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Decay spectroscopy of neutron-rich ¹³⁴Sb at the CARIBU facility¹ KAROLINA KOLOS, NICHOLAS SCIELZO, STEPHEN PADGETT, LLNL, ELIZABETH A. MCCUTCHAN, BNL, ALAN JOHN MITCHELL, The Australian National University, Canberra, CHRISTOPHER J. LISTER, PATRICK COPP, University of Massachusetts Lowell, JASON A. CLARK, MIKE P. CARPENTER, GUY SAVARD, SHAOFEI ZHU, ANL, ERIC B. NORMAN, UC Berkeley, ANI APBRA-HAMIAN, KEVIN SIEGL, University of Notre Dame, ELIZABETH HECKMAIER, UC Irvine, SCOTT MARLEY, Luisiana State University — Neutron-rich ¹³⁴Sb is one of a few isotopes (together with ⁹²Rb, ⁹⁶Y and ¹⁴²Cs) that have a large branching ratio to decay to the ground state via a $0^- \rightarrow 0^+$ first-forbidden transition. Previous measurements have indicated that 97.5% of the decays of ¹³⁴Sb ground state populate the ground state of ¹³⁴Te directly. However, a recent experiment using an ion trap indicated that this number may be lower. In order to confirm the β -decay branching ratios, an experiment was carried out to measure the decay properties of 134 Sb/ 134m Sb using the X-Array (a highly efficient HPGe clover array) and SATURN (a plastic scintillators and tape-transport system) decay-spectroscopy station at the CARIBU radioactive ion-beam facility at Argonne National Laboratory. Results on the analysis will be presented.

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