Abstract Submitted
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**Anomalous Pressure Dependence of Kadowaki-Woods ratio and Crystal Field Effects in Mixed-valence $YbInCu_4$**[1] TUSON PARK, VLADIMIR SIDOROV, JOHN SARRAO, JOE THOMPSON, Los Alamos National Laboratory — The Mixed-valence (MV) compound $YbInCu_4$ was investigated by electrical resistivity at low temperatures and high pressures. Scaling of the first derivative of the resistivity at different pressures reveals two characteristic temperatures, where the slope in $d\rho/dT$ changes abruptly: $T_v$ due to the first-order MV transition and $T_{CEF}$ due to crystal-field effects. The Kadowaki-Woods (KW) ratio, $A/\gamma^2$, is anomalously small at $P = 0$, but sharply increases to a value comparable to that of heavy fermion compounds at $P = 25$ kbar. The dramatic pressure dependence is attributed to a change in the ground state degeneracy from an octet to a doublet at $P \approx 25$ kbar. [1] K. Kadowaki and S. B. Woods, Solid State Commun. 58, 507 (1986), [2] T. Park et al., cond-mat/0409243 (2004).

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Tuson Park
Los Alamos National Laboratory

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