Acta Cryst. (1984). A**40**, 68–85

International Union of Crystallography

Report of the Executive Committee for 1982

Personal Notes

Professor N. V. Belov died on 7 November 1982. He was the leading crystallographer in the USSR for many years and distinguished in many fields of crystallographic research, the best known being his investigations into symmetry and his work on silicates. He was Editor-in-Chief of *Kristallografiya* and permanent Chairman of the USSR National Committee for Crystallography. He was a member of the Executive Committee of the Union from 1954 to 1963 and from 1966 to 1972. He was Vice-President from 1960 to 1963 and President from 1966 to 1969. An obituary has been published [*Acta Cryst.* (1982), A**38**, 561–562].

The deaths of three pioneer North American crystallographers were reported. Professor J. W. Gruner died in 1981, Professor L. G. Berry died on 29 June 1982 and Professor D. McLachlan Jr died on 3 December 1982. Professor Gruner was President of both the Crystallographic Society of America and the Mineralogical Society of America, Professor Berry was Editor of the *Canadian Mineralogist* from 1950 to 1975 and Editor of the Powder Diffraction File of the JCPDS from 1969 to 1976. Professor McLachlan was President of the American Crystallographic Association and Editor of *Crystallography in North America.* Obituaries have been published [*J. Appl. Cryst.* (1982), **15**, 248–249; (1983), **16**, 580; (1983), **16**, 361].

Dr J. Garrido died on 14 May 1982. He was one of the pioneers of X-ray crystallography in Spain and collaborated in the preparation of both *International Tables* and *Structure Reports* for the Union. An obituary has been published [*J. Appl. Cryst.* (1982), **15**, 577].

Mr S. A. Bryant died on 26 December 1982. He was Technical Editor of the publications of the Union from 1962 to 1975. An obituary has been published [*J. Appl. Cryst.* (1983), **16**, 360–361].

Meetings

The Union sponsored the following meetings, which were held during 1982: Meeting on Neutron Scattering and Diffraction Techniques for Macromolecular Structure Determination, Brookhaven, NY, USA, 31 May–4 June; Workshop on Crystallography of Molecular Biology, Erice, Italy, 7–19 June; Sagamore VII Conference on Charge, Spin and Momentum Densities, Nikko Kanaya Hotel, Japan, 25–30 August; Seventh European Crystallographic Meeting, Jerusalem, Israel, 29 August–3 September.

The Executive Committee met at Frodsham, near Chester, England, 26–28 July. The most important items of business dealt with were (1) approval of the audited accounts for 1981; (2) subscription rates and other matters concerning the Union's journals, including new arrangements with the publishers and the division of *Acta Crystallographica* into three sections; (3) other publications of the Union; (4) publication of macromolecular crystallography; (5) appointment of Editors for the new series of *International Tables*; (6) approval of membership of the Programme Committee for the Thirteenth Congress; (7) sponsorship of meetings and possible financial support for satellite meetings at Congresses; (8) computer system for the Chester office; (9) problems experienced by Adhering Bodies in paying their subscriptions.

The Finance Committee, established by the Executive Committee in 1981, met at Chester, 21–24 February, and at Frodsham, 23–25 July.

Appointments

The Executive Committee confirmed the appointments of Professor A. J. C. Wilson as General Editor of *International Tables*, Chairman of the Commission and Editor of Volume C, Professor U. Shmueli as Editor of Volume B of *International Tables* and Professor S. E. Rasmussen as a Co-editor of the *Journal of Applied Crystallography.*

Publications

Volume 38 of *Acta Crystallographica* and Volume 15 of the *Journal of Applied Crystallography* were published in 1982, as were Volumes 44B, 46A and 47A of *Structure Reports* and Volume 13 of *Molecular Structures and Dimensions.*

Adhering Bodies

The latest list of Adhering Bodies of the Union, and the names and addresses of the Secretaries of the National Committees, is given in Table 1. A full list of memberships of National Committees is given in Annex IV to the Report of the Twelfth General Assembly and Congress [*Acta Cryst.* (1983), A**39**, 425–480]. The following changes to the membership of committees had been communicated to the Executive Secretary by 1 October 1983:

Finland: Omit T. SAHAMA.

Israel: New membership: M. KAFTORY (Chairman), Y. BERNSTEIN, H. BINO, M. KAPON, Y. KIMMEL, G. REISNER, U. SHMUELI, M. SHOHAM.

USA: Correction of initials: R. E. NEWNHAM (Vice-Chairman).

Work of the Commissions

Commission on Journals

Volumes 38 of *Acta Crystallographica* (*Acta*) and 15 of the *Journal of Applied Crystallography* (*JAC*) were produced and published in 1982. The page limitation imposed for financial reasons in 1981 was lifted in 1982, with a resulting increase in the number of pages in both volumes, see Table

Table 1. *Adhering Bodies*

Country	*Category**	*Adhering Body*	*Secretary of National Committee*
Argentina	I	Consejo Nacionel de Investigaciones Cientificas y Técnicas	M. A. R. DE BENYACAR, Division Fisica del Solido, Commission Nacionel de Energia Atomica, Av. del Libertador 8250, 1429 Buenos Aires
Australia	III	Australian Academy of Science	The Executive Secretary, Australian Academy of Science, PO Box 783, Canberra City, ACT 2601
Austria	I	Österreichische Akademie der Wissenschaften	A. PREISINGER, Institut für Mineralogie, Kristallographie und Strukturchemie der Technischen Universität Wien, Getreidemarkt 9, A-1060 Vienna
Belgium	II	Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique	E. LEGRAND, Materials Sciences Department, Studiecentrum voor Kernenergie, B-2400 Mol
Brazil	III	Conselho Nacional de Desenvolvimento Cientifico e Tecnologico	S. CATICHA ELLIS, DESCM, Instituto de Fisica, Universidade Estadual de Campinas, Campinas, São Paulo 13100
Canada	III	National Research Council	C. P. HUBER, Division of Biological Sciences, National Research Council of Canada, Ottawa, Ontario K1A 0R6
Chile	I	National Committee for Crystallography	D. BOYS, Departamento de Fisica, Universidad de Chile, Casilla 5487, Santiago
China, People's Republic of	IV	Academia Sinica	GU XIAOCHENG, Department of Biology, Beijing University, Beijing
Czechoslovakia	I	Československá Akademie Věd	A. LÍNEK, Fysikálni ústav, Československá Akademie Věd, Libeň, Na Slovance 2, 180 40 Praha 8
Denmark	I	Royal Danish Academy of Sciences and Letters	B. JENSEN, Chemical Institute BC, Danish School of Pharmacy, Universitetsparken 2, Copenhagen DK-2100
Egypt, Arab Republic of	I	Academy of Scientific Research and Technology	S. A. ABDEL-HADY, Faculty of Engineering & Technology, Cairo Higher Institute of Technology, Helwan, Cairo
Finland	I	Suomen Tiedeakatemiain Valtuuskunta	A. VAHVASELKÄ, Department of Physics, University of Helsinki, Siltavuorenpenger 20 D, SF-00170 Helsinki 17
France	IV	Académie des Sciences (Institut de France)	Y. EPELBOIN, Association Française de Cristallographie, Tour 26, 4 place Jussieu, 75230 Paris CEDEX 05
German Democratic Republic	II	Vereinigung für Kristallographie in der GGW der DDR	H. PEIBST, Zentralinstitut für Elektronenphysik, Akademie der Wissenschaften der DDR, Mohrenstrasse 40/41, DDR-108 Berlin
Germany, Federal Republic of	IV	Arbeitsgeimeinschaft Kristallographie	H. BURZLAFF, Institut für Angewandte Physik, Lehrstuhl für Kristallographie, Universität, Loewenichstrasse 22, D-8520 Erlangen
Hungary	I	Magyar Tudományos Akadémia	L. ZSOLDOS, Research Institute for Technical Physics, Hungarian Academy of Sciences, PO Box 76, H-1325 Budapest
India	I	Indian National Science Academy	S. K. SIKKA, Scientific Officer, Neutron Physics Division, Bhabha Atomic Research Centre, Trombay, Bombay 400085
Israel	I	Israel Academy of Sciences and Humanities	G. M. REISNER, Department of Chemistry, Technion, Israel Institute of Technology, Haifa 32000
Italy	III	Consiglio Nazionale delle Ricerche	G. FILIPPINI, Istituto di Chimica Fisica, Università di Milano, Via Golgi 19, Milano
Japan	IV	Science Council of Japan	Y. IITAKA, Faculty of Pharmaceutical Sciences, University of Tokyo, Bunkyo-ku, Tokyo
Netherlands	III	Stichting voor Fundamenteel Onderzoek der Materie met Röntgen-en Elektronenstralen	The Executive Secretary, FOMRE, Koningin Sophiestraat 124, 2595 TM's-Gravenhage
New Zealand	I	The Royal Society of New Zealand	J. M. WATERS, Department of Chemistry, Massey University, Palmerston North
Norway	I	Det Norske Videnskaps Akademi	B. F. PEDERSEN, Department of Pharmacy, University of Oslo, PO Box 1068, Blindern, Oslo 3
Poland	I	Polska Akademia Nauk	A. PIETRASZKO, Instytut Niskich Temperatur i Badań Strukturalnych, Polskiej Akademii Nauk, Plac Katedralny, 1, 50–950 Wrocław
Portugal	I	Sociedade Portuguesa de Fisica	M. M. R. R. COSTA, Departamento de Fisica, Universidade de Coimbra, 3000 Coimbra

