



Fig. 1. Nomogram for evaluating  $f_i/f_0 = \exp [(-2B \sin^2 \theta)/\lambda^2]$ . (Reproduced one-half full size.)

because the original equation contains the exponent with a negative sign. An example of the use of the nomogram for evaluating  $f_i/f_0$  for particular values of  $B$  and  $(\sin^2 \theta)/\lambda^2$  has been sketched on the diagram: if  $\sin^2 \theta/\lambda^2 = 0.04$  and  $B = 3$ ,  $f_i/f_0 = 0.79$ , which is the  $A$ -scale reading corresponding to the value of  $Q$  ( $= 0.105$ ) on the  $B$ -scale.

In circumstances in which the temperature factor is assumed to be the same for all the atoms present, the nomogram can be used to evaluate it in the following way. If structure factors,  $F_{\text{calc.}}$ , are calculated using the values

of the atomic scattering factors for the atoms at rest,  $f_0$ , and a series of values of the ratio  $\Sigma |F_{\text{obs.}}| \div \Sigma |F_{\text{calc.}}|$  is obtained from successive groups of reflections having a mean value of  $(\sin^2 \theta)/\lambda^2 = M$ , then the value of each such ratio, when found on the  $A$  scale, determines a point on the  $B$  scale and hence a point on the  $C$  scale. If the points on the  $C$  scale for each value of  $M$  are joined to the corresponding values of  $(\sin^2 \theta)/\lambda^2$  on the  $A$  scale, these lines like  $PQ$ , when produced, should converge on a particular value of the temperature factor  $B$ , which is thereby determined.

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**The measurement and correction of intensities from single-crystal X-ray photographs: correction.** By G. KAAAN, *N. V. de Bataafsche Petroleum Maatschappij, The Hague, Holland*, and W. F. COLE, *Division of Building Research, C.S.I.R.O., Highett, Victoria, Australia*

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It has been brought to our attention by Mr G. J. Bullen of the Chemistry Department, University College, London, that in our paper (Kaan & Cole, 1949) symbols are used in other than their conventional meanings and that an error occurs in equation (6). These mistakes can be corrected as follows. Throughout the text  $\gamma$  should read  $\mathcal{Y}$  and  $\xi$  should read  $\zeta$ . It should be noted that for rotation and oscillation photographs  $\mu$  is to be replaced by  $\nu$ , the angle between the diffracted beam and the equatorial layer, as used by Buerger (1942). The definition of  $\mathcal{Y}$  given applies strictly to rotation and oscillation photographs only; that for equi-inclination Weissenberg photographs is more general, being the angle between the projections of the direct beam and of the reflected ray on a plane normal to the rotation axis. In both instances  $\mathcal{Y}$

is as used by Buerger (1942). The corrected form of equation (6) is

$$\frac{1}{L} = \cos \nu \sin \mathcal{Y} = \sin \mathcal{Y} (1 - \zeta^2)^{\frac{1}{2}} = \sin 2\theta \frac{(\sin^2 \varrho - \sin^2 \theta)^{\frac{1}{2}}}{\cos \theta}.$$

These corrections do not affect the published charts (Figs. 4 and 5) or their use.

Our thanks are due to Mr Bullen for kindly pointing out the above errors.

#### References

- BUERGER, M. J. (1942). *X-ray Crystallography*. New York: Wiley.  
 KAAAN, G. & COLE, W. F. (1949). *Acta Cryst.* **2**, 38.