Phase transitions in a highly anisotropic Heisenberg chain with staggered interaction

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ERRATUM

Phase transitions in a highly anisotropic Heisenberg chain with staggered interaction by Zhu-Pei Shi and Ruibao Tao (*J. Phys.: Condens. Matter* 1989 **1** 6279–6284)

Equations (1), (12) and (15) should read

$$H = N\left(\frac{p^2}{2M} + \tfrac{1}{2}M\omega_0^2 Q^2\right) + \sum_l \varepsilon_l (J + \gamma(-1)^l Q) \times (S_z(l+1)S_z(l) + \alpha[S_x(l+1)S_x(l) + S_y(l+1)S_y(l)]) \tag{1}$$

$$\frac{E_0(Q)}{N} = -\frac{\alpha^2}{8}\left(\lambda^2 + \frac{1}{\lambda}\right)J - \tfrac{1}{8}(1+\lambda)J + \tfrac{1}{2}\left[M\omega_0^2 - \alpha^2\left(\lambda + \frac{1}{\lambda}\right)\frac{\gamma^2}{J}\right](Q - Q_m)^2 - \tfrac{1}{2}\left[M\omega_0^2 - \alpha^2\left(\lambda + \frac{1}{\lambda}\right)\frac{\gamma^2}{J}\right]Q_m^2 \tag{12}$$

$$\frac{E(Q)}{N} = -\tfrac{1}{8}\alpha^2\left(\lambda^2 + \frac{1}{\lambda}\right)J + \tfrac{1}{2}Q^2[M\omega_0^2 - \alpha^2(\lambda + 1/\lambda)\gamma^2/J] - [\tfrac{3}{8}\alpha^2(1/\lambda - \lambda) + \tfrac{1}{8}(1-\lambda)]\gamma Q + \frac{1}{N}\sum_k \lambda(J - \gamma Q)n_e + \frac{1}{N}\sum_k (J + \gamma Q)n_0 \tag{15}$$

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