* Adherence to the Union is in one of five Categories I–V, with corresponding voting powers and contributions as set out in Statutes 3·6, 5·5 and 9·4.

Table 1 (*cont.*)

Country	*Category**	*Adhering Body*	*Secretary of National Committee*
South Africa	I	South African Council for Scientific and Industrial Research	P. LE R. MALHERBE, International Relations Division, CSIR, PO Box 395, Pretoria 0001
Spain	III	Consejo Superior de Investigaciones Cientificas	S. MARTÍNEZ CARRERA, Instituto de Química Fisica 'Rocasolano', Consejo Superior de Investigaciones Cientificas, Serrano 119, Madrid 6
Sweden	II	Kungliga Vetenskapsakademien	P. KIERKEGAARD, Arrhenius Laboratory, University of Stockholm, S-106 91 Stockholm
Switzerland	II	Schweizerische Gesellschaft für Kristallographie	H.-B. BÜRGI, Universität Bern, Laboratorium für Chemische und Mineralogische Kristallographie, Freiestrasse 3, CH-3012 Bern
UK	V	The Royal Society	The Executive Secretary, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG
USA	V	National Academy of Sciences – National Research Council	C. T. PREWITT, Department of Earth and Space Sciences, SUNY, Stony Brook, NY 11794
USSR	V	Akademija Nauk SSSR	V. I. SIMONOV, Institute of Crystallography, Leninsky prospekt 59, Moscow 117333
Yugoslavia	I	Jugoslavenska Akademija Znanosti i Umjetnosti	B. KAMENAR, Laboratory of General and Inorganic Chemistry, Faculty of Science, Ulica Soc. Revolucije 8, 41 000 Zagreb

* See footnote on preceding page.

2. The total number of papers in *Acta* A, however, did not increase in 1982 although those published in *Acta* B increased by nearly 44% and those in *JAC* by about 12%. The average length of all articles in *Acta* remained about the same as in recent years: a slightly greater variation continues to be found in *JAC*. The highest number of short structural papers ever published in any one year appeared in *Acta* B38, which also bore the highest ratio to the number of corresponding full articles.

Median publication times for full articles, the averaged elapsed time in months between the published date of acceptance and the nominal publication date, returned almost to normal for *Acta* A at 5·2 months from that of 5·8 months in 1981. The 6·1 month median for *Acta* B in 1981 came down only to 5·9 months as the backlog of accumulated papers was slowly eliminated. Similarly for *JAC*, the median was reduced from 6·3 months in 1981 to 5·9 months in 1982. Short communications averaged shorter median times than full articles by less than one week for *Acta* A, nine weeks for *Acta* B and two weeks for *JAC*: short structural papers were published more than two weeks faster than full articles in *Acta* B.

Full and short structural papers continued to be grouped informally as inorganic, organometallic or organic within the two sections of each issue of *Acta* B. A total of 123 inorganic, 72 organometallic and 175 organic full articles appeared in 1982 with 88 inorganic, 127 organometallic and 303 organic short structural papers. The 1981 *Index* for *Acta* A and B again consisted of five separate indexes, a subject, a chemical name, an inorganic formula, an organic formula and an author index.

The distribution of papers and authors by country in *Acta* A, *Acta* B and *JAC* for 1981 and 1982 is given in Table 3. Several notable year-to-year changes occurred, particularly for the UK, USA, Australia, Federal Republic of Germany and India in *Acta* A; for the UK, France, USA and Canada in *Acta* B; and for the USA, India and Federal Republic of Germany for *JAC*. The significance of such changes may be enhanced by considering them in historical context. The total number of countries represented in Table 3 is 59.

Plans for the division of *Acta* in three sections, beginning with Volume 39 in January 1983, were originally announced at the Twelfth International Congress of Crystallography in Ottawa. An editorial in *Acta* (1982), A**38**, 1–2, also in B**38**, 1–2, presented the reasons for the division and outlined the nature of the papers that would most appropriately be submitted for publication in each of the new sections. *Acta* A, *Foundations of Crystallography*, would be concerned with basic developments in any area of crystallography; *Acta* B, *Structural Science*, with structurally based studies from disciplines throughout the natural sciences; and *Acta* C, *Crystal Structure Communications*, with the results of the determination of all types of crystal structures.

A special format for *Acta* C papers was developed and published in *Acta* (1982), B**38**, 699–700. The forthcoming division was brought to the attention of authors, readers and subscribers by a statement that appeared at or near the foot of the Table of Contents in every issue of *Acta* in 1982, since adequate notice was regarded as being of great importance. Complete revision of the 1978 edition of *Notes for Authors* was also made and published in *Acta* (1983), A**39**, 174–186.

Commission on Structure Reports

Volume 46A (Metals and Inorganic Compounds for 1980, 455 pages) and Volume 47A (Metals and Inorganic Indices [Subject & Formula Indices for 1913–1980, Author Index for 1971–1980]) were published in 1982. The manuscript of the Inorganic section of Volume 48A (Metals and Inorganic Compounds for 1981) is ready and only awaits completion of the Metals section to go off to the printer. Co-editorial work is in progress on Volume 49A (Metals and Inorganic Compounds for 1982).

Table 2. *Survey of the contents of the Union Journals*

Acta Crystallographica

Vol.	Year	Number of Pages*	Number of Papers	Full Articles: Number	Full Articles: Average Length	Short Structural Papers: Number	Short Structural Papers: Average Length	Short Communications: Number	Short Communications: Average Length
A33	1977	1046	201	181	5·6	—	—	20	1·5
B33		3974	991	548	5·2	409	2·6	34	1·4
		5020	1192	729	5·3			54	1·4
A34	1978	1048	189	158	6·0	—	—	31	1·3
B34†		3848	1040	510	5·0	490	2·5	40	1·0
		4896	1229	668	5·2			71	1·1
A35	1979	1090	187	162	6·0	—	—	25	1·5
B35		3130	898	412	4·7	457	2·5	29	1·5
		4220	1085	574	5·0			54	1·5
A36	1980	1096	194	168	6·1	—	—	26	1·3
B36		3212	877	417	5·0	438	2·5	22	1·3
		4308	1071	585	5·3			48	1·3
A37	1981	944	158	136	6·4	—	—	22	1·1
B37†		2250	630	286	4·9	333	2·5	11	0·6
		3194	788	422	5·4			33	0·9
A38	1982	880	155	129	6·3	—	—	26	1·5
B38		3176	905	370	4·9	518	2·6	17	0·8
		4056	1060	499	5·3			43	1·2

Journal of Applied Crystallography

Vol.	Year	Number of Pages*‡	Number of Papers	Full Articles§: Number	Full Articles§: Average Length	Short Communications: Number	Short Communications: Average Length	Crystal Data: Number	Crystal Data: Average Length	Computer Programs: Number	Computer Programs: Average Length	Short Items¶: Number	Short Items¶: Average Length
10	1977	510	134	76	5·5	14	1·8	22	1·3	6	1·6	15	0·9
11‡	1978	720	167	47	5·5	11	1·6	20	1·2	3	2·0	12	1·0
12	1979	642	168	87	6·8	13	1·5	42	1·6	11	1·8	14	0·6
13	1980	638	130	81	6·2	6	2·0	25	1·8	7	2·7	11	1·0
14	1981	492	118	69	5·7	7	1·7	26	1·5	7	3·1	9	0·9
15‡	1982	676	132	89	6·2	8	1·0	19	1·7	9	2·3	7	0·9

* Excluding indexes.

