Errata

Erratum: Phenomenological description of piezoresistivity in semiconducting perovskite ferroelectrics [Phys. Rev. B 39, 4350 (1989)]

Ahmed Amin

There are typographical errors in Eqs. (23)–(27), (31), and (32). The corrected versions are as follows:

$$\chi_p^{-1} = 2(\alpha_1 + Q_h p) \epsilon_0 \quad (23)$$

$$= 2\beta[T - (T_0 - Q_h \beta^{-1} p)] \epsilon_0, \quad (24)$$

$$T_0(p) = T_0(0) - Q_h \beta^{-1} p, \quad (25)$$

$$\chi^{-1} = 2Q_h(p - p_0) \epsilon_0, \quad (26)$$

where $p_0 = -\beta(T - T_0)/Q_h$.

$$\phi(p, T) = \beta(e^2 n_s^2) [T - (T_0 - Q_h \beta^{-1} p)] / (4N_d), \quad (27)$$

$$(\partial\phi/\partial p)_T = (e^2/4N_d) \{n_s^2 Q_h + [\beta(T - T_0) + Q_h p] (\partial n_s^2 / \partial p)_T\}, \quad (31)$$

$$\Pi_h = (e^2 N_s^2 / 4kTN_d) [F^2 Q_h + (\alpha_1 + Q_h p) (\partial F^2 / \partial p)_T]. \quad (32)$$

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Erratum: Dynamic spin fluctuations and the bag mechanism of high- T_c superconductivity [Phys. Rev. B 39, 11 663 (1989)]

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There are two numerical errors in Sec. II of our paper:¹

(1) The umklapp transverse susceptibility $\bar{\chi}_Q^{+-}(q, \omega)$ should be half of the expression in Eq. (2.26). As a consequence, the spin-wave dispersion extracted from the large U limit of the random-phase approximation (RPA) calculation should be $\omega_q = 2J(1 - \gamma_q^2)^{1/2}$, where $\gamma_q = \frac{1}{2}(\cos q_x a + \cos q_y a)$, and the spin-wave velocity in Eq. (2.35) should be $v = \sqrt{2J}$.

(2) We misread a factor of 2 from the strong-coupling calculations. From Eqs. (17') and (20) of Anderson's paper,² the correct spin-wave dispersion and the spin-wave velocity should be $\omega_q = 2J(1 - \gamma_q^2)^{1/2}$ and $v = \sqrt{2J}$.

In terms of physical consequences, these two errors compensate each other and the conclusion remains the same: In the strong-coupling limit the spin-wave dispersion obtained from our RPA calculation agrees *exactly* with that from linear spin-wave theory of the Heisenberg model.

We would like to express our sincere thanks to Dr. Giovanni Vignate for kindly pointing out the first error to us.

¹R. Schrieffer, X. G. Wen, and S. C. Zhang, Phys. Rev. B 39, 11 663 (1989).

²P. W. Anderson, Phys. Rev. 86, 694 (1952).

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