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Publisher Correction: Two-qubit sweet spots for capacitively coupled exchange-only spin qubits

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The original PDF version of this Article contained typesetting errors in Eqs. (9) and (12) and incorrectly read as follows:

Equation (9)

$$\hat{U}_{\text{CPHASE}} = (100001000010000 - 1), \hat{U}_{\text{CNOT}} = (1000010000010010). \quad (9)$$

Equation (12)

$$\tilde{U}_{\text{int}}(t_0) = \hat{U}_{\text{int}}(t_0)\hat{U}_{\delta}(t_0) = (e^{-iV_1 t_0} 0000e^{-iV_2 t_0} 0000e^{-iV_3 t_0} 0000e^{-iV_4 t_0} \\ \left(\begin{array}{cccc} e^{-i \int_0^{t_0} \delta V_1(t) dt} & & & \\ & 0000e^{-i \int_0^{t_0} \delta V_2(t) dt} & & \\ & & 0000e^{-i \int_0^{t_0} \delta V_3(t) dt} & \\ & & & 0000e^{-i \int_0^{t_0} \delta V_4(t) dt} \end{array} \right)).$$

The correct form of Eq. (9) is:

$$\hat{U}_{\text{CPHASE}} = \begin{pmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & -1 \end{pmatrix}, \hat{U}_{\text{CNOT}} = \begin{pmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{pmatrix}. \quad (1)$$

The correct form of Eq. (12) is:

$$\tilde{U}_{\text{int}}(t_0) = \hat{U}_{\text{int}}(t_0)\hat{U}_{\delta}(t_0) \\ = \begin{pmatrix} e^{-iV_1 t_0} & 0 & 0 & 0 \\ 0 & e^{-iV_2 t_0} & 0 & 0 \\ 0 & 0 & e^{-iV_3 t_0} & 0 \\ 0 & 0 & 0 & e^{-iV_4 t_0} \end{pmatrix} \\ \left(\begin{array}{cccc} e^{-i \int_0^{t_0} \delta V_1(t') dt'} & & & \\ & e^{-i \int_0^{t_0} \delta V_2(t') dt'} & & \\ & & e^{-i \int_0^{t_0} \delta V_3(t') dt'} & \\ & & & e^{-i \int_0^{t_0} \delta V_4(t') dt'} \end{array} \right). \quad (2)$$

In the in-line equation right below Eq. (12), the tilde on the second U was rendered across “U”, instead of above it. It incorrectly read:

$$\mathcal{F} = \frac{1}{d^2} |\text{Tr}(U^\dagger \tilde{U})|^2$$

The correct form of this equation is:

$$\mathcal{F} = \frac{1}{d^2} |\text{Tr}(U^\dagger \tilde{U})|^2,$$

The equation label “(12)” was also incorrectly omitted.

This has now been corrected in the PDF version of the Article. The HTML version is correct and remains unchanged.



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