

Abstract Submitted
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Discrete Energy Spectrum of a Classical Harmonic Oscillator in Classical Electromagnetic Zero-Point Radiation¹ WAYNE HUANG, HERMAN BATELAAN, University of Nebraska-Lincoln — Since the early development of Quantum Mechanics, the discrete energy spectrum of atoms have been considered as the defining feature of Quantum Mechanics. However, when classical electromagnetic zero-point radiation is introduced as a modification of Classical Mechanics, our simulation shows that a classical harmonic oscillator can also exhibit a discrete energy absorption spectrum when excited by a laser pulse. This finding may be surprising given the use of a full classical theory, and it may help us identify fully quantum mechanical features in physical systems such as harmonic oscillator and ultimately atoms.

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Wayne Huang
University of Nebraska-Lincoln

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