Symmetry and dynamics universality in quantum chaos

Ping Fang 方萍

pingfang@bupt.edu.cn

北京邮电大学
Beijing University of Posts and Telecommunications

Symmetry and dynamics universality in quantum chaos

- Model: Quantum kicked rotors with or without time-reversal symmetry

- Dynamics is universal, determined only by the system's symmetry, both for the quantum resonance phase (rational $\widetilde{\hbar}/(4\pi)$)[1] and the localized phase (irrational $\widetilde{\hbar}/(4\pi)$)[2].

[1] P. Fang, C. S. Tian and J. Wang. Symmetry and dynamics universality of supermetal in quantum chaos. Phys. Rev. B 92, 235437 (2015).
[2] C. Hainaut#, P. Fang#, A. Rançon, J. F. Clément, P. Szriftgiser, J. C. Garreau, C. S. Tian*, R. Chicireanu*, Experimental Observation of a Time-Driven Phase Transition in Quantum Chaos, PHYSICAL REVIEW LETTERS, 121, 134101 (2018).