† Volume A34 includes, in addition, 431 pages of abstracts communicated to the Warsaw Congress and Volume A37 includes, in addition, 428 pages of abstracts communicated to the Ottawa Congress.

‡ Volume 11 includes 363 pages of 4 review papers, 50 contributed papers, and 17 extended abstracts presented at the Fourth International Conference on Small-Angle Scattering, Gatlinburg, 1977. The columns giving the number of pages and the numbers of papers in each volume include all these papers and abstracts, but the columns giving the number and average length of Full Articles do not include the conference papers. Volume 15 includes, in addition, 37 pages of "Current Crystallographic Books 1970 through 1981".

§ Excluding Lead Articles and Conference Papers.

¶ Excluding Union Announcements, Crystallographers, and Book Reviews.

The ten-year Index, Volume 36, covering the years 1961–1970 (337 pages, prepared by Professor W. B. Pearson) will be published early in 1983. Co-editorial work on Volume 45B (Organic Compounds for 1979, approximately 1600 pages in two parts) is almost complete and this should be with the printer by mid 1983. Work continues on Volumes 46B, 48B and 49B (Organic Compounds for 1980, 1981 and 1982 respectively) to try to decrease the delay time in publication of the Organic volumes.

Commission on International Tables

The Commission on *International Tables* began a thorough revision of the existing Volumes I–IV in the early 1970s, and produced several experimental 'pilot' volumes in the course of the decade. By 1981 it had completed a new Volume A on direct space, which is now in course of publication. This volume covers in greater detail the content of the first part only of the old Volume I. No Editors were appointed and no Commission was elected at the Twelfth General Assembly of the Union held in Ottawa in 1981, though the Chairman of the former Commission and his collaborators have continued with seeing Volume A through the press. The future of the *International Tables* was discussed by the Executive Committee of the Union at its meeting in July 1982, and it was decided that two further volumes of the revision should be undertaken:

Volume B: Reciprocal Space

Volume C: Mathematical and Physical Tables.

Table 3. *Distribution of papers and authors, by country, in Acta & JAC for* 1981 *and* 1982

Errata have been excluded. The papers have been allocated to the country or countries where the work was done, directly proportional to the number of authors per country for each paper. The authors' nationalities have been given where known. If an author's nationality is not known to be otherwise it is given as that of the country in which the work was done.

	Acta Crystallographica Section A				*Acta Crystallographica* Section B				*Journal of Applied Crystallography*			
	Papers		Authors		Papers		Authors		Papers		Authors	
Country	1981	1982	1981	1982	1981	1982	1981	1982	1981	1982	1981	1982
Afghanistan	—	—	—	—	—	—	—	1	—	—	—	—
Algeria	—	—	—	—	—	—	—	1	—	—	—	—
Argentina	0·3	2·0	4	4	—	0·8	—	5	1·0	1·0	4	2
Australia	6·0	14·0	9	21	25·0	20·0	58	42	1·0	6·0	3	6
Austria	—	—	—	—	1·0	6·7	3	15	1·0	—	1	—
Bangladesh	—	—	—	—	1·0	—	1	2	—	—	—	—
Belgium	3·0	3·3	6	7	11·4	15·9	51	68	1·0	—	1	—
Brazil	1·0	1·0	1	3	6·7	1·4	21	5	1·0	1·0	2	4
Canada	1·3	2·3	3	4	28·7	59·4	62	156	2·0	2·0	6	4
Chile	—	—	—	—	0·7	0·7	2	2	1·0	1·0	3	2
China, Peoples' Rep.	—	—	2	4	0·5	1·0	1	7	—	2·0	—	8
Cuba	—	—	—	—	—	—	—	—	—	1·0	—	1
Czechoslovakia	1·0	—	5	—	6·3	9·7	19	36	2·0	—	3	—
Denmark	1·0	—	2	—	11·3	9·0	27	18	1·0	0·6	2	3
Finland	1·3	4·0	3	7	2·0	9·4	4	22	—	—	—	1
France	13·3	9·7	31	26	89·4	137·0	303	439	21·9	19·5	59	60
German Dem. Rep.	1·0	4·0	1	8	1·5	3·2	4	14	2·0	—	3	—
Germany, Fed. Rep.	24·6	17.2	40	26	56·8	69·7	118	178	7·0	10·9	19	24
Ghana	—	—	—	—	0·7	—	3	—	—	—	—	—
Greece	—	0·3	1	1	1·0	1·0	3	4	—	—	—	—
Hungary	—	—	—	—	2·5	5·2	9	15	—	—	—	1
India	11·0	4·5	23	14	21·3	35·3	59	112	7·0	3·0	18	6
Iran	1·0	—	1	—	—	—	—	—	—	1·0	—	1
Iraq	—	—	—	—	—	—	1	—	—	—	—	—
Ireland	—	—	—	—	2·0	2·6	6	3	—	—	—	—
Israel	3·5	1·3	6	2	7·2	4·3	16	12	—	2·8	—	7
Italy	6·0	4·0	13	11	23·4	42·4	76	130	3·8	7·0	15	23
Ivory Coast	—	—	—	—	4·8	2·3	16	10	—	—	—	—
Japan	14·5	18·0	35	49	43·7	54·2	151	214	10·0	9·3	25	41
Kenya	—	—	—	—	—	0·5	—	2	—	—	—	—
Korea, South	—	—	—	—	—	—	1	—	—	—	—	—
Malaysia	—	—	—	—	—	—	1	1	—	—	—	—
Mexico	—	—	—	—	0·3	1·0	1	5	—	0·3	—	1
Morocco	—	—	—	—	—	—	—	1	—	—	—	—
Netherlands	9·0	7·2	14	15	19·2	18·3	48	59	2·8	3·0	7	6
New Zealand	—	—	—	1	1·0	1·5	4	3	—	—	—	—
Nigeria	—	—	—	—	0·7	1·0	2	4	—	—	—	—
Norway	1·0	—	2	—	5·3	4·0	9	7	—	—	—	—
Pakistan	—	0·5	—	2	—	—	—	—	—	—	—	—
Poland	2·5	1·0	5	6	17·1	19·9	47	49	1·5	2·0	3	5
Portugal	1·0	—	5	—	—	—	—	—	—	—	—	—
Romania	—	—	—	—	—	—	—	—	—	1·0	—	4
Saudi Arabia	—	—	—	—	—	1·0	—	1	—	—	—	—
South Africa	—	—	—	—	2·4	3·1	5	12	—	—	—	—
Spain	0·3	0·4	1	2	18·6	24·9	58	88	3·0	2·0	8	4
Sri Lanka	—	—	—	—	—	—	—	2	—	—	—	—
Sweden	1·0	1·0	5	3	16·0	19·0	34	38	2·3	1·0	7	2
Switzerland	4·6	5·5	9	6	6·3	17·7	16	44	1·0	1·0	1	2
Taiwan	—	—	—	—	1·0	1·0	1	3	—	—	—	—
Thailand	—	—	—	—	1·0	—	6	2	—	—	—	—
Togo	—	—	—	—	—	0·2	—	1	—	—	—	—
Tunisia	—	—	—	—	1·2	—	6	1	—	1·0	—	2
Turkey	—	1·0	—	2	—	0·5	—	2	0·3	1·0	1	2
USSR	5·0	5·0	10	11	1·0	2·8	2	18	1·0	1·3	13	12
UK	21·5	12·3	41	26	53·8	120·1	170	324	11·8	9·6	22	29
USA	19·4	31·8	47	53	118·2	152·7	319	452	30·8	37·7	74	89
Venezuela	—	—	—	—	—	1·3	—	2	1·0	—	2	—
Yugoslavia	—	—	—	—	9·0	12·9	32	40	—	2·0	—	6
Zimbabwe	—	—	—	—	—	0·4	—	2	—	—	—	—

Volume B would contain a revision and expansion of the remaining part of the Volume I, together with new material and a revision and expansion of certain parts of the existing Volumes II–IV that would appear more appropriately under the heading of Reciprocal Space. Volume C would contain those mathematical and physical parts of Volumes II–IV that are still useful, revised and edited as necessary. The Executive Committee invited A. J. C. Wilson to become Chairman of the Commission and Editor of Volume C, and U. Shmueli to become Editor of Volume B. Both invitations have been accepted, and preliminary work is under way.

