variant under translations by a lattice vector. The shallow indirect free exciton derived from one valley must have a wave vector **k** whose value is close to the **k** value giving the position of the valley minimum. Excitons formed from different valley conduction states thus have different **k** values, and their differences have no necessary relation to a reciprocal-lattice vector. Hence, the electronic Hamiltonian, which has translational invariance, cannot have a nonvanishing matrix element between excitons based on different valleys, and the valley-orbit splitting must vanish. (However, the electron-phonon interaction does connect free excitons from different valleys.)

The impossibility of a free-exciton valley-orbit splitting was also unrecognized in the work of Ascarelli[1] on silver bromide, which has a large electron-phonon coupling.

Shaklee and Nahory have recently reexamined the intrinsic absorption edge of silicon using wavelength derivative spectroscopy.[2] They have not seen the component E_1^{TA} identified with the very weak tail in our absorption spectrum. This suggests that the 2-meV splitting occurs only at the absorption threshold due to transitions assisted by the emission of TO phonons. In view of this, a possible interpretation is that the component we labeled E_1^{TO} actually arises from absorption associated with a different (LO) phonon. The difference between the energy splitting observed in the optical spectra (1.8 meV) and the TO-LO energy difference from tunneling spectroscopy[3] (~3.3 meV) could be accounted for by the experimental uncertainty in the latter estimate. In addition, the TO-LO energy separation in the heavily doped crystals necessary for the tunneling measurements may be different from that of undoped silicon because of electron-phonon interactions. In this interpretation, the difference in the intensity ratio of free-exciton luminescence components $I_2^{\mathrm{TO}}/I_1^{\mathrm{TO}}$ and of the absorption components $E_2^{\mathrm{TO}}/E_1^{\mathrm{TO}}$ must be attributed to the change in the transition energy order of the LO and TO phonon-assisted components between optical emission and optical absorption, rather than to thermalization as we suggested. Corresponding LO phonon-assisted components should occur in the luminescence of excitons bound to shallow donors and acceptors in silicon if this interpretation is correct. These components should just be resolved in the best spectra we possess, but are not apparent.

We thank Dr. Nahory for calling our attention to this matter and for discussing his results with us prior to publication.

Cu$^+$ and Ag$^+$ Centers in Alkali Halides, W. D. Wilson, R. D. Hatcher, R. Smoluchowski, and G. J. Dienes [Phys. Rev. **184**, 844 (1969)]. The 12th line of the Introduction should be changed to "... oscillator strengths of the order of 0.01 which decrease with temperature as $\coth(\hbar w/2kT)$." We are grateful to Professor John Herrandez for pointing out to us this error.

Calculation of Two-Phonon Conductivity in Semiconductors, Jick H. Yee [Phys. Rev. **186**, 778 (1969)]. *Page 778:* The title should read "Calculation of Two-Photon Conductivity in Semiconductors." *Page 782:* In the note added in proof, the equation for I_0 is really an approximation and so the equal sign should be replaced by an approximately equal sign. (The internal reflection of light at the boundary $x=L$ has been ignored.) In Fig. 6, the L values shown for the three curves are all a factor of 10 too small. They should be 0.2, 0.1, and 0.05.

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[1] G. Ascarelli, Phys. Rev. Letters **20**, 44 (1968); Phys. Rev. **179**, 797 (1969).

[2] K. L. Shaklee and R. E. Nahory, Phys. Rev. Letters **24**, 942 (1970).

[3] A. G. Chynoweth, R. A. Logan, and D. E. Thomas, Phys. Rev. **125**, 877 (1962).