## REPORT OF THE EXECUTIVE COMMITTEE, 1938 -47

After the interruption caused by the war in international co-operation the desire was felt to organize the Union's affairs anew as soon as possible, and to enable the Union to resume its activities at an early date.

As circumstances did not yet permit a General Assembly to be called, the Executive Committee met at Copenhagen, from March 7 to 13, 1946, together with other representatives from thirteen countries to discuss problems for which decisions were required immediately.

After consultation with the delegates the Executive Committee decided as follows:*

## (a) Solar Phenomena

I. That the annual grant of 2700 gold francs for the Cartes Synoptiques be continued and that an additional annual payment of the same amount be made to make up for the arrears in payment during the war years, in order to assist the Meudon Observatory to bring these publications up to date as far as possible.
2. That a grant be made to Prof. Abetti to cover the cost of publication of the records already prepared for 1935 and 1936, and that the Union cease to subsidize the publication of Immagini Spettroscopiche after that date.
3. That no attempt be made to combine the Quarterly Bulletin with other publications, the Bulletin being a summary publication giving results as early as possible, the other publications necessarily involving a delay in publication.
4. That Dr Fesenkov, Dr Lyot, Dr Menzel and Dr Woolley be nominated to the Joint Commission on the Ionosphere formed by the International Council of Scientific Unions. Each of the Unions of Astronomy, Geodesy and Geophysics, Radio-Science and Physics will nominate four members in this Commission.
5. That the form of the Quarterly Bulletin should be modified as follows. The characteristic numbers should be dropped, except only the sunspot number. That the question be referred to Commission II of the I.A.U. of adding as soon as can be arranged to the daily records details of coronal phenomena, radio noises of solar origin, and the luminescence of the night sky, and of securing a better index of prominence activity than the present one. That the details of solar eruptions continue to be published as at present, and that the President of Commission II arrange for the details of the publication during the transition stages, 1945 onwards.
6. That Commission II be also asked to study the question of the prediction of terrestrial phenomena of solar origin and the determination of zones of activity on the Sun's disk. That the Commission also be reminded of the importance of arranging when possible for a continuous cinematographic study of the Sun from stations spaced round the globe.

## (b) Variable Stars

I. That Commission 27 assume responsibility for the Naming of Variable Stars. A sub-committee has been nominated for this purpose.
2. That Commission 27 assume responsibility for the publication every five years of the Catalogue and Ephemerides of Variable Stars with intervening annual supplements, as well as for the publication of the third volume of Prager's Bibliography.
3. That the offer of the Academy of Sciences of the U.S.S.R. and of the Sternberg Astronomical Institute be accepted to prepare the Name-list and to prepare and publish both the Catalogue and Ephemerides, and Prager's third volume, with the afore-mentioned sub-committee of Commission 27 acting in an advisory capacity, the Name-list itself to be published by the I.A.U.

[^0]4. That an annual grant of 500 gold francs be made to the President of Commission 27 for the publication of this Name-list.
5. That additional bibliographic plans be postponed to the next meeting of the I.A.U. and that the publication of a new check-list be postponed, or incorporated in the fiveyear Catalogue.
6. That the two payments not yet made to the Cracow Observatory on the agreement of 1938 be now made for work in Poland on variable stars in the years 1946-48 inclusive.

## (c) Exchange of Astronomers

I. That a standing Commission be appointed for facilitating the exchange of astronomers.
2. That the attention of U.N.E.S.C.O. be drawn to the existence of this Commission, as an advisory body to whom U.N.E.S.C.O. could refer questions of the exchange of astronomers.

## (d) Fundamental Astronomy and Minor Planets

I. That the Executive Committee draw the attention of National Committees to the project initiated by Commodore Hellweg and supported by a Commission of the American Astronomical Society to install a number of photographic zenith-tubes in different latitudes and longitudes for the purpose of obtaining better information on latitude variation as well as on the systematic errors of existing systems of proper motion.
2. That an information centre for this project be formed at the Naval Observatory, Washington.
3. That a grant of $3 \times £ 300$ be made to the Leiden Observatory towards the expense of a second expedition for the measurement of fundamental declinations by means of azimuth observations, subject to the balance of the funds required being obtained.
4. That the computation of ephemerides of known Minor Planets be shared by the Institute of Theoretical Astronomy at Leningrad and by the Rechen-Institut at Heidelberg.
5. That the Berkeley Observatory be approached on the subject of the computation of newly discovered Minor Planets.
6. That the ephemerides computed at Leningrad be published there as suggested, and that the copy for press for the ephemerides and orbits computed at Heidelberg or Berkeley be sent to a centre arranged by the Union, and that these be published by the Union.*
7. That provisions be made for the sending out by the selected centre of circulars of observations.

## (e) Latitude Variation

I. That the annual grant of 2250 gold francs for the Central Bureau be resumed if the Bureau remains in Italy.
2. That a special grant of 4000 gold francs be made towards the publication of the Latitude Results 1935-4I.

## (f) Further Annual Grants

That the annual grants of 1200 gold francs to the Telegram Bureau, of 7200 gold francs to the Bureau de l'Heure, and of 6000 gold francs to the Bureau of the Union be continued.

## (g) International Observatory

That Dr Shapley be invited to emphasize to the United Nations Educational, Scientific and Cultural Organization (U.N.E.S.C.O.) that this organization envisage the foundation

[^1]of one or more International Observing Stations at which astronomers of all countries could be enabled to use instruments that are beyond the possibilities available in most countries. It was emphasized that such an observatory, internationally planned, internationally staffed and internationally operated, would effectively promote good will among scientists the world over, and thus serve the cause of peace.*

## (h) Delegates to International Council of Scientific Unions

That in the future the President and General Secretary represent the Union on this Council, and that, in case either of these is unable to attend a meeting of the Council, he designate another member of the Union to take his place.

The report of a special committee designated to advise the Executive Committee on Bibliography was read at a General Session of Delegates. In this report the desirability was stressed of having two bibliographies: (I) an annual bibliography, such as the Jahresbericht, giving fairly extended abstracts, but being published inevitably with a somewhat long delay; (2) a bibliography such as the Bibliographie Mensuelle, giving only very short abstracts, but published quickly. Attention was further drawn to the importance of publishing a series of monographs on recent progress in the different branches of astronomy.

