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Type: **Plenary Talk (Invitation Only)**

Production and Experiments with Rare Isotope Beams at FRIB

Friday, 30 May 2025 15:00 (30 minutes)

The Facility for Rare Isotope Beams, FRIB, is a US Department of Energy User Facility dedicated to providing beams of rare isotopes for researchers from around the world. FRIB began operation in May 2022 and has since produced over 280 rare isotopes for research ranging from the study of halo nuclei to the measurement of reaction rates relevant to astrophysical processes. FRIB uses a high-power superconducting LINAC to accelerate beams from oxygen to uranium to around 200 MeV/u. Novel features include multiple charge-state acceleration and stripping of electrons with a flowing lithium film. The primary beam from the LINAC reacts with a rotating carbon target and rare isotopes are collected and separated with a fragment separator. The talk will provide an overview of rare isotope production and separation at FRIB. Examples of early science from FRIB, including production of 11 new isotopes, will be presented. The benefits of an FRIB400 upgrade will be presented.

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Track Classification: Nuclear Reactions