1127-32-87 **Steve Zelditch*** (`zelditch@math.northwestern.edu`), Evanston, IL 60208, and **Pen Zhou** (`pengzhou@math.northwestern.edu`), Evanston, IL 60208. *Interface asymptotics and partial Bergman kernels.*

Partial Bergman kernels are orthogonal projections onto subspaces S_k of the space $H^0(M, L^k)$ of holomorphic sections of powers of an ample line bundle L with respect to an inner product. The problem of finding asymptotics of partial Bergman kernels arises in probabilistic complex geometry, in Kaehler geometry and in physics (quantum Hall effect), all for different reasons. Shiffman-Z studied random polynomials with spectra in a fixed Newton polytope, which is a special case in the toric setting. It was generalized by Ross-Singer, who first proved Gaussian interface asymptotics for certain S^1 invariant Kaehler manifolds. Peng Zhou and I generalized that and gave new proofs for all S^1 invariant Kaehler manifolds, and then generalized it further to subspaces S_k defined by spectral theory of Toeplitz operators. The asymptotics of the partial density of states determine the distribution of zeros of random sections drawn from the subspaces. (Received January 24, 2017)