

The Effects of Sine-Squared Pulse Modulation Correlated Noises on Stochastic Resonance in Single-Mode Laser

Zhi-Yun Wang, Pei-Jie Chen, and Liang-Ying Zhang

School of Physics and Electronic Engineering, Xiangfan University, Xiangfan 441053, P.R. China

Reprint requests to Z.-Y. W.; E-mail: wzy425@126.com

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By means of the linear approximation method, the output intensity power and signal-to-noise ratio (SNR) of a single-mode laser driven by sine-squared pulse modulation correlated noise are calculated. The effects of amplitude B , period T , and width τ on the resonance curves of SNR to the pump noise intensities and quantum noise intensities of pulse are discussed, and it is found that the SNR shows a stochastic resonance with the varying of pulse width τ .

Key words: Single-Mode Laser; Stochastic Resonance; Noises.

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