

International Union of Crystallography

Report of Executive Committee for 1965

Meetings

The most important event in 1965 was the participation of the Union in the International Conference which was held in Melbourne, Australia, from 16 to 21 August. This Conference was organized under the joint auspices of the Australian Academy of Science and the Union, with the support of the Commission on the Solid State of the International Union of Pure and Applied Physics. It consisted of two Symposia, on 'Electron Diffraction' and on 'The Nature of Defects in Crystals', respectively. About 220 Australian and 110 foreign scientists, the latter coming from 16 countries, participated in the meeting. A summary report, including a list of the speakers and the titles of their papers, has been published in *Acta Cryst.* (1966), **21**, 455.

The Executive Committee held its statutory intermediate meeting in London in April 1965. Among the main items of business discussed were (1) the applications for membership received from the Polish Academy of Science and from the Deutsche Akademie der Wissenschaften zu Berlin, and the problems arising from this East German request for a separate adherence to the Union; (2) the measures to be taken in connection with the increased size of *Acta Crystallographica*, and the financial consequences which made a considerable increase necessary in the subscription prices as from 1966; (3) the plans of the Commission on *International Tables* for a new and extended edition of this work; (4) the plans of the Commission on Crystallographic Teaching for sponsoring a one-week Summer School in 1966, and for the publication of a monograph containing reprints of historic papers in crystallography; (5) the formation of new Commissions, one on Neutron Diffraction and one on Crystal Growth; (6) the possible participation of the Union in international projects undertaken under the auspices of ICSU; and (7) the arrangements for the Seventh General Assembly and International Congress in Moscow, and the subsequent Symposium on Crystal Growth. The last item was discussed with the Programme Committee for the Moscow meetings, which also met in London.

The Commission on *International Tables* arranged for a meeting, further details of which can be found in the report of this Commission.

Substitutions and appointments

The Executive Committee regrets to report that because of serious illness the President, Professor J. D. Bernal, has not been able to deal with the business of the Union since the summer of 1965. At his request Dame Kathleen Lonsdale, Senior Vice-President of the Union, has served in his place as Acting President.

In 1965 the Executive Committee approved the appointments of Dr E. Banks, Prof. J. A. Ibers, Dr A. C. Larson and Dr C. E. Nordman as Co-editors of *Structure Reports*, and of Prof. H. Curien, Prof. T. Hahn, Dr W. T. Holser and Prof. J. A. Ibers as Co-editors of *International Tables*.

Publications

In 1965 *Acta Crystallographica* was published in two semi-annual volumes. The total number of pages amounted to

2172, which represents an increase of more than 33 per cent in one year.

During the period under review a number of other publications of the Union appeared. Most important were the book *Symmetry Aspects of M. C. Escher's Periodic Drawings*, which contains 29 black-and-white and 12 four-colour reproductions, and an accompanying text written by C. H. MacGillavry; and a new volume of *Structure Reports*, viz. Vol. 23, for 1959. The bibliographies on *High-temperature X-ray Diffraction Techniques* and on *Low-temperature X-ray Diffraction*, which had been prepared under the auspices of the Commission on Crystallographic Apparatus, the *Crystallographic Book List* prepared under the auspices of the Commission on Crystallographic Teaching, and the 3rd edition of the *World Directory of Crystallographers* were the other publications appearing in 1965. Copies of the bibliographies and of the *Book List* were distributed free of charge to all subscribers to *Acta Crystallographica*. It is interesting to note that the number of biographical entries included in the *World Directory of Crystallographers* increased from 3557 in the 2nd edition, which was published in 1960, to 5037 in the 3rd edition. This is an increase of slightly more than seven per cent per year.

Adhering Bodies; National Committees

In the new edition of the *World Directory of Crystallographers* the Adhering Bodies were listed, together with the names and addresses of the Secretaries of the National Committees. The following changes have been reported since the appearance of that list:

- Australia: J. DEEBLE, Australian Academy of Science, Gordon Street, Canberra City, A.C.T.
- Hungary: L. ZSOLDOS, Department of Experimental Physics, L. Eötvös University, Muzeum krt. 6-8, Budapest VIII
- New Zealand P. P. WILLIAMS, Chemistry Division, D.S.I.R., Wellington
- Norway: S. FURBERG, Kjemisk Institutt C, Universitetet i Oslo, Blindern, Oslo 3
- Poland: K. ŁUKASZEWICZ, Department of Physico-Chemical Structure Research, Polish Academy of Sciences, Wybrzeże, Wyspiańskiego 27, Wrocław
- Switzerland: F. H. LAVES, Institut für Kristallographie und Petrographie der E.T.H., Sonneggstrasse 5, Zürich 6

Membership lists of the National Committees were also included in the *World Directory*. For these lists the following changes have been reported:

Australia

A. McL. MATHIESON (Chairman), W. BOAS, J. M. COWLEY, J. DEEBLE, E. O. HALL, E. N. MASLEN, A. W. PRYOR, E. W. RADOSLOVICH, A. D. WADSLEY.

