

Critical behaviour of spin- s Heisenberg antiferromagnetic chains: analytic and numerical results

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CORRIGENDUM

Critical behaviour of spin- s Heisenberg antiferromagnetic chains: analytic and numerical results

Affleck I, Gepner D, Schulz H J and Ziman T 1989 *J. Phys. A: Math. Gen.* **22** 511-29

In a recent comment [1], Martins pointed out a mistake in our previous calculation of the energy of the lowest excited singlet state for the exactly soluble $S = 1$ chain. We have recalculated this eigenvalue following Martins. For short chains ($L = 10, 12$) we have compared with results obtained from direct diagonalisation of the Hamiltonian matrix and found agreement. The coupling constant $g_s(L)$ following from the corrected eigenvalues is shown in the new figure 3(b). For short chains g_s increases by about 20%, but for the longest chains ($L = 256$), the difference between the old and new values of g_s is of the order of 1%. The conclusions of our paper remain unaffected.

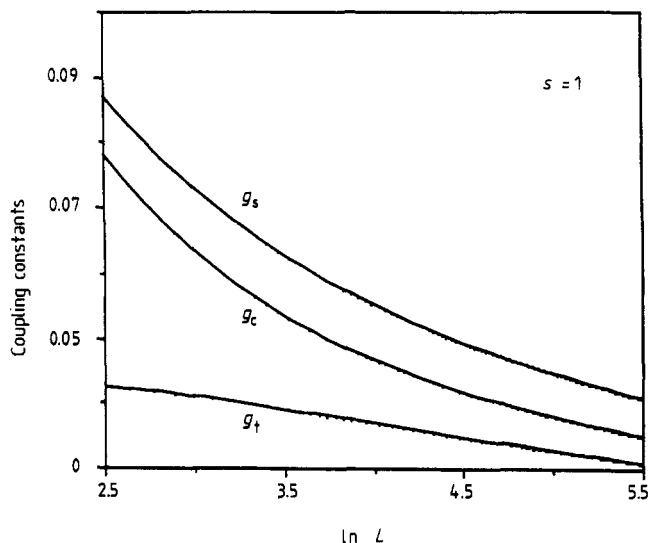


Figure 3(b). Effective coupling constants g_t , g_s and g_c measured from the triplet excitation energy, singlet excitation energy and ground-state energy, respectively, plotted as functions of length, L , from the Bethe ansatz, for $s = 1$.

[1] Martins M J 1990 *J. Phys. A: Math. Gen.* **23** 1465