

Erratum: Thermal pairing treatment within the path integral formalism [Chin. Phys. C, 48 (11): 114102 (2024)]

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The paragraph between equations (A9) and (A11) in Appendix A on page 10 of the published version is partially incorrect. In particular, the formal expression of the operator \mathcal{S}_j is incomplete. This paragraph should then be read as follows:

$$i\mathcal{S}_j = \exp\left[i\frac{\pi}{2}(a_j + a_j^\dagger)\right] \exp\left[i\frac{\pi}{2}(a_j^- + a_j^{+\dagger})\right]. \quad (\text{A9})$$

That is,

$$\mathcal{S}_j = \exp\left[i\frac{\pi}{2}\left(a_j + a_j^\dagger + a_j^- + a_j^{+\dagger} - \frac{\pi}{2}S_j - 1\right)\right] \quad (\text{A10})$$

where we used the Glauber identity.

And therefore

$$U = \exp\left[i\frac{\pi}{2}\sum_j\left(a_j + a_j^\dagger + a_j^- + a_j^{+\dagger} - \frac{\pi}{2}S_j - 1\right)\right]. \quad (\text{A11})$$

It should be noted that this has no effect on the remainder of the calculations since we used the form given in Eq. (6) for \mathcal{S}_j .

The authors apologize for any inconvenience caused.

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