The Executive Committee has further voted a new grant of 500 gold francs towards the completion of the Bibliographie Mensuelle up to 1948, and a grant of 500 gold francs to the President of Commission 33, to cover part of the expense of the publication under the auspices of the Union of tables prepared by Dr Link for correcting radial velocities for the effect of the Sun's motion.

At the same time the various Standing Committees were composed anew; the new composition is given at the top of the Draft Report of the Commission concerned, the names of members afterwards co-opted under By-Law Iv, 15 , having been added.

It was also decided that Commission 28, which was formerly called 'Commission on Nebulae and Star Clusters', will in future concern itself with extra-galactic nebulae only, whereas a new Commission, No. 37, Chairman Dr Shapley, on Star Clusters, has been formed. Galactic nebulae will be treated by Commission 34, which is now called: 'Commission on Interstellar Matter and Galactic Nebulae.' Prof. Stratton presides over the new Commission, No. 38, on Exchange of Astronomers.

In 1947 a new Commission, No. 39, on International Observatories, was formed, of which Dr Shapley is President.

The Executive Committee has allotted in each of the years 1939 and 1940 a grant of 2000 gold francs to Dr R. Prager, in order to enable him to finish at the Harvard College Observatory the 'Geschichte und Literatur der veränderlichen Sterne'.

## Countries adhering to the Union

Since the last General Assembly Australia, Chili, Eire, Hungary and India have adhered to the Union.

The following is the list of countries adhering to the Union and of the adhering organizations.

| Year of <br> Country |  |  |  |  | Adherence |  |  |
| :--- | :---: | :---: | :--- | :---: | :---: | :---: | :---: |
| Argentine Republic | 1927 | Government. |  |  |  |  |  |
| Australia | $\ldots$ | $\ldots$ | 1939 |  |  |  |  |$\quad$ National Research Council.

* The idea of an international observatory was suggested independently by the Polish delegation and by Dr Shapley. It received the unanimous support of the Meeting of Delegates.

| Country |  | Year of <br> Adherenc |  |
| :--- | :---: | :---: | :---: |
| Chili | $\ldots$ | $\ldots$ | 1947 |
|  |  |  |  |
| Ghina | $\ldots$ | $\ldots$ | 1935 |
| Czechoslovakia | $\ldots$ | 1922 |  |
| Benmark | $\ldots$ | $\ldots$ | 1922 |
| Egypt | $\ldots$ | $\ldots$ | 1925 |
| Eire | $\ldots$ | $\ldots$ | 1947 |
| Finland | $\ldots$ | $\ldots$ | 1948 |
| Erance | $\ldots$ | $\ldots$ | 1920 |
| Great Britain | $\ldots$ | 1920 |  |
| Greece | $\ldots$ | $\ldots$ | 1920 |
| Hungary | $\ldots$ | $\ldots$ | 1947 |
| Lndia | $\ldots$ | $\ldots$ | 1946 |
| Italy | $\ldots$ | $\ldots$ | 1921 |
| Mexico | $\ldots$ | $\ldots$ | 1921 |
| Netherlands | $\ldots$ | 1922 |  |
|  |  |  |  |
| Norway | $\ldots$ | $\ldots$ | 1922 |
| Poland | $\ldots$ | $\ldots$ | 1922 |
| Rortugal | $\ldots$ | $\ldots$ | 1924 |
| Roumania | $\ldots$ | 1928 |  |
| South Africa | $\ldots$ | 1938 |  |
| Spain | $\ldots$ | $\ldots$ | 1922 |
| Sweden $\ldots$ | $\ldots$ | 1925 |  |
| Switzerland | $\ldots$ | 1923 |  |
| United States | $\ldots$ | 1920 |  |
| U.S.S.R. $\ldots$ | $\ldots$ | 1935 |  |
| Katican City State | 1932 |  |  |
| Yugoslavia | $\ldots$ | 1935 |  |

$\quad$ Adhering Organization
Observatorio Astronómico de la Universidad de Chile, Santiago de
Chile.
National Committee of Astronomy, Nanking.
Conseil National de Recherches, Prague.
Kongelige Danske Videnskabernes Selskab, København.
Government.
Dublin Institute for Advanced Studies.
National Committee of Astronomy, Helsinki.
Académie des Sciences, Paris.
Royal Society, London.
Académie d'Athenes, Athenes.
Hungarian Academy of Sciences, Budapest.
The National Institute of Sciences of India, New Delhi.
Consiglio Nazionale delle Ricerche, Roma.
National University of Mexico.
Koninklijke Nederlandsche Akademie van Wetenschappen,
Amsterdam
Det Norske Videnskaps-Akademi, Oslo.
Polska Akademia Umiejetnosci, Cracovie.
Government.
Comitetul National Astronomic.
The Council for Scientific and Industrial Research, Pretoria.
Academia de Ciencias Exactas, Madrid.
Kungl. Vetenskapsakademien, Stockholm.
Schweizerische Naturforschende Gesellschaft, Bern.
National Research Council, Washington.
Academy of Sciences of the U.S.S.R., Moscow.
Pontifica Accademia delle Scienze i Nuovi Lincei, Roma.
National Committee of Astronomy, Belgrade.

## Deceased Members

The Executive Committee regret to record the loss by death of the following members of the Union:
E. M. Antoniadi, Member of Commission r6. Died February 10, 1944.

Dr J. M. Baldwin, Member of Commission 23.
Prof. A. Bemporad, Member of Commissions 23, 25. Died January II, 1945.
Dr G. Bemporad, Member of Commission 19. Died July ro, 1945.
A. F. Bennett, Member of Commission 25. Died May 14, 1937.
V. R. Berg, Member of Commission 19. Died January 4, 1942.

Prof. Emilio Bianchi, former Vice-President of the Union, Member of Commissions I8, 19, 24, 3I. Died September II, I94I.
Miss M. A. Blagg, Member of Commission I6. Died April I4, 1944.
Dr K. Boda, Member of Commission 20. Died February 25, 1942.
Prof. K. Bohlin, Swedish National Committee. Died May 25, 1939.
Général R. Bourgeois, French National Committee. Died November ro, 1945.
Dr W. Bowie, Member of Commissions 18, m. Died August 28, 1940.
G. Bratu, Member of Commission 23. Died September, 194I.

