



Canadian Association
of Physicists

Association canadienne
des physiciens et physiciennes

Contribution ID: 600

Type: **Invited Speaker / Conférencier(ère) invité(e)**

(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).

Presenter: Prof. NAKAMURA, Takashi (Tokyo Institute of Technology)

Session Classification: M1-5 Spectroscopy I (DNP) / Spectroscopie I (DPN)

Track Classification: Nuclear Physics / Physique nucléaire (DNP-DPN)