

Abstract Submitted
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Magnetic field and Spin-dependence of Quasi-particle Mass Enhancements in CeB_6 . PETER RISEBOROUGH — The field and spin-dependence of the quasi-particle mass enhancements are examined in the paramagnetic and ferromagnetic states close to a quantum critical point. The down-spin quasi-particles are found to have heavier masses than the up-spin quasi-particles. It is also found that the spin-dependence of the quasi-particle mass enhancements is through a factor of the inverse (spin-dependent) Fermi wave vector. The mass enhancements drop to the spin-independent value of unity at sufficiently high fields, where the magnetization starts to saturate and spin-flip scattering is suppressed. The results are compared with experimental results on CeB_6 .

Peter Riseborough
Physics Department, Temple University

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