Abstract Submitted for the DNP11 Meeting of The American Physical Society

Commissioning a Tape Transport System for Decay Studies and Beam Diagnostics at CARIBU¹ P.F. BERTONE, B. DIGIOVINE, C.J. LIS-TER, K. TEH, Physics Division, Argonne National Laboratory, F.G. KONDEV, C. NAIR, Nuclear Engineering Division, Argonne National Laboratory, P. CHOWD-HURY, A.Y. DEO, S. LAKSHMI, Department of Physics and Applied Physics, University of Massachusetts Lowell — The CAlifornium Rare Isotope Breeder Upgrade (CARIBU) to the ATLAS facility at Argonne utilizes the spontaneous fission of $^{252}\mathrm{Cf}$ for producing neutron-rich radioactive nuclei. CARIBU will be used for a wide variety of experiments, involving both reaccelerated and stopped beams, in nuclear structure, nuclear astrophysics and applications. Many of these experiments will require a means of transporting radioactivity to and from detector counting stations for the purpose of assaying beam content, measuring half-lives, β - γ spectroscopy and determining Gamow-Teller strength distributions. We have commissioned the first of several tape transport systems that will perform these functions. An overview of the design and deployment of the system will be given along with preliminary test results.

¹Supported by the U.S. DOE Office of Nuclear Physics DE-AC02-06CH11357.

P.F. Bertone Physics Division, Argonne National Laboratory

Date submitted: 06 Jul 2011 Electronic form version 1.4