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Low-energy transitions in ^{112}Cd identified in the beta-decays of ^{112}Ag and ^{112}In K.L. GREEN, P.E. GARRETT, G.A. DEMAND, G.F. GRINYER, K.G. LEACH, A.A. PHILLIPS, M.A. SCHUMAKER, C.E. SVENSSON, J. WONG, University of Guelph, G.C. BALL, D.S. BANDYOPADHYAY, G. HACKMAN, A.C. MORTON, C.J. PEARSON, TRIUMF, R.A.E. AUSTIN, S. COLOSIMO, St Marys University, D. CROSS, Simon Fraser University, J.L. WOOD, W.D. KULP, Georgia Tech, S.W. YATES, University of Kentucky — The Cd isotopes, especially ^{112}Cd, have been considered exceptional examples of vibrational nuclei. While many level lifetimes are known in ^{112}Cd, previous measurements lacked sensitivity to weak, low-energy branches that are often the most important transitions to establish collectivity. We have sought these branches through a high-statistics measurement of the β decay of ^{112}Ag and ^{112}In to ^{112}Cd using the 8π spectrometer at the TRIUMF-ISAC facility. The data were collected in scaled-down γ singles and $\gamma\gamma$ coincidence mode, and $\sim 100\times10^6$ events were sorted into a random-background-subtracted $\gamma\gamma$ matrix. New branches from levels below 2.5 MeV were observed, and a higher precision on several branching ratios, especially the 4^+ and 0^+ doublet of states at 1871 keV, has been achieved. Details of the analysis to date will be reported. Work supported in part by NSERC and the US DOE under grant DE-FG02-96ER40958.

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