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Analysis of high-spin isomers in A=128 hole nuclei near 132Sn

The neutron-rich hole nuclei of A=128 are studied by large-scale shell-model calculations employing the extended pairing plus multipole-multipole force model. The high-spin energy levels of ¹²⁸In and beta decay are investigated deeply between these A=128 nuclei. The excited energy and logft values of beta decay are predicted in the final states of ¹²⁸Ag, ¹²⁸Cd, and ¹²⁸In by the cascaded decays calculated in A=128 hole nuclei. The monopole effects are investigated carefully in the beta decay process from ground state 0⁺ of ¹²⁸Cd to the 1⁺ levels of ¹²⁸In, and its half-life is affected by monopole corrections acting on the configuration of final states. The high-spin isomers of ¹²⁸Cd are predicted as a spin-trap isomer feeding the exist high-spin 16⁺ of ¹²⁸In by beta decay.

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