Abstract Submitted
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Design of a Laser Ablation Ion Source for High-Precision Penning Trap Mass Spectrometry[1] CURTIS HUNT, ISHARA RATNAYAKE, PAUL HAWKS, RICHARD BRYCE, MATTHEW REDSHAW, Central Michigan University — High-precision atomic mass measurements provide important data for a wide range of fields including atomic, nuclear and neutrino physics, determination of fundamental constants, and metrology. At Central Michigan University we are building a Penning trap system that will utilize ions produced by external ion sources to allow access to a wide range of isotopes, including long-lived radioactive isotopes and isotopes with low natural abundances. The ions will be transported to a "capture" trap, before being transferred to double precision-measurement trap structure. In this poster we will present the design of a laser ablation ion source and the ion extraction and transport optics. We will report on the current status of the construction and operation of the ion source and the CMU Penning trap.

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