### Behavior of Metals under Impulsive Loads. By J. S. RINEHART and J. PEARSON. Pp. 256. Cleveland: American Society for Metals. 1954. Price \$5.50.

The reactions of solids under impulsive loads is a fascinating subject on which intensive research was done by various teams during World War II for obvious reasons. To the physicist the study of impulsive stress–strain relations presents many points of interest, since it is closely connected to the problems of plasticity, creep, mechanical hysteresis, brittleness and failure. As far as these properties are determined by slip and the movement of dislocations, impulsive stresses of too short a duration to allow the diffusion of dislocations to the grain boundary will produce a mechanical behavior of the solid differing considerably from that under static or slowly variable stresses.

The 14 chapters of the book deal with the subject mainly from an engineering point of view. They form a good introduction to the experimental procedures and they give the theory in its simplest form. More stress on the inertia effects which are characteristic of impulsive testing in contrast to static would have been preferable, in the reviewer's opinion, to the tendency of describing the phenomena in terms of static concepts familiar to the engineer; and a more mathematical treatment, if only in the form of an Appendix, would be welcome. Possibly because of the limitation to metals, the important work of E. Volterra on the impulsive stress–strain relation in polyethylene is not mentioned, although this showed for the first time the nature of the 'memory function' which accounts for the plastic hysteresis and the shock absorption.

Very little work has been done on stress-strain relations and plasticity in single metal crystals under impulsive loading, and some revealing results on the behavior of dislocations might be expected from it. The book forms a useful first reader for anyone interested in the methods.

P. P. EWALD

Polytechnic Institute of Brooklyn Brooklyn 1, N.Y., U.S.A.

### **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).

### Re-investigation of the crystal structure of CsI<sub>3</sub>: correction

In the paper by H. A. Tasman and K. H. Boswijk (Acta

Cryst. (1955), 8, 59) the following correction should be made:

In Table 1, last column, first line, the figure  $2.82_5$  ( $0.01_8$ ) should be replaced by  $2.85_5$  ( $0.01_8$ ).

Acta Cryst. (1955). 8, 857

### International Union of Crystallography

### Report of Executive Committee for 1954

### Introduction

The Third General Assembly and International Congress, held in Paris in July under the patronage of the President of the French Republic, was the most important event during the year under review. The Congress was attended by about 630 crystallographers, from almost thirty countries, constituting the largest gathering of crystallographers ever assembled together. In addition to a number of invited review lectures some 370 papers were presented covering the most diverse branches of crystallography. The Congress was followed by two Symposia, respectively on 'The Location and Function of Hydrogen' and 'The Mechanism of Phase Transition in Crystals'; some 50 papers were contributed to these Symposia. A more detailed report of the meeting and of the associated Symposia has already been published, together with abstracts of the papers presented (Acta Cryst. (1954), 7, 609).

In accordance with the Statutes and By-Laws, the

General Assembly elected the Executive Committee, the Commissions etc.; a complete list, including members co-opted afterwards, is given at the end of this Report. The Executive Committee thanks all those who retired for their help to the Union, and especially Dr R. C. Evans for his invaluable work as one of the organizers of the Union and as its first General Secretary.

In addition to the meetings of the Executive Committee during the Third General Assembly the Executive Committee met in London in October 1954, primarily to determine its policy for the period up to the Fourth General Assembly to be held in Canada in 1957, and to make arrangements in pursuance of the decisions taken at the Third General Assembly. It was decided to accept the invitation from Spain to hold the Symposium proposed for 1956 in Madrid, and Prof. A. Guinier was appointed Chairman of the Programme Committee. It was further decided to invite Dr W. N. Lipscomb to be Chairman of the Programme Committee for the Fourth International Congress, and Dr A. L. Patterson to head a committee

