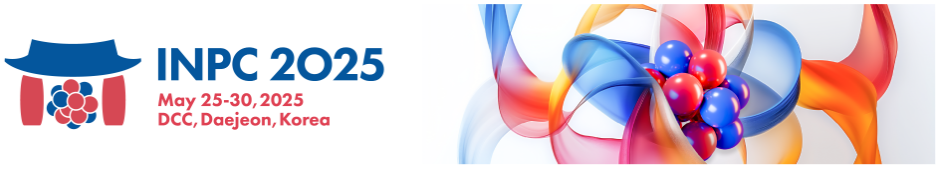

Contribution ID: **581** Type: **Invited Talk for Parallel Sessions (Invitation Only)**

Present status and perspective of the SCRIT electron scattering facility

Thursday, 29 May 2025 16:55 (25 minutes)

The world's first electron scattering experiment on online-produced radioisotopes (RIs) was successfully conducted at the SCRIT electron scattering facility, located at the RIKEN RI Beam Factory in Japan.
Electron scattering is widely recognized as one of the most powerful and reliable methods for investigating the structure of atomic nuclei due to its well-understood electromagnetic interaction mechanism.

Despite the long-standing ambition to explore exotic features of short-lived unstable nuclei through electron scattering, such studies have been hindered by the challenge of preparing sufficiently thick targets.
However, we have recently achieved a significant breakthrough by successfully performing electron scattering on ^{137}Cs.
This isotope was produced via the photo-fission of uranium and promptly transferred to the SCRIT system, where it was trapped to make a stationary target in a short timeframe.

This experiment represents a major milestone in simulating electron scattering from short-lived unstable nuclei produced online, paving the way for further advancements, especially with future upgrades to the ISOL driver's power.
In this presentation, we will highlight the recent progress and future prospects of the SCRIT electron scattering facility.
We will also discuss several potential research topics that could become feasible in the future through the unique capabilities of the SCRIT method.

Primary author: TSUKADA, Kyo (ICR Kyoto University)

Presenter: TSUKADA, Kyo (ICR Kyoto University)

Session Classification: Parallel Session

Track Classification: Nuclear Structure