

Abstract Submitted
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High-statistics beta-plus/EC decay study of Xe-122¹ B. JIGMEDDORJ, P.E. GARRETT, B. HADINIA, A.J. RADICH, E.T. RAND, C.E. SVENSSON, University of Guelph, Guelph, ON, Canada, C.A. ANDREOIU, D.S. CROSS, J. PORE, U. RIZMAN, P. VOSS, Simon Fraser University, Burnaby, BC, Canada, G.C. BALL, T. BRUHN, A.B. GARNSWORTHY, G. HACKMAN, M. MOUKADDAM, J. PARK, M.M. RAJABALI, Z. WANG, TRIUMF, Vancouver, BC, Canada, J.L. WOOD, Georgia Institute of Technology, Atlanta, GA, USA, S.W. YATES, University of Kentucky, Lexington, KY, USA — The isotopes of Xe are centrally located with respect to the evolution of collectivity in the $Z > 50$, $N < 82$ region, which exhibits an extraordinarily smooth evolution of simple collective signatures. Excited 0^+ states in $^{124-132}\text{Xe}$ are very strongly populated, suggesting that there are important proton subshell gaps influencing the low-lying structure of these isotopes and possibly shape-coexistence that would lead to strong $E0$ transitions. However, collectivity in this region is very poorly characterized because of a lack of spectroscopic data for low-spin states. A high-statistics ^{122}Cs β^+/EC decay experiment to obtain detailed spectroscopic data for low spin states was performed at the TRIUMF-ISAC facility using the 8π γ -ray spectrometer and PACES array of five Si(Li) detectors, for conversion electrons spectroscopy. Preliminary results will be presented.

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