Prof. G. Bruhat, French National Committee. Died January 1, 1945.
Prof. H. Buisson, Member of Commission I4. Died January 6, 1944.
Miss Dr Annie J. Cannon, Member of Commission 29. Died April 13, 1941.
Mme Dr Ed. Chandon, Member of Commissions 8, 9. Died March 8, I944.
Dr A. C. D. Crommelin, Member of Commissions 15, 20. Died September 20, 1939.
Prof. H. D. Curtis, Member of Commission I3. Died January 9, 1942.
Prof. Comte F. M. da Costa Lobo, Member of Commissions 13, m. Died April 29, 1945.
E. de la Villemarqué, S.J., Member of Commission 20. Died July 2I, 1946.

Dr Félix de Roy, President of Commission 22, Member of Commission 27. Died May 15, 1942.

Dr A. de Sitter, Member of Commission 25. Died September 15, 1944.
Dr H. Deslandres, late Vice-President of the Union; Honorary President of Commission Ir. Died January 15, 1948.
Dr N. Dneprovsky, Member of Commissions, 8, 3 I.
Prof. R. S. Dugan, President of Commission 27. Died August 3r, 1940.
Sir Frank W. Dyson, Past President of the Union, Honorary President of Commission 8, Member of Commission 23. Died May 25, 1939.
Prof. G. Eberhard, Member of Commission 25. Died January 3, 1940.
Sir Arthur S. Eddington, President of the Union, Member of Commissions 3, 33, 34, 35, 36. Died November 22, 1944.
Prof. P. Emanuelli, Member of Commission 5. Died July 2, 1946.
Prof. R. Emden, Member of Commission 35. Died October 8, I940.
Prof. Ch. Fabry, late Vice-President of the Union, Honorary President of Commission 9, Member of Commissions 14, 36. Died December II, 1945.
Prof. Ph. Fauth, Member of Commission 16. Died January 4, 194r.
Prof. A. Fowler, late General Secretary of the Union, Member of Commission I4. Died June 25, 1940.
Prof. R. Furuhjelm, Member of Commission 23. Died November 15, 1944.
W. F. Gale, Australian National Committee. Died June I, 1945.

Prof. L. Grabowski, Member of Commission 3. Died October 24, 194 I.
H. Grouiller, Member of Commissions 5, 22, 27. Died November 7, 1943.
J. C. Hammond, Member of Commission 20. Died May 12, 1940.

Dr W. E. Harper, Member of Commissions 24, 30. Died June 4, 1940.
A. R. Hinks, Member of Commissions 20, m. Died April 14, 1945.

Prof. K. Hirayama, Member of Commission 20. Died April 8, r943.
Prof. Shin Hirayama, Member of Commission 33. Died June 2, 1945.
Prof. A. Ivanov, Member of Commission 18. Died September 22, 1939.
Sir James H. Jeans, Member of Commission 35. Died September 16, I946.
Prof. F. C. Jordan, Member of Commissions 24, 27. Died February 15, 194 I.
Lou Kao, Member of Commission 3. Died in 1947.
Dr H. Kimura, Honorary President of Commission 19. Died September 26, 1943.
Prof. H. Kobold, Member of Commission 20. Died June II, 1942.
Prof. E. Kohlschütter, Member of Commission 18. Died October 18, 1942.
N. V. Komendantov, Member of Commission 20.

Dr J. Krassowski, Member of Commissions 3, I8. Died January 24, 1947.
Dr A. Lambert, Member of Commissions 8, 18, 3I. Died August 15, 1944.
E. Loreta, Member of Commission 22. Died February 2, 1945.
K. Lous, Norwegian National Committee.

Prof. H. Ludendorff, Member of Commissions 3, 27. Died June 26, I94r.
Prof. M. Maggini, President of Commission 16, Member of Commission 25. Died May 8, 1941.
Dr W. Chr. Martin, Member of Commission 27. Died June 29, 1945.
Prof. W. J. H. Moll, Member of Commission 9. Died March 10, 1947.
R. M. Motherwell, Canadian National Committee. Died September 30, 194I.

Prof. J. J. A. Muller, Netherlands National Committee. Died June 6, 1946.
Dr K. Müller, Member of Commission I6. Died October 22, 1942.
J. Nangle, Member of Commission 23. Died February 22, 1941.

Prof. P. V. Neugebauer, Member of Commission 5. Died March 3, 1940.
Dr G. N. Neuymin, Member of Commission 20. Died December 17, 1946.
Prof. H. F. Newall, late Vice-President of the Union, Member of Commission Io. Died February 22, 1944.
Prof. T. Niethammer, Member of Commissions 18, 19, 31. Died July 28, 1947.
Prof. C. Parvulesco, Member of Commissions 28, 33.
Prof. E. J. Perepelkin, Member of Commissions io, 12.

Général G. Perrier, President of Commission 18, Member of Commission 31. Died February 23, 1946.
Rev. T. E. R. Phillips, Member of Commission r6. Died May I3, 1942.
D. B. Pickering, Member of Commission 27. Died June 13, 1946.

Dr J. S. Plaskett, Member of Commissions 9, 29, 30, 34. Died October 17, 1941.
Prof. H. C. Plummer, British National Committee. Died September 30, 1946.
Prof. R. Prager, Member of Commission 27. Died July 21, 1945.
F. F. Rents, Member of Commission 8.

Mme Dr D. Klumpke Roberts, French National Committee. Died October 5, 1942.
Rev. Luis Rodés, S.J., Member of Commissions 10, Ir. Died June 7, 1939.
Prof. H. Rosenberg, Member of Commission 25. Died July 26, 1940.
Dr G. Rougier, Member of Commissions 16, 23. Died March io, 1947.
Prof. R. A. Sampson, Member of Commissions 5, 3I. Died November 7, 1939.
Dr Frank Schlesinger, Past President of the Union, Honorary President of Commission 24, Member of Commissions 3, 19, 23, 32. Died July 10, 1943.
Prof. F. Slocum, Member of Commissions 20, 24. Died December 4, 1944.
C. C. Smith, Canadian National Committee. Died July io, 1940.

