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Universal Scaling Behavior of the Kondo Effect in a Quantum Dot. DAVID GOLDHABER-GORDON, ILEANA RAU, Stanford University, RONALD POTOK, Harvard University, MICHAEL GROBIS, Stanford University — At zero temperature, a many-body Kondo singlet forms between a spin-1/2 quantum dot and electrons in nearby, tunnel-coupled reservoirs. This Kondo singlet can be broken by sufficiently large temperature T or bias V across the dot. Differential conductance G(V,T) is predicted to show universal scaling in eV/kT. However, such behavior has not been examined thoroughly in experiments. To address this issue, we have performed detailed transport measurements through a Kondo quantum dot at finite bias and temperature. We will present our results and discuss the scaling behavior seen in this system.

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