



独立行政法人理化学研究所 仁科加速器研究センター
第81回RIBF核物理セミナー

RIKEN Nishina Center for Accelerator Based Science
The 81st RIBF Nuclear Physics Seminar

**First demonstration of electron scattering using a novel target
developed for short-lived nuclei
- towards Hofstadter's experiments for short-lived nuclei -**

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My talk will be mainly based on our recent publication; Phys. Rev. Lett. 102, 102501(2009).

We have successfully performed a demonstrative electron scattering experiment using the SCRIT technique, which is exclusively developed for electron scattering experiments off rare-produced, short-lived nuclei.

A luminosity of an order of 10^{26} /cm²/s, high enough for elastic electron scattering, was obtained using only 10^6 trapped ions at the averaged electron beam current of 75mA. The angular distribution of elastic scattering from the trapped Cs ions was successfully measured. This success clearly proves that electron scattering off short-lived nuclei is now practical with the SCRIT technology.

In the seminar, I will describe the results of this experiment in details with an introduction to electron scattering. In addition, future perspectives at an electron scattering facility for short-lived nuclei at RIBF, which is under construction, will be given.

**Jun. 30(Tue), 2009 13:30 -
Nishina Hall, RIKEN**

The seminar will be given in Japanese or English

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