ENERGY SPECTRUM IN THE DOUBLY DEGENERATE HUBBARD MODEL WITH STRONG INTRATOMIC EXCHANGE INTERACTION

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A metal-insulator transition in the doubly degenerate Hubbard model is investigated using a new variant of the generalized Hartree – Fock approximation for calculation of a single-particle Green function. The case of strong Hund coupling and strong intra-atomic Coulomb repulsion is considered. The calculated single-particle energy spectrum allows one to study the metal-insulator transition. The dependence of the energy gap width on model parameters is obtained. Conditions for realization of metallic and insulating states are found.