

Abstract Submitted
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Exotic Kondo States in GaAs Quantum Dots R. M. POTOK, Stanford University and Harvard University, I. G. RAU, D. GOLDHABER-GORDON, Stanford University, C. M. MARCUS, Harvard University, H. SHTRIKMAN, Weizmann Institute — Using a unique double quantum dot geometry, we probe an exotic Kondo effect involving one quantum dot containing excess spin-1/2 simultaneously coupled to both open and confined reservoirs of electrons. Transport measurements through open reservoirs (normal leads) reveal single channel Kondo behavior. However, the addition of a third lead consisting of a large quantum dot drastically changes transport through the other, Kondo-correlated quantum dot. We explore Kondo correlations both when Coulomb blockade confines a defined number of electrons on the large dot and when charge is allowed to fluctuate. Research supported by an NSF CAREER award DMR-0349354. RMP acknowledges support from an ARO Graduate Research Fellowship.

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