

Abstract Submitted
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Angular Dependent Magnetoresistivity Studies of CeCoIn₅ Single Crystals¹ H. XIAO, T. HU, T. KATUWAL, P. GYAWALI, C.C. ALMASAN, Kent State University, T.A. SAYLES, M.B. MAPLE, University of California, San Diego — In-plane angular magnetoresistivity measurements were made on CeCoIn₅ single crystals at low applied magnetic fields H ($H \leq 2.5$ T) around the zero field critical temperature T_{c0} . The angular conductivity measured at different temperatures and applied fields can be well fitted with a recently suggested flux flow model, in which the in-plane conductivity is the sum of quasiparticle and flux-flow contributions. This indicates the presence of flux flow dissipation in the measured temperature and magnetic field range. The temperature and magnetic field dependence of the three fitting coefficients will also be discussed. Moreover, angular magnetoresistivity curves scale below a certain critical angle θ_c (θ is the angle between the direction of H and c axis of the crystal). This result has previously been obtained in the mixed state of cuprates. Therefore, the scaling appears to be a result of flux flow dissipation in this heavy fermion compound..

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