posure. The quartz background was separately measured and subtracted from the powder patterns. Absorption corrections were judged unnecessary. Integrated intensities were obtained for the following lines based on the tetragonal unit cell given by Baur (1956): 110, 200+111, 210, 211, 220, 002, and 112+301, the second and last being unresolved doublets.

The intensity of 210 is independent of b_{Sn} and that of (200+111) nearly so. A scale factor was computed from these two measured intensities (and subsequently corrected for the small contribution by b_{Sn} to 200) using $b_O = 0{\cdot}577 \times 10^{-12}$ cm. Values of b_{Sn} were then calculated from each of the other five measured intensities. Isotropic temperature factors of $B = 0{\cdot}7$ for oxygen and 0·4 for tin were found by trial and error to give the best agreement between calculated and observed intensities. It was also found that the position parameter, $x = 0{\cdot}306$ gave better agreement than the 0·307 of Baur.

Average values of b_{Sn} for each of the seven known isotopic compositions of Sn were determined and from them the b's for each pure isotope were computed assuming that a measured $b_{mix} = \Sigma a_i b_i$, where a_i is the fractional abundance, as reported by Oak Ridge, of each isotope in the sample. The resulting values are:

Isotope	Scattering amplitude, b ($cm \times 10^{-12}$)
116	0·58 ± 0·01
117	0·64 ± 0·025
118	0·58 ± 0·01
119	0·60 ± 0·025
120	0·64 ± 0·01
122	0·55 ± 0·03
124	0·59 ± 0·02

Each error listed is twice the average deviation from the mean of the five separate determinations for that sample. The average of these values is 0·61, weighted in accordance with the natural abundance of the isotopes and allowing for the fact that these seven isotopes make up only 98% of natural tin.

Reference

BAUR, W. H. (1956). *Acta Cryst.* **9**, 515.

Notes and News

Announcements and other items of crystallographic interest will be published under this heading at the discretion of the Editorial Board. The notes (in duplicate) should be sent to the General Secretary of the International Union of Crystallography (G. Boom, Department of Metallurgy, University of Oxford, Parks Road, Oxford, England). Publication of an item in a particular issue cannot be guaranteed unless the draft is received 8 weeks before the date of publication.

International Union of Crystallography

Commission on Neutron Diffraction

One of the activities of the Commission on Neutron Diffraction is the collection of additional and more accurate values of neutron scattering amplitudes and it is hoped to publish up-to-date lists from time to time. It would be a great help if news of all newly determined values, whether announced in published papers or not, could be sent to the Chairman, Prof. G.E. Bacon, The University, Sheffield S10 2TN, England.