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Steps Towards Implementing TITAN's Cooler Penning Trap
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Masses of short-lived isotopes are essential inputs for a number of fields of physics. These include, but are not limited to, studies in astrophysics and nuclear physics. TRIUMFs Ion Trap for Atomic and Nuclear physics (TITAN) utilizes Penning trap mass spectrometry to determine such masses. Charge breeding of the singly charged ions typically measured in such a trap shows great promise for increasing the capability of TITAN to perform high precision mass measurements of these isotopes. Mass measurements have been successfully performed on highly charged isotopes, but the maximal improvements in precision have not yet been realized due to an increase in energy spread resulting from the charge breeding process. In order to reduce this energy spread in the future prior to measurement, we are in the process of commissioning a Cooler Penning Trap (CPET). In this talk I will discuss the status of CPET in the context of the TITAN facility at TRIUMF and the steps we are taking towards its implementation.

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