

38. COMMISSION POUR L'ECHANGE DES ASTRONOMES

PRÉSIDENT: Professor F. J. M. Stratton†, Gonville and Caius College, Cambridge, England.

PRÉSIDENT INTERIMAIRE: Professor M. G. J. Minnaert, Director of the Observatory 'Sonnenborgh', Zonnenburg 2, Utrecht, the Netherlands.

MEMBRES: Abetti, Bok, Bowen, Danjon, Dawson†, Minnaert, Mohr, Nassau, Pawsey, Rosseland, Swings, Witkowski.

In the course of 1960, Commission 38 suffered a severe loss by the sudden death of Professor F. J. M. Stratton, who has been its President ever since it was instituted in 1946. From reading his successive reports and from personal experience we all know how effectively he carried out his duties, avoiding any unnecessary formalities, but treating each individual case with great human kindness. At the invitation of the Executive Committee the undersigned took over the Presidency until the next General Assembly.

The number of grants is regularly increasing, as may be seen from the following data:

1952-54	14 astronomers (34 - 47)
1955-57	22 astronomers (48 - 69)
1957-60	30 astronomers (70 - 99)

In this last period, the following grants were made:

70. A Czechoslovak astronomer to Manchester.
71. A Czechoslovak astronomer to Marseille and Haute Provence.
72. A French astronomer to Asiago.
73. A Spanish astronomer to Cambridge.
74. A British astronomer to Madrid and Tenerife.
75. A Czechoslovak astronomer to Mt Palomar and Tonantzintla.
76. An Italian astronomer to Berkeley.
77. A Greek astronomer to Arcetri.
78. A British astronomer to Victoria.
79. A French astronomer to London.
80. A Finnish astronomer to Greenwich.
81. An Italian astronomer to Manchester.
82. An Indian astronomer to Edinburgh.
83. A French astronomer to the Cape.
84. A British astronomer to Liège.
85. A British astronomer to Paris.
86. An Ecuadorean astronomer to Strasbourg.
87. A French astronomer to Padova and Asiago.
88. An Indian astronomer to the McMath-Hulbert Observatory.
89. An Italian astronomer to Leiden and Dwingeloo.
90. A Japanese astronomer to Victoria.
91. An Indian astronomer to Yale.
92. A Japanese astronomer to Utrecht.
93. A Japanese astronomer to Utrecht.
94. An American astronomer to London.
95. An Indian astronomer to Stockholm.
96. A Belgian astronomer to Torino.

97. An Indian astronomer to Bloomington.
98. An Indian astronomer to Middletown.
99. A Japanese astronomer to Manchester.

The following grants have been promised for 1961:

100. An Australian astronomer to London and Paris.
101. A Japanese astronomer to Utrecht.

In many cases applicants wanted to make observations with powerful instruments, not available in their country. One of the applications was made for studies of the Southern sky. Much observational material, obtained with great effort and not sufficiently exploited, has been put to good use with the co-operation of visiting astronomers. Astronomers acquiring a new telescope wished to ask for advice from an observatory where a large instrument is already in operation; even for the establishment of a new observatory foreign experts were sometimes consulted. Theorists wished to do research in close contact with a specialized group. In one case, two astronomers wanted to write a book together and had to discuss the text in close co-operation. Sometimes an assistantship was available at an astronomical institute abroad, but the Commission was asked to furnish travelling expenses. Often such visits were combined with lectures, held at colloquia or congresses. Some countries, in which astronomy is insufficiently developed, wanted to have an excellent young scientist trained at one of the big centres. A subsidy of \$1000 was granted to assist young astronomers wishing to attend the Moscow General Assembly of the Union in 1958; apart of this, only one small grant has been made especially for participation in a symposium.

The way in which the Commission operates is well known. Applicants should give full details of their qualifications and experience, details of the proposed research and study, and the reasons why this research cannot be carried out in their own country. Applications must be approved by the Director of the home Observatory and by the Director of the Observatory at which the proposed research is to be carried out. Usually the grants are restricted to the payment of travelling expenses, but when funds permit a small additional grant is occasionally made to assist with living expenses.

In this list, some types of research are still insufficiently represented: observations in the southern hemisphere; radio-astronomical investigations; rocket and satellite problems. The Union wishes to encourage also the study of very specialized instruments and computing machines, for which a stay abroad is often necessary. In general every effort should be made to promote East-West exchanges. On a modest scale, young astronomers invited to attend international astronomical symposia will be assisted, when other funds are not available.

In agreement with a decision, taken at the Moscow meeting in 1958, Professor Stratton communicated with members of the Commission and 15 other astronomers in order to compile a list of assistantships and fellowships, available for foreign astronomers at many observatories. This very valuable list is an up-to-date version of the publication in *Trans. IAU* 7, 414, 1950. It was duplicated and sent to all institutions on the IAU distribution list in August 1959 and is now reproduced as an addendum to this report, corrected and completed in minor details.

