

Weyl remainders: an application of geodesic beams

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In this talk we discuss quantitative improvements for Weyl remainders under dynamical assumptions on the geodesic flow. We consider a variety of Weyl type remainders including asymptotics for the eigenvalue counting function as well as for the on and off-diagonal spectral projector. These improvements are obtained by combining the geodesic beam approach to understanding eigenfunction concentration together with an appropriate decomposition of the spectral projector into quasimodes for the Laplacian. One consequence of these estimates is a quantitatively improved Weyl remainder for the eigenvalue counting function that holds for all product manifolds. This is joint work with J. Galkowski.