



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255回 RIBF核物理セミナー  
RIKEN Nishina Center for Accelerator Based Science  
The 255th RIBF Nuclear Physics Seminar

## SLOWRI and related topics

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'SLOWRI' is a universal low-energy RI-beam facility located at the downstream of BigRIPS in RIBF/RIKEN, which provides a wide variety of short-lived nuclei as high-purity and low-emittance ion beams or stored ions in trap. SLOWRI consists of two kind of gas catchers, He gas catcher with RF carpets for ion guide and Ar gas catcher with resonant laser ionization. The construction has been started from FY2013 and the R&D work is under progress. Several issues of the development for gas catcher system, such as contamination problem and space charge problem, present status and the perspective will be presented.

Using 'SLOW' RI beam provided from SLOWRI, several scientific programs are planned. For example, one of the main programs is systematic mass measurements for neutron-rich radioactive nuclei on and at around the path of rapid neutron capture process (r-process) with multi-reflection time-of-flight mass spectrograph (MR-TOF). And also, such low-energy RI beams can be adopted for material science, for example, nanometer scale diffusion measurement in battery materials. The related scientific topics will be also introduced.

\* The talk will be given in English language.

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RIBF Hall, RIBF bldg., RIKEN

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