Table 1. Adhering Bodies

Country	Group*	Secretary of National Committee
Australia	I	R. I. Garrod, Aeronautical Research Laboratories, Lorimer Street, Fishermen's Bend, Victoria
Austria	I	F. Machatschki, Mineralogisches Institut der Universität, Vienna 1
Belgium	$\dot{\mathrm{m}}$	R. VAN TASSEL, Institut royal des Sciences Naturelles de Belgique, Rue Vautier 31, Brussels
Brazil	I	E. TAVORA, Faculdade Nacional de Filosofia, Av. Pres. Antonio Carlos 40, Rio de Janeiro, D.F.
Canada	$\mathbf{IV}$	W. H. Barnes, Division of Physics, National Research Council, Ottawa 2
Chile	Ι	N. Joel, Laboratorio de Cristalografia y Fisica Molecular, Universidad de Chile, Casilla 147, Santiago
Czechoslovakia	Ι	The Secretary, Czechoslovak National Research Council, Opletalova 19, Prague 2
Denmark	Ι	A. Tovвовс Jensen, Den Kgl. Veterinær- og Landbohøjskoles Kemiske Laboratorium, Bülowsvej 13, Copenhagen V
France	VII	H. Curien, Laboratoire de Minéralogie de la Sorbonne, 1 Rue Victor Cousm, Paris 5
German Federal Republic	VI	H. O'DANIEL, Mineralogisches Institut der Universität, Senckenberg Anlage 30, Frankfurt/M.
India	I	The Secretary, Ministry of Natural Resources and Scientific Research, Government of India, New Delhi
Italy	III	G. Giacomello, Instituto di Chimica Farmaceutica, Università di Roma, Rome
Japan	IV	T. Ito, National Committee for Crystallography, Science Council of Japan, Ueno Park, Tokyo
Netherlands	IV	D. W. SMITS, Laboratorium voor Anorganische en Physische Chemie, Bloemsingel 10, Groningen
Norway	I	I. Oftedal, Universitetets Mineralogiske Institutt, Blindern, Oslo
South Africa	Ι	The Officer-in-Charge, Liaison Division, South African Council for Scientific and Industrial Research, P.O. Box 395, Pretoria
Spain	IV	M. ABBAD Y BERGER, Instituto de Física 'Alonso de Santa Cruz', Serrano 119, Madrid
$\mathbf{Sweden}$	I	F. E. Wickman, Naturhistoriska Riksmuseet, Stockholm 50
Switzerland	I	W. Nowacki, Mineralogisch-Petrographisches Institut der Universität, Hermann-Sahlistrasse 6, Bern
U.K.	VIII	The Secretary of the British National Committee for Crystallography, The Royal Society, Burlington House, London W. 1
U.S.A.	VIII	W. Parrish, Philips Laboratories, Irvington-on-Hudson, N.Y.
U.S.S.R.	VIII	Academy of Sciences of the U.S.S.R., Kaloujskaia 14, Moscow
	* See Statu	tes 8 and 10 (Acta Cryst. (1954), 7, 613).

Table 2. Analysis of Volumes 1-7 of Acta Crystallographica

	Vol. 1 1948	Vol. 2 1949	Vol. 3 1950	Vol. 4 1951	Vol. 5 1952	Vol. 6 1953	Vol. 7 1954
Number of pages	348	425	490	583	869	888	878*
Number of articles in English	55	68	65	88	135	121	133
Number of articles in French	4	4	3	8	11	8	3
Number of articles in German	2	8	4	2	4	3	4
Total number of articles	61	80	72	98	150	132	140
Number of short communications in English	13	20	41	58	62	81	79
Number of short communications in French	1		2	4	4	1	2
Number of short communications in German	I		2	1	1	8	1
Total number of short communications	15	20	45	63	67	90	82
Number of Book Reviews	9	4	13	15	20	17	20
Number of countries from which authors are drawn	13	11	17	19	20	18	19

<sup>\*</sup> Part 10 of Vol. 7, containing 94 pages, was completely devoted to the Third General Assembly and International Congress.

which will consider the proposed revision of the Statutes and By-Laws; both invitations have been accepted in the meantime.

