

Abstract Submitted
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Kondo-holes in La-doped CeOs₄Sb₁₂¹ COSTEL R. ROTUNDU, BOHDAN ANDRAKA, University of Florida — CeOs₄Sb₁₂ is an example of an interesting class of systems with low carrier concentrations in which strongly electron correlated states develop at low temperatures. 2% of La introduced for Ce suppresses the 1.1 K ordering and leads to exotic heavy fermion behavior. Electrical resistivity of weakly La-doped alloys, studied down to 20 mK, is proportional to the square of temperature, but with the proportionality coefficient (A) being negative. Such a temperature variation is characteristic of Kondo-hole systems. The absolute value of A ($-45 \mu\Omega\text{cm}/\text{K}^2$ for Ce_{0.98}La_{0.02}Os₄Sb₁₂) implies presence of massive quasiparticles. Magnetic fields reduce the absolute value of A and, for sufficiently strong fields, lead to a Fermi-liquid temperature variation (positive A).

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