Random matrices, symmetries, and many-body states[1] CALVIN
JOHNSON, San Diego State University — All nuclei with even numbers of protons
and of neutrons have ground states with zero angular momentum. This is ascribed to
the pairing force between nucleons, but simulations with random interactions suggest
a much broader many-body phenomenon. I discuss how to project out random
Hermitian matrices that have good quantum numbers and, computing the width
of the Hamiltonian in subspaces, find ground states dominated by low quantum
numbers, e.g. $J = 0$.

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