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## Gamow-Teller Giant Resonances in $^{132}\text{Sn}$

*Tuesday, 30 May 2017 12:15 (25 minutes)*

The Gamow-Teller (GT) transition is one of the most basic excitation modes in nuclei, exhibiting a strong and highly repulsive collectivity as the so-called GT giant resonance (GTGR). The study of the GTGR is an essential step to elucidate the nuclear interactions and structures underlying the collectivity as well as to construct the nuclear models that can reliably describe phenomena whose behaviours are governed by nuclear spin-isospin responses such as weak-interaction processes in astrophysical sites and double beta decay nuclei. Despite of these importances of the GTGR, the existing data are only limited to stable nuclei and there have been no data in nuclei far from the stability line. In this talk, the first experimental determination of the GT transition strengths from  $^{132}\text{Sn}$  to  $^{132}\text{Sb}$ , performed using the (p,n) reaction at RIKEN RIBF, will be presented with answers on the questions such as “the spin-isospin collectivity can be different, if one goes far from the stability line?”, “most sophisticated nuclear models could reproduce the data”. The speaker will also give an overview of the GT studies on nuclei that will be emerging at RIKEN RIBF in the near future.

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