

Isomeric states in stable and neutron-rich odd-A Sb and I isotopes

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Isomeric states in atomic nuclei are unique probes which reveal various aspects of the microscopic structure of the nucleus and the nature of nuclear interactions. This presentation will focus on characteristic isomers in stable and neutron-rich odd-A antimony and iodine isotopes. The nuclei of interest were investigated by means of time-correlated gamma-ray spectroscopy with the GAMMASPHERE array, in combination with deep-inelastic reactions with ^{136}Xe beams incident on thick targets. New results achieved in the present work include the identification of new isomers in $^{131,133}\text{I}$ and odd-A Sb isotopes with the mass range $A=121-127$. For the stable nucleus ^{121}Sb , complementary experiments were carried out using ^7Li beams at ANU. These features will be discussed.

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