**Physics Division Seminar**

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*Electron scattering off online-produced radioactive isotope*

 *- first results from RIKEN SCRIT e-scattering facility –*

**Abstract:**

In this seminar, I will present the results of the world's first electron scattering off an online-produced radioactive isotope. This achievement was recently accomplished at the RIKEN SCRIT electron-scattering facility in Japan. The SCRIT facility is designed to probe the internal structures of short-lived exotic nuclei by electron scattering. This facility employs a novel ion-trapping technique, named SCRIT (Self Confining Radioactive Isotope Ion Target), to prepare a target of exotic nuclei for electron scattering on an energetic electron beam (*E*e = 150 - 300 MeV). By utilizing only ~107 ions of an exotic nucleus, the SCRIT target technique allows us to achieve a luminosity of approximately 1027 /cm2/s, which is the minimum required for realizing elastic electron scattering. I will discuss the experimental results in detail and the SCRIT facility as well. In addition to elastic scattering, I would like to mention possible additional research possibilities at the SCRIT facility. If time permits, I would also like to introduce our low-energy electron scattering project, ULQ2 (Ultra-Low Q2), which aims to determine the proton charge radius through extremely low-energy electron scattering with *E*e = 10 - 50 MeV.

Thursday, August 31st @ 11 AM – 12 PM

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[**Zoom Link Here**](https://jlab-org.zoomgov.com/j/1612907613?pwd=TzFGK05SdDBIdFlFZmp5UEpYR2tFZz09&from=addon)