

Quantum decay rates for manifolds with hyperbolic ends

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Abstract

Mathematically, quantum decay rates appear as imaginary parts of poles of the meromorphic continuation of Green's functions. As energy grows, decay rates are related to properties of geodesic flow and to the structure at infinity. For a cusp, infinity is "small", which typically slows decay. However, I will present a class of examples for which decay rates go to infinity with energy even in the presence of a cusp. This is part of a more general investigation of resonances on manifolds with hyperbolic ends.