

Abstract Submitted
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Structural Studies of Synthetic Ferromagnetic Sample CeTiGe3 Under Pressure¹ JARED COLES, WEIZHAO CAI, TUSHAR BHOWMICK, University of Utah, MAHE LEZOUALC'H, University Paul Sabatier Toulouse, ELIZABETH MULVEY, St. Mary's College of Maryland, JINGUI XU, DONGZHOU ZHANG, GSECARS, VALENTIN TAUFOR, UC Davis, SHANTI DEEMYAD, University of Utah — Under extreme conditions the interactions, and thereby the arrangement of atoms, in materials is affected. We can change the temperature and pressure which a material is experiencing to observe what changes occur; such as structural changes, magnetic property changes, and in some cases superconductivity. This research was a case study of CeTiGe₃, a ferromagnetic material, under extreme pressures using helium as pressure transmitting medium. The measurements were conducted under pressure using single crystal x-ray diffraction in a synchrotron. No phase transitions were observed, but structural shifts were seen at ambient temperature with increased pressure from 0-10 GPa. Further investigations of the magnetic properties of CeTiGe₃ can be carried out to relate structural properties to magnetic properties.

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