

Abstract Submitted
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Study of shape evolution in very neutron-rich Cs isotopes A. YAGI,
Dep. of Phys., Osaka University, THE EURICA COLLABORATION — We have searched for the isomers in neutron-rich Cs isotopes of $^{144-148}\text{Cs}$ in one of the EURICA campaign experiments at RIBF in RIKEN, in order to investigate the shape evolution in the very neutron-rich Cs isotopes. The isomers were produced using the in-flight fission reaction of the 345 MeV/u $^{238}\text{U}^{86+}$ beam. The fragment separator system consisting of BigRIPS and Zero Degree Spectrometer (ZDS) was tuned for the neutron-rich Sb, Te, I, Xe and Cs isotopes with $A = 140-150$. The isotopes were implanted into a stack of 5 double-sided Si strip detectors (WAS3ABi). The beta ray and gamma ray emitted from the stopped isotopes were detected by WAS3ABi and EURICA, respectively. Event-by-event unambiguous particle identification was achieved by careful analyses using the ion-optics matrices as well as the Delta E information from the ion chambers and the timing information from the plastic scintillators. The isomers in ^{145}Cs , ^{146}Cs , ^{147}Cs , ^{148}Cs were observed for the first time. Isomers in odd-odd ^{146}Cs , ^{148}Cs could be explained to be caused by the low-energy transition. On the other hand, isomers in odd ^{145}Cs , ^{147}Cs are supposed to be candidate of K isomer, which indicate that these nuclei have prolate deformation.

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