2002 Vol. 37 No. 4 pp. 413-418 DOI:

Exact Analytical Solutions to the Two-Mode Mean-Field Model Describing Dynamics of a Split Bose-Einstein Condensate

WU Ying^{1,2} and YANG Xiao-Xue¹

¹ National Laboratory of Laser Technique and Physics Department, Huazhong University of Science and Technology, Wuhan 430074, China ² Wuhan Institute of Physics and Mathematics, the Chinese Academy of Sciences, Wuhan 430071, China (Passived: 2001 & O: Deviced:)

(Received: 2001-8-9; Revised:)

Abstract: We present the analytical solutions to the two-mode mean-field model for a split Bose-Einstein condensate. These explicit solutions completely determine the system's dynamics under the two-mode mean-field approximation for all possible initial conditions.

PACS: 03.75.Fi, 05.30.Jp, 32.80.Pj Key words: split Bose-Einstein condensate, mean-field model, exact analytical solutions

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