During the three years 1958–60 the grants totalled \$15 517·36. The balance at hand on 31 December 1960 is \$1 525·13. The annual allocations of the Union amounted to \$4 000 + \$6 000 + \$6 000 = \$16 000. It is clear that the increase from \$4 000 to \$6 000, decided at the Moscow meeting of 1958, has been most useful; and it would be appropriate if a sum of at least \$6 000 would be again available for each of the next three years.

M. G. J. MINNAERT
Acting President of the Commission

ADDENDUM. FACILITIES FOR VISITING ASTRONOMERS

In general the directors of observatories are very willing to receive visiting astronomers and to offer them observational facilities, but often there is no scholarship or fellowship attached to the observatory. The following list includes only those institutes where some assistance for visitors may be available locally. For all observatories not in the list below the procedure for a young astronomer would be to apply directly to the Director of the Observatory, indicating the nature of the research that he wishes to carry out.

For general information on facilities for study or research in other countries, the book *Study Abroad*, published by UNESCO, will be found very helpful.

Argentina

The Argentine National Research Council has important funds for travelling and local expenses for a senior astronomer. Inquiries should be addressed to Dr C. R. Jaschek, Secretary of the Argentine National Committee for Astronomy, Observatorio Astronómico, La Plata.

Cordoba. Two fellowships each year for a period of two or three months of observational work at Bosque Alegre with the 60-inch reflector.

La Plata. Similar arrangements.

Australia

Canberra. The Mount Stromlo Observatory is the Department of Astronomy of the Australian National University in Canberra. The University offers two scholarships for post-graduate study in Astronomy with preference for students from overseas. The annual scholarship award is of the order of £1000 (Australian) and the scholarships are generally tenable for a period of three years. All inquiries should be addressed to the Director of Mount Stromlo Observatory, Canberra, A.C.T.

Sydney. The Division of Physics of the Commonwealth Scientific and Industrial Research Organization is prepared to consider applications for fellowships for theoretical or observational research in solar physics: structure of the photosphere and chromosphere; studies of disturbances involving these layers (sunspots, flares, prominences, plages); the development of new types of observational equipment. The fellowships may be at senior or junior level in the approximate range of £1500 or £3500 (Australian) annually. All inquiries should be addressed to The Chief, Division of Physics, C.S.I.R.O., University Grounds, Sydney, New South Wales.

The Division of Radiophysics offers from time to time fellowships for work in radio astronomy. The conditions for remuneration are the same as for solar physics. All inquiries should be addressed to The Chief, Division of Radiophysics, C.S.I.R.O., University Grounds, Sydney, New South Wales.

Belgium

Liège. Occasional temporary assistantships. Apply to the Director, Institut d'Astrophysique, Coite-Sclessin.

American astronomers may get help under the Belgian-American Educational Foundation Inc., Graybar Building, 420 Lexington Avenue, New York.

Canada

Post-doctorate fellowships, National Research Council. Fellowships of \$3700 a year for single fellows and \$4500 a year for male fellows who are married. Tenure: one year, but

renewable. Travel grant allowed. Applicants must be not more than 35 years of age and should possess a Ph.D. degree (or equivalent) from a recognized University. Apply to the Awards Office, National Research Council of Canada, Ottawa or to the Chief Scientific Liaison Officer, National Research Council of Canada, Africa House, Kingsway, London, W.C.2, England. These Fellowships are tenable at:

Ottawa, Dominion Observatory. Fellowships tenable for Geomagnetism, Gravity, Positional Astronomy, Stellar Physics and Seismology.

Victoria, British Columbia, Dominion Astrophysical Observatory. Fellowships tenable for Stellar Atmospheres, Galactic Structure, Photo-electric Photometry, Spectroscopic Binaries, Interstellar Matter.

Toronto, David Dunlap Observatory of the University. Postgraduate fellowships.

Eire

Dunsink. One Scholarship every two years at the Dublin Institute for Advanced Studies in the School of Cosmic Physics. Qualification: an honours degree in mathematics, physics or astronomy, with evidence of capacity for original research. Apply to the Registrar, Dublin Institute for Advanced Studies, 64 Merrion Square, Dublin.

Germany

For fellowships tenable at astronomical observatories and institutions apply, after securing the approval of the chosen institution, to: the Deutsche Forschungsgemeinschaft, Frankengraben 40, Godesberg, or to the Deutscher Akademischer Austauschdienst, Nassestrasse, Bonn a.Rh.

Tautenburg. Applications should be sent to the Director.

India

Kodaikanal. For young Indian students with a M.Sc. or equivalent degree. Four Research Scholarships of Rs. 2400 a year. Apply to the Director, Astrophysical Observatory, Kodaikanal.

Naini Tal. Two Fellowships for one year, with a possibility of renewal, for photometric work. Apply to the Director, U.P. State Observatory, Naini Tal.

