

Abstract Submitted
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Experimental Results from Oak Ridge Isomer Spectrometer and Separator (ORISS) A. PIECHACZEK, J.C. BATCHELDER, H.K. CARTER, R.E. GOANS, S. LIU, ORAU, V. SHCHEPUNOV, SRL, E.F. ZGANJAR, LSU, UNIRIB COLLABORATION — ORISS is a linear multi reflection time-of-flight mass analyzer developed by the University Radioactive Ion Beam Consortium. It will be used to separate any isobar and many isomers for decay spectroscopy experiments. The entire system's operation was demonstrated with a less than ideal multi-isotopic ion source and achieved a mass resolving power as high as 430,000. To better characterize the system we have installed a monoisotopic ^{133}Cs ion source. The radiofrequency quadrupole ion cooler and buncher, which serves as the ion injector into ORISS, was tested in stand-alone mode and achieved a longitudinal emittance of $22 \pi \text{ eV} \times \text{ns}$ and transmission $>40\%$. These very good results confirm our expectation that ORISS can achieve the design goals. Using the improved ion source, we expect, very soon, to demonstrate the complete system's design goals of 400,000 mass resolving power and 50% transmission.

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