Hungary

Delete: L. TOKODY (because of death).

Norway

Add: S. FURBERG.

Poland

J. TRZEBIATOWSKI (Chairman), J. AULEYTNER, Z. BOJARSKI, A. ŁASZKIEWICZ, K. ŁUKASZEWICZ.

U.K.

J. M. ROBERTSON (Chairman), J. D. BERNAL, M. BLACKMAN, C. W. BUNN, W. COCHRAN, A. H. COTTRELL, P. J. GAY, J. C. KENDREW, M. J. LIGHTHILL, H. S. LIPSON, Dame KATHLEEN LONSDALE, H. M. POWELL, G. V. RAYNOR, H. W. THOMPSON, M. R. TRUTER, A. J. C. WILSON.

U.S.A.

G. A. JEFFREY (Chairman), J. S. KASPER (Vice-Chairman), S. C. ABRAHAMS, M. J. BUERGER, J. D. H. DONNAY, P. P. EWALD, W. C. HAMILTON, E. W. HUGHES, J. A. IBERS, H. A. LEVY, W. N. LIPSCOMB, R. E. MARSH, R. C. L. MOONEY-SLATER, F. ORDWAY, W. PARRISH, A. L. PATTERSON, B. POST, B. E. WARREN, W. H. ZACHARIASEN.

Work of the Commissions*Commission on Acta Crystallographica*

The increasing size of *Acta Crystallographica* has given rise to problems in binding as well as of finance, and it was decided to split the 1965 issues into two volumes, 18 and 19. Between them these volumes amount to 2172 pages, an increase of one-third over 1964. A survey of the contents of the last six years is given in Table 1. It will be noticed that there is a tendency for papers to increase in length as well as in number. The increase in the volume of publication has been made possible only by a change of printers, which took place in April 1965. The two volumes were supplied to subscribers at the same total price as the single 1964 volume, but an increase is necessary for the year 1966.

It has been suggested often that *Acta Crystallographica* should publish lists of structure determinations in progress. This has not been found practicable, and it is not universally agreed that it is desirable. To go some way in meeting the demand, however, the publication of lists of accepted papers has been resumed. These are printed among the advertisement pages, so that if desired they can be removed and cut up for filing without damage to the journal.

A new set of 'Notes for Authors' was published in the January 1965 issue.

Commission on Structure Reports

Vol. 23 for 1959 appeared just after the end of the year, but progress during the second half of the year has been disappointing. Illness and pressure of other work has taken its toll generally among the Editors with the result that Vols. 22 and 24 are indefinitely delayed at present, and pro-

gress with Vols. 26 and 27 has not been as good as hoped. Nevertheless all volumes up to 29 are being worked on, and four new Co-editors (Dr E. Banks, Prof. J. A. Ibers, Dr A. C. Larson and Dr C. E. Nordman) have been appointed during the year in order to maintain the pressure of production. Five section manuscripts are at present with the printers.

The Ten-year Cumulative Index (Vol. 25) has been estimated to run to 400 pages with some 60,000 entries. Typing, checking and sorting for this index is thus a formidable job, which will be started shortly. Very good progress has been made with the projected index of crystal-structure types and lists of phases by structure type which might be included in Vol. 25. An index of the structures of metals has been prepared and submitted to the Sub-committee on Structure-type Designation for assessment. If it is found acceptable it could be expanded with the inclusion of structures and lists of inorganic compounds.

Commission on International Tables

During the year 1965 preliminary arrangements continued to be discussed for the proposed new edition of *International Tables*. A meeting was held on 16 and 17 January in the Mineralogical Institute, Marburg, at which there was a complete discussion of the material proposed for the new edition, at least as far as certain volumes were concerned. The important decision was taken to propose to the Executive Committee that a pilot-plan edition of the material should be issued, as this would give valuable information before the decisions had to be made for the new edition proper.

In April the Executive Committee accepted in principle the proposals for a new edition and approved of the appointment of Co-editors for the pilot-plan issues; a sum of £2000 was allocated for these issues.

It was decided also by the Executive Committee, on the proposal of the Commission, to reprint Vol. I with corrections, as this had unfortunately been allowed to go out of print.

