University, Changsha 410081, China

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Abstract: The influence of decoherence on interference between two trapped Bose-Einstein condensates with arbitrary initial states is studied. Analytic expressions of the intensity and visibility of the interference pattern are found. It is shown that the decoherence weakens the interference intensity and decreases the visibility of the interference pattern.

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Key words: Bose-Einstein condensate, decoherence, interference

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