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(I) Study of exotic nuclei along the neutron drip line and beyond

Monday 7 June 2021 11:45 (25 minutes)

I will show and discuss the recent progress of spectroscopic studies of neutron-rich nuclei near and beyond the neutron drip line, using the large acceptance multi-purpose spectrometer SAMURAI at RIBF at RIKEN [1]. After a brief introduction on characteristic features of structures near and beyond the neutron dripline, we focus on the recent experimental results on the observation of $^{25-28}\text{O}$ [2] beyond the neutron drip line, and the Coulomb and nuclear breakup of halo nuclei such as ^6He and ^{19}B [3]. Future perspectives on the spectroscopy of such extremely neutron-rich nuclei are also discussed.

[1] T. Nakamura, H. Sakurai, H. Watanabe, Prog. Part. Nucl. Phys. 97, 53 (2017).

[2] Y. Kondo, et al. Phys. Rev. Lett. 116, 102503 (2016).

[3] K.J. Cook, et al., Phys. Rev. Lett. 124, 212503 (2020).

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