Erratum to: Constraints on new physics from $K \rightarrow \pi \nu \bar{\nu}$

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A missing factor of i in Eq. (C1) has led to an incorrect expression for the last line of Eq. 14. The correct expression should read

$$\mathcal{B}_{K_L} = \kappa_L \left[\left(\frac{\text{Im}(V_{ts}^* V_{td} X_t)}{\lambda^5} + 2 \text{Im} \kappa^{\frac{3}{2}} \right)^2 \right]. \quad (1)$$

This correction results in a slightly different Fig. 4, shown below. Furthermore, our example produces a CP violating $K_L \rightarrow \pi^0 \nu \bar{\nu}$ amplitude so our comments on a possible CP conserving amplitude do not apply. Full corrected discussion can be found in the updated arXiv version [arXiv:1804.07449](https://arxiv.org/abs/1804.07449).

Fig. 4 Rates covered by Eq. 14 of [1] (corrected as in Eq. 1 above) are illustrated in pink along with the BNL result in green and the GN exclusion in grey. The SM central values are shown as the large red dot and the dashed vertical lines correspond to $\pm 3\sigma$ from the central SM value of $\mathcal{B}_{K^+}$. The green curve for $\phi_k = 45^\circ$ is chosen to illustrate values that can produce $\mathcal{B}_{K_L} \sim 10^{-9}$ while keeping $\mathcal{B}_{K^+}$ near its SM value

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Reference

1. X. G. He, G. Valencia, K. Wong, Eur. Phys. J. C **78**(6), 472 (2018). <https://doi.org/10.1140/epjc/s10052-018-5964-0>. [arXiv:1804.07449](https://arxiv.org/abs/1804.07449) [hep-ph]