photograph, is very poor. This is largely due to the difficulty of making accurate visual estimates of photographic intensities from a highly absorbing crystal. Extinction has undoubtedly also affected some of the more intense reflections.

Discussion

Fig. 2 is a schematic drawing of the crystal structure showing the numbering of the atoms. The identification of the germanium and arsenic atoms was made by consideration of the number of covalent bonds formed by each atom. From Table 2, the list of interatomic distances and angles, it is seen that the germanium atoms form four approximately tetrahedral covalent bonds to arsenic atoms, and the arsenic atoms form three pyramidal covalent bonds to germanium or arsenic atoms. The germanium–arsenic bond lengths range from 2·42 to 2·51 Å, with an average of 2·453 Å. This is not significantly different from the value of 2·43 Å calculated from Pauling's covalent bond radii (Pauling, 1960). The single arsenic–arsenic bond length is 2·50 Å, about the same as is found in metallic arsenic.

When viewed along the *c* axis, two germanium and three arsenic atoms make an irregular puckered pentagon. The bonds between Ge_2 and As_1 and between As_2 and As_3 form these pentagons into columns parallel to the *c* axis. The fourth arsenic atom then binds these columns together into layers parallel to (100).

In addition to three close neighbors, each arsenic atom has three more-distant arsenic neighbors arranged so that the coordination is roughly octahedral. These longer interatomic distances range from 3·16 to 3·89 Å. The shortest distance is about the same as found in metallic arsenic. The forces between these layers in $GeAs_2$ must therefore be considerably weaker than the forces between the layers in metallic arsenic. This is borne out by the great ease with which crystals of $GeAs_2$ may be cleaved parallel to (100). Four of these longer distances are between layers; the fifth, between As_1 and As_3', is within the layers.

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Short Communication

Contributions intended for publication under this heading should be expressly so marked; they should not exceed about 1000 words; they should be forwarded in the usual way to the appropriate Co-editor; they will be published as speedily as possible. Publication will be quicker if the contributions are without illustrations.

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The crystal structure of biuret hydrate. A correction.

By E. W. HUGHES and H. L. YAKEL, *California Institute of Technology, Pasadena* 4, *California, U.S.A.* and H. C. FREEMAN, *University of Sydney, Sydney, Australia*

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