

Abstract Submitted
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High precision Penning trap mass spectrometry of rare isotopes produced by projectile fragmentation ANNA KWIATKOWSKI, C. BACHELET, B.R. BARQUEST, G. BOLLEN, C.M. CAMPBELL, R. FERRER, C. GUENAUT, D. LINCOLN, D.J. MORRISSEY, G.K. PANG, A.M. PRINKE, R. RINGLE, J. SAVORY, S. SCHWARZ, Natl. Superconducting Cyclotron Lab./Michigan State Univ., M. BLOCK, GSI, P. SCHURY, RIKEN, C.M. FOLDEN III, D. MELCONIAN, Cyclotron Inst./Texas A&M Univ., S.K.J. SJUE, TRIUMF — The Low Energy Beam and Ion Trap (LEBIT) facility combines high precision Penning trap mass spectrometry with fast beam projectile fragmentation and high pressure gas stopping techniques. Advanced ion manipulation, such as high efficiency continuous mass selection in an ion-guide and radio-frequency ion accumulation and bunching, are used to purify, cool, and pulse the beam. Recent mass measurements include $^{63-66}\text{Fe}$, ^{66}As , and ^{32}Si . The neutron-rich iron isotopes access the $N = 40$ subshell closure. The new significantly lower mass uncertainty makes ^{66}As a candidate to test the CVC hypothesis. ^{32}Si , member of the $A = 32$, $T = 2$ quintet, provides the most precise test of the isobaric multiplet mass equation. An overview of the various aspects of ion manipulation and some of the resulting measurements will be presented.

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