

Normalized Excited Squeezed Vacuum State and Its Applications

MENG Xiang-Guo, WANG Ji-Suo, and LIANG Bao-Long

Department of Physics, Liaocheng University, Liaocheng 252059, China
(Received: 2006-6-26; Revised:)

Abstract: By using the intermediate coordinate-momentum representation in quantum optics and generating function for the normalization of the excited squeezed vacuum state (ESVS), the normalized ESVS is obtained. We find that its normalization constants obtained via two new methods are uniform and a new form which is different from the result obtained by Zhang and Fan [Phys. Lett. A 165 (1992) 14]. By virtue of the normalization constant of the ESVS and the intermediate coordinate-momentum representation, the tomogram of the normalized ESVS and some useful formulae are derived.

PACS: 42.50.-p

Key words: excited squeezed vacuum state, technique of integration within an ordered product of operators, intermediate coordinate-momentum representation, generating function

[\[Full text: PDF\]](#)

Close