

Abstract Submitted
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Results of precision mass measurements from CARIBU with the CPT¹ J. VAN SCHELT, U. of Chicago, D. LASCAR, Northwestern U., G. SAVARD, J.A. CLARK, J.P. GREENE, A.F. LEVAND, T. SUN, B.J. ZABRANSKY, ANL, S. CALDWELL, M.G. STERNBERG, U. of Chicago, A. CHAUDHURI, K.S. SHARMA, U. of Manitoba, G. LI, McGill U. — An array of neutron-rich nuclides from the Californium Rare Isotope Breeder Upgrade (CARIBU) at ANL beyond ^{132}Sn has been subjected to precision mass measurements with the Canadian Penning Trap mass spectrometer, including many never-before-measured nuclides. Neutron-separation energies calculated directly from these results provide essential input to models of the astrophysical r -process. Trends in binding energies far from stability provide input to nuclear mass models and identify regions of deformation. Additional nuclear structure information can be extracted from symmetry energy and observations of isomeric states. Implications for all of these topics will be discussed as well as future plans with the more intense CARIBU source.

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