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# Prediction of Exotic Islands of Deformation in the Generalized Differential Equation Model

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**Abstract.** Predictions for possible occurrence of exotic islands of deformation in the neutronand proton-rich regions of the nuclear chart are made from the calculated values of the reduced quadrupole transition probability B($E2$) ↑ for the transition from the ground state to the first $2^+$ state and the corresponding excitation energy E2 of even-even nuclei in the recently developed Generalized Differential Equation model. Our findings of large deformations in the exotic neutron-rich regions support the existence of an "Island of Inversion" in the heavy-mass region possibly caused by breaking of the N=70 sub-shell closure.

[ Full Paper ]