Since the planning undertaken by the Commission in the 1970's, there has been a considerable development in the power and in the accessibility of computers. In the current stage of planning it is assumed that the user of Volume B will have ready access to a large computer, and that the user of Volume C will at least have access to a programmable pocket calculator.

Commission on Biological Macromolecular Crystallography

The Commission has continued its discussions with the Commission on Journals on the deposition of data for papers on biological macromolecular crystallography.

The Commission met during the workshop on Crystallography of Molecular Biology in Erice in June, when most of the time was dedicated to topics for the 1984 Congress. T. L. Blundell has subsequently been active in putting together a programme for Hamburg at least partially in line with the suggestions made in Erice. At the Workshop there was also an open discussion on the merits of starting a new journal but the concensus was that there were already sufficient other journals covering the field.

The Commission was pleased to note a variety of excellent international meetings in 1982 devoted to macromolecular structure and its function, in particular the above-mentioned June meeting in Erice and the Gordon Diffraction Conference in July.

Commission on Charge, Spin and Momentum Densities

The Commission met upon the occasion of the seventh triennial Sagamore Conference at Nikko, Japan. The conference, held under the chairmanship of Y. Saito, attracted approximately one hundred and twenty active participants, one third of whom came from outside Japan. The six-day conference was a mixture of formal plenary lectures, informal poster presentations and discussions.

The results from the oxalic acid project have now been collated and analysed by P. Coppens, and the project report will be published in *Acta Cryst.* This project has shown good agreement between experimental results from various sources.

Data on charge density in vanadium have been collected in a range of X-ray, γ-ray and neutron experiments. The results will be considered further at the 1984 Congress.

Commission on Crystal Growth and Characterization of Materials

The main activity this year was the preparations for the International School on Materials Science and Solar Energy (Egypt, 18 March–1 April 1983). The selection of the lecturers was made in such a way that not only technological aspects but also the underlying principles were presented. This is a crucial problem for developing countries. The urgent need for technology tends to overshadow the fact that fundamental aspects are very important in order to understand applications.

The proceedings of the International School on Synthesis, Crystal Growth and Characterization of Materials for Energy Conversion and Storage held in India (New Delhi, October 1981) will be published through North Holland Publishing Company.

Other meetings supported by the Commission are (1) the 5th International Summer School on Crystal Growth and Materials Research, Davos, Switzerland, 3–10 September 1983, (2) the 7th International Conference on Crystal Growth (ICCG-7), Stuttgart, Federal Republic of Germany, 12–16 September 1983, and (3) an International Conference on Crystal Growth and Characterization of Polytype Structure, to be held in Marseille, France, 3–6 July 1984.

The various international schools organized by the Commission in the last three years in the third world, in order to transfer expertise in materials research to scientists and engineers, have started to attract the interest of developing countries.

Commission on Crystallographic Apparatus

Commission activities:

1. *Microdensitometer Project* (S. Abrahamsson, P. Kierkegaard, O. Lindqvist and L. Sjölin). Phase two of the project concerning a comparison between data measured on film and diffractometer has been somewhat delayed. The process of writing the final manuscript is in progress.
2. *Survey of Film Characteristics* (M. Elder and O. S. Mills). The final production of the manuscript presenting the results is in progress.
3. *X-ray Attenuation Project* (D. C. Creagh). The project is completed and the results will soon be published.
4. *Polarization Ratio Survey* (L. D. Jennings). The project is completed. The report has been submitted for publication.
5. *Radiation safety* (S. Martinez Carrera). A circular including a letter signed by the Chairman of the Commission is being sent to various authorities in the field.
6. *Accurate determination of diffractometer intensities* (H. Hope). A projected layout is in preparation.
7. *Profile analysis project* (J. Čermák). The comments of Commission members are being collected before an approach is made to the Executive Committee.
8. *Intensity meeting* (S. Abrahamsson, P. Kierkegaard). Union sponsorship was obtained to arrange a meeting on intensities during 1983, but the decision came too late for a meeting in 1983 to be arranged. It is now hoped that an open meeting of the Commission will be held at the Hamburg Congress, possibly in co-operation with the Commission on Neutron Diffraction.

Commission on Crystallographic Computing

The Commission directed most of its efforts in 1982 to preparations for the IUCr Computing School held in Kyoto in August 1983. The Commission acted as the programme committee for the school, and selected the topics and potential lecturers. This school was intended specifically for participants in the Asian/Pacific region and had a strong macromolecular emphasis. Approximately thirty lecturers from nine countries were invited and approximately 150 participants attended. A Commission member, T. Ashida, was Local Chairman for the school.

The Commission was also involved in the discussions leading to the selection of a site for the 1984 Computing School. This school will be held in Mulheim, Federal Republic of Germany, 30 July–8 August. H. Burzlaff will be the Local Chairman.

Another matter discussed during the course of 1982 was an alternative to the World List of Crystallographic Programs for communicating crystallographic software information. The Editor of the *Journal of Applied Crystallography* has been approached about publishing software information as summaries with a prescribed format. Details of this format are not yet finalized, but a draft proposal is expected to be ready for the 1984 Congress.

Commission on Crystallographic Data

The Commission has had no formal activity during the year but ideas have been collected and passed on to Professor Bonse concerning arrangements for the 1984 Congress.

The report of the *ad hoc* working party on the standard Crystallographic File Structure was accepted for publication [*Acta Cryst.* (1983), **A39**, 216–224]. SCFS files are being included as input and output options in the XTAL program system.

The document 'Recommendations to the Editors of Scientific Journals concerning the Reporting of Crystal Structure Determinations' has now been completed and will shortly be circulated to appropriate editors.

Commission on Crystallographic Nomenclature

The final report of the *ad hoc* Committee on the Nomenclature of Disordered, Modulated and Polytype Structures, dealing with polytype structure nomenclature, was received. Following careful evaluation, this valuable report was returned to the *ad hoc* Committee for additional clarification. The *ad hoc* Committee on the Nomenclature of Symmetry continued its deliberations. Correspondence was maintained throughout the year with the IUPAC Commission on Nomenclature of Inorganic Chemistry and with the IUB Committee of Editors of Biochemical Journals.

Commission on Crystallographic Studies at Controlled Pressures and Temperatures

The Commission has had no formal activity during the year but proposals had been made for an Open Commission Meeting at the 1984 Congress.

Commission on Crystallographic Teaching

The Commission contributed to the list of crystallographic books published between 1970 and 1981, edited by J. H. Robertson [*J. Appl. Cryst.* (1982), **15**, 640–676].

A further set of pamphlets is being prepared under the "pamphlet project" edited by C. A. Taylor.

Under the Commission's programme of organizing international schools on crystallographic teaching in developing countries, a further school was held in Brazil in 1983 with S. Caticha-Ellis and A. Authier as the directors of the course.

Commission on Electron Diffraction

The work of the Commission continues to be centred around correlating and bringing up to date information which it is believed will be helpful to other crystallographers, through Commission projects and correspondence.

Three additional consultants were appointed this year in specialist areas.

Research into space-group determination methods has been stimulated in response to the space group project, and three review papers have been received for independent publication; during the year space group tables have been prepared for consideration, and consultation with the Commission on *International Tables* has been maintained.

