

Abstract Submitted
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Theoretical analysis of the transmission Phase Shift of a Quantum Dot in presence of Kondo correlations ANDRES JEREZ, Institut Laue Langevin, Grenoble, France, PAVEL VITUSHINSKY, Dpartement de Recherche Fondamentale sur la Matire Condense/ SPSMS, CEA Grenoble, France, MIREILLE LAVAGNA, Dpartement de Recherche Fondamentale sur la Matire Condense/ SPSMS, CEA Grenoble, France — We study the effects of Kondo correlations on the transmission phase shift of a quantum dot coupled to two leads. Experimental determination of the phase shift made by embedding a quantum dot in one of the arms of an Aharonov-Bohm interferometer leads to a value of the phase which differs from the well-known theoretical predictions. We propose here a theoretical interpretation of these results based on Bethe Ansatz calculations combined with the scattering theory. Quantitative agreement is obtained with experimental results both in the unitary limit and the weak Kondo coupling regimes.

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