Prof. Elis Strömgren, President of Commission 3, Member of Commissions 6, 17, 20, 27. Died April 5, 1947.
Prof. J. Svoboda, Member of Commissions 9, 18, 19, 22. Died May 12, 1941.
Dr M. Tremblot, Member of Commission 25. Died April 19, 1944.
Dr H. van Gent, Member of Commission 27. Died March 29, 1947.
Dr A. van Maanen, Member of Commissions 24, 28, 32, 33. Died January 26, 1946.
Dr A. Wilk, Member of Commission 15. Died February 14, 1940.
E. G. Williams, Member of Commissions 29, 34, 36. Died May 3I, 1940.

Prof. C. W. Wirtz, Member of Commission 28. Died February 18, 1939.
Dr J. Woltjer, Jr., Member of Commission 35. Died January 28, 1946.
Dr H. E. Wood, Member of Commissions 6, 13, 20. Died February 28, 1946.
P. J. Yashnov, Member of Commission 5.

Dr M. L. Zimmer, Member of Commissions 8, 18. Died February 5, 1945.

## New Members

After the meeting in Stockholm, before the war, the following were co-opted by the various Commissions under By-Law iv, 15 :
K. Araki (22), W. Baade (25, 28, 32, 34), J. M. Baldwin (23), F. Becker (32), S. J. Belyawsky (20), T. P. Bhaskaran (23), L. Biermann (35), K. Boda (20), N. Boneff (17), R. B. Bousfield (22), H. Brück (12), S. Chandrasekhar (12, 35), H. B. Curlewis (23), S. S. da Gama (19), G. F. Dodwell (19), G. Eberhard (25), R. Emden (35), Ph. Fauth (16), R. Furuhjelm (23), K. Graff (25, 27), W. Grotrian ( 13 , 29), H. Grouiller (5), P. Guthnick (25, 27, 30), O. Heckmann (33), J. Hellerich (25), C. Hoffmeister (22, 27), J. Kaplan (22), H. Kayser (14), H. Kienle (25, 36), H. Kobold (20), A. Kohlschütter (29, 32, 33), E. Kohlschütter (I8), A. Kopff (4, 8, I5, 20), A. Kuwaki (5), H. Ludendorff (3, 27), R. A. McIntosh (22), K. Müller (16), J. Nangle (23), A. L. Narayan (ro, II), P. V. Neugebauer (5), E. J. Ópik (22), R. Prager (27), Lord Rayleigh (22), K. Reinmuth (20, 28), H. Rosenberg (25), E. Schoenberg (34), R. Schorr (8, 20), R. Schumann (19), M. Schwarzschild (35), A. Schwassmann (32), L. Sommer (22), T. E. Sterne (35), G. Stracke (20), P. ten Bruggencate (12), O. Thomas (22), A. Unsöld (II, 12, 29, 36), H. Vogt (35), E. von der Pahlen (33), H. von Klüber (12, 13), K. Walter (27), C. F. Weizsäcker (35), R. Wildt (16), C. W. Wirtz (28), G. Witt (20), W. M. Worssell (17).

After the meeting in Copenhagen the following were co-opted by the various Commissions under the same By-Law:

Akbar Ali (23), J. Ashbrook (27), Miss I. Barney (8), H. Barrell (14), I. Bonsdorff (17), D. Brouwer (8), R. P. de Kock (27), M. dos Reis (II), W. J. Eckert (8), R. Grandón (20),
H. O. Grönstrand (13), Miss D. Hoffleit (24), G. J. Järnefelt (23, 36), D. S. Kothari (35), L. La Paz (22), Mrs S. Levy McDonald (20), R. A. McIntosh (22), H. A. Martinez (8), G. Merton (20), F. D. Miller (33), P. M. Millman (13), O. Mohler (11), E. Öpik (22), A. J. Orlov (8), L. C. Peltier (27), F. Rutllant (I2), M. N. Saha (II), R. F. Sanford (29), F. P. Scott (8), C. D. Shane (8), H. S. Spigl (23), R. H. Stoy (8), B. Strömgren (34), K. F. Sundman (17), J. Tuominen (35), Frank Bradshaw Wood (27), H. W. Wood (23). The following, not being members of Commissions, became members on being elected to national committees of astronomy of adhering countries:

Sir Edward Appleton, Prof. Z. Bay, Prof. D. Brunt, H. E. Butler, Dr L. Detre, Prof. L. Dezsö, M. M. Dujisin, Prof. J. Egerváry, Prof. G. R. Goldsbrough, Prof. P. Gombás. Dr C. Graef, Prof. G. Haro, F. M. Holborn, Prof. H. Jeffreys, Miss H. A. Kluyver, H. E. Krumm, Prof. K. Lassovsky, T. L. MacDonald, Dr B. Mašek, P. J. Melotte, Dr W. J. Miller, S.J., Dr T. E. Nevin, J. J. Nolan, Prof. Fr. Nušl, F. J. O'Connor, Dr L. Plaut, Dr J. G. Porter, G. Romero, Prof. R. O. Sandoval, Dr M. Sandoval Vallarta, F. J. Sellers, Dr R. Stoneley, W. S. Tai, Sir Edmund Whittaker, A. Zirwes, S.J.

The following were nominated as members by national committees of astronomy:
Poland: Dr W. Gorczyński, Dr W. Iwanowska, Dr W. Koebcke, Dr J. Mergentaler, Dr S. Piotrowski, Dr S. Szeligowski, Mgr W. Tecza, Dr S. Wierzbinski.
South Africa: A. W. J. Cousins.
U.S.S.R.: N. I. Idelson, V. A. Krat, K. A. Kulikov, B. A. Orlov.

## Appointments made by the Executive Committee

After the death of Sir Arthur Eddington Sir Harold Spencer Jones was appointed to succeed him as President of the Union.

Prof. Ch. Fabry, Prof. O. Bergstrand and Prof. W. Brunner, who wished to retire from their function as Vice-President, have been replaced by Prof. A. Danjon, Prof. A. A. Mikhailov and Prof. G. Tiercy respectively.

