

Though the dynamical effect of 'weak rays' within the crystal is wholly neglected in the above theory for the sake of simplicity, we also confirmed that their inclusion by the procedure of Bethe (1928) does not change the general feature of the results. It must, however, be remembered that the (222) and (22 $\bar{2}$ ) reflexions become of considerable importance when the conditions for the (331) and (33 $\bar{1}$ ) reflexions are fulfilled simultaneously, so that it is not adequate to assume the former as weak rays. Their effect may be responsible for the more complicated intensity distribution as compared with that observed and the one shown in Fig. 2.

At any rate we believe that the observation on the apparent violation of Friedel's law in electron diffraction can reasonably be explained as a special case of the well-known phenomenon of *Aufhellung*. The effect is to be expected only in the 'Bragg case' and never in the 'Laue case'. A similar effect may be expected to occur in the case of X-ray diffraction by a polar crystal.

#### References

- BETHE, H. (1928). *Ann. Phys., Lpz.*, **87**, 55.  
MIYAKE, S. & UYEDA, R. (1950). *Acta Cryst.* **3**, 314.

*Acta Cryst.* (1950). **3**, 481

## International Union of Crystallography

### Second General Assembly and International Congress, Stockholm, 27 June–3 July 1951

By kind invitation of the Swedish National Committee for Crystallography the Second General Assembly and International Congress of the Union will be held in Stockholm from 27 June to 3 July 1951. A Local Committee has been established under the Chairmanship of A. WESTGREN, Vice-President of the Union, with F. E. WICKMAN as Secretary.

#### Membership

Delegates to the General Assembly, which will be concerned with the formal business of the Union, will be nominated by the National Committees. Crystallographers throughout the world are, however, cordially invited to attend the International Congress; it is particularly hoped that they will assist the Union by bringing the Congress to the notice of their colleagues, by press announcements and otherwise, so that the attendance may be large and fully representative of crystallographic research in all countries. The Union is unfortunately not in a position to provide funds to assist delegates in meeting travelling expenses.

A grant towards the expenses of the Congress has been generously made by the Swedish Government. It is, however, a condition of the grant that delegates shall themselves make some contribution. All those attending will, therefore, be required to pay a membership fee of 50 Swedish crowns.

#### Programme

The subjects selected for consideration are:

1. Instruments and Measurements.
2. New Developments in Structure Determination.
3. Mineral Structures.
4. Metal Structures.
5. Inorganic Structures.
6. Organic Structures.
7. Proteins and Related Structures.
8. Random and Deformed Structures.
9. Thermal Transformations.
10. Crystal Growth.
11. Neutron Diffraction.
12. Miscellaneous.

The Executive Committee has decided that no report of the Congress shall be published, it being felt that most

of the contributions will find their way into the scientific literature in the normal manner and that the expense of separate publication would not be warranted. Full abstracts of the contributions will, however, be distributed in advance; speakers will then be expected to present their papers quite briefly at the Congress in order that ample time may be available for discussion.

#### Exhibition

It has unfortunately not been found practicable to arrange any exhibition of instruments or equipment in connexion with the Congress. It is possible, however, that a number of instrument manufacturers represented in Stockholm will take the opportunity of themselves arranging small exhibits of crystallographic interest.

#### Excursions

Arrangements have been made for a visit to Uppsala University and will probably also be made for visits to localities of mineralogical interest. Details will be announced later.

It is hoped also to arrange a programme of excursions and other events for the benefit of friends accompanying those attending the Congress.

#### Symposia

It is proposed to hold two Symposia on the following topics:

1. Advanced Techniques in Structure Determination.
2. Electron Diffraction in Liquids and Gases.

These Symposia are intended primarily for specialist workers in these fields, but in so far as accommodation is available all crystallographers will be welcome. The Symposia will probably be held on the days immediately following the Congress but one or more sessions may also be arranged during the period 27 June–3 July.

#### Languages

Although contributions may be presented in any language, the Executive Committee feels that those in English, French and German, and especially those in English, will be most readily understood by the majority of the

delegates. The Committee, therefore, hopes that authors will as far as possible present their papers in one of these three languages.

### Enrolment

It is hoped that crystallographers will now be in a position to give firm notice of their intention to be present and it is requested that such notice should reach the General Secretary as soon as possible, and in any case not later than 15 February 1951.\* While every effort will be made to meet the convenience of those able to register only after this date, no guarantee can be given that it will be possible to find hotel accommodation for them. Those who in any case prefer to arrange their accommodation independently are advised to act early, as Stockholm hotels are heavily booked in the summer months.

