Mechanical Stochastic Resonance

ELLIOIT WAINWRIGHT, JOHN LINDNER, Physics Department, The College of Wooster — Noise and nonlinearity can produce a stochastic resonance that maximizes a system’s output signal-to-noise ratio. Stochastic resonance has been observed in electronic, chemical, optical, magnetic, and biological systems. Here, we report stochastic resonance in a simple mechanical system consisting of a bistable pendulum driven by a harmonic oscillator and the broad-band noise of a flapping flag.

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