It was decided to amalgamate the editorial committees for two of the proposed new volumes and to reconsider the division of the material into volumes for the proposed new edition. Preparations were made in detail for a joint meeting to be held at Aachen in the early weeks of 1966.

Although it may be hoped that the first of the pilot-plan issues can be produced by the end of 1966, it would certainly be several years before the first volume of the proposed new edition could be published. In the meantime the existing three volumes will be kept in print, with corrections only, as the demand for these shows no sign of slackening.

Table 1. *Survey of the contents of Acta Crystallographica*

Vol.	Year	Number of pages	Articles			Short Communications		
			Number	Number of pages	Average length	Number	Number of pages	Average length
12	1959	1067	181	926	5.12	93	103	1.11
13*	1960	1164*	144	835	5.79	69	105	1.52
14	1961	1318	206	1111	5.40	166	181	1.09
15	1962	1324	199	1170	5.88	105	106	1.01
16†	1963	1471†	198	1099	5.55	101	117	1.16
17	1964	1631	242	1406	5.81	127	162	1.28
18 & 19	1965	2172	330	1943	5.89	134	161	1.20

* Volume 13 includes the report of the Cambridge Congress, involving 169 pages of abstracts.

† Volume 16 includes the report of the Rome Congress, involving 198 pages of abstracts.

Commission on Crystallographic Apparatus

Activities have been as follows:

1. *Bibliographies* (E.G. Steward). A further two are under way, that on *Methods of Obtaining Monochromatic Radiation* being largely completed in draft form while the second on *Novel X-ray Detectors* is nearing completion.
2. *Single-crystal intensity measurements on diffractometers* (S.C. Abrahams). As a result of problems encountered with some of the first batch of crystals circulated, a second batch was prepared. In this case, each crystal was tested individually before delivery to participants. Approximately 40 participants have been kind enough to join in this project. Data are to be supplied early in 1966 to permit time for their processing and assessment so that a preliminary report can be given at an Open Session of the Commission at the 7th Congress.
3. *Index of Crystallographic Supplies* (V. Scatturin). Material in the form of catalogues and other basic information has been collected.

As a contribution to the activities of the 7th Congress, the Commission is arranging the following topics:

4. *Exhibition of Non-commercial Apparatus* (M.M. Uman-sky). The detailed organization is being carried out in close association with the Soviet Organizing Committee.
5. *An Exhibition of Photographs of Crystallographic Interest* (F.H. Herbstein).
6. *An Open Session on Novel Detectors for X-rays*. Dr U.W. Arndt has kindly agreed to convene this session.

An informal discussion on intensity measurement of powders will take place during the Congress to assist in formulating a Commission project on this subject. Under discussion during the year has been the possibility of arranging an international meeting, with restricted attendance, on the general problems of intensity measurement on single-crystal powders.

Commission on Crystallographic Computing

The business of the Commission has been conducted by correspondence and by informal meetings between individuals as opportunity offered.

A second edition of the *World List of Crystallographic Computing Programs* is being prepared by D.P. Shoemaker as Editor. It is expected to be ready during 1966.

There has been active discussion of various computing problems, including the possibility of establishing standard formats for the transmission of crystallographic data, and the drawing up of standard programs in a universal language for the main crystallographic calculations. However, in view of the still-increasing variety of hardware facilities and programming languages, it is considered premature to embark on these projects. Priority is being given to establishing a set of standard test calculations, so that individual programs can be checked. J.M. Stewart has joined the Commission as a Consultant to assist in this work, which it is hoped to complete during 1966.

Commission on Crystallographic Data

1. As in previous years liaison was maintained with various crystallographic groups compiling data and information supplied to non-crystallographic organizations interested in activities in the field of the Commission.
2. The U.S.S.R. National Committee prepared 310 abstracts for *Crystal Data*. Work on the next edition is well advanced and the organic section of the book, computer

produced, is expected to be available in time for the Moscow Congress.

3. The working party on Primary Publications met in January and the final draft of the recommendations was submitted to the Executive Committee in April. Amendments suggested by the Executive Committee are being incorporated and the recommendations will be presented for discussion at the Moscow Congress.

4. A recommendation on new X-ray wavelengths was prepared and submitted to the Executive Committee in April.

5. The Secretary has been investigating extension of crystallographic data compilations and is preparing a report for the Moscow Congress.

Commission on Crystallographic Nomenclature

The Commission has not met during the year, but its members have been kept informed by means of circulars of proceedings of the IUPAP Publications Committee and the ICSU Abstracting Board having some bearing on nomenclature.

