

Probing nuclear structure through the mass surface at TITAN

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Mass measurement facilities are extremely important in furthering our understanding of nuclear structure away from the valley of stability, including searching for collective behaviors and probing the appearance and disappearance of shell closures. TRIUMF's Ion Trap for Atomic and Nuclear science (TITAN) is among the world's premier precision trapping facilities, with the newly added Multiple-Reflection Time-of-Flight Mass Spectrometer (MR-ToF-MS) expanding its reach. A variety of mass measurement campaigns and results from TITAN's MR-ToF-MS will be discussed, including investigations of a surfacing island of inversion around $N = 40$ through neutron-rich Fe masses and tests of the robustness of the $N = 32$ and $N = 34$ shell closures in Ca, Ti and V masses.

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