ERRATA

TUNNELING BETWEEN SUPERCONDUCTORS. Vinay Ambegaokar and Alexis Baratoff [Phys. Rev. Letters 10, 486 (1963)].

Despite our assertion to the contrary, the integral of the last two terms in (22) is not zero except at $T = 0$. As a result (23) is correct only in this neighborhood and Fig. 1 is wrong.

By transforming (22) into a sum over the poles of the Fermi function, one obtains

$$J_s = R_n^{-1}\Delta_1(T)\Delta_2(T)\frac{\pi}{\beta}\sum_{l=0,\pm1,\cdots}\{[\omega_l^2+\Delta_1^2(T)][\omega_l^2+\Delta_2^2(T)]\}^{-1/2},$$

where $\omega_l = \pi(2l+1)/\beta$. In the limit $T \to 0$ the sum approaches an integral and (23) is recovered. For a symmetrical junction the sum may be done analytically leading to

$$J_s = \tfrac{1}{2}\pi R_n^{-1}\Delta(T)\tanh\tfrac{1}{2}\beta\Delta(T).$$

This formula differs qualitatively from (23) in that J_s vanishes like Δ^2 near $T = T_c$ and not like Δ. The tangent at $T = T_c$ is $J_s(T)/J_s(0) = 2.67 \times[1 - (T/T_c)]$. For $\Delta_1 \neq \Delta_2$ the curve approaches $T = T_c$ with an infinite slope. However, in this case it seems necessary to resort to numerical calculation for $T \neq 0$. The results of such a calculation for $\Delta_1(0)/\Delta_2(0) = 0.5$ are shown in the accompanying figure which should replace Fig. 1 of the original paper.

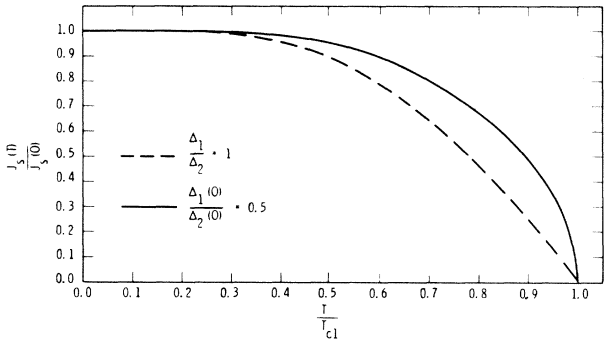

FIG. 1. Reduced dc Josephson current versus reduced temperature. T_{c1} is the smaller of the two critical temperatures. The dashed line applies to the case of equal energy gaps; the temperature dependence reduces to that of the gap alone. The solid line corresponds to $\Delta_1(0)/\Delta_2(0) = 0.5$, and applies approximately to a Sn-Pb sandwich. The BCS temperature dependence of the gap is assumed in both cases. Barring other complications from the strong electron-phonon coupling in lead, such an approximation is good for Al-Pb or Sn-Pb sandwiches since the gap of lead varies little over the interesting temperature range.

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BIQUADRATIC EXCHANGE BETWEEN Mn^{2+} IONS IN MgO. E. A. Harris and J. Owen [Phys. Rev. Letters 11, 9 (1963)]. BIQUADRATIC EXCHANGE AND THE BEHAVIOR OF SOME ANTIFERROMAGNETIC SUBSTANCES. D. S. Rodbell, I. S. Jacobs, J. Owen, and E. A. Harris [Phys. Rev. Letters 11, 10 (1963)].

In our Letters it is stated that the contribution to biquadratic exchange from exchange-induced distortion is very small. While this is correct for the usual isotropic model, more detailed considerations of the observed anisotropic nature of the distortions show that this contribution is greatly accentuated. We estimate that this mechanism may account for about one tenth of the biquadratic term in NiO, about half in MnO, and perhaps more than half for an isolated Mn pair.