In 1954 two additional countries (Chile and the U.S.S.R.) adhered, bringing the total number of adhering countries at the end of the year to twenty-two. These countries are listed in Table 1; details of secretaries etc. have been brought up to date (October 1955).

### Work of the Commissions

Commission on Acta Crystallographica

Vol. 7 (1954) was of about the same size as the two previous volumes; Table 2 gives an analysis of the contents of the volumes which have appeared so far. Thanks to the increase of the subscription prices as from 1 January 1954, the publication of Vol. 7 has been concluded

with an excess of receipts over expenses, even without taking into account the generous donations received from various sources. Fortunately the increase of the subscription prices did not lead to a reduction of the number of subscribers, which was 1278 at the end of 1954 as compared with 1270 at the end of 1953. The improved financial position of the journal during 1954 makes changes in publication that have been under consideration a matter of less urgency; it is hoped that through a continuation of this position they can be avoided, at least for the immediate future. It has been decided to carry advertisements in Acta Crystallographica as from Vol. 8.

### Commission on International Tables for X-ray Crystallography

Work has continued throughout the year on the preparation of Vols. 2 and 3, but the manuscripts are not yet complete. A supplement to Vol. 1 is being prepared which will give the diagrams for the cubic space groups. The sales of Vol. 1 have been slower during 1954: by 30 September the total sales and orders received amounted to 1380 copies; 5 sets of offprints for teaching purposes are still available.

### Commission on Structure Reports

Structure Reports for 1950 (Vol. 13), the fourth volume to appear, was published in July 1954. Work has continued on the preparation of further volumes. The typescript of Vol. 9 (1942–1944) is with the printers. The next volume to appear is expected to be Vol. 8 (1940–1941), followed by Vol. 14 (1951). The Executive Committee very much regrets the decision of the Editor of the Inorganic Section, Prof. J. M. Bijvoet, to resign after the completion of the work on the volumes reviewing the years up to 1950, but is glad to announce the co-optation of Prof. J. Wyart as Editor of this Section with effect as from Vol. 14.

### Commission on Crystallographic Apparatus

The Commission has made preparations for a comparison of methods for the precise determination of lattice parameters, and some ten laboratories have accepted the invitation to participate in this investigation. The comparative study of some forty types of X-ray films of different makes and types used in crystallographic work has been nearly finished; the results of this investigation will be published in *Acta Crystallographica* before long. A list of manufacturers and suppliers of crystallographic apparatus has been compiled and will probably be distributed during the year 1955.

During the Third International Congress a meeting was held with invited review lectures.

### Commission on Crystallographic Data

The Commission organized a meeting at the Third International Congress with invited papers on powder and single-crystal data. Activities in collecting powder data have been reported by the British, Canadian and Netherlands National Data Committees. The Commission has made preparations for reaching a decision as to whether it shall act as sponsor to the publication of single-crystal data in the form of determination tables.

### Commission on Crystallographic Nomenclature

The Commission has continued its activities in an advisory capacity.

### Commission on Crystallographic Teaching

At the Third General Assembly this Commission was established with the object of exchanging information on an international scale on the subject of teaching crystallography, of promoting publication of articles on teaching, and of arranging discussions. A draft questionnaire on the teaching of crystallography was circulated in 1954.

### Joint Commission on Electron Microscopy

The Commission sponsored an International Conference on Electron Microscopy which was held in London in July 1954. This very useful conference was attended by approximately 300 persons and had a scientific programme consisting of more than 150 papers. At the time of this conference there was organized, at the instigation of the Joint Commission, an International Committee on Electron Microscopy to foster future collaboration between the several National Societies which already exist. In thus laying the foundation for a permanent International group, the Joint Commission feels that its task is done and has voted to request its dissolution by the International Council of Scientific Unions.

