Abstract Submitted
for the DAMOP17 Meeting of
The American Physical Society

Precision mass ratios of mass-3 ions[1] EDMUND G MYERS, SAEED HAMZELOUI, JORDAN R SMITH, DAVID J FINK, Florida State University — Precision atomic masses of hydrogen, deuterium and helium-3 are important fundamental constants with application to a wide range of physical science. Using a rebuilt and improved Penning trap mass spectrometer, we are measuring the ion mass ratios HD^+/H_3^+, $^3He^+/H_3^+$ and $^3He^+/HD^+$. The results will help resolve the current four-sigma discrepancy for the mass of ^{3}He.

[1]Work supported by NSF

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Date submitted: 30 Jan 2017 Electronic form version 1.4