HAW14-2014-020292

Abstract for an Invited Paper for the HAW14 Meeting of the American Physical Society

Decay properties of exotic nuclei relevant to r-process nucleosynthesis SHUNJI NISHIMURA, RIKEN Nishina Center

Systematic studies of decay parameters, such as beta-decay half-lives, excited states, and beta-delayed neutron emissions, are essential to study on the mechanism of a rapid-neutron capture process (r process), which is responsible for the production of elements heavier than iron. RIBF has started providing very neutron-rich nuclei by means of in-flight fission of high intensity ²³⁸U beam at RIKEN Nishina Center. New project EURICA has been launched with the goal of performing $\beta\gamma$ spectroscopy of exotic nuclei. Series of campaign experiments were conducted to survey the decay properties of very neutron-rich nuclei. Highlights of recent results and future perspectives will be presented to discuss the nuclear shell evolution and their impacts to the r-process nucleosynthesis.