In the course of the structure factor project a summary of results obtained for structure factors for copper was distributed amongst Commission members during the year and a corrected version is being sent to the Commission on Charge, Spin and Momentum Densities. There is a general agreement between results obtained by electron and X-ray diffraction measurements which utilize various dynamic scattering phenomena, in clear distinction to those based on imperfect single-crystal data.

The gas-phase electron diffraction group has continued to organize an information service which provides data about newly determined molecular structures, in addition to providing information concerning instrumentation and new techniques. The information is gathered and distributed by B. Stark, and the 9th such *GEDIS* letter was issued in November 1982. *GEDIS* constitutes a service which is generally very highly regarded, and serves as a model for other Commission projects.

Initial response for the forthcoming 1984 Congress has been communicated to the Programme Chairman, and the Commission hopes to organize at least two Open Commission Meetings at the Congress.

Commission on Neutron Diffraction

Planning started for the next symposium on neutron scattering, to be held at the Hahn-Meitner Institut in Berlin prior to the 1984 Congress. W. Saenger will chair the local organizing committee. Likewise a programme committee has been formed, and the scientific programme is under discussion.

The *Newsletter* reappeared after three years' absence, and it is planned that from 1983 it should appear regularly. The editorship will change with each new issue and each issue will, apart from international news, mainly concentrate on the part of the world that can be easily reached by the editor. The editors will be members of the Commission.

The magnetic form factor project, organized by J.-X. Boucherle, has now been redefined, and will consist of regular summaries of the literature references. A first summary is in production. Finally, a project for comparison of single-crystal diffractometers has been started. Preliminary measurements have been done at the Institut Laue–Langevin, Grenoble, in order to define the project, and a preliminary definition is being worked out in collaboration with G. Heger.

Sub-Committee on the Union Calendar

The Sub-Committee receives and considers requests for Union sponsorship and nominal financial support, and makes recommendations to the Executive Committee. Acting on the recommendations made by the Sub-Committee, during 1982 the Executive Committee approved sponsorship of the following schools and meetings, mostly with financial support:

1. Meeting on Neutron Scattering and Diffraction Techniques for Macromolecular Structure Determination, Brookhaven, USA, 31 May–4 June 1982.

2. Sagamore VII Conference on Charge, Spin and Momentum Densities, Nikko Kanaya Hotel, Japan, 25–30 August 1982.

3. Eighth European Crystallographic Meeting, Liège, Belgium, 8–12 August 1983.

4. International Summer School on Crystallographic Computing, Kyoto, Japan, 18–27 August 1983.

5. VII International Conference on Crystal Growth, Stuttgart, Federal Republic of Germany, 12–16 September 1983.

Other meetings which received Union support have been listed earlier in this Report. Organizers of meetings wishing to seek Union sponsorship should write as early as possible to the Chairman of the Sub-Committee, Professor Th. Hahn, Institut für Kristallographie, RWTH, Templergraben 55, D-5100 Aachen, Federal Republic of Germany.

Representatives on Other Bodies

Abstracting Board of the International Council of Scientific Unions (ICSU AB)

For some years now the Abstracting Board of the International Council of Scientific Unions has been conducting internal discussions about its future structure and functions, and had set up a special committee to report and make recommendations. Within the last year this question has been given greater urgency by a move on the part of ICSU itself to withdraw from the Board. The motive behind the ICSU move has not been disclosed; it would appear that most members of ICSU are apathetic on the subject, but there are one or two very active proponents of the withdrawal. No irrevocable decisions have been made as yet.

In spite of this preoccupation with structure, the Board and its Committees have been fully active. The Board met in Amsterdam from 24–29 May, beginning with a seminar on the theme 'Information and the Innovative Process'. This was attended by about one hundred people from nearly twenty countries, and showed a healthy surplus of income over expenditure. Unfortunately it was attended mainly by information experts, rather than by administrators and research managers, for whom it was primarily intended. The talks, with an edited version of the discussions following them, have been published by North-Holland under the title *Information and Innovation.* Two points of interest emerged from the Working Group in Chemistry. The first is a proposal to develop a unified nomenclature for the fields in which Physics and Chemistry overlap. The second is that the Board will organize a joint session, lasting a full day, at a meeting of the International Union of Pure and Applied Chemistry to be held in June 1983. The session will include one paper on crystallographic data centres.

The next General Assembly of the Board will be held in Vienna during the last week of May 1983.

Committee on Data for Science and Technology (CODATA) of the International Council of Scientific Unions

The 13th General Assembly of CODATA was held in Jachranka near Warsaw, Poland, in October 1982. The discussions that took place on this occasion indicated that CODATA is rethinking its role. A workshop is scheduled for June 1983 to address the issue and it is likely that the organization will place a larger emphasis on the role of computer databases in scientific data manipulation and retrieval. The 14th General Assembly has been scheduled for Jerusalem in June 1984.

CODATA provides a useful forum for people drawn from many fields who have similar methodological interests in information storage and retrieval, particularly in relation to the rapid advances in computer technology.

Committee on Space Research (COSPAR) of the International Council of Scientific Unions

The meeting of COSPAR in Ottawa in May 1982 included a very successful symposium on Materials Science in Space. Both theoretical and experimental aspects have been discussed, indicating interesting subjects for future experimentation. Also in this meeting the enormous technological effort for the material research in space was clearly visible. Unfortunately there are many aspects of the various space programmes which are strongly criticized by the scientific community. The major drawback is that the national space organizations mainly finance equipment and flight expenses but neglect to some degree the ground-based scientific investigations. The USA and the Federal Republic of Germany are exceptions among the western countries. Particularly for smaller countries this situation sometimes leads to very expensive experiments which are inadequately prepared from the scientific point of view.

Committee on the Teaching of Science (CTS) of the International Council of Scientific Unions

The ICSU Committee on the Teaching of Science is planning a major World Education Conference in August 1985 at Bangalore on the theme 'Science and Technology Education and Future Human Needs'. Several international unions, including the IUCr, will participate in this event. The main aim of this conference is to identify the future needs of humanity, particularly in the developing countries, and evolve a strategy for the development and planning of education in various branches of science (especially interdisciplinary areas) which would enable society to fulfil effectively the projected future needs.

The Committee is also interested in promoting the training of technicians in developing countries, to assist them in the maintenance and use of costly scientific equipment imported from the developed countries. The IUCr Commissions on Crystallographic Teaching and Crystallographic Apparatus could usefully be involved in this programme to train technicians for crystallographic equipment. The person to contact is Professor D. J. Waddington, Chairman, CTS Sub-Committee on Technician Training, Department of Chemistry, University of York, York YO1 5DD, England.

Committee on Science and Technology in Developing Countries (COSTED) of the International Council of Scientific Unions

Regional offices of COSTED have been established with the aim of widening the geographical distribution of meetings it supports and organizes. It is hoped that this will lead to greater support for crystallographers from developing countries.

Scientific Committee on Problems of the Environment (SCOPE) of the International Council of Scientific Unions

The Fifth General Assembly of SCOPE took place in Ottawa, 30 May–5 June 1982. S. H. Whitlow deputized for the Union representative who was unable to attend. Some of the papers suggested potential areas for crystallographic investigations.

Commission on the Structure and Dynamics of Condensed Matter of the International Union of Pure and Applied Physics

The Commission prepared for the IUPAP Executive Committee a priority list and recommendations for IUPAP sponsorship and financial support for conferences in the field of condensed matter in 1983.

Conference Committee of the European Physical Society

The Committee met in Geneva in 1982. The new Chairman of the Committee is Professor S. Methfessel.

The suggestion to establish a Division of Optics and a Division of Biophysics was discussed. The preparations for the 1984 General EPS Conference in Prague were also discussed in detail. Applications for the EPS approval and sponsorship for forthcoming conferences were considered.

International Organization for Crystal Growth

The main activities of IOCG this year have been preparations for ICCG-7 in Stuttgart in September 1983. A Nomination Committee has been constituted and voting for the IOCG officers for 1983–86 (mail ballot) is under way. Dr R. Laudise, the President of IOCG, was not a candidate for the next period. The Nomination Committee proposed Professor R. Kern (University of Marseille) as the new President of the IOCG.

