

Fractal Weyl law behaviour in an open Hamiltonian system

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We numerically show fractal Weyl law behavior in an open Hamiltonian system that is described by a smooth potential (rotating Henon-Heiles) and which supports numerous above-barrier resonances. This behavior holds even relatively far away from the classical limit. The complex resonance wave functions are found to be localized on the fractal classical repeller. The structure of the phase space in the repeller is also analyzed.