The entire procedure is repeated with an integral mode PHA setting with the baseline above the λ window so as to accept only the $\lambda/2$ radiation and this yields I_2 without f. In this manner f is determined. (Extension of the method to higher harmonics, if important, may be possible by using several foils of varying thickness.)

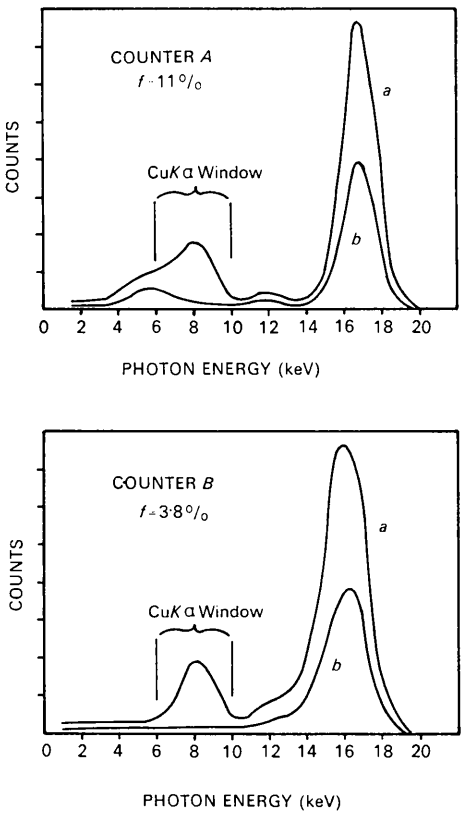

Fig. 1.

Having once determined f one may then correct thermal diffuse scattering (TDS) data obtained in a region where the $\lambda/2$ contribution is important by scanning the region using the integral mode to determine the angular dependence of I_2. Then fI_2 is subtracted from the observed TDS count rate at each angle. One advantage of the method is that the I_2 count rates are relatively high using the integral mode so that the machine time involved in obtaining correction data is short compared with the time spent accumulating TDS data.

The fractions f determined for three different commercial detectors, (xenon filled proportional counters and pre-amps.) were 3·8%, 5·5% and 11%. Their 'resolutions', as judged by the width of the $\lambda/2$ line, were all comparable. Fig. 1 shows how these differences may arise. The curves are PHA scans for two of the counters, the signal being obtained from a Cr(200) reflection for the $\lambda/2$ wavelength TDS only for λ) with a Cu anode tube using a doubly bent lithium fluoride monochromator designed for Cu $K\alpha$ radiation. The scans labeled (*a*) are without absorbing material and those labeled (*b*) were taken with an absorber which passes about 48% of the $\lambda/2$ and 3% of the λ radiation. The peaks at 8 keV in the (*a*) scans are due to the TDS of the characteristic radiation. The peak at 5 keV for counter *A* is only attenuated by a factor of 2 by the absorber so that this portion of the pulse height distribution must be associated with the incident $\lambda/2$ radiation. We attribute this peak to Fe fluorescence from the back wall of the proportional counter, which in this model does not have a double window. It is this peak which accounts for the poor performance of counter *A*.

Finally, it should be noted that the number f depends on the choice of PHA settings used in its determination so that consistent settings must be used. For the f numbers quoted the λCu $K\alpha$ window was between 6 and 10 keV and the integral mode data was taken with a baseline at 10 keV.

Acta Cryst. (1968). A**24**, 477

The atomic mechanism of the body-centred cubic to σ-phase transformation. Corrections.

By W. J. KITCHINGMAN, *Metallurgy Department, Institute of Science and Technology, Sackville Street, Manchester* 1, *England*

(*Received* 30 *March* 1968)

orrections to *Acta Cryst.* (1968), A**24**, 282.

The following corrections should be made in the article (Kitchingman, 1968) published under the above title:

Fig. 7, page 286: In the section labelled ATOM in the table, position *C* should be shown as occupied by Nb and position *D* by Al, in the second column.

Page 285, column 2, lines 20–25 should read:

Similarly in the case of 2NbAl incompatibility occurs in the replacement $C \rightarrow D$ and $B \rightarrow D$, since aluminum atoms of coordination number 12 must be replaced by niobium atoms of coordination numbers 14 and 15. Aluminum shows only coordination number 12 and niobium coordination numbers 14 and 15 in the structure.

Reference

KITCHINGMAN, W. J. (1968). *Acta Cryst.* A**24**, 282.