Commission on Crystallographic Teaching

1. *Book List* (H.D. Megaw). A new edition of the *Crystallographic Book List* was printed and distributed with *Acta Crystallographica* early in 1965. Dr Megaw is currently gathering data on books that have come out since the publication of this list in order to prepare a supplement.

2. *Film List* (H. Curien). The latest edition of this list will be ready for distribution in 1966. This list has been augmented to contain brief abstracts of the content of the films as well as the information contained in earlier editions such as information as to the length of the film, the colour, the sound, the educational level, etc.

3. *Syllabus File* (S. Furberg). The maintenance of a file of the syllabuses of courses in Crystallography is continuing.

4. *Monograph*. At the request of the Executive Committee the Commission is amplifying its recommendations concerning the publication of a monograph containing reprints of significant early papers in X-ray Crystallography. This amplification will contain not only the titles of papers suggested for reproduction but also a pilot copy of a possible edition.

5. *Summer School*. The Commission has organized a Summer School from 24 to 29 July 1966 in Boboty, Czechoslovakia, with the sponsorship of the Slovak Academy of Sciences and the Komensky and Slovak Technical Universities (Bratislava), devoted to the dynamical theory of diffraction by crystals and its applications (study of crystal defects). The School is intended for teachers of Crystallography and for advanced students in Crystallography and Physics. There will be lectures and informal discussions.

6. *Teaching Films*. The Commission has been seeking ways of stimulating the production of films on crystallographic subjects of pedagogic value. Through the efforts of Dr N. Joel arrangements are in progress whereby such a programme might be supported by funds from UNESCO.

7. *Congress on the History of Science*. The Commission sent a representative (Dr J. Zemann) to the XI International Congress on the History of Science, which was held in Poland from 24 to 29 August 1965. Dr Zemann presented a paper on the History of Crystallography and its Growing Importance for Other Sciences.

8. *Report on the Status of Crystallography and Crystallographic Teaching*. This report requested by the Executive

Committee at the Sixth General Assembly has been completed. A draft report has been circulated for correction through the Commission members concerned with it, and will be submitted to the Executive Committee in the very near future.

9. *Open Session* (F. Mazzi). The Commission is arranging an open session for the Moscow Congress in order to show some recently made motion films of pedagogic interest and to present papers on topics concerned with the teaching of Crystallography.

Commission on Electron Diffraction

On account of the International Conference in Melbourne (August 1965), the members of the Commission had been in close contact during the year to discuss the different questions connected with the preparation of the Symposium on Electron Diffraction. This meeting, which gave an excellent survey of the different problems of electron diffraction, gathered the people interested in fundamental questions of electron diffraction and its applications, and thus activated further research work. A three-day Spring School held immediately after the Conference intensified scientific and personal contacts. The Commission members met several times during the Conference to discuss various questions.

Representation on other Bodies

Abstracting Board of the International Council of Scientific Unions

The Executive Committee and the General Assembly of the ICSU Abstracting Board met in Moscow during July 1965. It was not possible for either of the Observers to be present, but the International Union of Crystallography was represented by Professor J. Wyart. Many questions of general interest to the publications of the Union were discussed, and a recommendation that even Short Communications should be accompanied by an abstract will be considered by the Commission on *Acta Crystallographica* at its meeting in 1966.

Commission on the Solid State of the International Union of Pure and Applied Physics

1. At the proposal of the Commission, IUPAP sponsored Part II of the International Conference in Melbourne, August 1965, *viz.* the Symposium on 'The Nature of Defects in Crystals'.
2. The Commission has proposed to IUPAP to sponsor the following Conferences on 'Crystal Growth' (Boston, Mass., 20–24 June 1966), 'Ferroelectricity' (Prague, Czechoslovakia, 28 June–1 July 1966), 'Luminescence' (Budapest, Hungary, 23–30 August 1966), and on 'Magnetic Resonance and Relaxation' (Ljubljana, Yugoslavia, 5–10 September 1966).

Further suggestions of topics are invited for future Conferences of common interest to IUCr and IUPAP.

International Council of Scientific Unions

The Union was represented by its President, Prof. J.D. Bernal, at the 3rd meeting of the ICSU Executive Committee, which was held in Munich, Germany, from 5 to 7 April. Most of the business discussed was of no direct interest to the Union. Reports of the Unions federated in ICSU, of the Scientific and the Special Committees of ICSU, of Union and Inter-Union Commissions, and of

various Working Groups were presented and discussed. The proposals of the Committee on Future Structure were adopted with some minor changes. According to these proposals the main objectives of ICSU should not be changed; new Unions should be admitted only when there is no possibility for an existing Union to accommodate the new discipline by modification of its own structure; and each Union should have a representative on the ICSU Executive Committee. Of the new bodies which were set up, the Working Group on Critical Tables may be mentioned.