An amendment of the constitution of the IOCG has been proposed, concerning regional/national scientific meetings (article VII, section 5): 'Although open to IOCG members, (these meetings) are subject to the laws and regulations of the host country'. The results of voting will be published in the next year.

European Crystallographic Committee

Professor M. Nardelli attended the meeting of the European Crystallographic Committee at Jerusalem on 1 September, in place of Professor Ramaseshan.

The 7th European Crystallographic Meeting was held at Jerusalem, Israel, 29 August–3 September 1982, and was attended by 240 participants and over 50 accompanying members. There were no participants from Eastern Europe. ECM-8 has now been held in Liège, Belgium, in 1983 and ECM-9 will be held in Torino, Italy, in 1985. It is hoped to hold ECM-10 in Wrocław, Poland, in 1986.

With respect to the co-operation scheme for assistance to scientists in developing countries, it was reported that problems in paying shipping costs made it difficult for such scientists to accept gifts of apparatus. Collaboration in scientific research could be more beneficial.

International Council of Scientific Unions

Professor Kato represented the Union at the 19th ICSU General Assembly at Cambridge, England. Dr King also attended for the first few days. The main actions of the General Assembly were (1) the admission of the China Association for Science and Technology; (2) the admission of the International Union of Microbiology and Psychology; (3) the defeat of proposals to group Unions and to re-allocate their voting power; (4) cautious approval for investigation of the establishment of an ICSU Press.

In addition there was discussion of problems on the free circulation of scientists. The IUCr proposal for an International Crystallographic Centre is still under consideration by ICSU and Unesco. COSTED has established regional offices which it is hoped will make it easier for scientists from developing countries to receive COSTED funds to help them attend international conferences.

The next meeting of the ICSU General Committee was held in Warsaw, Poland, 4–5 August 1983.

Finances

The audited accounts for the year 1982 are given at the end of this Report. For comparison, the figures for 1981 are provided in italics. Negative quantities are indicated by parentheses. As agreed by the General Assembly in August 1981 the accounts are presented in Swiss Francs.

The Unesco rates of exchange, as issued by the ICSU Secretariat, have been used in the preparation of these accounts. As a consequence of the many fluctuations in exchange rates during the year, the following procedure has been adopted for the accounts. Assets and liabilities in currencies other than Swiss Francs at 31 December 1982 have been translated into Swiss Francs in the Balance Sheet at the rate operative at that date. For the Income and Expenditure Accounts, transactions have been translated into Swiss Francs by applying the rates of exchange appropriate to the individual dates of these transactions. As a consequence of the fluctuations in exchange rates, a gain has arisen on the assets of the Union, in terms of Swiss Francs, amounting to SwFr 25 786. This gain has been divided amongst the ten Fund Accounts with credit balances, in direct proportion to the balances on these accounts at 31 December 1982.

As on previous Balance Sheets, the investments have been valued according to their quotation at the end of the year. Their appreciation in value, together amounting to SwFr 900, has not been entered in the General Fund but has again been included in the assets on the Balance Sheet, to avoid annual fluctuations in value influencing the General Fund Account. At the end of 1982 the Union held investments of SwFr 18 000 in government bonds.

The total of SwFr 986 969 with the banks at the end of the year was represented by Dfl 1859 and $227 837 with the Amsterdam–Rotterdam Bank, $52 599 with the Bankers Trust Company, £110 686 with the National Westminster Bank and SwFr 6851 with the Union Bank of Switzerland. The amounts shown in the Balance Sheet for debtors and creditors relate to sums, principally on the publishing accounts, due at 31 December 1982. Where appropriate, these amounts have now been settled.

The Balance Sheet shows that the assets of the Union, excluding stocks of unsold publications but including the gain of SwFr 25 786 resulting from fluctuations in rates of exchange, have increased during the year, from SwFr 709 687 to SwFr 1 203 961, more than correcting the losses sustained in the previous year.

The General Fund account shows a surplus of SwFr 150 041 as compared with a surplus of SwFr 72 235 in 1981. The administrative expenses were SwFr 138 703 in

1982 as compared with SwFr 142 666 in 1981. The fall was the result of exchange rate fluctuations. Of this amount, SwFr 42 814 was charged to the publications of the Union. SwFr 4836 was spent on supporting scientific meetings. The Union received SwFr 21 382 from the Unesco subvention to ICSU and a grant of a further SwFr 4060 from ICSU. The subscriptions from Adhering Bodies increased to SwFr 131 941 with the increase of the unit contribution from $300 to Sw Fr 890. Interest on bank accounts and investments was SwFr 96 521. Sales of the *World Directory of Crystallographers* yielded SwFr 2734. Donations totalling SwFr 38 662 were gratefully received from the organizers of the Ottawa Congress, and the associated School on Crystallographic Computing and Meeting on Crystalline Deposits in Human Tissues.

The President's Fund account received SwFr 864 in donations during 1982; payments of SwFr 582 were made from the fund. It was decided to maintain this fund at the equivalent of $6000, and therefore SwFr 7000 was transferred from the General Fund.

A new agreement with Munksgaard, the publisher of *Acta Crystallographica* and the *Journal of Applied Crystallography*, led to large interim payments to the Union during the year, the payment of interest on the Union's money held by the publisher and a reduction of Munksgaard's commission on sales to 7%. The journal accounts are now less susceptible to exchange rate fluctuations because the publication expenses were incurred in Danish kroner and the subscriptions are received in the same currency.

The *Acta Crystallographica* account for 1982 shows a surplus of SwFr 202 606 as compared with a deficit of SwFr 231 628 in 1981. The surplus resulted mainly from the large increase in the subscription rates in Danish kroner, and a small increase in the printing costs.

The number of paid subscriptions to both sections of the journal dropped from 1319 in 1981 to 1295 in 1982, including 126 personal subscriptions in 1981 and 132 in 1982. There were also 254 paid subscriptions to Section A and 140 paid subscriptions to Section B in 1982, compared with 258 and 145 respectively in 1981. The cost of cancellation of the computerized typesetting facility and the cost of the technical editing office have been divided between the *Acta Crystallographica* and the *Journal of Applied Crystallography* accounts in percentages based on the number of text pages published during the year; 87% and 13% respectively for 1982. The technical editing costs for *Acta Crystallographica* were SwFr 240 492 in 1982 as compared with SwFr 250 718 in 1981. This reduction was the result of exchange rate fluctuations. The journals accounts have also been charged with administrative expenses as in previous years and as shown in the General Fund.

The *Journal of Applied Crystallography* account shows a surplus of SwFr 81 598 as compared with a deficit of SwFr 15 695 in 1981. The number of paid subscriptions decreased from 1,126 in 1981 to 1,105 in 1982, including 96 personal subscriptions in 1981 and 98 in 1982.

The *Structure Reports* account shows a surplus of SwFr 7239 as compared with a surplus of SwFr 3146 in 1981. Publishing and editorial expenses in 1982 were SwFr 52 220 and SwFr 59 435 respectively, as compared with SwFr 19 616 and SwFr 71 363 in 1981. The publication expenses of Volume 44B had been held over from 1981. The net income from sales was SwFr 199 356 in 1982 as compared with SwFr 94 525 in 1981.

The *International Tables* account shows a surplus of SwFr 7940 as compared with a surplus of SwFr 11 700 in 1981. Sales income remained low at SwFr 10 411 with Volume I out of print. Sales had been taken over by Reidel from Kynoch Press, who ceased to trade.

SwFr 317 was received from the sale of 21 copies of *Fifty Years of X-ray Diffraction.* SwFr 401 was received from the sale of 25 copies of *Symmetry Aspects of M. C. Escher's Periodic Drawings*, as well as SwFr 316 royalties for the Japanese edition of this book. SwFr 156 was received from the sale of 7 copies of Volume I and 6 copies of Volume II of *Early Papers on Diffraction of X-rays by Crystals.* The *Molecular Structures and Dimensions* account shows no surplus for 1982, because this account was charged with a contribution of SwFr 46 125 towards the publication costs of Volume 13, the volume published in 1982. The sales income was much higher than that for 1981, with 344 copies of Volume 13, 230 of Volume 12 and 393 copies of earlier volumes being sold. *Fifty Years of Electron Diffraction* was published in 1981. Net sales of 233 copies yielded SwFr 10 592, reducing the deficit on this fund account to SwFr 12 769.

