

Abstract Submitted
for the HAW09 Meeting of
The American Physical Society

Two-particle correlations in continuum dipole transitions in Borromean nuclei K. HAGINO, Tohoku University, H. SAGAWA, University of Aizu, T. NAKAMURA, Tokyo Institute of Technology, S. SHIMOURA, Center for Nuclear Study (CNS) — We discuss the energy and angular distributions of two emitted neutrons from the dipole excitation of typical weakly-bound Borromean nuclei, ^{11}Li and ^6He . To this end, we use a three-body model with a density dependent contact interaction between the valence neutrons. Our calculation indicates that the energy distributions for the valence neutrons are considerably different between the two nuclei, although they show similar strong dineutron correlations in the ground state to each other. This different behaviour of the energy distribution primarily reflects the interaction between the neutron and the core nucleus, rather than the interaction between the valence neutrons. That is, the difference can be attributed to the presence of *s*-wave virtual state in the neutron-core system in ^{11}Li , which is absent in ^6He . It is pointed out that the angular distribution for ^{11}Li in the low energy region shows a clear manifestation of the strong dineutron correlation, whereas the angular distribution for ^6He exhibits a strong anticorrelation effect.

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Date submitted: 26 Jun 2009

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