

## High Power ISOL Target Remote Handling Developments at TRIUMF

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TRIUMF maintains a high power ISOL target facility called ISAC (Isotope Separator and Accelerator), which generates about 10 waste targets per year with dose rates up to 1 Sv/h at 1 m. TRIUMF has remote handling infrastructure in place for servicing the ISAC target modules, including a hot cell and remote bridge crane. Upgrades underway include a second hot cell and a crane rotation redundancy system. These improvements will permit routine target exchanges and extended module repairs in parallel, increasing the reliability of the facility. TRIUMF is also developing a new ISOL target facility called ARIEL (Advanced Rare IsotopE Laboratory). TRIUMF will make use of modern technology and apply lessons learned from ISAC to the ARIEL remote handling facility design. Recent ARIEL developments include a maintenance and waste-processing hot cell, as well as a crane-based remote handling system for a novel target module, which is a hybrid of the CERN ISOLDE and TRIUMF ISAC systems.

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