

Abstract Submitted  
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**Spin-incoherent behavior in the ground state of strongly correlated systems**<sup>1</sup> GREGORY FIETE, Department of Physics, The University of Texas at Austin, Austin, Texas 78712, USA, ADRIAN FEIGUIN, Department of Physics and Astronomy, University of Wyoming, Laramie, Wyoming 82071, USA — It is commonly believed that strongly interacting one-dimensional Fermi systems with gapless excitations are effectively described by Luttinger liquid theory. However, when the temperature of the system is high compared to the spin energy, but small compared to the charge energy, the system becomes “spin-incoherent.” We present numerical evidence showing that the one-dimensional “t-J-Kondo” lattice, consisting of a t-J chain interacting with localized spins, displays all the characteristic signatures of spin-incoherent physics, but in the ground state. We argue that similar physics may be present in a wide range of strongly interacting systems.

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