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## Decay studies of high-spin isomers in the mass 90 region

*Wednesday, 7 September 2016 09:00 (25 minutes)*

There are a significant number of isomeric states in the region close to the  $N=Z$  line and immediately below  $100\text{Sn}$ , some of which may decay via particle emission. The study of these states yields vital experimental data on neutron-proton ( $np$ ) pairing, provides a sensitive test for nuclear models, and input for understanding the astrophysical  $rp$ -process.

This presentation will report on results from the ribf83 experiment performed at RIKEN. Nuclei of interest were produced from a primary beam of  $^{124}\text{Xe}$  and identified using BigRIPS. The active stopper SIMBA, a stack of 3 highly segmented double sided silicon detectors and beta-particle calorimeter, was used to identify  $\beta$  decays from implanted ions and extract  $Q$  values for the decay. Coincident gamma-rays were recorded by EURICA, an array of high purity germanium detectors.

The results of gamma-ray spectroscopy from the  $\beta$ -delayed proton decay of  $^{96}\text{Cd}$  and  $^{98}\text{In}$  will be presented and compared to shell model calculations and WKB estimates. Results of a gamma-ray decaying isomer identified in  $^{96}\text{Cd}$  will also be presented and compared to r3gds shell-model calculations. The results of a Geant4 simulation, that was employed to extract the  $Q$  value of the  $\beta$  decay of  $^{94}\text{Ag}$ , will also be presented, along with the results of conversion electron spectroscopy, used to measure the lifetimes of states in  $^{95}\text{Ag}$ .

### Summary

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