

## Phase transitions in a highly anisotropic Heisenberg chain with staggered interaction

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1990 J. Phys.: Condens. Matter 2 3141

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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

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

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

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