Field Modulated Intrinsic Positive Exchange Bias in Novel Ferrite \( \text{Ru}_{0.25}\text{Cr}_{0.75}\text{O}_2 \) near the Compensation Point KEVIN G. WEST, NAM DAO, University of Virginia, JIWEI LU, STUART A. WOLF — In some ferrimagnetic materials systems a compensation point is observed where the opposing sublattice magnetizations are equal and opposite resulting in a zero net magnetization. The resulting magnetization decreases below zero at temperatures below \( T_c \) and then increase to zero at \( T_c \). We observe this type of unusual ferrimagnetic behavior in the \( \text{Ru}_{0.25}\text{Cr}_{0.75}\text{O}_2 \) system. In addition, near the compensation point we observe positive exchange bias that can be modulated using an external applied magnetic field. Possible mechanisms will be discussed.