

Abstract Submitted
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Combined Effects of Magnetic Field and Uniaxial Pressure on CeCoIn₅¹ RENA ZIEVE, SCOOTER JOHNSON, UC Davis, JASON COOLEY, Los Alamos National Laboratory — CeCoIn₅ exhibits unusual behavior in a magnetic field. The upper critical field is highly anisotropic, more than a factor of two larger for a field applied in the *ab*-plane than for a field along the *c*-axis. In both field orientations the superconducting transition changes from second-order to first-order with increasing field, and possible FFLO phases have been observed at high fields. Here we explore the influence of uniaxial pressure, applied along the crystal *c*-axis, on the temperature-field phase diagram. We find that a magnetic field suppresses the superconductivity far more sharply when the sample is also under pressure. We also examine the slope of the phase boundary near zero field and the nature of the transition at higher fields.

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