

Leiden, 24 July 1957.

Report on the meeting of the Executive Committee
of the International Astronomical Union
at Liège, July 4-6, 1957.

The President opened the meeting on July 4 at 10.30 A.M. Further meetings were held in the afternoon of July 4, in the morning and afternoon of July 5 and in the morning of July 6.

The following took part in the meetings: A. Danjon (President), A. Couder (Vice-President), O. Heckmann (Vice-President), B. V. Kukarkin (Vice-President), E. Rybka (Vice-President), P. Swings (Vice-President), R.v.d.R. Woolley (Vice-President), P. Th. Oosterhoff (General Secretary) and in advisory capacity O. Struve (former President).

Dr. Kulikovsky attended the meeting as a guest and Miss Splinter as assistant to the General Secretary.

The agenda of the meeting were as follows:

Opening by the President.

1. Financial Report
2. Arrears in Subscription
3. UNESCO subventions
4. Request for adherence to the I.A.U. by Bulgaria
5. The appointment of an assistant General Secretary
6. The date of the Moscow General Assembly in 1958.
7. General problems concerning the Moscow General Assembly
8. Symposia in connection with the Moscow General Assembly
9. Joint Discussions during the Moscow General Assembly
10. Appointment of delegates to the meetings of other Unions (I.U.G.G. and I.U.P.A.P.)
- 11a. Proposal for a change in the structure of the commissions 10, 11, 12, 13, 29, 35, 36, 36b by Unsöld and Greenstein and by H. W. Babcock
- 11b. Proposal by Dr. Woolley for the establishment of a commission to co-ordinate routine solar observations.
12. The subscription of I.A.U. to I.C.S.U.
13. The adherence of the I.A.U. to the International Foundation of the Pic-du-Midi and the appointment of a representative for the IAU
14. Proposal by Dr. Laclavère for the coordination of the dates of the General Assemblies of U.R.S.I., I.U.G.G. and I.A.U.
15. Proposal by the special committee concerning the method of nominating Presidents and other members of the Executive Committee of the I.A.U.
16. The General Assembly of 1961.
17. Report by the Secretary of the meeting of the Executive Board of I.C.S.U.
18. Roumanian participation in the Moscow General Assembly
19. Should members of the I.A.U. who leave astronomy remain member?
20. Appointment of a President of the Nominating Committee

21. Discussion of the problem whether I.A.U. symposia should be open to its members
22. Archives of the Union
23. Proposal by Dr. Junkes for reduction in price for members of the I.A.U. of the Photographic Atlas of Spectra of Diatomic Molecules
24. Agreement with the International Telecommunication Union concerning exchange of observers.
 - a. Policy concerning letters about the abolishment of atom bombs
 - b. Letter by Dr. Randic.

The discussions and decisions are summarized below, arranged in the order indicated by the agenda, which differs slightly from the order in which the questions were actually discussed.

1. The General Secretary made some remarks upon his report on the financial situation on 1 November 1956, which is given below:

Bank accounts in different currencies

Balance

<u>on 1 Nov. 1954</u>		<u>on 1 Nov. 1956</u>
74828.68	dollars	44588.48
4494-9-6	pounds	5851-10-8
9794.85	guilders	1518.77
1574421	french francs	1043544

All sums reduced to dollars

<u>on 1 Nov. 1954</u>		<u>on 1 Nov. 1956</u>
74828.68	\$	44588.48
12584.53	1 £ = 2.80 \$	16384.29
2577.59	1 \$ = 3.80 Fl.	399.68
4498.34	1 \$ = 350 francs	2981.55
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\$ 94489.14	total	\$ 64354.00

During this period \$ 20,000 was put into savings accounts.

On January 1, 1956 we had in savings accounts and in a compound interest account: \$ 30649.56 and \$ 6701.92. The interest of this sum of \$ 37351.48 from 1 Jan. 1955 to 1 Nov. 1956 is estimated to be: \$ 800.

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Some remarks on the financial situation

In the last paragraph on page 9 of the Dublin Draft Report and on page 41 of Volume 9 of the Transactions, a list has been given of subventions, voted by the General Assembly before 1 November 1954, which had not yet been paid and which therefore should be considered as commitments. The total sum of these commitments amounted to \$ 24574.

