



## OPEN ACCESS

RECEIVED  
29 April 2022ACCEPTED FOR PUBLICATION  
30 May 2022PUBLISHED  
14 June 2022Original content from  
this work may be used  
under the terms of the  
Creative Commons  
Attribution 4.0 licence.Any further distribution  
of this work must  
maintain attribution to  
the author(s) and the  
title of the work, journal  
citation and DOI.

## CORRIGENDUM

Corrigendum: Benchmarking high fidelity single-shot readout of semiconductor qubits (2019 *New J. Phys.* 21 063011)D Keith , S K Gorman, L Kranz, Y He, J G Keizer, M A Broome<sup>1</sup> and M Y Simmons\* 

Centre of Excellence for Quantum Computation and Communication Technology, School of Physics, University of New South Wales, Sydney, New South Wales 2052, Australia

\* Author to whom any correspondence should be addressed.

<sup>1</sup> Current address: Department of Physics, University of Warwick, Coventry CV4 7AL, UK.E-mail: [michelle.simmons@unsw.edu.au](mailto:michelle.simmons@unsw.edu.au)**Keywords:** spin qubit, electron spin, qubit readout, benchmarking, fidelity

There was a typo in the original presentation of equation (14) used to show the state-to-charge conversion visibility  $V_{\text{STC}}(t)$  as a function of the readout time  $t$ . The correct form of equation (14) is:

$$V_{\text{STC}}(t) = \frac{T_1(t_{\text{OUT}}^0 - t_{\text{OUT}}^1)}{T_{\text{OUT}}^2} \left( e^{-\frac{t}{t_{\text{OUT}}^0}} - e^{-\left(\frac{1}{T_1} + \frac{1}{t_{\text{OUT}}^1}\right)t} \right), \quad (1)$$

where  $T_1$  is the qubit excited state relaxation time,  $t_{\text{OUT}}^0$  and  $t_{\text{OUT}}^1$  are tunnel out times to the reservoir of the respective  $|0\rangle$  and  $|1\rangle$  qubit states, and  $T_{\text{OUT}}^2 = T_1(t_{\text{OUT}}^0 - t_{\text{OUT}}^1) + t_{\text{OUT}}^0 t_{\text{OUT}}^1$  for compactness.

The results of the study are unaffected as subsequent derivations and analysis originally used the correct form of this equation despite the typo.

## ORCID iDs

D Keith  <https://orcid.org/0000-0001-7990-3189>M Y Simmons  <https://orcid.org/0000-0002-6422-5888>