### Commission on Macromolecules of the International Union of Pure and Applied Chemistry

A meeting of the Commission was held in Milan, Italy, in September 1954, as part of the proceedings of the Symposium which was held in Milan and Turin. There was a discussion on the Huggins Report on Nomenclature, and suggestions were made for alterations and amendments of some details. The German version of this Report has not yet been issued; a committee under Prof. Kratky is preparing this version. The Symposium, at which 88 papers were presented, attracted about 400 research workers from 23 countries; the emphasis was on two topics: the kinetics of polymerization, and the properties of macromolecules.

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

There was a meeting of the Commission in Bristol, Great Britain, in July 1954. The only point discussed was the proposal to organize a meeting on some aspects of solid-state physics shortly before or soon after the Fourth International Congress of the International Union of Crystallography in Canada in the summer of 1957. Prof. Slater offered to have the meeting at M.I.T., Cambridge, Mass., U.S.A., and to take charge of the necessary arrangements. It is hoped that the meeting will be attended by a representative group of solid-state physicists and of crystallographers.

### Abstracting Board of the International Council of Scientific Unions

A meeting of the Board was held in Brussels in July 1954. In addition to discussions on various matters, it

was decided to extend the activity of the Board to chemistry. (At present it is concerned with physics only.) This decision was confirmed by the Executive Board of the International Council of Scientific Unions.

### International Council of Scientific Unions

The Union was represented by Dr R. W. G. WYCKOFF at the meeting of the Executive Board of the International Council of Scientific Unions held at Naples, Italy, in October 1954. Among the items of business discussed were the following: a proposal to increase the subscriptions of the national organizations adhering to the ICSU: a closer description of permanent services and permanent activities; the organization of the International Geophysical Year 1957-58; the admission of new Unions; and the allocation of the UNESCO subvention expected for 1955. Reports from the Unions and from the Joint Commissions were presented.

### **Finances**

The audited accounts of the Union for the year 1954 are published elsewhere in this issue (Acta Cryst. (1955), 8, 862). As in previous years, the Union received generous support in its activities, and owes a deep debt of gratitude to the donors. A subvention of \$10,200 was received from UNESCO, of which an amount of \$696 remained unspent and has to be refunded. The support further comprised the following donations: f. 15,000 (£1410) from Netherlands sources, \$1435 from U.S.A. sources, D.Cr. 5000 (£258) from Danish sources and Sw.Fr. 500 (£41) from Swiss sources.

During the year under review the publishing activities were conducted on a self-supporting basis, and they yielded a profit to the Union, even without taking into account the various subventions.

For Acta Crystallographica this state of affairs has been achieved by a substantial increase in the subscription prices; in addition the sale of back numbers continued at a satisfactory level. The total income, including an amount of f. 26,671 (£2507) from subventions, exceeded expenditure during the year by f. 44,683 (£4200), compared with a deficit of £1693 during the year 1953. As a result of this, the accumulated deficit of £3777 at the end of 1953 was converted into a credit balance of f. 4500 (£423) at the end of 1954.

Relatively small expenses were incurred in the production of International Tables during 1954, and income (from sales of copies of Vol. 1) exceeded expenditure by f. 2649 (£249), resulting in an accumulated balance to the credit of the account of f. 67,090 (£6305). This will be carried forward and will be used towards the cost of printing the additional volumes.

The Structure Reports Account showed an excess of income over expenditure during the year of f. 21,105 (£1984), which includes a donation of f. 15,000. For various reasons it is not possible to make a direct comparison of the account for 1954 with that for 1953. The volume published in 1953 (Vol. 10) appeared only in December of that year, whereas the volume published in 1954 (Vol. 13) appeared in July. The number of copies of Vol. 10 sold in 1953 was, therefore, small in comparison with the number of copies of Vol. 13 sold in 1954. On the other hand the cost of production of the more voluminous Vol. 13 was almost twice as high as the cost of production of Vol. 10. At the end of 1954 the Structure Reports Account showed an accumulated balance of f. 37,500 (£3524). Although it has been decided to set the prices of future volumes at figures which will recover the cost of production within a few years, this accumulated balance will be needed because the rate of production of Structure Reports is to be accelerated.

