Abstract Submitted for the DNP12 Meeting of The American Physical Society

Mass measurements along the r-process path at CARIBU¹ GUY SAVARD, JASON CLARK, JON VAN SCHELT, DAN LASCAR, AN-THONY LEVAND, BRUCE ZABRANSKY, Argonne National Laboratory, KU-MAR SHARMA, University of Manitoba — The CARIBU facility is now operational and a large body of new mass measurements around the N=82 waiting point has been accumulated. The masses of over 70 neutron-rich isotopes from the heavy Californium fission peak have been measured with the CPT Penning trap mass spectrometer yielding a typical accuracy of 10 keV/c2. The most neutron-rich masses show significant deviations from either masses measured by other means when available or from extrapolated values from the last Atomic Mass Evaluation when no measurements where available. The system used for these measurements will be briefly described and an analysis of the modification to the delay for the r-process in this region when taking into accounts the new masses will be presented.

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