Abstract Submitted
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Unmixing Symmetries[1] CALVIN JOHNSON, San Diego State Univ — The low-lying spectra of atomic nuclei display diverse behaviors, for example rotational bands, which can be described phenomenologically by simple symmetry groups such as spatial SU(3). This leads to the idea of *dynamical symmetry.* Detailed microscopic calculations, however, show these symmetries are in fact often strongly mixed and the wave function fragmented across many irreps. More commonly the fragmentation across members of a band are similar, which is called a *quasi-dynamical symmetry.* I numerically construct unitary transformations from a quasi-dynamical symmetry to a dynamical symmetry, adapting the *similarity renormalization group,* or SRG, in order to transform away the symmetry-mixing parts of the Hamiltonian, transforms a quasi-dynamical symmetry to a dynamical symmetry, that is, unmixes the mixed symmetries.

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