[RIBF-ULIC-Symposium-003] Further understanding of 'Island of Inversion' via nuclear moments and inelastic reactions.

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Shape coexistence/mixing in Mg isotopes

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Properties of the low-lying states in magnesium isotopes around the island of inversion are studied using the five-dimensional quadrupole collective Hamiltonian constructed with the microscopic theory of large-amplitude collective motion. Shape dynamics with changing the neutron number and angular momentum in the yrast bands are discussed. The properties of the experimental observables such as the 0_2^+ states, 2_2^+ states, excited rotational bands, electric transitions between yrast and excited bands, and quadrupole moments are also discussed in relation with the shape coexistence/mixing dynamics.

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