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**Kondo effect in a many-electron quantum ring**

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The Kondo effect is investigated in a many-electron quantum ring as a function of magnetic field. For fields applied perpendicular to the plane of the ring a modulation of the Kondo effect with the Aharonov-Bohm period is observed. This effect is discussed in terms of the energy spectrum of the ring and the parametrically changing tunnel coupling. In addition, we use gate voltages to modify the ground state spin of the ring. The observed splitting of the Kondo related zero bias anomaly in this configuration is tuned with an in-plane magnetic field. It has been shown that the dot-lead coupling can be determined quantitatively for quantum dots connected to three terminals. The Kondo effect is studied in a three-terminal quantum ring. By measuring the currents through the differently biased terminals it can be determined which lead has Kondo correlations with the dot and which does not. The possibility to probe the density of the dot in the Kondo regime using a three-terminal configuration is discussed. This work was done in collaboration with A. Fuhrer, R. Leturcq, and T. Ihn. A. Fuhrer, et al., Phys. Rev. Lett. 93, 176803 (2004), cond-mat/0406247