

# A TITAN Journey Towards The R-Process

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In the quest to measure the masses of the most exotic species available at TRIUMF, the TITAN facility has transitioned from a Penning-trap to a Multi-Reflection Time-Of-Flight (MR-TOF) mass spectrometer. The latter has permitted measurements of yields with species less than 0.01 particles per second as well as half-life determinations. With an extraordinary dynamic range, TITAN has tackled both sides of the valley of stability, moving closer to the driplines. For studies of the rapid-proton-capture process, measurements of Ga-60 and Sr-74 have been performed. More recent collaborations with beam development have permitted measurements within the r-process pathway like Zn-83 and Sn-138. A selection of recent developments, results, and their impact will be shown.

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