

Abstract Submitted  
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**Design of a double Penning-trap mass spectrometer for high-precision mass measurements**<sup>1</sup> ISHARA RATNAYAKE, RICHARD BRYCE, PAUL HAWKS, CURTIS HUNT, MATTHEW REDSHAW, Central Michigan University — The mass of an atom plays an important role in various fields throughout science. As such, there is a need for precise mass determinations on a wide range of isotopes. At Central Michigan University we are developing a Penning trap to focus on ultra-high precision measurements of long-lived radioactive isotopes and isotopes that have low natural abundances. The Penning trap we are constructing will consist of a double precision measurement trap structure for simultaneous cyclotron frequency comparisons to eliminate the effect of magnetic field fluctuations. An additional, cylindrical Penning trap will be used to capture ions from external ion sources, eliminate contaminant ions and transfer the ions of interest to the precision traps. In this poster we will present the design of the Penning trap system, and report on the current status of the project.

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