Errata

Erratum: Functional integral theories of low-dimensional quantum Heisenberg models [Phys. Rev. B 38, 316 (1988)]

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Our derivation of a unimodular Hubbard-Stratonovich transformation for the SU(2) quantum Heisenberg antiferromagnet, described in Appendix C of our paper, is wrong. The error is an elementary one: The coefficient of $\overline{\mathcal{C}}_{ij}(t)\mathcal{C}_{ij}(t)$ in Eq. (C4) is $-\frac{1}{2}dt$, and therefore according to Eq. (C5) we must choose $\alpha = \sqrt{2}(dt)^{1/2}$ to recover the proper form of the interaction. Thus, Eqs. (C7) and (C8) are incorrect due to the improper accounting of powers of dt in the action.

This invalidates some minor conclusions stated at the end of the paragraph preceding Eq. (4.10), but all other results in the paper remain unaffected.

We thank G. Zimanyi for bringing the error to our attention.

In addition, a misprint appears in Eq. (3.11): $\zeta(\frac{3}{2})$ should be replaced by $\zeta(\frac{1}{2})$.