

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241回 RIBF核物理セミナー RIKEN Nishina Center for Accelerator Based Science The 241st RIBF Nuclear Physics Seminar

Nuclear Clustering probed by Nuclear Responses

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In this contribution, I will discuss the relationship between the nuclear clustering and the Isoscalar monopole/dipole responses. In this decade, it was proved that the cluster states have strong isoscalar monopole/dipole transition strengths from the ground state. This finding enables us to explore various cluster states using the nuclear responses.

Using the analytic shell-model and cluster-model wave functions, analytic formula for the transition matrices are derived, that clearly show that the isoscalar monopole/dipole transitions are good probe for nuclear clustering. For more quantitative and detailed discussions, I will introduce the numerical calculations based on the antisymmetrized molecular dynamics. Various nuclear clustering in the excited states of 24Mg and 28S will be discussed.

Jun.13th(Tue.)2017 15:00~ RIBF Hall (rm.201), RIBF bldg., RIKEN \* The talk will be given in English language..

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