Finances

The audited accounts of the Union for the year 1965 are given at the end of this Report. The amounts are expressed in Netherlands Guilders, and the standard rates of exchange used by the U.N. organizations in 1965 were applied.

The *Acta Crystallographica* account for 1965 shows a heavy deficit of *f.*83,251 which was mainly caused by the considerable increase in the size of the journal, from 1631 pages in 1964 to 2172 pages in 1965. The cost of production of the two volumes published in 1965 was *f.*72,651 higher than that of the 1964 volume. The cost of distribution increased by *f.*17,492; increased postage rates contributed to this higher cost of distribution. Owing to an adjustment of the editorial honoraria, the total editorial expenditure was also larger in 1965 than in 1964, the increase being *f.*7894.

It is satisfying that the income from subscriptions and from the sale of back numbers has increased from year to year. The net income from this source amounted to *f.*256,223 in 1965, which is *f.*15,305 more than the net amount received in 1964. The income from advertisements was in 1965 *f.*2878 higher than in 1964.

A heavy deficit was already foreseen early in 1965 when it appeared that an unexpected change of printers made it possible to reduce the backlog in the publication of manuscripts, *i.e.* to print a considerably larger number of pages. As also an increasing number of articles is submitted for publication each year, it could be expected that the size of the journal would probably remain at the level reached in 1965, or even tend to increase. It was therefore clear that the subscription prices had to be substantially increased and such a decision was made by the Executive Committee at its meeting in London in April 1965. It is hoped that this increase in the subscription prices will be sufficient to prevent further deficits in the near future. The accumulated balance in the account, which decreased to *f.*64,357 at the end of 1965, can no longer be considered a safe reserve for any further unforeseen increases in the cost of production of the journal.

For *Structure Reports* income exceeded expenditure by *f.*64,940 in 1965, and the accumulated balance in the account increased to *f.*198,375. It should be kept in mind, however, that in 1965 only editorial honoraria, *etc.* were paid for completed manuscripts of volumes which did not appear in that year. On the other hand the sale of copies of Vol.21 started in 1965 and yielded a gross income of *f.*56,874; the total cost of production of this volume was already paid in previous years.

Since the volumes of *Structure Reports* are not published at regular intervals, the annual accounts show large differences in income and expenditure and they are, therefore, difficult to compare. However, it has already been noted frequently that if for each individual volume the total expenditure and income are examined, the financial situa-

tion appears to be satisfactory. This can also be seen when the accumulated balances at the end of a number of successive years are compared. This balance appears to be more than three times as high at the end of 1965 as it was at the end of 1961.

The picture of the *International Tables* account is also most satisfactory. The sales of copies of the three volumes continued at a rather high level, with the result that in 1965 the complete edition of Vol. I was sold out. The total net income from sales amounted to *f.* 30,644 in 1965 whereas the total expenditure amounted to *f.* 6945 so that there was a balance of *f.* 23,700. The accumulated balance in the account increased to *f.* 112,860; this sum represents the net profit which the Union has made with *International Tables* up to the end of 1965. Part of the accumulated balance will be needed to pay the expenditure in connexion with the preparations for a revised new edition. Preceding the appearance of this edition, second printings, with corrections only, will be made of the existing edition.

In 1965 an amount of *f.* 3086 was received from the sales of copies of *Fifty Years of X-ray Diffraction*, and the accumulated deficit in the account decreased to *f.* 5927 at the end of the year. It should be noted that no subventions were received and used for this publication, nor for the book *Symmetry Aspects of M. C. Escher's Periodic Drawings* which was published in 1965. The cost of printing and binding of this book amounted to *f.* 32,162; the net income from sales of copies was *f.* 5097. The special account opened for this new publication of the Union therefore showed a deficit of *f.* 27,065 at the end of 1965. It is expected that within a few years this deficit will be recovered from the sales.

The accumulated balance of the General Publications Fund did not change in 1965, and remained at *f.* 179,407.

Travel grants and reimbursements in connection with the International Conference in Melbourne formed together the largest charge against the General Fund in 1965. After deduction of the subventions received from UNESCO, the Australian Academy of Science, the International Union of Pure and Applied Physics and the International Atomic Energy Agency, together amounting to *f.* 69,685, a total sum of *f.* 44,061 was paid from Union funds. It should be kept in mind, however, that there was no intermediate meeting in 1964, and that the unspent part of the UNESCO subvention received in that year could be kept for the Melbourne Conference.

The total expenditure in connection with the statutory intermediate meeting of the Executive Committee amounted to *f.* 9530. An additional amount of *f.* 5314 was paid for the simultaneous meeting of the Programme Committee for the Congress in Moscow.

