

# Errata

## Publication IV

The recombination rates in this publication were calculated incorrectly due to a numerical error. The error does not affect the main conclusions of the manuscript on the observability of a parity effect in the presence of quasiparticles or charge detector backaction as the dominant source of quasiparticles, but a number of numerical values given in the manuscript are incorrect. As we stated in the original manuscript, our simulations are sensitive to the ratio of Cooper pair breaking rate to the recombination rate rather than to either of these quantities separately. The simulated curves in Figs. 3 and Fig. 4 are nearly unchanged, but the top x-axis of Fig. 4 should span 0 to 780 Hz. Simulations corresponding to Figs. 3 and 4 and Supplementary Fig. 2 of the publication with the correct recombination rates are shown in Figs. 6.1, 6.2, and 6.6 within this thesis.

On page 3, the sentence starting the second column should read "The expected recombination rate is 0.6 kHz for  $N_S = 2$  and larger for more quasiparticles (assuming the electron-phonon coupling constant  $\Sigma = 1.8 \text{ W K}^{-5} \text{ m}^{-3}$ ), several times larger than the measured tunneling rates." The last sentence of the caption of Fig. 3 should read "Solid lines are simulations with the Cooper pair breaking rate  $\Gamma_{pb} = 370 \text{ Hz}$  as the only free parameter." The last sentence of the caption of Fig. 4 should end "which corresponds to  $\Gamma_{pb} = 120 \text{ Hz}$ ." On page 4, the correct value for  $A$  is 1/4,000,000, and the pair-breaking rate for sample B is 6 Hz. In the supplemental material, the correct values for the pair-breaking and recombination rates are  $\Gamma_{pb} = 6 \text{ Hz}$  and  $\Gamma_{rec} = 600 \text{ Hz}$ .