Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

**Scaling and relaxational dynamics near Kondo-destroying quantum critical points** JEDEDIAH PIXLEY, MATTHEW GLOSSOP, Rice University, STEFAN KIRCHNER, Max Planck Institute for the Physics of Complex Systems, QIMIAO SI, Rice University — We study the finite-temperature dynamical scaling in the vicinity of the Kondo-destroying quantum critical points in two quantum impurity models. For the pseudogap Anderson model, we use a combination of renormalization group, continuous time quantum Monte Carlo and large-N techniques to obtain the complete scaling functions of the local susceptibility and single-electron Green's function both in the coherent ( $\omega >$T) and relaxational ( $\omega <$T) regime [1]. We establish that the relaxation rate is linear in temperature for both quantities. The result for the Green's function is reminiscent of recent experimental findings in the Kondo-destroying quantum critical point of heavy fermion metals [2]. For the Bose-Fermi Kondo model, we report related results derived from the continuous time quantum Monte Carlo and large-N methods.

[1] M. T. Glossop, S. Kirchner, J. H. Pixley, and Q.Si, "Critical Kondo destruction in a pseudogap Anderson model: scaling and relaxational dynamics," to be published (2009).
[2] S. Friedemann et al., to be published (2009).

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Date submitted: 09 Dec 2009 Electronic form version 1.4