

Abstract Submitted
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The Influence of Interference on the Kondo Effect JUSTIN MALECKI, IAN AFFLECK, University of British Columbia — Semi-conductor quantum dots with an odd number of electrons are known to exhibit the Kondo effect when embedded between two leads. We study how the Kondo effect is influenced by the presence of an additional transport path between the two leads, allowing for the possibility of electron interference. It is shown that Kondo screening of the quantum dot still occurs but at a reduced Kondo temperature that is independent of a magnetic flux between the two tunneling paths. We describe the various phases of the system and have determined the low-energy effective model which does exhibit flux dependence. All results are supported by data from the numerical renormalization group (NRG).

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