

Abstract Submitted
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Multichannel Numerical Renormalization Group study of the Anderson Hamiltonian with multiple impurities JAMES STOKES, Boston College, ROBERT KONIK, Brookhaven National Laboratory — Using the Numerical Renormalization Group (NRG), the low energy sector of the Anderson Hamiltonian with two impurities in parallel has been previously argued to be consistent with an underscreened spin-1 Kondo effect (R. Zitko and J. Bonca, Phys. Rev. B 76, 241305 (2007); Logan et al., Phys. Rev. B 80, 125117 (2009)). Bethe Ansatz and slave boson calculations have given the ground state as a singlet (M. Kulkarni and R. M. Konik, Phys. Rev. B 83, 245121 (2011)). As an attempt to understand these differences, we have developed a modified NRG routine that takes into account the multiple channels arising from the logarithmic discretization of the Fermi sea. This could conceivably allow for more complicated screening processes suggested by the Bethe ansatz computations. Results of studies using this code for various numbers of impurities and channels will be presented and discussed in relationship to these conflicting views.

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