

SCATTERING RESONANCES FOR CONVEX OBSTACLES

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Abstract: In this talk, we discuss the distribution of scattering resonances for strictly convex obstacles in Euclidean spaces and various other background spaces. In particular, we show that under very general boundary conditions, including Dirichlet, Neumann and Robin boundary conditions, there is a cubic resonance free region near the real axis. Moreover, under certain pinched curvature conditions, the resonances appears in cubic bands and the counting functions of the resonances in each band satisfy a Weyl law similar to the one for eigenvalues on compact manifolds.