atoms in neighboring Bi layers is 3·68 Å, which is somewhat larger than the interatomic separation of Bi atoms in adjacent layers of metallic Bi (3·47 Å) and gives rise to a marked cleavage plane normal to the *c* axis.

The significance of the structure of InBi is its contrast to that generally found in 1:1 compounds formed by elements in which the average number of valence electrons per atom is four. In the case of the *B* sub-group elements of groups 3 and 5 of the periodic table, to which In and Bi belong, such compounds crystallize with the zinc-blende structure with tetrahedrally coordinated atoms and interatomic distances corresponding to the sum of the tetrahedral covalent radii of the atoms involved. The only exceptions in this series are the compounds involving the heavier and more metallic elements, namely TlSb and TlBi, in which the atoms are in the CsCl arrangement and the interatomic separations are equivalent to the sum of the metallic radii for eightfold coordination (Wyckoff, 1948). InBi appears to be intermediate between these two structural types as it possesses fourfold coordination and its interatomic distance, 3·13 Å, corresponds to the sum of the metallic radii of In and Bi with four nearest neighbours (1·47 and 1·60 Å respectively). This observed separation is appreciably greater than the value expected (2·92 Å) for a covalent bond; or for an ionic structure of the type $In^{3+}Bi^{3-}$ in which the radii would be 0·88 and 1·98 Å for the cation and anion respectively (Wyckoff, 1948). InBi belongs to the B-10 structural [type (*Strukturbericht*), which is characterised by a bimolecular tetragonal unit cell developed from the space group $P4/nmm$ and with atoms at the positions already quoted. A compound of this type can be described as a distorted CsCl arrangement when the axial ratio c/a approaches $1/\sqrt{2}$, (0·707), and the unknown coordinate, z, approximates 0·5 (*Strukturbericht*). However, the distortion in the case of InBi, due to an axial ratio of 0·955, is so great that fourfold coordination results and only a formal resemblance exists between InBi and the distorted CsCl arrangement which is possible in *B*–10 structural types.

References

Strukturbericht, **1**, 89.

WYCKOFF, R. W. G. (1948). *Crystal Structures*, vol. 1, chap. 3. New York: Interscience Publishers.

Notes and News

Announcements and other items of crystallographic interest will be published under this heading at the discretion of the Editorial Board. Copy should be sent direct to the British Co-editor (R. C. Evans, Crystallographic Laboratory, Cavendish Laboratory, Cambridge, England).

International Union of Crystallography

With the approval of the Executive Committee, the Commission on Crystallographic Data has co-opted Dr Olga Kennard (U. K.) and the Commission on Crystallographic Apparatus has co-opted Dr M. M. Umanskij (U.S.S.R.).

Symposium on Crystallography in Santiago, Chile

A Symposium on Crystallography, organized by the Chilean Committee of Crystallography, was held at Santiago, Chile, from 7 to 9 June 1956. It was attended by members of three Chilean Universities who are working in this field.

Dr Sven Furberg, who is at present at Montevideo organizing a Crystallographic Laboratory on a UNESCO Technical Assistance Mission, attended this Symposium as the guest of honour.

A report on the Symposium of the International Union of Crystallography held in Madrid last April, submitted by Mr Enrique Grünbaum, was read during the sessions.

Papers by Jorge Muñoz-Cristi, George Mueller, Sven Furberg, Arnold Keller, Carlos Rivera, Nahum Joel and Isabel Garaycochea on subjects including mineralogy, crystal structure, X-ray diffraction, optical crystallography and crystallization problems were presented to this Symposium.

Book Reviews

Works intended for notice in this column should be sent direct to the Editor (P. P. Ewald, Polytechnic Institute of Brooklyn, 99 Livingston Street, Brooklyn 2, N.Y., U.S.A.). As far as practicable books will be reviewed in a country different from that of publication.

Microscopic Petrography. By E. W. HEINRICH. Pp. xiv+296 with 131 photomicrographs, 21 other figures and 9 tables. New York, Toronto, London: McGraw-Hill. 1956. Price $6·50; 49*s*.

This book is designed to serve as a text for the systematic study of rocks under the microscope. It is intended for 'initial to intermediate students' (author's preface) but ranges over a wider field than many teachers would attempt at this level. The knowledge of mineralogy assumed in the reader is greater than would usually be possessed by second-year university students.

The opening chapter, 'Methods of Microscopic Study', is an up-to-date account of techniques for the preparation