better insight into the problem of organization. In this direction I have already previously made attempts. [5, 30]) It is to be recommended to continue and extend these researches.

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[30]) M. W. WOERDEMAN, Zeitschr. mikr. anat. Forsch. **36**, 600 (1934).

Physics. — *On the Structure of Solid Chlorine.* By W. H. KEESOM and K. W. TACONIS. (Abstract of Communication N°. 240e from the KAMERLINGH ONNES Laboratory at Leiden).

(Communicated at the meeting of February 29, 1936).

The structure of solid chlorine was determined with the X-ray goniometer with moving film, by irradiating a rotating single crystal of the substance.

From the gnomonic projection we derived a tetragonal structure, with $\frac{c}{a} = 0{,}715$.

For the determination of the absolute dimensions of the unit cell and for the conclusions on the space group we availed ourselves of the data from DEBYE-SCHERRER diagrams made by KÖHLER [1]).

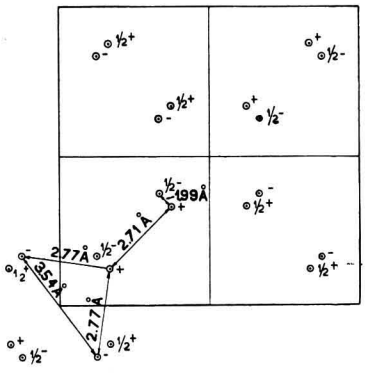

Fig. 1. Structure of solid chlorine.

We found for the unit cell $a = 8{,}56$ Å, $c = 6{,}12$ Å. We concluded to a space group D_4^{1h} in which the co-ordinates of the Cl atom are $x = 0{,}125$; $y = 0{,}167$; $z = 0{,}107$.

We represent the arrangement of the Cl atoms in fig. 1. It shows a projection of the unit cell on the horizontal plane in the way as done in the International Tables for the Determination of Crystal Structure.

The distance of the Cl atoms in the molecule in this molecular lattice is 1,99 Å. This value most satisfactorely agrees with 2 × the value (0,99 Å) given by PAULING [2]) for Cl in his table of the normal electron-pair-bond radii of atoms. The minimum distance between Cl atoms of different molecules in the arrangement mentioned above amounts to 2,71 Å.

[1]) J. W. L. KÖHLER, Thesis, Leiden (1934).
[2]) L. PAULING, Proc. nat. Acad. U.S.A. **18**, 293 (1932).