

Abstract Submitted
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Fermi Surface Investigation of Cd doped CeCoIn₅ CIGDEM CAPAN, University of California Irvine, LUIS BALICAS, YOUNJUNG JO, National High Magnetic Field Laboratory, ROY GOODRICH, Louisiana State University, ANDREA BIANCHI, Universite de Montreal, JOHN DITUSA, Louisiana State University, ZACHARY FISK, University of California Irvine — CeCoIn₅ is a 2.3K superconductor member of the 115 family of heavy fermion compounds that have attracted much attention due to the competing magnetism and superconductivity. The superconductivity in CeCoIn₅ emerges from a metallic state that exhibits strong deviations from the Fermi Liquid theory, with the presence of a field-tuned antiferromagnetic quantum critical point near the upper critical field. Recently it was shown that Cd substitution can tune the ground state from superconducting to antiferromagnetic. One important question is how the shape of the Fermi surface influences the stability of the ground state. We will present de-Haas-van-Alphen results in Cd doped LnCoIn₅ (Ln=La,Ce) and discuss the origin of magnetic order in this system.

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