For incidental publications a total sum of *f.* 37,387 was spent in 1965, namely *f.* 18,449 for the 3rd edition of the *World Directory of Crystallographers*, *f.* 11,535 for the two

bibliographies prepared under the auspices of the Commission on Crystallographic Apparatus, and *f.* 7403 for the *Crystallographic Book List*. The greater part of the cost of the *World Directory* was recovered from the sales of copies which yielded *f.* 14,551. It was hoped that the cost of production and distribution of the bibliographies and the *Book List* could be recovered from the income from advertisements. The number of advertisements collected was rather disappointing, and the net income from this source, and from the sales of a limited number of copies of these publications, amounted to only *f.* 4364 for the bibliographies, and to *f.* 4026 for the *Book List*.

A comparison of the General Fund accounts for 1964 and 1965 shows that there was a slight decrease in the administrative expenditure, from *f.* 13,130 in 1964 to *f.* 12,506 in 1965. On the other hand the incidental travel expenses increased from *f.* 289 in 1964 to *f.* 1867 in 1965. The income from subscriptions from the Adhering Bodies amounted to *f.* 27,119 in 1965 (to be compared with *f.* 27,132 in 1964), that from investments and the interest on banking and deposit accounts increased from *f.* 20,908 in 1964 to *f.* 24,273 in 1965.

The total expenditure of the General Fund exceeded income by *f.* 37,839; the accumulated balance decreased to *f.* 89,631. For a fair comparison this balance should be compared with the accumulated balance as at the end of 1962 which amounted to *f.* 108,700. During the three years 1963, 1964 and 1965 a total deficit of *f.* 19,069 was therefore suffered, which is less than the estimated deficit of *f.* 29,000 which was allowed for this three-year period by the Sixth General Assembly.

In 1965 the holding of investments decreased by the redemption of *f.* 2000 3% Nederland 1937, \$1000 3% Nederland 1947, *f.* 24,000 3% Nederlandsch Indië 1937 I, and *f.* 2000 4½% Noorwegen 1955. On the other hand the holding was enlarged by the purchase of *f.* 50,000 4½% Nederland 1964. As on the previous Balance Sheets the investments have been valued according to their quotations as at the end of the year. Their depreciation in value, together amounting to *f.* 11,377, has not been charged against the General Fund, but it has again been included as an asset on the Balance Sheet. In this way the General Fund account is not influenced by the annual fluctuations in the value of the investments.

The larger parts of the balances with the banks are still placed on deposit accounts, namely, at the end of 1964, *f.* 24,025.80 with the Amsterdam-Rotterdam Bank N.V., \$24,300.49 with the First National City Bank of New York, Sw.Kr. 122,150.91 with A.B. Svenska Handelsbanken, and £7999.0s.6d with the Westminster Bank Ltd. The amounts due from Imperial Metal Industries Ltd at Birmingham and A. Oosthoek's Uitgevers Mij N.V. at Utrecht represent the balances of the 1964 accounts with these firms; these amounts were received in 1965.

International Union of Crystallography
Acta Crystallographica Account for the year ended 31 December 1965

	<i>Netherlands Guilders</i>	<i>Netherlands Guilders</i>
Publication Expenses:		
Printing and Binding, Volumes 18 and 19, 1965 (D. Kr. 511,468.78)	268,031.11	(D. Kr. 460,442.00) 241,317.66
Distribution and Postage (D. Kr. 80,144.53)	42,003.75	98,280.24) 51,508.67
	<u>310,034.86</u>	<u>292,826.33</u>
Editorial Expenses:		
Editorial Honoraria and Salaries	43,188.98	36,603.29
Secretarial Assistance, Postages, Telephone, Office Supplies, Stationery and Sundries	4,322.96	20,559.98
Travelling Expenses	866.42	3,169.68
Depreciation of Office Equipment	48,578.36	17,390.30
Less Sale of Journals	1,748.46	83,251.42
	<u>46,829.90</u>	<u>256,223.04</u>
	<u>f. 356,864.76</u>	<u>f. 356,864.76</u>

Structure Reports Account for the year ended 31 December 1965

Publication Expenses:		
Binding Additional Copies of Volume 10	872.78	35,102.50
Volume 13	954.32	9,397.00
Volume 16	860.00	9,514.85
	<u>2,687.10</u>	<u>56,874.25</u>
Editorial Expenses:		
Editorial Honoraria, Abstractors' and Assistants' Salaries Office and Travelling Expenses	21,545.42	110,888.50
	<u>1,340.45</u>	<u>20,375.52</u>
	<u>22,885.87</u>	<u>90,512.98</u>
	<u>64,940.01</u>	<u>f. 90,512.98</u>
<i>Excess of Income over Expenditure carried to Balance Sheet</i>		

