ERRATUM

Néel State in the Fermionized Spin $\frac{1}{2}$
Heisenberg Antiferromagnet on Hypercubic and Triangular Lattices

[Pham Thi Thanh Nga and Nguyen Toan Thang, Comm. Phys. 22(1) (2012) 33]

The equation (67) should take the following form:

$$F = \frac{Nz\alpha Jm_o^2}{2} - \frac{N}{\beta} \ln \left( 2 \cosh \frac{z\alpha Jm_o\beta}{2} \right)$$

$$+ \frac{1}{2\beta} \sum_{\vec{p} \in BZ} \ln \left[ 1 - \frac{z\alpha J\beta \gamma(\vec{p})}{4} (1 - 4m_o^2) + \frac{zJ\beta (1 - \alpha^2) f^2(\vec{p})}{4\alpha (1 - \gamma(\vec{p}))} (1 - 4m_o^2) \right]$$

$$+ \frac{1}{\beta} \sum_{\vec{p} \in BZ} \ln \frac{\sinh \frac{\beta \epsilon(\vec{p})}{2}}{\sinh \frac{z\alpha Jm_o\beta}{2}}.$$

The notation "$\vec{p} \in BZ$" should read also for the summation over $\vec{p}$ on the Eqs. (54), (69), (70) and (72).

The sentence following the Eq. (69) of the paper should read "The numerical evaluation of the equation (69) gives $\epsilon_o = -0.1796$, which is exactly the value obtained in linear spin wave approximation [19] and is in agreement with the results obtained by other methods [20-23]."

The equation (70) should take the following form:

$$m = \left( m_o + \frac{1}{4m_o} \right) + \frac{z\alpha J\Delta m}{4m_o} - \frac{1}{4N} \sum_{\vec{p} \in BZ} \frac{1}{\tanh \frac{\beta \epsilon(\vec{p})}{2}} \left( \frac{2}{\omega(\vec{p})} + \frac{(\frac{1}{\alpha} - 1) \gamma(\vec{p})}{\omega(\vec{p})} + 2z\alpha J\Delta m \omega(\vec{p}) \right)$$

$$- \frac{4m_o z \alpha J \Delta m}{N} \sum_{\vec{p} \in BZ} \frac{\alpha^2 \gamma(\vec{p})(1 - \gamma(\vec{p})) - (1 - \alpha^2) f^2(\vec{p})}{4\alpha (1 - \gamma(\vec{p})) - zJ\beta [\alpha^2 \gamma(\vec{p})(1 - \gamma(\vec{p})) - (1 - \alpha^2) f^2(\vec{p})](1 - 4m_o^2)}.$$

The equation (71) should read:

$$\Delta m = \frac{\beta (1 - 4m_o^2)}{4 - \beta z\alpha J (1 - 4m_o^2)}.$$

The conclusions are unaltered.

We thank the anonymous referee of P. T. T. Nga’s thesis for bringing this to our attention.

Received 20 October 2012.