Prof. M. Waldmeier has been appointed as successor to Prof. W. Brunner as Chairman of Commission 10 .

Prof. B. J. Bok was nominated to represent the Union in the Committee on Science and its Social Relations of the I.C.S.U.

Dr Deslandres (honorary member), Drs Abbot, Abetti, d'Azambuja, Newton, Nicholson and Waldmeier have been appointed by the I.A.U. as members of the Mixed Commission on Solar and Terrestrial Relations of the I.C.S.U.

In July 1946 and July 1947 the President and the General Secretary represented the I.A.U. at meetings of the Executive Committee of the I.C.S.U., in London and Paris respectively. On both occasions the General Secretary read a report on recent activities of the Union.

## Income and Expenditure

During the occupation of the Netherlands by the Germans, from May 10, 1940, to May 5, 1945, the General Secretary was not able to perform fully his secretarial duties. Dr W. S. Adams was kind enough to carry out all transactions concerning countries outside the German sphere of influence.

Some time before the war the General Secretary opened a dollar account for the I.A.U. at the Corn Exchange Bank Trust Co., New York, so that at present the Union has three accounts: one in dollars in New York, one in pounds at Barclays Bank, Cambridge, England, and one in guilders at the Amsterdamsche Bank, Leiden.

Moreover, a somewhat fictitious, fourth account has been formed, expressed in gold francs. This has originated from the difficulties inherent in transferring money from one country to another during the war. On account of these difficulties the Executive Committee decided that countries in which a Bureau to which grants had been allotted by
the I.A.U., had its seat, might pay their subscription directly to that Bureau. In this way Denmark, and for analogous reasons Sweden and afterwards Norway, paid their subscriptions to the Telegram Bureau in Copenhagen, France to the Director of the Paris Observatory for the Bureau de l'Heure and the Cartes Synoptiques, Italy to Prof. Abetti and Prof. Carnera for the Immagini Spettroscopiche and the Latitude Bureau. No account was taken of the actual exchange, which would have been almost impossible, but the subscriptions paid were assumed to represent the amounts in gold francs actually due. This system has worked satisfactorily.

In May 1940, on the invasion of the Netherlands, the I.A.U.'s sterling account at Barclays Bank, Cambridge, was blocked by the Custodian of Enemy Property; it was released in June 1946.

At its meeting in Copenhagen in March 1946 the Executive Committee decided that the unit of contribution for the years $1942-48$ be fixed at 300 gold francs, the gold franc being defined, in accordance with the Statutes of the International Council of Scientific Unions, Vol. 3, 1937, p. 107, as 0.2903225 grammes fine gold, or 0.3266 U.S. dollars.

It was also decided to request payment for the war years, because the various bureaux supported by the Union had continued their work during these years. It was judged to be all the more necessary because a number of the countries which were occupied during the war were unable to pay their contributions for these years. The possibility of having their dues for the war years annulled was offered to those countries which had suffered so badly from the war that they were not able to pay. A number of such countries have actually availed themselves of this opportunity, while several others have paid their contributions in full.

On January I, 1948, the unexpended balance was about $\$ 38,000$. This does not, however, represent the true balance, $\$ 21,000$ being already allotted to various Commissions. Furthermore, the total of the grants for 1948 plus estimated costs for the Bureau in this year (total $\$ 12,000$ in round figures) should be available at the beginning of the year. The true balance is, therefore, approximately $\$ 5000$.

In future the financial status of the I.A.U. will be entirely different, on account of the interest taken by U.N.E.S.C.O. in international organization. This body intends to give grants for undertakings which are of a sufficiently wide scope. In fact, for 1947 U.N.E.S.C.O. has already allotted the following grants to the I.A.U.:

Commission 19, Latitude Variation $\$ 980$.<br>Commission 3I, Bureau International de l'Heure $\$ 8800$.<br>Commission 38, Exchange of Astronomers



Fl. $725 \cdot 79$

$882 \cdot 46$
$1764 \cdot 17$

$842 \cdot 00$

$1468 \cdot 43$

$881 \cdot 14$

$472 \cdot 79$

$1664 \cdot 35$

$687 \cdot 90$
$2348 \cdot 09$
$188 \cdot 79$
$210 \cdot 00$
$4 \cdot 12$
$509 \cdot 10$
$50 \cdot 00$
$617 \cdot 85$
$281 \cdot 08$
$129 \cdot 57$
$29 \cdot 06$
$13280 \cdot 50$
Nov. 8 Prof. Minnaert (special grant, Utrecht Atlas) Commission 19 : Cor. 20 . Commission 27:
Jan. 6 Prof.
Commission 31:
Feb. 25 Prof. Nörlund (part first semester, 1938) ...
Mar. 11 Prof. Nörlund (to complete first semester, $\begin{array}{cccccc}\text { Mar. } 11 \text { Prof. Nörlund (to complete first semester, } \\ \quad \ldots 938 \text { ) } \ldots \ldots & \ldots \\ \text { July } & 8 \text { Prof. Nörlund (second semester, 1938) } & \ldots\end{array}$ July 8 Prof. Nörlund (second semester, 1938)
International Council of Scientific Unions ... International Council of Scientific Unions
Travelling expenses, Oort ... ... ... Travelling expenses, Oort ...

