

Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Out-of-equilibrium Transport Phenomena through a Quantum Dot TATSUYA FUJII — We investigate nonequilibrium transport through a dot in a finite magnetic field in a weak correlation regime by using the self-consistent perturbation theory in the Keldysh formalism. Separation of the density of states between the up and down spins becomes smaller gradually and ends up with the Zeeman energy as increasing the bias voltage. Concerning the differential conductance the zero-bias peak splits into two peaks when magnetic field is increased. The critical field for the splitting decreases as the Coulomb interaction is increased.

Tatsuya Fujii
Institute for Solid State Physics, University of Tokyo

Date submitted: 02 Dec 2004

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