Multipole mixing ratios of γ-band to ground band transitions in neutron-rich Mo and Ru isotopes B.B. FENKER, C. GOODIN, J.H. HAMILTON, A.V. RAMAYYA, S.H. LUI, J.K. HWANG, N.T. BREWER, Y.X. LUO, Vanderbilt University, A. DANIEL, G. TER-AKOPIAN, Y. OGANESSIAN, JINR, J.O. RASMUSSEN, LBNL, S.J. ZHU, Tsinghua University — Multipole mixing ratios, δ(E2/M1) for the ΔI=0,1 transitions from the γ vibrational bands to the ground bands in neutron-rich nuclei $^{104-108}$Mo and $^{106-112}$Ru were determined from $\gamma-\gamma(\theta)$ correlations. The prompt $\gamma-\gamma-\gamma$ coincidences in the spontaneous fission of ^{252}Cf were measured with Gammasphere. The data were sorted first into 64 angle bins and then compressed into 17 angle bins. The $\gamma-\gamma(\theta)$ data between two transitions were analyzed directly or by gating the data by transitions that feed or follow the two transitions of interest. Special interest was given to eliminate unwanted transitions of similar energy by selecting different gate transitions. The E2/M1 mixing ratios were measured for 2_γ-2_g, 3_γ-2_g, up to 9_γ-8_g in some nuclei. All the accurate δ values yielded E2 $>$ 95%.

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