

Abstract Submitted  
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**Some exactly solvable quantum-chaotic models** VLADIMIR YUROVSKY, School of Chemistry, Tel Aviv University, MAXIM OLSHANII, Department of Physics, University of Massachusetts at Boston — Exact analytical expressions are obtained for the wavefunctions of two atoms with a zero-range interaction in two types of the external potentials. The potential of first kind is a three-dimensional anisotropic harmonic oscillator; the second is a harmonic oscillator in two directions with periodic boundary conditions in the third direction. Neither of the two systems is known to possess a complete set of integrals of motion. The energy eigenvalues are roots of a transcendent equation and form a discrete spectrum. The energy spectrum statistics exhibits distinctive features of quantum-chaotic systems.

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