The accumulated balance of the General Publications Fund, f. 93,853 (£8821) at the end of 1953, remained unchanged. In 1954 no subventions were credited to this account, and no expenses were charged to it.

The grants towards the expenses of Officers and Editors attending the Third General Assembly, and of the invited participants in the Symposia, as well as the expenses of the Apparatus Commission, were fully met from subventions from UNESCO allocated for these purposes. The other expenses for the Third General Assembly and International Congress were met from the General Fund: the cost of production of the abstracts of the papers presented at the Congress and Symposia formed the main part of these expenses. Part of the British investments were redeemed in 1954, which resulted in a loss of f. 1871 (£176). The General Fund showed an excess of expenditure over income for the year of f. 4,436 (£417); the accumulated balance to the credit of this fund at the end of 1954 was f. 30,848 (£2900).

### Membership of Committees, Commissions and Other Bodies

The membership of Committees, Commissions and other bodies is as follows:

### Executive Committee

President: R. W. G. WYCKOFF (U.S.A.)\*

Vice-Presidents: G. Hägg (Sweden)\* P. P. EWALD (U.S.A.)†

D. W. SMITS\*, Laboratory of Inorganic and Physical Chemistry, General Secretary:

Bloemsingel 10, Groningen, Nether-

lands

Ordinary Members: N. V. Belov (U.S.S.R.)\*

J. D. BERNAL (U.K.)\* A. GUINIER (France)†

C. H. MACGILLAVRY (Netherlands)† A. TOVBORG JENSEN (Denmark)\*

A. J. C. Wilson (U.K.)†

Acta Crystallographica Advisory Board

SIR LAWRENCE BRAGG (U.K.) M. von Laue (Germany) C. MAUGUIN (France) L. PAULING (U.S.A.) R. W. G. WYCKOFF (U.S.A.)

Commission on Acta Crystallographica

Chairman:

P. P. EWALD, Polytechnic Institute of Brooklyn, 99 Livingston Street, Brooklyn 1, N.Y., U.S.A.

<sup>\*</sup> Till close of the Fourth General Assembly.

<sup>†</sup> Till close of the Fifth General Assembly.

Other Members:

R. C. Evans (U.K.)

I. FANKUCHEN (U.S.A.)
I. NITTA (Japan)

J. WYART (France)

Commission on Crystallographic Nomenclature

Chairman:

W. L. Bond, Bell Telephone Laboratories, Murray Hill, N.J., U.S.A.

Other Members:

S. BHAGAVANTAM (India)
H. BRASSEUR (Belgium)
W. DE KEYSER (Belgium)
J. D. H. DONNAY (U.S.A.)
C. HERMANN (Germany)
K. LONSDALE (U.K.)
W. NOWACKI (Switzerland)

E. W. NUFFIELD (Canada) J. Thewlis (U.K.)

### Commission on Structure Reports

Chairman:

A. J. C. Wilson, Physics Department, University College, Cardiff, Wales.

Other Members:

N. C. BAENZIGER (U.S.A.)
J. M. BIJVOET (Netherlands)
G. B. BOKIJ (U.S.S.R.)
G. HÄGG (Sweden)
V. LUZZATI (France)
I. NITTA (Japan)

H. O'DANIEL (Germany)
J. M. ROBERTSON (U.K.)
P. M. DE WOLFF (Netherlands)

F. M. DE WOLFF (Nemerial

J. WYART (France)

### Commission on International Tables

Chairman:

K. Lonsdale, Chemistry Department, University College, London

W.C. 1, England.

Other Members:

M. J. BUERGER (U.S.A.) N. F. M. HENRY (U.K.) J. S. KASPER (U.S.A.)

C. H. MacGillavry (Netherlands)
G. D. Rieck (Netherlands)

### Commission on Crystallographic Apparatus

Chairman:

A. GUINIER, Conservatoire des Arts et Métiers, 292 Rue St Martin,

Paris 3, France.

