

Slave-Fermion Mean-Field Theory of Heisenberg Model

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Abstract: A nearly half-filled two-dimensional Heisenberg model is investigated. A slave-fermion method with fermions as the charge carriers and bosons as the spin carriers is proposed. The ground state shows antiferromagnetic long range order at $T=0$. The spin-spin correlation and static susceptibility are also obtained.

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Key words: slave-fermion, correlation function, static susceptibility

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