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Matthew D Blair* (blair@math.unm.edu). *L^p norms of eigenfunctions and Keakeya-Nikodym averages.*

We consider the problem of determining optimal upper bounds on the growth of L^p norms of eigenfunctions of the Laplacian on a compact Riemannian manifold in the high frequency limit. After an introduction to the problem, we will discuss recent works relating such upper bounds to mass concentration in frequency dependent tubes about geodesic segments. When the manifold has nonpositive sectional curvatures, it can be shown that the criteria developed here yields improved L^p bounds on the eigenfunctions. These are results in joint works with C. Sogge and S. Zelditch. (Received January 19, 2015)