

Abstract Submitted
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**High Pressure Study on the Multiferroic State in $\text{Mn}_{1-x}\text{Co}_x\text{WO}_4$:
 $x = 0.135$ and $x = 0.15$** MELISSA GOOCH, NARAYAN POUDEL, BERND
LORENZ, K.C. LIANG, Y.Q. WANG, Y.Y. SUN, Texas Center for Superconductivity at the University of Houston, JINCHEN WANG, FENG YE, Oak Ridge National Laboratory, JAIME FERNANDEZ-BACA, Oak Ridge National Laboratory and Department of Physics and Astronomy at The University of Tennessee, CHINGWU CHU, Texas Center for Superconductivity at the University of Houston and Lawrence Berkeley National Laboratory — $\text{Mn}_{1-x}\text{Co}_x\text{WO}_4$ has an interesting and complex phase diagram where 2 multiferroic phases coexist at $x = 0.15$. For $x < 0.15$ a spiral spin structure forms, while in contrast a conical spin is observed for $x > 0.15$. High pressure polarization measurements on $x = 0.135$ observed a polarization flop and an increase in the polarization, indicating the a-c spiral is converted to the conical spin. An enhancement of the polarization by $\sim 400\%$ is seen for $x = 0.15$, at the highest pressure measured. High pressure neutron measurements found supporting results.

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