International Union of Crystallography

Balance Sheet as at 31 December 1982

Swiss Francs

	1982				*1981*
	As at 31 December 1981	Gain on fluctuations in Rates of Exchange	Excess of Income over Expenditure for the year	Balance at 31 December 1982	
FUND ACCOUNTS					
General Fund	274,330	9,024	150,041	433,395	*274,330*
President's Fund	5,448	120	7,282	12,850	*5,448*
Acta Crystallographica	108,515	6,508	202,606	317,629	*108,515*
Journal of Applied Crystallography	53,530	2,827	81,598	137,955	*53,530*
Structure Reports	187,113	4,066	7,239	198,418	*187,113*
International Tables	(39,625)	—	7,940	(31,685)	*(39,625)*
General Publications	74,517	1,559	—	76,076	*74,517*
Fifty Years of X-ray Diffraction	4,520	101	317	4,938	*4,520*
Escher Drawings	19,469	422	717	20,608	*19,469*
Early Papers	(10,159)	—	156	(10,003)	*(10,159)*
Molecular Structures and Dimensions	6,800	142	—	6,942	*6,800*
Fifty Years of Electron Diffraction	(23,361)	—	10,592	(12,769)	*(23,361)*
Special Publications Fund	48,590	1,017	—	49,607	*48,590*
	709,687	25,786	468,488	1,203,961	*709,687*
				1,203,961	*709,687*

Swiss Francs

	1982		*1981*	
CURRENT ASSETS				
Cash at banks				
Current Accounts	181,671		*71,600*	
Deposit and Savings Accounts	741,479		*628,964*	
Treasury bills	63,819	986,969	—	*700,564*
Cash with Union Officials		4,651		*10,545*
Debtors		261,095		*161,183*
Subscriptions from Adhering Bodies, due for 1981 and 1982		14,986		*4,503*
		1,267,701		*876,795*
Deduct Creditors		90,226		*191,850*
NET CURRENT ASSETS		1,177,475		*684,945*
FIXED ASSETS				
Investments				
At market value	18,090		18,270	
Depreciation in value	900		720	
At cost	18,990		18,990	
Office Equipment at cost, less depreciation	7,496		5,752	
TOTAL FIXED ASSETS		26,486		*24,742*
		1,203,961		*709,687*

Report of the Auditors to the International Union of Crystallography

We have audited the financial statements on pages 78 to 85 in accordance with approved Auditing Standards.

We have not been requested by the Union to consider the requirements of Swiss Company Law as regards these financial statements.

In our opinion, the financial statements give a true and fair view of the state of affairs of the Union at 31 December 1982 and of its excess of income over expenditure and source and application of funds for the year then ended.

Manchester, England
1 August 1983

Signed: TOUCHE ROSS & CO

Chartered Accountants

General Fund Account for the year ended 31 December 1982

	Swiss Francs			
	1982		*1981*	
Subscriptions to ICSU ($2\frac{1}{2}$% of subscriptions received from Adhering Bodies in 1981)		2,295		*2,060*
Subscription to ICSU Abstracting Board		670		*727*
Subscription to ICSU Committee on the Teaching of Science		852		*828*
Administration Expenses:				
Honoraria: General Secretary, Treasurer and Secretarial Assistance	2,117		*2,971*	
Audit and Accountancy Charges	12,715		*9,170*	
Taxation and other services	3,436		*354*	
Legal Fees	1,175		*1,210*	
Postages, Stationery, Printing and Sundries	2,757		*2,990*	
Travelling Expenses	1,076		*3,966*	
Bank Charges	513		*1,220*	
Executive Secretary's Office:				
Salaries and Expenses	113,333		*119,286*	
Depreciation of Office Equipment	1,581	138,703	*1,499*	*142,666*
Twelfth General Assembly and Congress:				
Executive Committee	—		*19,744*	
Travel Grants	—		*29,400*	
Expenses of Commissions	—		*615*	
Incidental Expenses	—	—	*190*	*49,949*
Meeting of the Executive Committee		16,333		—
Finance Committee expenses		7,641		—
Travel Expenses of IUCr Representatives on Other Bodies		6,106		*3,436*
Commission expenses		4,354		—
Sponsorship of Meetings		4,836		*32,435*
Publication and editorial expenses of *World Directory of Crystallographers*: 6th Edition		—		*18,740*
Transfer to President's Fund Account		7,000		—
Excess of Income over Expenditure carried to Balance Sheet		150,041		*72,235*
		338,831		*323,076*

	Swiss Francs			
	1982		*1981*	
Grant received from UNESCO Subvention to ICSU		21,382		*20,680*
Grant received from ICSU		4,060		*15,710*
Subscriptions from Adhering Bodies		131,941		*89,114*
Interest on Investments		690		*3,354*
Interest on Bank Accounts		95,831		*82,817*
Gain on Redemption of Treasury Bills		594		—
Net Profit on sale of Investments		—		*45,211*
Donations from the Twelfth General Assembly and Congress and Associated Meetings		38,662		—
Sale of *World Directory of Crystallographers*: 6th Edition		2,734		*21,252*
Net sale of Sundry Publications		123		*927*
Amount charged to Journals and Publications:				
Acta Crystallographica	31,208		*32,100*	
Journal of Applied Crystallography	10,403		*10,700*	
Molecular Structures and Dimensions	1,203	42,814	*1,221*	*44,011*
		338,831		*323,076*

President's Fund Account for the year ended 31 December 1982

	Swiss Francs 1982	1981
Travel Grants and Registration Fees	582	*1,611*
Excess of Income over Expenditure carried to Balance Sheet	7,282	—
	7,864	*1,611*

	Swiss Francs 1982	1981
Donations received	864	*791*
Transfer from General Fund Account	7,000	—
Excess of Expenditure over Income carried to Balance Sheet	—	*820*
	7,864	*1,611*

Acta Crystallographica Account for the year ended 31 December 1982

Publication Expenses:				
Printing and Binding Volume 38 *(1981 Volume 37)*	579,057		*529,976*	
Distribution and Postage	55,149		*50,868*	
Airfreight Costs	25,987		*22,871*	
	660,193		*603,715*	
Printing *Acta* Supplement to A37	—		*22,506*	
Printing Index to Volume 37 *(1981 Volume 36)* and sundry printing	32,098	692,291	*18,599*	*644,820*
Cancellation of Computerised Typesetting Facility		5,991		*93,446*
Editorial Expenses:				
Editorial Honoraria	26,627		*20,171*	
Secretarial Assistance	7,965		*13,708*	
Postages, Telephone and Office Sundries	8,852		*7,789*	
Technical Editing: Salaries and Expenses	240,492		*250,718*	
Depreciation of Office Equipment	2,481	286,417	*1,742*	*294,128*
Administration Expenses		31,208		*32,100*
Excess of Income over Expenditure carried to Balance Sheet		202,606	—	
		1,218,513		*1,064,494*

Subscriptions to Volume 38 *(1981 Volume 37)*	1,239,589		*883,309*	
Sale of Back Numbers and Single Copies	48,810		*29,031*	
Airfrieght Charges to Subscribers	20,049		*10,401*	
Royalties and Copyright Fees	253		*362*	
	1,308,701		*923,103*	
Less Publisher's Commission on Sales	90,188	1,218,513	*90,237*	*832,866*
Excess of Expenditure over Income carried to Balance Sheet		—		*231,628*
		1,218,513		*1,064,494*

Journal of Applied Crystallography Account for the year ended 31 December 1982

	Swiss Francs			
	1982		*1981*	
Publication Expenses:				
Printing and Binding Volume 15 (*1981 Volume 14*)	88,498		*83,488*	
Distribution and Postage	10,737		*5,880*	
Airfreight Costs	5,374	104,609	*5,365*	*94,733*
Cancellation of Computerised Typesetting Facility		895		*13,964*
Editorial Expenses:				
Editorial Honoraria	3,991		*3,966*	
Postages, Telephone and Office Sundries	1,734		*1,220*	
Technical Editing: Salaries and Expenses	35,935		*37,464*	
Depreciation of Office Equipment	361	42,021	*250*	*42,900*
Administration Expenses		10,403		*10,700*
Excess of Income over Expenditure carried to Balance Sheet		81,598		—
		239,526		*162,297*

