

## Erratum: Interband superconductivity: Contrasts between Bardeen-Cooper-Schrieffer and Eliashberg theories [Phys. Rev. B **79**, 060502(R) (2009)]

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It was recently pointed out<sup>1</sup> that significant discrepancies in two-band interband-only pairing model calculated gap ratios  $\Delta/T_c$ , for both the BCS and Eliashberg cases, exist between the work above and that of Ref. 1. After checking, we find that both Eliashberg curves and the upper BCS curve of Fig. 2 of our work were incorrect, and supply below a corrected figure (see Fig. 1). As a result, the larger BCS  $\Delta/T_c$  gap ratio increases from that previously reported, while both Eliashberg  $\Delta/T_c$  ratios

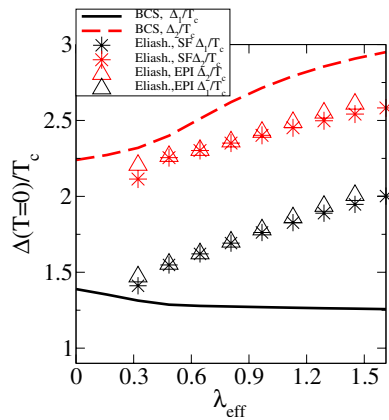


FIG. 1. (Color online) A corrected version of Fig. 2 from the previous work. “SF” refers to a spin-fluctuation Eliashberg spectral function and EPI to an Einstein electron-phonon spectral function.

decrease from the previous values. The remaining discrepancy with Ref. 1 is due to the use in that work of the “bubble” expression  $\log(1.136\omega_c/T_c)$ , which is inaccurate at large coupling. We, on the other hand, have directly integrated  $\int_0^{\omega_c} dE \tanh(E/2T_c)/E$  from the BCS  $T_c$  gap equation for these results, resulting in differences for the BCS curves from Ref. 1.

<sup>1</sup>L. Benfatto, E. Cappelluti, and C. Castellani, arXiv:0909.3735, Phys. Rev. B (to be published).