of free electrons, $\epsilon(k)=k^2/2m$ and we find $k_1=\frac{1}{2}q$ so

$$\sigma(q)=(me^2/2\pi q)(\mathcal{E}_F-q^2/2m),\quad q<2k_F$$
$$=\quad 0,\quad q>2k_F \qquad (14)$$

as first found by Lindhard.[6] Reuter and Sondheimer's value for the extreme anomalous case is $\sigma(q)=me^2\mathcal{E}_F/2\pi q$. The correction due to using (14) is purely resistive and completely negligible. In more complicated cases the cutoff may be significant.

Pippard's result may be recovered in the following way. The behavior of the surface-impedance integral (7) is dominated by the behavior of $\sigma(q)$ for small q. In this case we have

$$\epsilon(k+q)-\epsilon(k)\cong q\epsilon'(k)+\tfrac{1}{2}q^2\epsilon''(k)+\cdots, \qquad (15)$$

so the leading term is

$$\sigma(q)\cong[(m_2/m_1)^{1/2}e/2\pi|q|]$$
$$\times\int_{-\infty}^{\infty}dk\{\mathcal{E}_F-\epsilon(k)\}\theta[\mathcal{E}_F-\epsilon(k)]\delta[\epsilon'(k)]$$
$$=[(m_2/m_1)^{1/2}e^2/2\pi|q|]\sum_\lambda(\mathcal{E}_F-\epsilon_\lambda)|\epsilon_\lambda''|^{-1}, \qquad (16)$$

where $\epsilon_\lambda<\epsilon_F$ are the energies at which the $\epsilon(k)$ curve has zero slope. But these points correspond precisely to the stationary k_x-k_y cross sections of the Fermi surface. Equation (16) may also be written

$$\sigma(q)=[e^2/4\pi^2|q|]\sum_\lambda\oint|R_\lambda(\phi)|\cos^2\phi d\phi, \qquad (17)$$

where R_λ denotes the radius of Gaussian curvature at a point on the λth extremal cross section and ϕ is the polar angle in the k_x-k_y plane. This is precisely Pippard's expression and may be derived for quite general forms of ϵ_x and ϵ_y.

At "flat" portions of the Fermi surface, the first few terms on the right-hand side of (15) will be absent and (17) will no longer be valid. In such cases we have $\sigma(q)\sim|q|^{-n}$, $n\geq 2$, which will affect the size and frequency dependence of the surface impedance, as discussed for $n=2$ by Gerlach.[1] Inserting the above value for $\sigma(q)$ into (7) leads to the frequency dependence $\omega^{(n+1)/(n+2)}$. The observation of a frequency dependence of this sort would indicate the existence of a flat section on the Fermi surface, at right angles to the surface normal, but other information, e.g., de Haas–van Alphen data, would be required to position it in k space. Because of the difficulty in preparing single-crystal surfaces, this does not appear to present a useful technique for Fermi-surface studies.

[6] J. Lindhard, Kgl. Danske Videnskab Selskab, Mat. Fys. Medd. **28**, 8 (1954).

Errata

Role of Longitudinal and Transverse Phonons in Lattice Thermal Conductivity of GaAs and InSb, C. M. BHANDARI AND G. S. VERMA [Phys. Rev. **140**, A2101 (1965)]. The fifth column in Table II should read $(\hbar/k)B_{TN}$ (10^{-23} sec deg^{-3}) in place of B_{TN} (10^{-23} deg^{-4}). The authors are grateful to Takeshi Aoki for pointing out this error.

Magnetic Interactions between Rare-Earth Ions in Insulators. I. Accurate Electron-Paramagnetic-Resonance Determination of Gd^{3+} Pair-Interaction Constants in $LaCl_3$, M. T. HUTCHINGS, R. J. BIRGENEAU, AND W. P. WOLF [Phys. Rev. **168**, 1026 (1968)]. Several minor proof corrections were inadvertently omitted by the publishers. The numerical corrections omitted are listed below; none affects the main results presented in the paper. Equation (8) should read $\Delta H_{mn}=\epsilon_{mn}[(1-\cos\theta)/\cos\theta]H+[(\sin^2\theta)/\cos\theta]B_{mn}$. In line 1 of Table I, A for $LaCl_3$ should be 2.94 Å, not 2.91 Å. In the right-hand column of Table IV, -1176.1 should read $+1176.1$. In row 1 of Table VI, the calculated value should be 512.2, not 512.5. In Table IX, the value of b_2^0 at 77°K (row 2, col. 4) should be -0.00206, not 0.00201. In Table XI, in the eighth row (295°K), $J_{nn}=0.01268$, not 0.02168; and $r_{nnn}=4.785$, not 4.875.