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Microscopic analysis of large amplitude collective dynamics in triaxial nuclear shapes TAKASHI NAKATSUKASA, NOBUO HINOHARA, RIKEN Nishina Center, KOICHI SATO, Kyoto University, MASAYUKI MATSUO, Niigata University, KENICHI MATSUYANAGI, RIKEN Nishina Center — We have developed a microscopic theory of large amplitude collective motion that provides us with a collective Hamiltonian. The method is based on the adiabatic expansion of equations of the self-consistent collective coordinate method (Prog. Theor. Phys. **103**, 959 (2000)). In this approach, the canonical collective variables are self-consistently determined, and all the quantities in the collective Hamiltonian (mass parameters and potential) are also microscopically calculated. Quantizing the collective Hamiltonian, we can treat nuclear dynamics beyond the harmonic limit. We apply the method to the pairing-plus-quadrupole Hamiltonian to discuss properties of nuclear anharmonicity and shape mixing. Especially we stress importance of triaxial degrees of freedom in the shape coexistence phenomena.

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