

Erratum: Comparison of two-quantum-cluster approximations
[Phys. Rev. B 65, 041104 (2002)]

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(Published 12 June 2002)

DOI: 10.1103/PhysRevB.65.249904

PACS number(s): 71.27.+a, 71.10.-w, 99.10.-g

Three errors have been spotted:

1. The Green function G in Eq. (4) is a function of $\tilde{\mathbf{k}}_1$ and $\tilde{\mathbf{k}}_2$ independently, and not a function of $\tilde{\mathbf{k}}_1 - \tilde{\mathbf{k}}_2$. The corrected Eq. (4) reads

$$\begin{aligned}\bar{G}(\mathbf{X}_1, \mathbf{X}_2; \tilde{\mathbf{x}}=0) &= \frac{1}{N^2} \sum_{\substack{\mathbf{K}_1, \mathbf{K}_2 \\ \tilde{\mathbf{k}}_1, \tilde{\mathbf{k}}_2}} e^{i(\mathbf{K}_1 + \tilde{\mathbf{k}}_1) \cdot \mathbf{X}_1} G(\mathbf{K}_1, \mathbf{K}_2; \tilde{\mathbf{k}}_1, \tilde{\mathbf{k}}_2) e^{-i(\mathbf{K}_2 + \tilde{\mathbf{k}}_2) \cdot \mathbf{X}_2} \\ &= \frac{N_c^2}{N^2} \sum_{\tilde{\mathbf{k}}_1, \tilde{\mathbf{k}}_2} G(\mathbf{X}_1, \mathbf{X}_2, \tilde{\mathbf{k}}_1, \tilde{\mathbf{k}}_2).\end{aligned}$$

2. The same applies to the self-energy Σ in Eq. (8). Therefore Eq. (8) has to read

$$\Sigma(\mathbf{K}_1, \mathbf{K}_2; \tilde{\mathbf{k}}_1, \tilde{\mathbf{k}}_2) = \sum_{\mathbf{X}_1, \mathbf{X}_2} e^{-i(\mathbf{K}_1 + \tilde{\mathbf{k}}_1) \cdot \mathbf{X}_1} \Sigma_{MC}(\mathbf{X}_1, \mathbf{X}_2) e^{i(\mathbf{K}_2 + \tilde{\mathbf{k}}_2) \cdot \mathbf{X}_2}.$$

3. Eq. (10) is misprinted. The corrected version reads

$$[\hat{\epsilon}(\tilde{\mathbf{k}})]_{\mathbf{X}_1 \mathbf{X}_2} = \epsilon(\mathbf{X}_1 - \mathbf{X}_2, \tilde{\mathbf{k}}) = \frac{1}{N_c} \sum_{\mathbf{K}} e^{i(\mathbf{K} + \tilde{\mathbf{k}})(\mathbf{X}_1 - \mathbf{X}_2)} \epsilon_{\mathbf{K} + \tilde{\mathbf{k}}}.$$

These typographical corrections do not affect our results or conclusions.