Travelling expenses, de Haan Expenses General Assembly, Prof. Lindblad (stationery | clerical assistance, telegrams, etc.) |  |  |  |
| :---: | :---: | :---: | :---: |
| Cost report, Prof. van Rhijn $\ldots$ |  |  |  | Cost report, Prof. van Rhijn

Clerical assistance ... ... $\begin{array}{lll}\text { Stamps, etc. } & \cdots & \ldots \\ \text { Stance }\end{array}$
 Bank expenses, cheque books
Balance, Jan. 1, 1939 ...
GUILDERS

| EXPENDITURE |  |  |  |
| :---: | :---: | :---: | :---: |
| Grants to Commissions: |  |  |  |
| Commission 6: |  |  |  |
| Dec. 30 Prof. E. Strömgren (1939) | $\ldots$ | ... | ... |
| Commission 11: |  |  |  |
| Feb. 28 Prof. Abetti (1938) ... | $\ldots$ | $\ldots$ |  |
| Mar. 1 Prof. Esclangon (1938) | ... | ... |  |

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 (886I |  | 1938) | $\ldots$ | $\ldots$ |  |
| :--- | ---: | :--- | :---: | :---: |
| Dec. 14 | Greece (1931-38) | $\ldots$ | $\ldots$ |  |
| Mar. 15 Italy (1937) $\ldots$. | $\ldots$ | $\ldots$ |  |  |
| Apr. 25 | Japan (1937) $\ldots$ | $\ldots$ | $\ldots$ |  |
| Jan. 27 | Netherlands (1937) | $\ldots$ | $\ldots$ |  |
| Jan. 28 | Norway (1938) | $\ldots$ | $\ldots$ |  |
| Jan. | 4 | Poland (to complete | $1935 ;$ | 1936 | $\begin{array}{lllcc}\text { Dec. } 14 & \text { Greece (1931-38) } & \ldots & \ldots \\ \text { Mar. 15 Italy (1937) } \ldots . & \ldots & \ldots \\ \text { Apr. } 25 & \text { Japan (1937) } \ldots & \ldots & \ldots \\ \text { Jan. } 27 & \text { Netherlands (1937) } & \ldots & \ldots \\ \text { Jan. } 28 & \text { Norway (1938) } & \ldots & \ldots \\ \text { Jan. } & 4 & \text { Poland (to complete } & 1935 ; & 1936\end{array}$ $\begin{array}{lllcc}\text { Dec. } 14 & \text { Greece (1931-38) } & \ldots & \ldots \\ \text { Mar. 15 Italy (1937) } \ldots . & \ldots & \ldots \\ \text { Apr. } 25 & \text { Japan (1937) } \ldots & \ldots & \ldots \\ \text { Jan. } 27 & \text { Netherlands (1937) } & \ldots & \ldots \\ \text { Jan. } 28 & \text { Norway (1938) } & \ldots & \ldots \\ \text { Jan. } & 4 & \text { Poland (to complete } & 1935 ; & 1936\end{array}$ $\begin{array}{lllcc}\text { Dec. } 14 & \text { Greece (1931-38) } & \ldots & \ldots \\ \text { Mar. 15 Italy (1937) } \ldots . & \ldots & \ldots \\ \text { Apr. } 25 & \text { Japan (1937) } \ldots & \ldots & \ldots \\ \text { Jan. } 27 & \text { Netherlands (1937) } & \ldots & \ldots \\ \text { Jan. } 28 & \text { Norway (1938) } & \ldots & \ldots \\ \text { Jan. } & 4 & \text { Poland (to complete } & 1935 ; & 1936\end{array}$ $\begin{array}{lllcc}\text { Dec. } 14 & \text { Greece (1931-38) } & \ldots & \ldots \\ \text { Mar. 15 Italy (1937) } \ldots . & \ldots & \ldots \\ \text { Apr. } 25 & \text { Japan (1937) } \ldots & \ldots & \ldots \\ \text { Jan. } 27 & \text { Netherlands (1937) } & \ldots & \ldots \\ \text { Jan. } 28 & \text { Norway (1938) } & \ldots & \ldots \\ \text { Jan. } & 4 & \text { Poland (to complete } & 1935 ; & 1936\end{array}$ $\begin{array}{ccccc}\text { Jan. } & 4 \text { Poland (to complete } & 1935 ; & 1936 \\ & \text { and 1937) } & \ldots & \ldots & \ldots \\ \text { May } & 4 \text { Poland (1938) } & \ldots & \ldots & \ldots\end{array}$ $\begin{array}{llll}\text { May } 4 \text { Poland (1938) ... } & \ldots & \ldots \\ \text { Feb. } 26 \text { Portugal (1938) } & \ldots & \ldots\end{array}$

 \begin{tabular}{lrlrr}
May \& 4 \& Roumania (part 1937) \& $\ldots$ <br>
Apr. 1 \& South Africa (1938) \& $\ldots$ \& $\ldots$ <br>
Jan. 13 \& Sweden (1937) \& $\ldots$ \& $\ldots$ <br>
June 14 \& Switzerland (1938) \& $\ldots$ \& $\ldots$ <br>
Apr. 14 \& U.S.A. (1937) \& $\ldots$ \& $\ldots$ \& $\ldots$ <br>
Dec. 31 \& U.S.A. (1938) $\ldots$ \& $\ldots$ \& $\ldots$ <br>
Nov. 24 \& U.S.S.R. (1938) \& $\ldots$ \& $\ldots$ <br>
June 29 \& Vatican City State (1936, \& 1937, <br>
\multicolumn{4}{c}{$1938)$} \& $\ldots$ <br>
\& \& $\ldots$ \& $\ldots$

 

May \& 4 \& Roumania (part 1937) \& $\ldots$ <br>
Apr. 1 \& South Africa (1938) \& $\ldots$ \& $\ldots$ <br>
Jan. 13 \& Sweden (1937) \& $\ldots$ \& $\ldots$ <br>
June 14 \& Switzerland (1938) \& $\ldots$ \& $\ldots$ <br>
Apr. 14 \& U.S.A. (1937) \& $\ldots$ \& $\ldots$ \& $\ldots$ <br>
Dec. 31 \& U.S.A. (1938) \& $\ldots$ \& $\ldots$ \& $\ldots$ <br>
Nov. 24 \& U.S.S.R. (1938) \& $\ldots$ \& $\ldots$ <br>
June 29 \& Vatican City State (1936, \& 1937, <br>
\multicolumn{4}{c}{$1938)$} \& $\ldots$ <br>
\& \& $\ldots$ \& $\ldots$
\end{tabular} $1402 \cdot 94$

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1402.94 $\qquad$ $\begin{array}{cccc}\text { June } 29 & \text { Vatican City } \\ \text { 1938) } & \text { State } & \text { (1936, } & \text { 1937, } \\ & & & \ldots \\ \text { Sale, lunar maps } & \ldots & \ldots & \ldots\end{array}$ Sale, lunar maps Cambridge University Press
Sale, supplement Stroobant Sale, supplement Stroobant
Interest ... ... ...
INCOME AND EXPENDITURE， 1939


