Abstract Submitted
for the NWS16 Meeting of
The American Physical Society

Measurements of Mixing Ratios in ^{116}Sn.[1] DAVID CROSS, J. PORE, C. ANDREOIU, Simon Fraser University, G.C. BALL, P.C. BENDER, TRIUMF, V. BILDSTEIN, University of Guelph, A.S. CHESTER, Simon Fraser University, G.A. DEMAND, A. DIAZ VARELA, R. DUNLOP, University of Guelph, A. GARNSWORTHY, TRIUMF, P.E. GARRETT, University of Guelph, G. HACKMAN, TRIUMF, B. HADINIA, B. JIGMEDDORJ, University of Guelph, R. KANUNGO, St. Mary's University, A. LAFFOLEY, A. LIBLONG, University of Guelph, D. MILLER, TRIUMF, B. NOAKES, Simon Fraser University, C. SVENSSON, University of Guelph, P. VOSS, Simon Fraser University, Z.-M. WANG, TRIUMF, J.L. WOOD, Georgia Institute of Technology, S. YATES, University of Kentucky — The β decay of ^{116m1,g}In to ^{116}Sn, conducted at TRIUMF-ISAC utilizing the 8π array of 20 HPGe detectors augmented with 5 Si(Li) detectors, produced a high statistics data set from which E2/M1 mixing ratios from $\gamma\gamma$ angular correlations were obtained. Several new mixing ratios were measured for the first time for transitions among the $I^{\pi} = 4^{+}$ states within ^{116}Sn. Additionally, a re-measurement of mixing ratios between the 2_2^+ to 2_1^+ and 2_3^+ to 2_1^+ states shows consistency with mixing ratio systematics in neighboring even-even tin isotopes. Previous analyses of ^{116}Sn have rationalized the nature and mixing of the 4^+ states on the basis of shared phonon strength [1]. The results presented here demonstrate that generalized seniority, without the inclusion of vibrational components, may better describe these states. This has implications for ongoing theoretical and experimental research on ^{116}Sn and neighboring tin isotopes. [1] S. Raman *et al.*, Phys Rev C 43 521 (1991)

[1]This work was supported by the Natural Sciences and Engineering Research Council

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Date submitted: 08 Apr 2016 Electronic form version 1.4