

The LERIB project at iThemba LABS

Thursday, 18 April 2024 12:00 (20 minutes)

The Low Energy Radioactive-Ion Beam (LERIB) project at iThemba LABS aims to produce radioactive-ion beams of up to 60 keV energy using the ISOL method. It is centered around a target-ion/ion-source or “Front-End” that is identical to the SPES front-end at Legnaro, Italy, which in turn is derived from the ISOLDE front-end at CERN. The iThemba LABS front-end is presently being worked-up in an offline test facility at the lab, where beams of group I and group II elements have been produced using surface-ionization.

Immediate goals for the facility are to produce 40K targets for nuclear structure and astrophysics research, to develop a FEBIAD ion-source, and to simulate the production of Terbium and Actinium isotopes for medical research. Eventually the front-end will be moved to an “on-line” facility where the radioactive isotopes will be made available for research

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Session Classification: Nuclear Physics Applications and Projects