

量子多体相関を示唆する四重極変形と八重極変形

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Spontaneously symmetry breaking is the one of most important keywords to describe modern physics. In nuclear physics, the rotational symmetry of nucleus is spontaneously breaking induced by the coupling among individual particle motions and the corrective motion, which was pioneered by Bohr and Mottelson.

We investigate systematically the ground states of nuclei for whole nuclear mass region, with using the three-dimensional Skyrme Hartree-Fock+BCS model. Furthermore the octupole correlations for rare earth and actinoid nuclei are studied with the constraint mean-field method.

We will report the aspects of octupole deformed nuclei, through the distribution in the nuclear chart and potential energy surfaces with respect to multi- octupole deformation parameters.

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