Abstract Submitted
for the NWS12 Meeting of
The American Physical Society

Taming Highly Charged Radioisotopes USMAN CHOWDHURY, TRIUMF & University of Manitoba, BENJAMIN EBERHARDT, FULUNI JANG, BRAD SCHULTZ, VANESSA SIMON, PAUL DELHEIJ, JENS DILLING, TRIUMF, GERALD GWINNER, TRIUMF & University of Manitoba, TITAN COLLABORATION — The precise and accurate mass of short-lived radioisotopes is a very important parameter in physics. Contribution to the improvement of nuclear models, metrological standard fixing and tests of the unitarity of the Caibbibo-Kobayashi-Maskawa (CKM) matrix are a few examples where the mass value plays a major role. TRIUMF's ion trap for atomic and nuclear physics (TITAN) is a unique facility of three online ion traps that enables the mass measurement of short-lived isotopes with high precision ($\sim 10^{-8}$). At present TITAN's electron beam ion trap (EBIT) increases the charge state to increase the precision, but there is no facility to significantly reduce the energy spread introduced by the charge breeding process. The precision of the measured mass of radioisotopes is linearly dependent on the charge state while the energy spread of the charged radioisotopes affects the precision adversely. To boost the precision level of mass measurement at TITAN without loosing too many ions, a cooler Penning trap (CPET) is being developed. CPET is designed to use either positively (proton) or negatively (electron) charged particles to reduce the energy spread via sympathetic cooling. Off-line setup of CPET is complete. Details of the working principles and updates are presented

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Date submitted: 17 Sep 2012 Electronic form version 1.4