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212回 RIBF核物理セミナー
RIKEN Nishina Center for Accelerator Based Science
The 212th RIBF Nuclear Physics Seminar

The Electric Dipole Response of ^{132}Sn

Dr. Philipp Schrock (CNS, The Univiersity of Tokyo)

The Isovector Giant Dipole Resonance (IVGDR) is a well-known collective excitation in which all protons oscillate against all neutrons of a nucleus. In neutron-rich nuclei an additional low-lying dipole excitation occurs, often denoted as Pygmy Dipole Resonance (PDR). The strength function of the PDR is related to the thickness of the neutron skin. Experimental information provide important constraints on the theoretical description of nuclear matter, especially pure neutron matter. However, experimental data for exotic neutron-rich nuclei are scarce.

To study the electric dipole response of neutron-rich tin isotopes an experiment was successfully performed with the R3B-LAND setup at GSI Helmholtzzentrum für Schwerionenforschung GmbH (Darmstadt, Germany). Relativistic Coulomb excitation in inverse kinematics was utilized for these studies. The experimental setup is designed to perform kinematically complete measurements of the projectiles and their decay products which allows an event-by-event reconstruction of the excitation energy.

The experimental setup and the analysis method will be described and first results for the dipole response of 132Sn will be discussed.

Dec. 17th (Thu.)2015 16:30 ～
Nishina Hall , Nishina bldg., RIKEN

＊ The talk will be given in English language..

Contact: Nuclear Physics Seminar Organizing Committee
npsoc@ribf.riken.jp
http://ribf.riken.jp/~seminar/