*No further public announcements about the Congress will be made and future notices will be distributed only to those*

\* To save unnecessary correspondence these communications should, if possible, be on the forms accompanying the Second Circular, copies of which may be had from the General Secretary or from the Secretaries of the National Committees (see *Acta Cryst.* (1950), 3, 388).

*who have indicated their interest. All those who expect or hope to be present are, therefore, earnestly requested to register their names with the General Secretary.*

Offers of papers for consideration by the Programme Committee are cordially invited and should be submitted as soon as possible, and in any case not later than 15 February 1951.\* Crystallographers whose contributions are accepted will be notified shortly after this date and will then be requested to submit an abstract of their papers not later than 31 March 1951.

### Correspondence

All correspondence concerning contributions to the Congress or to the Symposia should be addressed to the Secretary of the Programme Committee:

F. E. WICKMAN, Stockholm 50, Sweden.

All other correspondence should be addressed to the General Secretary of the Union:

R. C. EVANS, Crystallographic Laboratory, Cavendish Laboratory, Cambridge, England (*Telegraphic address*: Crystals, Cambridge, England).

## 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).*

### Charts for X-ray Crystallography

The X-ray Analysis Group of the British Institute of Physics, with the approval of the Chairman of the Commission on Crystallographic Apparatus of the International Union of Crystallography, is proposing to arrange for the supply and distribution of the different types of charts used in X-ray crystallography. The Graphical Methods Panel of the Group has prepared these notes on available charts as a preliminary to making arrangements for their supply to individual users. It is proposed that stocks of those charts for which sufficient demand exists shall be held centrally to be sold in large or small quantities to X-ray crystallographers.

#### 1. Stereographic and other nets for Laue method and all orientation work

(1) The following are now available:

- (a) Equatorial (Wulff) stereographic net (half circle); 5 in. diameter on tracing paper; 2° intervals.
- (b) Equatorial (Wulff) stereographic net (whole circle); 20 cm. diameter on thin card; 2° intervals.
- (c) Equatorial (Wulff) stereographic net (whole circle); 30 cm. diameter on thin card; 1° intervals.
- (d) Combined equatorial and polar (Fedorov) stereographic net (whole circle); 5 in. diameter on opaque paper; 5° intervals.
- (e) Greninger chart for back-reflection photographs; 2° intervals; specimen-film distance 3 cm. (C. S. Barrett, *Structure of Metals*, p. 170. New York: McGraw Hill, 1943).

(2) The following might be made available if a sufficient demand existed:

- (a) Equatorial (Wulff) stereographic net (whole circle); 5 in. diameter; 2° intervals.
- (b) Equatorial (Wulff) stereographic net (whole circle); 18 in. diameter.
- (c) Polar stereographic net.
- (d) Equatorial (Schmidt) net for Lambert's equal-area projection (whole circle); 20 cm. diameter.
- (e) Chart for reading  $\alpha$  and  $\theta$  from a stationary cylindrical film (C. S. Barrett, *Structure of Metals*, p. 164. New York: McGraw Hill, 1943).

#### 2. Charts for rotation and oscillation methods

(1) The following are now available, all on tracing paper:

- (a) Bernal  $\xi$ ,  $\zeta$  chart for flat film; specimen-film distance 4 cm. (J. D. Bernal, *Proc. Roy. Soc. A*, 113, 117, 1927).
- (b) Bernal  $\xi$ ,  $\zeta$  chart for cylindrical film of diameter 6 cm.
- (c) Portion of same for film of diameter 12 cm.
- (d)  $i$ ,  $\phi$  charts and corresponding absorption-correction charts for use with reflecting crystal plates: (i)  $\phi$  20–47°, (ii)  $\phi$  41–71°, (iii)  $\phi$  66–100°. Here  $i$  is the glancing angle between the X-ray beam and crystal plate, and  $\phi$  is the angle between incident and diffracted X-ray beams.
- (e) Weissenberg chart for cylindrical film of diameter 6 cm.; 9 cm. traverse = 180° (chart to cover 13.5 cm.) (M. J. Buerger, *X-ray Crystallography*, p. 268. New York: Wiley, 1942). (Also available on opaque paper.)