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Fourier coefficients of restricted eigenfunctions

We will discuss the growth of Laplace eigenfunctions on a compact, Riemannian manifold when restricted to a submanifold. We analyze the behavior of the restricted eigenfunctions by studying their Fourier coefficients with respect to an arbitrary orthonormal basis for the submanifold. We give an explicit bound on these coefficients depending on how the defect measures for the two collections of functions, the eigenfunctions and the orthonormal basis, relate.