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Breakup reaction study of drip-line nuclei at the new-generation RI-Beam facility RIBF

Monday, 22 March 2010 18:00 (1 hour)

Recent experimental results using the breakup reactions at the new-generation RI-beam facility, RIBF, at RIKEN, will be presented. After briefly introducing the facility and showing some of the other highlights of the experiments at RIBF facility, we focus more on the breakup experiments. We measured the inclusive Coulomb and nuclear breakup of neutron drip line nuclei 22C and 31Ne[1]. Enhanced cross sections have been observed for these nuclei to exhibit the halo nature of these nuclei. This is the finding that the halo structure is found near and inside the island of inversion region for the first time. Near-future projects and experimens at RIBF are also discussed in this presentation.

[1] T.Nakamura et al., Phys. Rev. Lett.103, 262501 (2009).

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