Other Members:

J. L. Amorós (Spain)
M. J. BUERGER (U.S.A.)
E. G. Cox (U.K.)
G. Hägg (Sweden)

H. JAGODZINSKI (Germany) W. Parrish (U.S.A.) H. P. ROOKSBY (U.K.)

E. H. WIEBENGA (Netherlands)

### Commission on Crystallographic Data

Chairman:

P. M. DE WOLFF, Technisch Physische Dienst, T.N.O. en T.H., Delft,

 ${\bf Netherlands.}$ 

Other Members:

E. G. Cox (U.K.)

J. D. H. DONNAY (U.S.A.) W. L. FINK (U.S.A.) M. H. HEY (U.K.) T. ITO (Japan)

F. W. MATTHEWS (Canada)

J. N. VAN NIEKERK (South Africa)

H. STRUNZ (Germany) A. J. C. WILSON (U.K.) E. A. WOOD (U.S.A.)

### Commission on Crystallographic Teaching

Chairman:

N. F. M. HENRY, Department of Mineralogy and Petrology, Cam-

bridge, England.

Other Members: L. BRú (Spain)

G. DONNAY (U.S.A.)
I. FANKUCHEN (U.S.A.)
M. FORNASERI (Italy)

H. J. GREENVILLE-WELLS (U.K.)

R. HOCART (France)
G. A. HOMES (Belgium)
A. MAGNELI (Sweden)
W. NOWACKI (Switzerland)

A. Pabst (U.S.A.)

W. G. PERDOK (Netherlands)

E. TAVORA (Brazil)
T. WATANABÉ (Japan)\*
A. F. WELLS (U.K.)
H. WINKLER (Germany)

### Commission on Macromolecules of the International Union of Pure and Applied Chemistry

Representative:

C. W. Bunn, I.C.I. (Plastics) Ltd, Black Fan Road, Welwyn Garden

City, Herts., England.

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

Representatives:

P. P. EWALD (U.S.A.) A. GUINIER (France) W. H. TAYLOR (U.K.)

### Joint Commission on Electron Microscopy†

Representative:

R. W. G. WYCKOFF, National Institutes of Health, Bethesda 14, Maryland, U.S.A.

Abstracting Board of the International Council of Scientific Unions

Observer:

A. J. C. Wilson, Physics Department, University College, Cardiff, Wales.

\* Co-opted in 1955. † Dissolved in 1955.

Acta Cryst. (1955). 8, 862

### International Union of Crystallography

The audited accounts of the Union for the calendar year 1954 are printed below.

# Acta Crystallographica Account for the year ended 31 December 1954

	f.	97,175-59	26,670.52	11 070 00	f. 123,846·11	f. 8,419·30			8,419.30
	f. 99,931.99 86.66 10,250.08 649.81 40.64		5,453·00 2,733·50 434·02	ו',	<u></u>	f. 10,076·17 1,656·87			<del>  '</del>
	(D. Cr. 182,791·28) (D. Cr. 158·51) (D. Cr. 18,749·00) (D. Cr. 1,188·60)	(D. Cr. 25,212·35) (************************************	1,435·00) 5,000·00) 5.500·00)			::'			
1,754	(b. 9.9.9. (b. 9.9.9.9.9.9.9.9.9.9.9.9.9.9.9.9.9.9.9	:	(\$ (D. Cr. (Sw. Fr.		954	 les			
acm crystatiographica Account for the year enuca 31 December 1934	Subscriptions to Volume 7, 1954 Sale of Single Copies Sale of Back Numbers Reprints 1952 Sundries	Less Publisher's Commission on Sales Subvention from UNESCO	Subventions from U.S.A. Sources Subvention from Danish Source Subvention from Swiss Source		$f. 123,846.11$ $\frac{f. 123,846.11}{10000000000000000000000000000000000$	Sale of Copies of Volume 1 Less Publisher's Commission on Sales			
ccount to	j.	68,941.20	10.222.19	44,682.72	f. 123,846·11	f. 1,819.00		3.951.63	2,648.67
abuca v	f. 56,125·92 6,007·81 73·50	6,733.97	5,192.69 506.29 34.58	' •	f. ables Ac	f. 1,779.01 39.99	4,248·00 12·41 87·83	4,348.24	\ •••"
Acta Crystatogr	Publication Expenses: Printing and Binding Volume 7, 1954 (D. Cr. 102,663-11) Distribution and Postage (D. Cr. 10,989-22) Insurance on Stock at Cambridge Publisher's Commission on Production	 rance, Offic	Postages, Telephone, Stationery, Printing and Sundry Expenses Travelling Expenses Depreciation of Office Equipment	Excess of Income over Expenditure carried to Balance Sheet	International T	Publication Expenses:  Binding additional Copies of Volume 1  Bank Charges on Publisher's Receipts	Editorial Expenses:  Computational Work for Volume 3  Travelling Expenses  Stationery, Postages and Sundry Expenses	$Less$ Balance held by General Editor at 1 January 1954 $^{-}$	Excess of Income over Expendeture carried to Balance Sheet