General Fund Account for the year ended 31 December 1965

Subscription to ICSU (2% of subscriptions received from Adhering Bodies in 1964)					
Subscription to ICSU Inter Union Commission on Science Teaching	551.34				
Administrative Expenses:					
Honarium General Secretary and Secretarial Assistance	8,963.80				
Auditors' Fees	1,561.95				
Postages, Stationery, Printing and Sundries	1,474.41				
Bank Charges and Differences on Exchange	446.00				
Depreciation of Office Equipment	60.00				
International Conference in Melbourne, Australia					
Travel Grants to Participants	12,506.16				
Meeting of Executive Committee and Programme Committee for Seventh International Congress	113,746.20				
Incidental Travelling Expenses	14,843.73				
<i>World Directory of Crystallographers</i> , 3rd edition:	1,866.66				
Cost of Printing		16,564.61			
Editorial Honorarium and Expenses		1,884.46			
Cost of Printing and Distribution of Bibliographies			18,449.07		
<i>Crystallographic Book List</i> :			11,535.45		
Cost of Printing and Distribution					
Editorial Expenses		7,342.93			
		59.84			
Expenses of Commission on Crystallographic Data			7,402.77		
			295.97		
Subventions received for Travel Grants in connection with Melbourne Conference:					
From UNESCO through ICSU				19,005.00	
From International Union of Pure and Applied Physics				16,290.00	
From the Australian Academy of Science				25,340.00	
From the International Atomic Energy Agency				9,050.00	
				<u>69,685.00</u>	
Subscriptions from Adhering Bodies					27,118.99
Interest on Investments:					
34% Australia 1965/69				1,219.89	
6% Conversion Stock 1972				1,086.14	
3% Nederland 1937				960.00	
3% Nederland 1947				3,921.51	
4½% Nederland 1964				1,418.75	
3% Nederlandsch Indië 1937 I				690.00	
4½% Noorwegen 1955				162.91	
4% Unie van Zuid Afrika 1955				200.00	
				<u>9,659.20</u>	
Profit through Redemption of Investments				310.49	
Interest on Banking and Deposit Accounts				14,303.43	
Sale of Copies of <i>World Directory of Crystallographers</i> , 2nd and 3rd edition				17,642.53	
Less Publishers' Commission				3,091.57	
				<u>14,550.96</u>	
Sale of Copies of Bibliographies				757.20	
Less Publishers' Commission				151.44	
				<u>605.76</u>	
Income from Advertisements				3,758.44	
				<u>4,364.20</u>	
Sale of Copies of <i>Crystallographic Book List</i>				470.72	
Less Publishers' Commission				86.64	
				<u>384.08</u>	
Income from Advertisements				3,641.71	
				<u>4,025.79</u>	
Sale of Copies of Abstracts				73.21	
Less Publishers' Commission				12.81	
				<u>60.40</u>	
Excess of Expenditure over Income carried to Balance Sheet				<u>37,839.27</u>	
				<u>f. 181,917.73</u>	

International Tables Account for the year ended 31 December 1965

	<i>Netherlands Guilders</i>	<i>Netherlands Guilders</i>
Publication Expenses:		
Binding Additional Copies of		
Volume II	1,470·31	Sale of Copies of Volume I
Volume III	<u>2,652·46</u>	Volume II
	4,122·77	Volume III
Editorial Expenses:		6,263·29
Editorial Office Expenses	668·97	<u>55·62</u>
Travelling Expenses	1,615·82	Less Publishers' Commission on Sales
Cost of Trial Kit	<u>537·21</u>	Bank Charges and Differences
	2,822·00	<u>6,318·91</u>
Excess of Income over Expenditure carried to Balance Sheet	23,699·53	30,644·30
	<u>f. 30,644·30</u>	<u>f. 30,644·30</u>

Fifty Years of X-ray Diffraction Account for the year ended 31 December 1965

Excess of Income over Expenditure carried to Balance Sheet	3,740·00	3,085·50	3,740·00
	<u>654·50</u>	Sale of Copies	<u>654·50</u>
	3,085·50	Less Publishers' Commission on Sales	3,085·50
	<u>f. 3,085·50</u>		<u>f. 3,085·50</u>

