

Abstract Submitted
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Temperature- and pressure-dependent Raman scattering study of phase transitions in ZrTe_3 ¹ S. GLEASON, S. YUAN, T. BYRUM, S.L. COOPER, Department of Physics and Frederick Seitz Materials Research Laboratory, University of Illinois at Urbana-Champaign, Urbana, IL 61801, C. PETROVIC, Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory, Upton, NY 11973 — Pressure-induced superconductivity has been discovered in many classes of materials, such as the iron pnictides and transition metal chalcogenides. ZrTe_3 is a representative member of the latter whose ground state can be tuned between charge density wave and superconducting phases via pressure or intercalation. Microscopic information about the structural evolution of ZrTe_3 in response to applied pressure is lacking at present. In this talk, we describe a temperature- and pressure-dependent Raman scattering study of the structural evolution of ZrTe_3 through its temperature- and pressure-dependent phase transitions.

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