## Structure Reports Account for the year ended 31 December 1954

÷.							38 609.87	15,000.00	20 200624			53,602.87	
4.	11,985.04	4,771.45	6,022.54	28,675.50	51 454.53	12.851.66						<i>f.</i>	
	:	:	:	:	'		. '		:				
	:	:	:	:					:				
	:	:	:	;			•		:				
	:	:	:	:		a.lea		g	:				
	Sale of Copies of Volume 10	Sale of Copies of Volume 11	Sale of Copies of Volume 12	Sale of Copies of Volume 13		Less Publisher's Commission on Sales		Submontion from Notherlands Source	Dan Verritori ironi ivenieratas boar				
f.		18,047-75								14,450.14	21,104.98	53,602.87	
<i>ۍ</i>				12,586.68		1,126.29	239.22	37.24	460.71			ا <b>بن</b> "	
	Publication Expenses:	Printing and Binding Volume 13	Editorial Expenses:	Editorial Honoraria, Assistants' and Abstractors' Salaries	Subscriptions to Journals, Photocopies, Stationery,	Postages, Bank Charges and Sundry Expenses	Travelling Expenses	Depreciation of Office Equipment	Due to General Editor at I January 1954		Excess of Income over Expenditure carried to Balance Sheet		

### General Fund Account for the year ended 31 December 1954

	j.						18,063.68 $11,489.15$			2,576.84	4,436.20	f. 36,565.87
	f.	7,524.00		11,086.88	1,352.80	19,963.68 1,900.00		1,788.98	731.19	70.00		**;"
	ĵ.		11,286.00 $199.12$	1,900.00	047.20	I	1			ı		
		:	: :	· :	: '	:	:	÷	÷	:	ied to	
delicial Fund Account for the year chief of December 1704		Sa	Symposia (\$ 2,970·00) Less Unspent	Permanent Activities (\$ 500.00)	Less Unspent	Less Subvention 1953 to be refunded	Subscriptions from Adhering Bodies	Interest on Investments: 2½ % National War Bonds		o % lyeaerianasch maie 1991 1	Excess of Expenditure over Income carried to Balance Sheet	
101 171	<i>÷</i>	108.00		!	6,106.43 $603.09$			90 017 70	24,410.92	2,113.36	1,352.80 $1,871.27$	f. 36,565·87
ייי ייייי				5,744.05 $362.38$		7,368-96	11,086.88	5,955.08				· ••
General Fun		I.C.S.U. (1% of Subscriptions from Adhering Bodies) Office Expenses:	Secretarial Salaries and National Insurance, Office Rent, Auditors' Fees, Postages, Telephone, Stationery,	Printing and Sundries Bank Charges and Differences on Exchange	Incidental Travelling Expenses of Officers	Grants towards Expenses of Officers and Editors attending Third General Assembly	Position 1	Other Expenses for initial General Assembly and invertia- tional Congress	Travelling Expenses of Officers attending Meeting of	Executive Committee in London	Expenses of Apparatus Commission Deficiency at Redemption of Investments	

