

## SHAPE EVOLUTION OF NEUTRON-RICH NUCLEI IN THE VICINITY OF $^{110}\text{Zr}$

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The sudden onset of a large deformation has been known at the neutron number  $N = 60$  in neutron-rich Sr ( $Z = 38$ ), Zr ( $Z = 40$ ) and Mo ( $Z = 42$ ) isotopes. Theoretically, the axially deformed shape is predicted for the Sr and Zr isotopes. On the other hand, for the Mo isotopes, the triaxiality in deformed shape is predicted and indicated from experimental data up to  $N = 68$ . The large difference expected between Zr and Mo isotopes about the triaxiality provides a good opportunity to understand a shape change and a modification of the shell structure far from the stability line. In addition, we found an isomeric state in  $^{108}\text{Zr}$ , but its isomerism has not been understood yet. Because the tetrahedral shape is predicted around  $^{110}\text{Zr}$ , it is important to discuss whether a possibility of the tetrahedral shape isomer is denied based on a new high-statistical data or not.

The decay-spectroscopy experiment was performed using a high-efficiency HPGe-array EURICA at RIKEN RI beam factory (RIBF). The RI beam was produced by the in-flight fission of  $^{238}\text{U}$  beam with 345 MeV/u. Both the  $\beta$ -delayed  $\gamma$  rays and the  $\gamma$  rays from the isomeric states were measured in the same experimental setup. New gamma rays from the  $^{108}\text{Zr}$  isomer were observed. The lifetime of the first excited state in  $^{104,106}\text{Zr}$  was also measured from the time difference of  $\beta$  and  $\gamma$  rays using a fast timing LaBr<sub>3</sub>(Ce) array. In this conference, the experimental details and results will be presented.