

Abstract Submitted  
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**Inelastic Neutron Scattering Studies of  $\text{GeCo}_2\text{O}_4$**  M.K. CRAWFORD, R.L. HARLOW, DuPont Company, Wilmington, DE, Y. CHEN, Q. HUANG, J.W. LYNN, Y. QUI, J.R.D. COPLEY, NCSR, NIST, Gaithersburg, MD, S. HARA, Y. YOSHIDA, S.I. IKEDA, AIST, Tsukuba, Japan, D.T. ADROJA, ISIS, United Kingdom, R.W. STEVENS, B.F. WOODFIELD, J. BOERIO-GOATES, Brigham Young University, Provo, UT, P.L. LEE, Y. ZHANG, APS, ANL, Argonne, IL, R.A. FISHER, LBNL, Berkeley, CA —  $\text{GeCo}_2\text{O}_4$  is a normal spinel in which the magnetic spin- $3/2$   $\text{Co}^{2+}$  ions are located on the crystallographic  $B$ -sites.  $\text{GeCo}_2\text{O}_4$  has a Néel transition ( $T_N = 20.6$  K) that coincides closely with a cubic-to-tetragonal structural phase transition, below which  $c/a > 1$ . Inelastic neutron scattering measurements show that there is an energy gap in the Néel state of magnitude 3 meV. We have measured the dispersion of the lowest energy spin wave branch along the (100), (110) and (111) directions for single crystals grown by the floating zone technique. In addition, inelastic neutron powder diffraction data have been obtained to study the higher energy crystal field levels of  $\text{Co}^{2+}$ . These data will be described and compared with results for other  $B$ -site spinels.

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