

Abstract Submitted  
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**Pressure effect of  
single ion Kondo temperature in Ce<sub>0.02</sub>La<sub>0.98</sub>RhIn<sub>5</sub>** H. LEE, V.A. SIDOROV,  
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Los Alamos, NM 87544 — Near a critical pressure  $P_c \sim 25$  kbar, CeRhIn<sub>5</sub> assumes  
characteristics of CeCoIn<sub>5</sub> at atmospheric pressure: they have comparable  $T_C$ , sim-  
ilar dHvA frequencies, and display quantum-critical behaviors. Many properties of  
CeCoIn<sub>5</sub> can be interpreted within a two-fluid phenomenology<sup>1</sup> in which there are  
interpenetrating fluids, a localized f-electron Kondo gas (energy scale  $T_K$ ) and an  
interacting Kondo liquid (energy scale  $T^*$ ). We have measured transport proper-  
ties of Ce<sub>0.02</sub>La<sub>0.98</sub>RhIn<sub>5</sub> under pressures to 50 kbar to determine  $T_K(P)$ , which at  
 $P=0$  is estimated to be  $\sim 0.03$ K from specific heat measurements.  $T_K(P)$  increases  
rapidly, reaching  $\sim 1.35$ K at 25 kbar, where it becomes comparable to  $T_K$  ( $\sim 1.8$ K)  
of CeCoIn<sub>5</sub> at  $P=0$ . A comparison of  $T_K(P)$  with  $T^*(P)$ , determined from the pres-  
sure studies of CeRhIn<sub>5</sub>, reveals the same correlation between  $T_K$  and  $T^*$  inferred  
from a two-fluid analysis of CeCoIn<sub>5</sub>, further supporting the similarity of these two  
compounds and the two-fluid phenomenology. [1] S. Nakatsuji et al., Phys. Rev.  
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