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Precision Mass Measurements with LEBIT at MSU G. BOLLEN, D. DAVIES, NSCL/MSU, A. DOEMER, MSU Dept. of Physics and Astronomy, J. HUIKARI, NSCL, D.J. MORRISSEY, NSCL/MSU, A. PRINKE, MSU Dept. of Physics and Astronomy, R. RINGLE, P. SCHURY, NSCL/MSU, S. SCHWARZ, NSCL, T. SUN, NSCL/MSU, L. WEISSMAN, NSCL — The Low-Energy beam and Ion Trap facility LEBIT opens the door to a new class of experiments with projectile fragment beams. The Coupled Cyclotron Facility at the NSCL delivers a large range of rare isotopes with high intensities, produced by the in-flight separation method. LEBIT converts these beams into low-energy beams using gas stopping and advanced ion guiding, cooling, and bunching techniques. The gas stopping cell has shown to efficiently stop relativistic ions and convert them into a low-energy continuous beam. The RFQ ion trap cooler-buncher shows excellent performance in converting such beams into brilliant pulses. First test mass measurements on stable isotopes performed with the 9.4 T Penning trap system show a very good accuracy. The status of LEBIT and the results of first measurments will be presented.

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