### Balance Sheet as at 31 December 1954

	f.		58,158.09	606.13			71,038.97 $2,553.60$		106,127-97	1	252.70	340.48	pro memoria	f. 239,077.94	
	f.	5,091·82 9,433·07	000101	296.37	;	38,639.38 $30,804.48$ $1,595.11$		64,794.94 40,503.86 829.17		287·28 34·58	377.72		pri	1,4	
Assets	Cash at Bank.	Amsterdamsche Bank N.V., Groningen, Guilders account Amsterdamsche Bank N.V., Groningen, Sterling account (£886.11.4)	Cash with Editors:	General Editor of International Tables (£27.17.1) General Editor of Structure Reports (£29.2.3)	Due from:	N.V. A. Oosthoek's Uitgevers Mij., Utrecht Messrs Ejnar Munksgaard, Copenhagen (D. Cr. 56,346·23) The Kynoch Press Ltd., Birmingham (£149.18.4)	Subscriptions from Adhering Bodies due for 1954	Investments at Cost: £6,000 2½% National War Bonds 1954/56 f. 40,000 3% Noderlandsch Indië 1937 I Interest accrued thereon		Office Equipment at Cambridge: As at 1 January 1954 (£27.0.0) Less Depreciation	Office Equipment at Cardiff:  As at 1 January 1954 (£35.10.0)  Less Depreciation		Stocks of unsold Copies of Acta Crystallographica, International Tables and Structure Reports		
	.,		5,022.36 $265.75$		76 007 7	4,499·34	000	07,089.83	200	37,499·54 93,852·91			30,848·21	f. 239,077.94	
	٠ <u>٠</u>	1,783·70 570·00 22·34 2,646·32		44,682.72	40,183.38	64,441.16	2,648.67	16,394.56	21,104.98		35,284.41	4,436.20		, <u>, , , , , , , , , , , , , , , , , , </u>	10000404
		: : : :	:	date	:	:	year	 year	÷		year	:	ı		and the section
Liabilities	Sundry Creditors:	Office Expenses  Travelling Expenses  Acta Crystallographica Office Expenses  Unspent UNESCO Subventions	Subscriptions from Adhering Bodies paid in Advance	Acta Crystallographica Account: Excess of Income over Expenditure for the year to date	Less Deficit as at 1 January 1954 (£3,776.12.8)	International Tables Account: As at 1 January 1954 (£6,056.10.0)	Add Excess of Income over Expenditure for the year to date	Structure Reports Account: As at 1 January 1954 (£1,540.16.10) Add Excess of Income over Expenditure for the year	to date	General Publications Fund: As at 1 January 1954 (£8,820.15.3)	General Fund: As at 1 January 1954 (£3,316.4.1) Less Excess of Expenditure over Income for the year	to date			$f_{1} = f_{1} \cdot 10.64 \cdot 10.64 \cdot 10.80 \cdot 11NIFSCO = 0.000 \cdot 10.000 \cdot 10.00$

£1 = f. 10.64; \$1 = f. 3.80 (UNESCO rates of exchange)

We declare, that the above Balance Sheet as at 31 December 1954 and the attached Acta Crystallographica Account, International Tables Account, Structure Reports Account and General Fund Account exhibit a true and correct view of the affairs of the International Union of Crystallography, with the understanding that the books for the period I January 1954-31 August 1954 have been examined by Messrs. Slater, Dominy and Swann, Chartered Accountants at Cambridge, and that the starting point has been the Balance Sheet as at 31 December 1953, certified by these accountants.

Groningen, Holland Ubbo Emmiussingel 75 21 September 1955

VAN DIEN, VAN UDEN AND CO.

Accountants