

25,000 kg/cm² bismuth also has a rising melting curve.

It would of course have been gratifying if I could have extended these measurements to helium also and found its ΔV and latent heat along its melting curve, for Simon stresses the point that exploration of the melting curve of helium over a comparatively low range of pressure and temperature might be expected to give as much information about the essential character of the melting curve as an exploration over a much wider range for other substances. The reason given for this is that such an exploration for helium exceeds the critical temperature by a very much larger factor than is possible for other substances. Thus Simon explicitly comments on the fact that in following the melting curve of helium to 55° Abs. and 5500 kg/cm² he has exceeded the critical temperature by a factor of 8-fold, whereas previously the critical temperature had been exceeded at most by 20 percent in the case of CO₂. I believe, however, that examination will show that these considerations have less pertinence than at first appears. The implication, of course, is that in some way the critical parameters for the change from liquid to vapor are of importance for the phenomenon of freezing to the crystalline phase, and that something analogous to the law of corresponding states for liquid-vapor will carry over to amorphous-crystal, with some connection between the two sets of reduced parameters. Not only is

there, so far as I know, no reason theoretically to expect any such connection, but I have previously shown on the basis of the experimental evidence that there can be no law of corresponding states for the freezing of different substances. Until some connection has been established therefore between liquid-vapor and amorphous-crystal phenomena, there would seem to me no reason to ascribe greater significance to the fact that Simon has been able to exceed the critical *temperature* of helium by a factor of 8 than to the fact that the critical *pressure* of CO₂, for example, had previously been exceeded by a factor of 165. It would seem to me on the contrary that any special effects to be shown by helium would be expected in the low temperature domain where degradation and similar effects occur, and that having successfully got helium out of this domain into that of normal temperature phenomena, it would be expected to have exhausted its possibilities of giving unique information, and from here on to be of perhaps not much greater significance than other substances. The mere fact that it is possible to bring the melting curve of helium up into the region of normal temperature effects is in itself an argument for the significance of the universal traits of the melting curve discussed above.

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Erratum: A New Method for Measuring Elastic Moduli and the Variation with Temperature of the Principal Young's Modulus of Rocksalt Between 78°K and 273°K

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(Phys. Rev. 45, 715, 1934)

DR. S. L. QUIMBY of Columbia University, New York, has recently pointed out an error in Eq. (13) on page 716 of the above paper. This equation should read

$$f_i = n(G_i^{1/2}/2\rho_i l_i^{1/2})(1 - \pi^2 n^2 \sigma_i^2 \theta_i / 2l_i^2 A_i)$$

instead of

$$f_i = n(G_i^{1/2}/2\rho_i l_i^{1/2})(1 - \pi^2 n^2 \sigma_i^2 \theta_i / 4l_i^2 A_i).$$

However, the correct formula was used in computing the results compiled in the various tables in the paper.