1120-35-88   **Steve Zelditch*** (`zelditch@math.northwestern.edu`). *Level sets of eigenfunctions: number of components.*

There are several recent results proving that the number of nodal domains of almost all eigenfunctions of an ONB ϕ_j tend to infinity with the eigenvalue on surfaces of negative curvature with a special curve C , either the fixed point set of reflection symmetry or the concave boundary of the surface (Ghosh-Reznikov-Sarnak, Jung-Zelditch, Jang-Jung). Quantum ergodic restriction theorems, sup norm estimates and integrals over C play the key role. My talk gives the same kind of results for all level sets, $\phi_j = a$. The proofs are different from the prior ones and are based on the weak convergence in L2 of normalized Cauchy data. They also depend on whether the L1 norm of the normalized Cauchy tends to zero or not. We do not use sup norms, or compare integrals of ϕ and $|\phi|$ as in prior work. (Received February 14, 2016)