

ERRATA

Influence of the Phonon Spectrum of In-Tl Alloys on the Superconducting Transition Temperatures. R. C. Dynes [Phys. Rev. B 2, 644 (1970)]. In this paper the value for  $\langle\omega\rangle$  was incorrectly calculated. Rather than calculate  $\langle\omega\rangle$  as was defined in the paper, namely,

$$\langle\omega\rangle = \int_0^\infty \alpha^2(\omega)F(\omega) d\omega / \int_0^\infty \frac{\alpha^2(\omega)F(\omega)}{\omega} d\omega,$$

the author inadvertently calculated

$$\int_0^\infty \omega \alpha^2(\omega)F(\omega) d\omega / \int_0^\infty \alpha^2(\omega)F(\omega) d\omega,$$

which we will now denote  $\bar{\omega}$ . The correct numerical values for  $\langle\omega\rangle$  and  $\bar{\omega}$  are given in the revised version of Table II, which is presented here. It can be seen immediately that, using the correct values for  $\langle\omega\rangle$ , much better agreement is found between the values of  $T_c$  determined experimentally and those calculated using McMillan's equation [Eq. (8)]. This agreement is shown in Fig. 1 (which is a corrected version of Fig. 7). Clearly, when used with the correct  $\langle\omega\rangle$ , McMillan's equation adequately describes the  $T_c$ 's of these alloys throughout the entire series.

The correction of the values of  $\langle\omega\rangle$  leaves the other conclusions of the paper unchanged. As Garland's equation does not involve  $\langle\omega\rangle$ , it is still in rather poor agreement with the experimental results. The values presented in the  $T_c$ -versus-con-

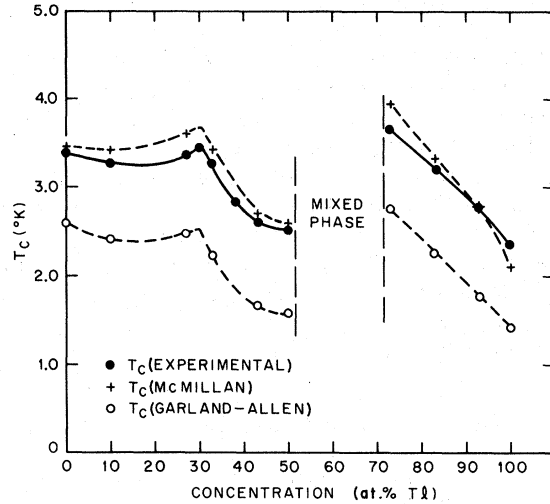


FIG. 1. Comparison of the experimentally measured transition temperatures with those obtained from the theoretical expressions of McMillan (using  $\langle\omega\rangle$  as defined in the text) and of Garland and Allen. This is a revised Fig. 7.

centration plot (Fig. 9) are changed, as can be seen from the new Table II, but the basic shape of the curve, with a minimum in  $\langle\omega\rangle$  near 30% Tl, remains the same. Thus the discussion of mode softening at the phase transition is unaltered.

The author wishes to thank C. Owen for pointing out this error.

TABLE II. (Revised)

Alloy	$\langle\omega\rangle$ (meV)	$\bar{\omega}$ (meV)	$\langle\omega^2\rangle$ (meV <sup>2</sup> )	$\lambda$	$T_{c \text{ expt}}$ (°K)	$T_{c \text{ McM11}}$ (°K)	$T_{c \text{ G. A.}}$ (°K)	$\langle\omega^2/\omega_0^2\rangle$
In	6.91	8.86	61.17	0.834	3.40	3.44	2.57	0.2613
In <sub>0.90</sub> Tl <sub>0.10</sub>	6.46	8.41	54.30	0.850	3.28	3.42	2.40	0.2413
In <sub>0.73</sub> Tl <sub>0.27</sub>	5.76	7.67	44.19	0.933	3.36	3.60	2.47	0.2131
In <sub>0.67</sub> Tl <sub>0.33</sub>	5.88	7.81	46.00	0.899	3.26	3.42	2.21	0.2218
In <sub>0.57</sub> Tl <sub>0.43</sub>	5.51	7.33	40.50	0.847	2.60	2.70	1.68	0.2066
In <sub>0.50</sub> Tl <sub>0.50</sub>	5.45	7.20	39.32	0.835	2.52	2.58	1.57	0.2035
In <sub>0.27</sub> Tl <sub>0.73</sub>	4.56	6.46	29.32	1.092	3.64	3.95	2.76	0.1609
In <sub>0.17</sub> Tl <sub>0.83</sub>	4.67	6.30	29.45	0.980	3.19	3.31	2.26	0.1916
In <sub>0.07</sub> Tl <sub>0.93</sub>	4.86	6.09	29.61	0.889	2.77	2.76	1.79	0.2319
Tl	4.98	6.04	30.13	0.780	2.33	2.10	1.41	0.2584

Influence of the Dipole-Dipole Coupling on the Specific Heat of Cesium Titanium Alum. Paul H. E. Meijer [Phys. Rev. B 3, 182 (1971)]. In Sec. III the length  $a\sqrt{2}$  is taken to be 12.17 Å. For the alum in question it should have been 12.45 Å. This is based on the results of Haussühl<sup>1</sup> and the fact that Haussühl is, in all comparable cases, 0.025 Å

higher than Lipson and Beevers.<sup>2</sup> Hence, the author averaged over the two by subtracting 0.012 Å. Note that with this lattice constant our  $\tau$  becomes identical with the value of  $\tau$  used by Hebb and Purcell.<sup>3</sup>

The numbers of  $g^2P$  remain the same, since they are expressed in units of  $a$ . The entropy correc-

tions  $\Delta S$  contain the factor  $a^{-3n}$ , where  $n$  is the number of bonds. Hence, we have to multiply the last column of each table by  $x^n$ , where  $x = (12.17/12.45)^3 = 0.934036$ .

The first sentence of the Appendix should be "The calculation of a square-vertex contraction  $\langle S_\alpha S_\beta S_\gamma S_\delta \rangle$

versus two independent circular vertices  $\langle S_\alpha S_\beta \rangle \times \langle S_\gamma S_\delta \rangle$  on a given lattice site gives the *same* result. . . ."

Below Eq. (1): The 10% discrepancy is a 1% discrepancy.

<sup>1</sup>S. Haussühl, Z. Krist. 116, 371 (1961).

<sup>2</sup>H. Lipson and C. A. Beevers, Proc. Roy. Soc. (London) A148, 664 (1935).

<sup>3</sup>M. H. Hebb and E. M. Purcell, J. Chem. Phys. 5, 338 (1937).

Hall Effect in Superconducting Niobium and Alloys. J. le G. Gilchrist and J. -C. Vallier [Phys. Rev. B 3, 3878 (1971)]. Equation (2.4) is wrong and should read

$$\gamma \approx \frac{R_+^2 - R_-^2}{2R_+ R_-} \left[ 1 - \frac{(R_+^2 + R_-^2) R_g h r^{-1}}{R_+ R_- (R_+ + R_-)} \right].$$

There is always a term of order  $h r^{-1}$ , and when  $u$  is small (and  $R_+ \approx R_- \approx R_g$ ),  $\gamma$  underestimates the Hall tangent by a factor  $1 - h r^{-1}$ . Applying this correction, the figures in the last column of Table II become 34.4, 37.8, and 36.4  $\mu\Omega m$ .