

and in calculating the interatomic distances in the NpBe_{13} unit cell (Table 1).

Table 1. *Interatomic distances in NpBe_{13}*

| Atom | Neighbour | No. of neighbours | Distance (Å) |
|--|--|-------------------|--------------|
| $\text{Be}_I(0, 0, 0)$ | $\text{Be}_{II}(0, y, z)$ | 12 | 2.22 |
| $\text{Be}_{II}(0, y, z)$ | $\text{Be}_{II}(0, z, \frac{1}{2}-y)$ | 2 | 2.15 |
| | $\text{Be}_I(0, 0, 0)$ | 1 | 2.22 |
| | $\text{Be}_{II}(z, \frac{1}{2}-y, 0)$ | 2 | 2.24 |
| | $\text{Be}_{II}(z, 0, y)$ | 4 | 2.31 |
| | $\text{Be}_{II}(0, y, \bar{z})$ | 1 | 2.45 |
| | $\text{Np}(\frac{1}{2}, \frac{1}{2}, \frac{1}{2})$ | 2 | 2.98 |
| $\text{Np}(\frac{1}{2}, \frac{1}{2}, \frac{1}{2})$ | $\text{Be}_{II}(0, y, z)$ | 24 | 2.98 |

The observed contraction of NpBe_{13} on the Np-rich side is somewhat surprising, since the Np atom is about 35% larger than the Be atom. However, a similar phenomenon has been observed by Bradley & Taylor (1937) for the Al-rich side of the phase NiAl , i.e. the lattice spacing decreases rapidly with an increasing aluminum

ratio. This effect is attributed to the generation of nickel vacancies in the lattice as the aluminum ratio increases. A similar defect structure, Be-deficient, may exist in Np-rich NpBe_{13} .

The neptunium used in the investigation was supplied by the Argonne National Laboratory, Lemont, Illinois. Mr R. R. Boucher assisted in the preparation of the X-ray samples.

References

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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).

Publications of the Geological Society of America

The Geological Society of America announces that it has reprinted its Special Paper No. 33, *Numerical Structure Factor Tables (Crystal Structure and X-ray Diffraction)* by M. J. Buerger. The price is \$1.50.

The Society also announces that it has in press extensive tables of crystal data to be published as *Memoir 60*. Part I (systematic), by W. Nowacki, gives all substances crystallizing in each of the 219 distinguishable groups. Part II (determinative), by J. D. H. Donnay *et al.*, permits a crystal to be identified from its cell dimensions and space group. Formula index and name index serve as a guide to the literature. The Donnay-Harker *Tables of Space-Group Criteria* are reprinted in an appendix. The work is expected to comprise over 750 pages and the price is estimated to be about \$5.00. Crystallographers wishing to be notified when the book is available are asked to register their names with the Society (419 West 117 Street, New York 27, New York, U.S.A.).

Publications of the American Crystallographic Association

The American Crystallographic Association announces the publication of Monograph No. 3, *The Solution of the Phase Problem. I. The Centrosymmetric Crystal*, by H. Hauptman and J. Karle. The price is \$1.50. Orders should be placed with Mr A. Rae duBell, The Letter Shop, Inc., 222 West Eighth Street, Wilmington, Delaware, U.S.A., and remittances should be made payable to the American Crystallographic Association.

International Instrument Congress and Exposition

The Instrument Society of America announces that an International Instrument Congress and Exposition will be held in Philadelphia from 14 to 24 September 1954 to mark the Tenth Anniversary of the Society. Further particulars may be obtained from the Manager of the First International Instrument Congress and Exposition, 921 Ridge Avenue, Pittsburgh 12, Pennsylvania, U.S.A.

Acta Crystallographica

The U.S.A. and Canadian members of the American Crystallographic Association have voted to increase their dues by \$3.00 annually and to donate the proceeds to the Union for the support of *Acta Crystallographica*. This most generous action, which will yield approximately \$2,000 (£715) a year, is a great encouragement to the editors in their difficult task of dealing with the constantly growing amount of material reaching them, while trying to keep the price of the journal within reach of individual subscribers. *Acta Crystallographica* has enjoyed very large subventions in the past and may need them in the future to cope with the steadily expanding crystallographic production; crystallographers throughout the world owe a deep debt of gratitude to their American and Canadian colleagues for this generous support.

International Union of Crystallography

Messrs Sandoz A. G. of Basle, Switzerland, have offered to the Union a generous donation of Swiss fr. 500 (approximately £41) for each of the years 1954-6, as a contribution towards the expenses of *Acta Crystallographica*.