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Spectrum of Geometric Phases in a Driven Oscillator[1] INDU
SATIJA[2], George Mason Univ, RADHA BALAKRISHNAN, Insitute of Mathematical sciences, Chennai, India — We study geometric phases underlying the time
evolution of the quantum wave function of a driven nonlinear oscillator exhibiting
periodic, quasiperiodic as well as chaotic dynamics. In the asymptotic limit, irrespective of the classical dynamics, the geometric phases are found to increase linearly
with time. However, the fingerprints of classical motion are present in the bounded
fluctuations that are superimposed on the monotonically growing phases, as well as
in the difference in phases between two neighboring quantum states.

Indu Satija
George Mason Univ

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