Italy

After securing the approval of the Director of the Observatory where the student wishes to work, apply for a fellowship to the Consiglio Nazionale delle Ricerche, Piazzale delle Scienze 7, Rome.

Netherlands

Leiden. Occasional vacancy for a young astronomer on the staff for a period between six months and a year.

Utrecht. Occasional exchanges of astronomers for a period of three to six months.

In each observatory there may be a room available free of charge in the Observatory. Apply in each case to the Director.

South Africa

Radcliffe Observatory, Pretoria. See Oxford.

Switzerland

Zürich. Foreign astronomers may be able to obtain an assistantship to work in solar research

for a period ranging between several semesters and several years. Apply to the Director, Swiss Federal Observatory, Zürich.

United Arab Republic (Egyptian region)

Helwan. Assistantship for two years. Visiting professorship for limited time in 1962-63.

United Kingdom

Cambridge. The Isaac Newton Studentship of £400 a year for two years, open to graduates of any University, under 25 years of age on January 1 of the year of election. Apply to the Registrar, University Registry, Cambridge, by 25 March each year with evidence of age, evidence of qualifications, testimonials and a statement of proposed course of study or research.

Oxford. Radcliffe Travelling Fellowship to be held partly at Oxford University Observatory and partly at the Radcliffe Observatory, Pretoria. Vacancies are advertised from time to time as they occur. Apply to the Director, Oxford University Observatory.

Skyenner Senior Studentship for students working for a research degree. Apply to the Master, Balliol College, Oxford.

Scotland. Robert Cormack Fellowships in Astronomy £300 to £600 a year for three years. Tenable at the Observatory of *Edinburgh, Glasgow* or *St. Andrew's* in the case of graduates of Universities outside Scotland. Apply to the Convener, Robert Cormack Bequest Committee, Royal Society of Edinburgh, 22 George Street, Edinburgh 2.

U.S.A.

Berkeley. One Lick Fellowship of \$1820 a year for a graduate student, usually for theoretical astrophysics. Apply to the Head of Berkeley Astronomical Department, Leuschner Observatory, Berkeley 4, California.

California Institute of Technology. Graduate fellowships for study for the doctor's degree. Apply to The Dean of Graduate Studies, California Institute of Technology, Pasadena, California.

Flower and Cook. Assistantships and fellowships; Pawling Fellowship (\$1800 a year). Apply to the Director of the Flower and Cook Observatory, University of Pennsylvania, Philadelphia 4, Pa.

Harvard. Agassiz and other fellowships and assistantships. Apply to The Director, Harvard College Observatory, Cambridge, Mass.

Kirkwood. Assistantships and fellowships. Apply to the Director, Kirkwood Observatory, Indiana.

Lick. Two Lick Observatory Fellowships of \$1820 a year. Apply to The Director, Lick Observatory, Mount Hamilton, California.

Los Angeles. Occasional assistantships, especially in the field of celestial mechanics. Apply to the Chairman of the Department of Astronomy, University of California, Los Angeles 4, California.

Michigan. Part time assistantships for graduate students, for Post-doctoral research in Solar Physics and Radio Astronomy. Apply to The Director, University of Michigan Observatory, Ann Arbor, Michigan.

Mount Wilson and Palomar. Carnegie Fellowships for men who have recently received

doctor's degree. Apply to The Director, Mount Wilson and Palomar Observatories, 813 Santa Barbara Street, Pasadena 4, California.

Perkins. Fellowships of the Ohio State University. Apply to The Director, Perkins Observatory, Delaware, Ohio.

Van Vleck. Assistantships in the fields of positional astronomy and astrophysics. Apply to the Director, Van Vleck Observatory, Wesleyan University, Middletown, Connecticut.

Warner and Swasey. Research fellowships. Apply to The Secretary, Case Institute of Technology, East Cleveland, Ohio.

Yerkes and MacDonald. Post-graduate research fellowships and assistantships. Apply to The Director, Yerkes Observatory, Williams Bay, Wisconsin.

American Astronomical Society. Each year the Society awards four Foreign Visiting Professorships to distinguished astronomers from overseas. No one can apply for these positions; candidates are nominated by the university or observatory where they will serve for a period of about four months and are paid salary and travel expenses from funds provided by the National Science Foundation. Further information is available from Prof. Thornton Page, Van Vleck Observatory, Wesleyan University, Middletown, Connecticut.

U.S.S.R.

The largest astronomical institutions of the Academy of Sciences and the Ministry of Higher Education have facilities for visiting astronomers from other countries in an exchange programme. The Academy and the Ministry decide on any application, which has to be made through diplomatic channels.

It would be appreciated if directors of observatories in the above list would send corrections or additional details to the President of Commission 38.

Directors of observatories not included in the above list who have fellowships or occasional assistantships available for visiting astronomers are also asked to send details.