	Swiss Francs			
	1982		*1981*	
Subscriptions to Volume 15 (*1981 Volume 14*)	240,429		*156,792*	
Sale of Back Numbers and Single Copies	11,413		*6,625*	
Airfreight Charges to Subscribers	4,781		*2,469*	
Royalties and Copyright Fees	106		*103*	
	256,729		*165,989*	
Less Publisher's Commission on Sales	17,629	239,100	*20,427*	*145,562*
Income from Advertisements		426		*600*
Donation		—		*440*
Excess of Expenditure over Income carried to Balance Sheet		—		*15,695*
		239,526		*162,297*

Structure Reports Account for the year ended 31 December 1982

	Swiss Francs 1982		1981	
Publication Expenses:				
Printing and Binding Volume 44B, 46A and 47A (*1981 Volume 45A*)	44,304		*11,062*	
Typing of Manuscripts	7,916	52,220	*8,554*	*19,616*
Depreciation		462		*400*
Editorial Expenses:				
Salary and Honoraria: Editors, Abstractors and Assistants		59,435		*71,363*
Excess of Income over Expenditure carried to Balance Sheet		7,239		*3,146*
		119,356		*94,525*

	Swiss Francs 1982		1981	
Sale of copies				
Volumes 46A and 47A	64,631		—	
Volumes 44B and 45A	78,479		*85,793*	
Earlier Volumes and Indexes	19,295		*43,207*	
	162,405		*129,000*	
Less Publisher's Commission on Sales	43,049	119,356	*34,475*	*94,525*
		119,356		*94,525*

International Tables Account for the year ended 31 December 1982

	Swiss Francs 1982		1981	
Editorial Expenses:				
Secretarial Assistance and Postages	2,471		*1,683*	
Travelling	—	2,471	*122*	*1,805*
Excess of Income over Expenditure carried to Balance Sheet		7,940		*11,700*
		10,411		*13,505*

	Swiss Francs 1982		1981	
Sale of copies				
Volumes I, II, III and IV	12,662		*18,869*	
Less Publisher's Commission on Sales	2,251	10,411	*6,534*	*12,335*
Copyright Fees	—			*1,170*
		10,411		*13,505*

Fifty Years of X-ray Diffraction Account for the year ended 31 December 1982

	Swiss Francs	
	1982	*1981*
Excess of Income over Expenditure carried to Balance Sheet	317	*953*
	317	*953*

	Swiss Francs			
	1982		*1981*	
Sale of Copies	453		*1,361*	
Less Publisher's Commission on Sales	136	317	*408*	*953*
		317		*953*

Escher Drawings Account for the year ended 31 December 1982

Excess of Income over Expenditure carried to Balance Sheet	717	*3,897*
	717	*3,897*

Sale of Copies	573		*2,307*	
Less Publisher's Commission on Sales	172	401	*624*	*1,683*
Royalties		316		*2,214*
		717		*3,897*

Early Papers Account for the year ended 31 December 1982

Excess of Income over Expenditure carried to Balance Sheet	156	*1,305*
	156	*1,305*

Sale of copies of Volumes I and II	223		*1,864*	
Less Publisher's Commission on Sales	67	156	*559*	*1,305*
		156		*1,305*

Molecular Structures and Dimensions Account for the year ended 31 December 1982

	Swiss Francs 1982		*1981*	
Publication Expenses:				
Printing and Binding Volume 13 *(1981 Volume 12)*	21,735		*14,384*	
Paper	8,590		—	
Carriage and Miscellaneous Expenses	1,010		*755*	
Salaries	14,790	46,125	*11,384*	*26,523*
Administration Expenses		1,203		*1,211*
Excess of Income over Expenditure for the year:				
University of Cambridge	—		—	
IUCr carried to Balance Sheet	—	—	—	—
		47,328		*27,734*

	Swiss Francs 1982		*1981*	
Sale of copies				
Volume 13	31,270		—	
Volume 12	16,354		*14,619*	
Earlier volumes	17,154		*23,488*	
	64,778		*38,107*	
Less Publisher's Commission on Sales	17,450	47,328	*10,373*	*27,734*
		47,328		*27,734*

Fifty Years of Electron Diffraction Account for the year ended 31 December 1982

			31,145
Publication Expenses		—	
Excess of Income over Expenditure carried to Balance Sheet		10,592	—
		10,592	*31,145*

			10,519	
Sale of Copies	14,314			
Less: Publisher's Commission on Sales	3,722	10,592	*2,735*	*7,784*
Excess of Expenditure over Income carried to Balance Sheet		—		*23,361*
		10,592		*31,145*

Special Publications Fund for the year ended 31 December 1982

		59,821
Excess of Income over Expenditure carried to Balance Sheet	—	
	—	*59,821*

		59,821
Donations Received	—	
	—	*59,821*

Statement of Source and Application of Funds

Year ended 31 December 1982

	1982 SwFr	*1981 SwFr*
Source of funds		
Excess of Income over Expenditure (Expenditure over Income) for the year	468,488	*(118,447)*
Gain/(loss) on fluctuations in rates of exchange	25,786	*(180,942)*
	494,274	*(299,389)*
Adjustment for items not involving the movement of funds:		
Depreciation	4,885	*3,891*
(Profit) on sale of investments	—	*(56,016)*
Loss on fluctuations in rates of exchange on office equipment	288	*1,275*
Total generated/(absorbed) from operations	499,447	*(350,239)*
Proceeds of sale of investments	—	*939,638*
Decrease in debtors	—	*67,019*
	499,447	*656,418*
Application of funds		
Decrease in creditors	(101,624)	*(66,391)*
Increase in debtors	(110,395)	—
Purchase of office equipment	(6,917)	*(1,939)*
Increase in net liquid funds	280,511	*588,088*

Net liquid funds include cash at banks and with Union officials.

Notes to the Financial Statements

1. Accounting Policies

(*a*) The financial statements have been prepared under the historical cost convention.

(*b*) *Rates of Exchange*

Unesco rates of exchange as issued by the ICSU Secretariat are used in the preparation of the financial statements.

Assets and liabilities held in currencies other than Swiss Francs at the Balance Sheet date are translated into Swiss Francs at the rates operative on that date.

In each of the Income and Expenditure Accounts, transactions in currencies other than Swiss Francs are translated by applying the rates of exchange appropriate to the individual dates of the transactions.

Profits and losses arising from the fluctuations in rates of exchange during the year are divided between the Fund Accounts with credit balances in direct proportion to those balances at the Balance Sheet date.

(*c*) *Publication Costs*

Publication, editorial and administrative expenses of publications are charged in the appropriate Income and Expenditure Account as and when incurred.

(*d*) *Stocks of Unsold Copies of Union Publications*

Stocks of unsold copies of publications are not valued for accounting purposes.

(*e*) *Expenditure on Premises*

Expenditure on renovation and refurbishing is charged against the appropriate Income and Expenditure Accounts in the year in which it is incurred.

(*f*) *Depreciation*

(i) Investments are included in the Balance Sheet at market value. Depreciation or appreciation, calculated as the difference between cost and market value, is added or deducted to bring the Investments back to cost to prevent the fluctuation in value from influencing the General Fund.

(ii) Office Equipment is depreciated on the straight line basis at a rate of 20% per annum.

2. Rates of Exchange

The rates of exchange operative at the Balance Sheet date compared with the Swiss Franc were as follows:

	1982	*1981*
Netherland Guilders	1·29	*1·36*
Danish Crowns	4·11	*4·03*
Pounds Sterling	0·291	*0·289*
US Dollars	0·469	*0·568*
Canadian Dollars	0·58	*0·67*

3. Taxation

As an association incorporated in Switzerland, the Union is exempt from Swiss Federal and Geneva Cantonal Tax. Under the terms of the United Kingdom/Switzerland Double Taxation Agreement dated 8 December 1977, income arising within the United Kingdom under present circumstances will not be subject to United Kingdom Tax.