国立研究開発法人理化学研究所　仁科加速器研究センター
第207回 RIBF核物理セミナー
RIKEN Nishina Center for Accelerator Based Science
The 207th RIBF Nuclear Physics Seminar

The cluster structure in light neutron-rich nuclei

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Many theoretical and experimental studies have been devoted to the cluster structure in nuclei in the past decades. But the detailed mechanism of clustering in nuclei is still an open question and is of fundamental importance in nuclear physics. Neutron-rich Be isotopes are obvious good candidates of clustering studies, for the richness of their cluster structures built on a well established α+α rotor. We have carried out a new inelastic breakup experiment for 12Be at HIRFL-RIBLL in Lanzhou, China. For the first time a strong resonance at 10.3 MeV with spin parity of 0+ was identified. And an enhanced monopole matrix element and a large cluster spectroscopic factor were determined for this state. Some other resonances were also observed in 6He+6He and 4He+8He decay channels. These results reveal a strong clustering structure in 12Be, which is in agreement with the GTCM prediction.

＊ The talk will be given in English language..

Sep. 15th (Tue.) 2015　13:30 ～
RIBF Hall (rm.201), RIBF bldg., RIKEN

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