Errata

Towards a Quantum Many-Body Theory of Lattice Dynamics. II. Collective Fluctuation Approximation, N. S. GILLIS AND N. R. WERTHAMER [Phys. Rev. **167**, 607 (1968)]. In Sec. III C, it was claimed that the eigenvectors of the one-phonon collective modes within the RPA could be constructed exactly for the general case of an arbitrary interatomic potential, and that these eigenvectors were exhibited explicitly by Eq. (39). It has since been pointed out to us by Dr. P. C. Kwok that the vectors of Eq. (39) are not in fact true eigenvectors. Thus the frequencies given by Eq. (43) are not the true eigenfrequencies of the one-phonon collective modes, but instead are just the projection of the response matrix onto a noninvariant subspace. Nevertheless, the frequencies of Eq. (43) will approximate the phonon frequencies to the extent that the Hartree potential is approximately a quadratic function of displacement for small displacements or, equivalently, to the extent that the ground single-particle Hartree state approximates a Gaussian.

Thus the phonon spectrum computations of de Wette *et al.*,[1] which claimed an exactitude on the basis of the alleged theorem in question, in fact only approximate the true phonon spectrum. However, the arguments used by Nosanow and Werthamer[2] still apply, and continue to indicate that the approximation is a good one for helium, probably no worse than 5% for the phonon frequencies.

It should also be remarked that all results and conclusions of Sec. III D and the conclusions of Secs. IV and V remain valid.

[1] F. W. de Wette, L. H. Nosanow, and N. R. Werthamer, Phys. Rev. **162**, 824 (1967).

[2] L. H. Nosanow and N. R. Werthamer, Phys. Rev. Letters **15**, 618 (1965).

Subthreshold Electron Damage in *n*-Type Germanium, Y. CHEN AND J. W. MACKAY [Phys. Rev. **167**, 745 (1968)]. The passage beginning at the end of p. 746 and ending at the beginning of p. 747 should read as follows: "This produces a point on the lower curve, indicated by a cross. n is again measured after irradiation with a short, high-intensity beam of 40–50 μA/cm^2. This produces a point on the upper curve and is represented by a triangle."

Investigation of Energy-Band Structures and Electronic Properties of PbS and PbSe, SOHRAB RABII [Phys. Rev. **167**, 801 (1968)].

I. The captions of Figs. 1 and 2 should be interchanged.

II. The energies given in Table XI are in Ry, not in eV.

III. The value of E_0 for PbS in Table XI labeled "Present work" should be 0.021.

IV. The value of E_3 for PbS in Table XI labeled "Present work" should be 0.489.

Effective Magnetic Field in Metals, J. I. KAPLAN AND M. L. GLASSER [Phys. Rev. **170**, 649 (1968)]. We have found that in the current operator π [Eq. (1)] we have taken the electron charge as $+e$, whereas in the expression for $Z(3,2)$ [Eqs. (9) and (10)] it is taken as $-e$. Correcting for this error leads to $\mathbf{H}_{\text{eff}}=0$ in Eq. (12). Dr. M. Green has remarked that this must be the case, for the quantity $\lim_{3\to 2}\pi_2 Z(3,2)$ appearing in Eq. (8) is just the average value of the current (at $\mathbf{r}_2$) which must vanish for an infinite homogeneous system. However, Eq. (8) does give a nonvanishing **A** in the case of a bounded system, for, as discussed by Teller [Z. Physik **67**, 311 (1931)], the diamagnetism is due to a finite surface current (which is a purely quantum effect). For a cylindrical system, with the surface current adjusted to give the correct magnetization, Eq. (8) gives a local field of precisely $4\pi\mathbf{M}$. The calculation no longer requires screening and is valid for any band structure. Furthermore, there appears to be no possibility, in the Hartree approximation, for the coexistence of different effective fields in a homogeneous system.