Escher Drawings Account for the year ended 31 December 1965

Publication Expenses:			
Cost of Printing and Binding	32,162·00	Sale of Copies	6,673·18
		Less Publishers' Commission on Sales	1,167·81
		Royalties	<u>408·35</u>
			1,576·16
	<u>f. 32,162·00</u>	Excess of Expenditure over Income carried to Balance Sheet	5,097·02
			<u>27,064·98</u>
			<u>f. 32,162·00</u>

Balance Sheet as at 31 December 1965

<i>Liabilities</i>	<i>Netherlands Guilders</i>	<i>Assets</i>	<i>Netherlands Guilders</i>
Sundry Creditors:		Cash at Bank:	
Messrs Munksgaard, Copenhagen (D. Kr. 93,125-19)	48,806-91	Amsterdam-Rotterdam Bank N.V., Groningen, Guilder account	28,685-13
<i>Acta Crystallographica</i> Editorial Honoraria and Expenses	18,710-99	Comptoir National d'Escompte de Paris (N.F. 3,258-19)	2,407-07
<i>International Tables</i> Editorial Expenses	222-99	First National City Bank of New York (\$ 29,883-54)	108,178-41
Administrative Expenses	1,277-97	A.B. Svenska Handelsbanken, Stockholm (Sw. Kr. 122,150-91)	85,529-26
Subscription from an Adhering Body, paid in advance	434-40	Westminster Bank Ltd, Cambridge (£ 8,497-16-6)	86,133-96
Sundries	450-92		310,933-83
<i>Acta Crystallographica</i> Account:	69,904-18	Cash with Editors of <i>Acta Crystallographica</i>	2,880-77
Balance as at 1 January 1965	147,608-16	Due from:	
Less Excess of Expenditure over Income for the year to date	83,251-42	Imperial Metal Industries Ltd, Birmingham (£ 1,496-19-2)	15,173-17
	64,356-74	A. Oosthoek's Uitgevers Mij N.V., Utrecht	55,346-39
Structure Reports Account:			70,519-56
Balance as at 1 January 1965	133,434-50	Subscriptions from Adhering Bodies, due for 1963-1965	1,520-40
Add Excess of Income over Expenditure for the year to date	64,940-01	Advertisements in <i>Acta Crystallographica</i> , due for 1965, after deduction of Advertising Agent's Commission	3,945-84
	198,374-51	Investments (Market Values as at 31 December 1965):	
International Tables Account:		£ 3,702-19-3 3¼% Australia 1965/69	88 33,002-82
Balance as at 1 January 1965	89,160-24	£ 3,000-00 6% Conversion Stock 1972	100 30,377-59
Add Excess of Income over Expenditure for the year to date	23,699-53	f. 31,000-00 3% Nederland 1937	82 25,420-00
	112,859-77	\$ 36,000-00 3% Nederland 1947	86½ 112,104-00
General Publications Fund:		f. 50,000-00 4½% Nederland 1964	94 47,000-00
Balance as at 1 January 1965	179,406-67	f. 21,000-00 3% Nederlandsch Indë 1937 I	97 20,370-00
General Fund:		f. 3,000-00 4½% Noorwegen 1955	90 2,700-00
Balance as at 1 January 1965	127,470-07	f. 5,000-00 4% Unie van Zuid Afrika 1955	90 4,500-00
Less Excess of Expenditure over Income for the year to date	37,839-27	Add Interest accrued thereon	275,474-41*
	89,630-80	Depreciation in Value of Investments, entered as an Asset	3,998-88
			11,376-54*
		Office Equipment	290,849-83
		<i>Fifty Years of X-ray Diffraction</i> Account:	890-00
		Deficit as at 1 January 1965	9,012-96
		Less Excess of Income over Expenditure for the year to date	3,085-50
		<i>Escher Drawings</i> Account:	5,927-46
		Excess of Expenditure over Income for the year to date	27,064-98
		Stocks of Unsold Copies of Union Publications	pro memoria
			f. 714,532-67

Rates of Exchange: £1 = \$2.80; \$1 = f.3.62 = N.F.4.90 = D.Kr.6.907 = Sw.Kr.5.17 (ICSU rates).

* As in previous accounts, the depreciation in value of the investments has been included in the Balance Sheet only, to prevent fluctuations in their values from influencing the General Fund account.

We declare that the above Balance Sheet as at 31 December 1965, and the attached *Acta Crystallographica* Account, *Fifty Years of X-ray Diffraction* Account, *Structure Reports* Account, *International Tables* Account, and General Fund Account, *Escher Drawings* Account and General Fund Account, exhibit a true and correct view of the affairs of the International Union of Crystallography.

Groningen, Netherlands, Ubbo Emmiusingel 75

17 June 1966

Signed: VAN DIEN, VAN UDEN & Co.

Accountants.