## GUILDERS

EXPENDITURE
：：

## Grants to Commissions：

## Commis 21 Prof．E．Strömgren（advance）

Dec． 28 Prof．E．Strömgren（1940）．．． Commission 11：
$\begin{array}{lll}\text { Jan．} & 5 \text { Prof．Esclangon（1939）} \\ \text { Jan．} & 5 \text { Prof．Abetti（1939）}\end{array}$
Commission 19：
Jan． 5 Dr Spencer Jones（1939）
Commission 27：
Jan． 5 Prof．
Jan． 5 Prof．Banachiewicz（1939）
Commission 31：
$\begin{array}{ll}\text { Jan．} & 5 \text { Prof．Nörlund（first semester，1939）} \\ \text { May } & 11 \text { Prof．Nörlund（second semester，1939）}\end{array}$ International Council of Scientific Unions ．．． Cambridge University Press，Draft Reports Dr Comrie，expenses Comm． 4 and 20 Stamps，postage，telegrams，telephone Stationery and printing ．．．．．． Bank expenses，etc．．．．．．． Transferred to dollar account
Balance，Jan．I， 1940

| $\begin{aligned} & 0 \\ & \stackrel{8}{8} \\ & \stackrel{0}{0} \\ & \stackrel{0}{0} \end{aligned}$ |  | N |
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## INCOME

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INCOME AND EXPENDITURE, 1940

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$\vdots \vdots \vdots \vdots \vdots \vdots \vdots \vdots \vdots$


INCOME AND EXPENDITURE, 1941



$\stackrel{\text { Fl. } 4383 \cdot 74}{\underline{-}}$

\section*{ENDITURE, 1942

ERS

Bank expenses $\quad \ldots$
$\begin{aligned} & \text { Stamps } \ldots \\ & \text { Clerical assistance } \ldots \\ & \text { Balance, Jan. 1, } 1943\end{aligned}$}

|  | 88 |  |
| :---: | :---: | :---: |
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| $\stackrel{\sim}{*}$ | ¢ |  |
| 宝 |  |  |

INCOME

| EXPENDITURE |  |  |  |
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| $\ldots$ | $\ldots$ | $\ldots$ |  |
| $\ldots$ | $\ldots$ | $\ldots$ |  | $\cdots$ Balance, J 19 .


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| 185.00 |

## INCOME

INCOME




INCOME AND EXPENDITURE, 1942

INCOME AND EXPENDITURE, 1943




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& \text { EXPENDITURE } \\
& \text {... ... ... }
\end{aligned}
$$

EXPENDITURE
!
!
INCOME AND EXPENDITURE, 1946



$\vdots \vdots$

INCOME




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| $\ldots$ | ... | $\ldots$ |  |
|  | NI |  |  |

## Total Expenditure and Income, r938-1947

The following table shows, roughly, the amounts expressed in gold francs, paid on the annual grants:

| Comm | 6 | 11 | 11 | 19 | 20 | 23 |  | 27 | 31 | 38 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  | Cartes syn. | Imm. Sp . |  |  |  | Ephem. Ecl. stars | Name List |  |  | I.C.S.U. | Bureau | Total |
| 1938 | 1,200 | 2,700 | 1,350 | 2,250 | - |  | 800 | - | 7,200 | - | 325 | 3,100 | 18,925 |
| 1939 | 2,100 | 2,700 | 1,350 | 2,250 | - | 3,900 | 800 | - | 7,200 | - | 300 | 8,900 | 29,500 |
| 1940 | - | 2,700 | 1,350 | 2,250 | - |  | - | - | 3,600 | - | 225 | 300 | 10,425 |
| 1941 | 1,500 | 2,700 | 900 | 1,500 | - | - | - | - | 7,150 | - | - | 2,700 | 16,450 |
| 1942 | 300 | 650 | 900 | 1,500 | - | - | - | - | 1,750 | - | - | 50 | 5,150 |
| 1943 | 2,100 | - | 900 | 1,500 | - | - | - | - | - | - | - | 25 | 4,525 |
| 1944 | 900 | - | - | - | - | - | - | - | 750 | - | - | 25 | 1,675 |
| 1945 | 2,250 |  |  | 750 | - |  | - |  |  |  | - | 150 | 3,150 |
| 1946 | 3,950 | 5,400 | 900 | 1,500 |  |  |  | 350 | 4,550 |  |  | 3,550 | 20,200 |
| 1947 | 1,200 | 2,700 | 1,800 | 2,250 | 3,050 | 5,600 |  | 1,600 | 2,400 | 2,450 | 525 | 1,200 | 24,775 |
| Total. | 15,500 | 19,550 | 9,450 | 15,750 | 3,050 | 9,500 | 1,600 | 1,950 | 34,600 | 2,450 | 1,375 | 20,000 | 134,775 |

Moreover, the following special grants have been paid:

| 1947, Commission 8, expedition of Leiden Observatory to Kenya | 11,200 gold frs. |
| :--- | :---: |
| 1938, Commission 12, Atlas of Solar Spectrum | 1,400 |
| 1939, Commission 18, Longitudes mondiales | 5,000 |
| 1939, Commission 19, Publication of Latitude Results | 3,600 |
| 1938, Commission 20, Orbit of Eros | 1,500 |
| 1939, Commission 27, Grant to Dr Prager for GuL | 2,000 |
| 1940, Commission 27, Grant to Dr Prager for GuL | $\underline{2,000}$ |
|  | $\underline{26,700}$ |

The total expenditure is $\mathbf{1} 6 \mathbf{1}, 475$ gold francs.
The subscriptions received are given below:

| 1938 | 1939 | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32,900 | 22,500 | 17,150 | 10,100 | 8,100 | 8,700 | 5,700 | 2,100 | 53,650 | 34,650 | 195,550 |

Moreover, II50 gold francs have been received by sale of publications, and 1500 gold francs as interest, whereas U.N.E.S.C.O. paid in 1947 grants-in-aid to a total amount of 36,000 gold francs.

The income hence equals 234,200 gold francs.
It should be remarked that the gold franc equivalents given above are only approximate. Besides, in several cases a country has paid somewhat less than the subscription actually due.

