
Where are the resonances of negatively curved cusp surfaces ?

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Abstract

We call cusp surface a complete surface whose ends are exact real hyperbolic cusps. On such a manifold the laplacian Δ has continuous spectrum (as well as eigenvalues). The resonances appear as the poles of the analytic continuation of the resolvent $R(s) = (\Delta - s(1 - s))^{-1}$.

When the curvature is negative, I will explain how one can show that most resonances lay in a vertical strip near the spectrum (at least for generic metrics).

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