Erratum: Breakdown of the Ginzburg-Landau approximation in superconductor fluctuation theory [Phys. Rev. B 13, 3870 (1976)]

Subodh R. Shenoy

Two dimensionless field variables have been incorrectly printed with the same symbol. Below Eq. (7), the variable $A_\pm$ should be correctly defined as $A_\pm = 1 \pm h'$, where $h' \equiv h(T_{c0}/T)^2$ and $h = (2eH/\hbar c)\xi^2(0)$. Then in Eqs. (8) and (9), the h that appears explicitly should be replaced by h', with the over-all coefficient κ unchanged. The transition temperature, PAW-type substitution, and variable $A'_\pm$ of p. 3872 are then correctly defined as $\ln T/T_{c2}(H) = \epsilon_0 + h'/(1+h')$, $\xi^2(0)\vec{q}^2 \rightarrow \xi^2(0) + 2h'(n+\frac{1}{2})$, and $A'_\pm \equiv e^{\pm h'}$. The variable h of Fig. 1 is unchanged.

In Eq. (A6) there is a sign error, and the exponential on the right-hand side should read $\exp[-(1+z)\beta\rho^2/2(1-z)]$.

Erratum: Surface tension and boundary conditions for superfluid Fermi liquid. Size effect and the effect of a magnetic field on the phase diagram [Phys. Rev. B 12, 4825 (1975)]

I. A. Privorotskii

The flux density can be calculated straightforwardly within the weak-coupling theory, along the lines of the analogous calculation for superconductors, as given, e.g., in Ref. 1. It removes the ambiguity in the flux density referred to below Eq. (10). The correct result is

$$j_l^s = 4mc\,\mathrm{Im}\left(A^*_{ik}\frac{\partial A_{ik}}{\partial x_l} + A^*_{il}\frac{\partial A_{ik}}{\partial x_k} + A^*_{ik}\frac{\partial A_{il}}{\partial x_k}\right).$$

This coincides with the expression given in Ref. 2. Fermi-liquid corrections do not change this result.

The bending energy is

$$F' = c\left(\frac{\partial A_{ik}}{\partial x_l}\frac{\partial A^*_{ik}}{\partial x_l} + \frac{\partial A_{ik}}{\partial x_k}\frac{\partial A^*_{il}}{\partial x_l} + \frac{\partial A_{ik}}{\partial x_l}\frac{\partial A^*_{il}}{\partial x_k}\right).$$

The total free energy is uniquely determined by the relationship

$$\mathfrak{F} = \int dV(F+F') + \int dS[\sigma_1\,\mathrm{Tr}(AA^\dagger) + \sigma_2 A^*_{ik} n_k^{(0)} A_{il} n_l^{(0)}].$$

The boundary conditions are

$$c\left(n_l^{(0)}\frac{\partial A_{ik}}{\partial x_l} + n_k^{(0)}\frac{\partial A_{il}}{\partial x_l} + n_l^{(0)}\frac{\partial A_{il}}{\partial x_k}\right) + \sigma_1 A_{ik} + \sigma_2 A_{il} n_k^{(0)} n_l^{(0)} = 0.$$

If the parameters A_{ik} satisfy these conditions the flux-density component normal to the boundary vanishes.

Other results remain unchanged.

[1] A. A. Abrikosov, L. P. Gor'kov, and I. E. Dzyaloshinski, *Quantum Field Theoretical Methods in Statistical Physics* (Pergamon, London, 1965).
[2] P. Wölfle, Phys. Lett. A 47, 224 (1974).

Erratum: Plasma oscillation of a charge layer at an insulator surface [Phys. Rev. B 13, 2859 (1976)]

D. E. Beck and P. Kumar

Equation (10) should read

$$\omega_L^2 = \frac{2\pi \bar{n} e_*^2}{m} q\left\{1 + 3q\left[\lambda + \frac{a_0}{32}\left(11\frac{\epsilon_1}{\epsilon_2} - 21\right)\right] + O(q^2)\right\},$$

and the right-hand sides of Eqs. (23) and (25) should be divided by 2. In addition, the value of λ_{TF} for the Si-SiO_2 interface should be $\lambda_{TF} = 10.9$ Å. With these corrections the expressions for λ_2 in Sec. IV should read

$$\lambda_2 = \tfrac{3}{2}\lambda_{TF} - 1.64a_0 - 0.85/k_F$$

and

$$\lambda_2 \approx 3\lambda_D - 0.9a_0 - \tfrac{1}{2}\lambda_T$$

for the degenerate and nondegenerate electron gases, respectively.

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