

# ISGMR measurement in Xe isotope with CAT-M

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The nuclear matter compressibility ( $K_\tau$ ) is an important physical quantity that can directly determine a part of the equation of state of nuclear matter. In order to determine  $K_\tau$  with high accuracy, it is indispensable to determine the compressibility of many nuclei ( $K_A$ ). We have been developing an active target CAT-M for the purpose of systematic measurement of an isoscalar giant monopole resonance (ISGMR).

In this study, we performed a ISGMR measurement using the  $^{136}\text{Xe}$  (d, d') reaction as the first measurement of systematic measurements with the Xe isotope. A dipole magnet was newly introduced into CAT-M for eliminate the delta rays by high intensity heavy ion beam in the experiment. Moreover a Mini TPC that has  $10\times 30\times 30\text{mm}^3$  active volume, was introduced for measure the beam angle. We will report the outline of the experiment.

## Experimental nuclear physics

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## Theoretical nuclear physics

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