

Abstract Submitted
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Interference in triple quantum dot systems GEORGE MARTINS, Oakland University, EDSON VERNEK, Ohio University, CARLOS BUSSEER, Oakland University, ENRIQUE ANDA, PUC - Rio - Brazil, SERGIO ULLOA, NANCY SANDLER, Ohio University — Transport properties of an interacting triple quantum dot system coupled to three leads in a triangular geometry has been studied in the Kondo regime. Applying mean-field finite-U slave boson and embedded cluster approximations to the calculation of transport properties of this system unveils a set of very rich features associated to its particular symmetry. In the case where just two leads are present, interference effects between degenerate molecular levels are studied, as well as an $S = 1$ Kondo effect. The introduction of a third lead does not affect the coherence of propagating electrons, but rather results in an ‘amplitude leakage’ phenomenon, which alters the interference effects. There is a good overall agreement between the two techniques employed.

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