

Recent Progress of Spectroscopic Studies of Nuclei Near and Beyond the Neutron Drip Line

Takashi Nakamura

Department of Physics, Tokyo Institute of Technology

I present the recent progress of spectroscopic studies of neutron-rich nuclei near and beyond the neutron drip line, using rare isotope beams at RIBF, RIKEN. Reactions we adopt here are primarily nuclear and Coulomb breakup at energies of about 200 MeV/nucleon. After introducing characteristic features of such reactions and targeted exotic nuclear structures, I will focus on the following two topics. One is on the Coulomb/nuclear breakup of deformation-driven halo nucleus ^{31}Ne . The other is the studies of oxygen isotopes beyond the neutron drip line, in particular, on $^{26,27,28}\text{O}$. I will also show future perspectives on the spectroscopy of neutron drip-line nuclei.