## Publications

In addition to Vol. vi of the Transactions of the I.A.U. the following volumes have been published under the auspices of and with financial support from the Union:
Commission Ir. Immagini Spettroscopiche del Borde Solare.
Abetti.
Cartes synoptiques de la Chromosphère et Catalogue des Filaments de la Couche supérieure. D'Azambuja.
Commission 19. Results of the International Latitude Service from 1922.7 to 1935.o. (viII.) Kimura.

Commission 23. Astrographic Catalogue 1900.0. Hyderabad Section (Part III). Dec. $+35^{\circ}$ to $+40^{\circ}$, vol. XI: Measures of Rectangular Co-ordinates and Diameters of 50,907 starimages on plates with centres in Dec. $+37^{\circ}$.

Bhaskaran.
Astrographic Catalogue 1900.0. Hyderabad Section (Part III). Dec. $+35^{\circ}$ to $+40^{\circ}$, vol. XII: Measures of rectangular Co-ordinates and Diameters of 60,144 star-images on plates with centres in Dec. $+36^{\circ}$.
Commission 27. Minima of Eclipsing Variables, 1939, 1947. 42nd Name-list of Variable Stars. $43^{r d}$ Name-list of Variable Stars.
Commission 35. Bulletins horaires du Bureau de l'Heure.

Bhaskaran.
Banachiewicz.
Kukarkin, Parenago.
Kukarkin, Parenago.
Esclangon, Danjon.

The Meeting at Zürich
At the Stockholm meeting the Union was invited to hold its next General Assembly in Switzerland in 194I, an invitation which was very cordially received. Notwithstanding the difficult economic conditions the invitation was renewed after the war, and it was finally decided that the General Assembly would be held in Switzerland, from August ir-18, I948. Prof. Waldmeier kindly offered to undertake the task of organizing the meeting in Zürich.

Draft Reports of the various commissions were asked for by January r, 1948, and those received in time have been bound together and issued in advance of the meeting to all members who had notified their intention of being present.

The Agenda for the first meeting of the General Assembly was fixed as follows:
I. Official opening of the Congress.
2. Address by the President of the Union.
3. Appointment of Recorders for the Meeting.
4. Report of the Executive Committee.
5. Appointment of Finance Committee-one member to be nominated by each adhering country.
6. Appointment of Committee to advise the Executive Committee in the selection of members of standing commissions.
7. Resolutions submitted by National Committees of Astronomy:
(a) 'That Statute IV, 9 shall be replaced by the following:
'There shall be eight categories of membership of the Union, numbered 1 to 8 . Each adhering country shall pay annually a number of units of subscription equal to the number of its category of membership. A country offering to adhere to the Union shall specify in which category it proposes to be classed. The offer to adhere may be refused by the Executive Committee if the proposed category is judged to be manifestly inadequate. In each country the organization adhering to the Union shall be responsible for the payment of the contribution.
'That Statutes III, 5 and 6 shall be replaced by the following:
'5. On scientific matters eacn delegate present shall have one vote. In questions of administrative, or of mixed administrative and scientific character, not involving questions of finance, voting shall be by countries, each country having one vote, with the provision that its subscription shall have been paid up to the end of the year preceding the voting. In questions involving finance, voting shall be by countries, with the same provision as for administrative questions. The number of votes for each country shall be one greater than the number of its category of membership, as defined in article rv, 9.
'6. No delegate shall represent more than two countries. An adhering country not represented by a delegate may forward by post its vote on any specific question of the agenda.' (Great Britain.)
(b) 'Que l'Union accorde un appui financier à la Bibliographie Mensuelle de l'Astronomie.' (France.)
(c) 'Que l'Union Astronomique Internationale entreprenne des démarches auprès de la Commission Economique Interalliée de Berlin, pour que les recherches soient continuées en vue de retrouver le télescope Zeiss de un mètre d'ouverture del'Observatoire Royal de Belgique, réquisitionné par l'armée allemande en juin 1940.' (Belgique.)
(d) 'Que, au sein de l'Union Astronomique Internationale, une Commission d'Histoire de 1'Astronomie soit créée.' (Belgique.)
(e) 'That the I.A.U. organize the broadcasting of astronomical scientific news.' (Poland.)
$(f)$ 'That a Commission be created to revise the structure of the standing commissions of the Union, so that by 1951 plans may be proposed for a new and more effective organization of the standing commissions.' (U.S.A.)
8. The following resolutions, which had reached the General Secretary too late to be circulated in advance of the meeting, were added to the Agenda:
$(g)$ 'That the first paragraph of By-Law i, 1, which now reads:
'The Union shall be composed of three classes of members: (a) all the members of the National Committees of Astronomy of countries adhering to the Union, (b) members nominated by adhering organizations or by National Committees, and (c) all the members of the standing committees of the Union',
be changed as follows:
'The Union shall be composed of two classes of members: (a) all the members of the standing committees of the Union, and (b) members nominated by adhering organizations or by National Committees.' (Executive Committee.)
$(h)$ 'The International Union of Radio-Science draws the attention of the I.A.U. to the importance of precise measures of the velocity of transmission of long waves, and requests the astronomical observatories to co-operate with the radio-technicians, in order to organize common experiments of the highest possible precision. In particular, it would be desirable to organize experiments on either side of the Atlantic, which would permit measuring differences between the times of transmission in the two directions.'
(i) 'Que l'Union se charge de donner une définition plus exacte de l'unité de temps.' (Bureau National, Scientifique et Permanent des Poids et Mesures, Paris.)
( $j$ ) 'Que l'U.A.I. considère de nouveau la résolution prise au congrès de 1928 sur la désignation du temps civil de Greenwich, donne à cette résolution une rédaction plus nette, et lui donne la publicité nécessaire pour la faire admettre universellement.' (Comité Exécutif.)
( $k$ ) 'That the I.A.U. recommend that an abstract in English or French be attached to all scientific astronomical publications.' (Executive Committee.)


[^0]:    * The decisions had the approval of the General Meeting of Delegates, but are subject to subsequent approval by a regular General Assembly.

[^1]:    * The Executive Committee has further voted an annual grant of 2500 gold francs for this purpose to the President of Commission 20.

