



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262回 RIBF核物理セミナー
RIKEN Nishina Center for Accelerator Based Science
The 262nd RIBF Nuclear Physics Seminar

First mass measurements of $55-57\text{Ca}$

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An occurrence of magic number in exotic nuclei was first discovered at the beginning of this century and a lot of nuclear physicists are interested in this topic as an important feature of exotic nuclei. To discuss this topic, the atomic masses around and beyond the interested nucleus are essential physical quantities.

The TOF-Brho technique is one of the powerful tools to extend atomic mass database to extremely exotic nuclei. By using this method combined with BigRIPS-SHARAQ system we have done direct mass measurements of Ca isotopes beyond the $N=34$ magic number, and recently confirmed a shell closure of neutrons in 54Ca .

In this talk, I will introduce details of the performed experiment and discuss the results, as well as a future plan of TOF-Brho mass measurements by SHARAQ.

* The talk will be given in English language.

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