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# Structure and Responses of nuclei studied by real-time evolution method

Recently, we proposed a new theoretical method which enables to study nuclear structure and responses in an unified way. This method, named real-time evolution method, utilizes the equation-of-motion of interacting nucleon wave packets. It will be demonstrated that this method is very powerful theoretical tool which beyond the small amplitude approximation (RPA).

As an example of the application, Following topics will be discussed.

1. The structure and excitation modes of the Hoyle state
2. The structure and decay pattern of pygmy dipole resonances

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