The first item in this list, the grants for Commission 5 (Bibliographie mensuelle) of \$ 326 is erroneous and should be \$ 653.20.

On 1 November 1956 the following items had been paid in full:

Commission 5 (Bibliographie mensuelle)	\$ 653
Commission 5 (Observatoires et Astronomes)	523
Commission 11 (Polarimètre photoélectrique Lyot)	2025
Commission 19 (Publications des Résultats)	2613
Commission 38 (Echange des Astronomes)	8552

in total \$ 14366

For Commission 23 (Carte du Cile) a sum of \$ 5759 was paid.

In connection with these old commitments a total sum of \$ 20125 has therefore been paid.

Of the special grants allocated by the General Assembly in Dublin, given on page 66 of Volume 9 of the Transactions, the grant of \$ 1000 for Commission 24 (Catalogue of high velocity southern stars) has been paid before 1 Nov. 1956.

Taking together the remaining old commitments and the new special grants from Dublin, which have not yet been paid, we must consider the following grants as commitments on 1 Nov. 1956.

Commission 5 (Observatoires et Astronomes)	\$ 500
Commission 12 (Tables spectroscopiques solaires)	3960
Commission 20 (Catalogue des Orbites des Comètes)	1400
Commission 23 (Carte du Ciel)	10183
Commission 29 (Atlas of Spectra of Diatomic Molecules)	1633
Bureau de l'Union (Publication de symposia)	2200

total	\$ 19876

About the annual grants the following remarks may be of interest.

The annual grants for Commission 10 (Quarterly Bulletin on Solar Activity) and for Commission 31 (Bureau de l'Heure) have been paid in 1955 and 1956. From 1957 on these two services will be financed by the new Federation of Astronomical and Geophysical Permanent Services. Consequently our annual financial obligations in the years 1957 and 1958 will be about \$ 8000 smaller than had been foreseen at the Dublin meeting. However, the Bureau de l'Heure may need some financial assistance from the I.A.U. besides the subvention from the Federation.

On 1 November 1956 Commission 38 (Exchange of Astronomers) had a balance left from the past years of \$ 3227 and on that date a sum of \$ 1000 from the subvention for the Bureau of the Union has to be considered as committed for travel grants of young astronomers in connection with the Moscow general assembly.

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Professor Woolley asked how large the real annual turnover of the Union is. The Secretary replied that the Union has an income from the subscriptions from the countries of about \$ 19000,- and that the annual subvention from UNESCO averages about \$ 15000.

After some discussion the meeting agreed that it probably will not be necessary at the Moscow General Assembly to propose an increase in the unit of subscription, as the Union has sufficient reserves to guarantee its activities for at least a number of years without even any financial help from UNESCO.

2. The General Secretary remarked that Argentina and Hungary have not paid their subscription since 1954, while Egypt did not pay since 1955. On the whole the situation is very satisfactory and it is very likely that all countries will pay their subscription up to and including 1957 before the Moscow General Assembly, as otherwise they would lose their right of vote.

3. The UNESCO subventions received since the Dublin General Assembly were as follows:

1955:	\$ 17.750
1956:	\$ 15.000
1957:	\$ 14.700

A sum of \$ 4950 for symposia was transferred by virement from 1954 to 1955 and a sum of \$ 2000 for meetings of the Executive Committee was transferred by virement from 1956 to 1957.

In 1956 we submitted an application for grants-in-aid for the year 1958 to the amount of \$ 30.100. The Executive Board of I.C.S.U. allotted a sum of \$ 16.500.

Professor Wocley asked how the difference between the application and the allocation for 1958, which amounts to nearly \$ 14000, has to be met. The Secretary answered that part of the expenses to be expected will have to be paid from our proper income from subscriptions and that we have to economize to a certain degree in the amounts to be used for different items.

For example we applied for a sum of \$ 2500 to help Young Astronomers to come to the Moscow General Assembly. In Dublin the General Assembly agreed that the Bureau of the Union will keep in reserve for this purpose a sum of \$ 1000 annually. It will now depend on the financial situation of the Union whether we will use \$ 3000 for the Young Astronomers from the Union's own income or whether we will increase this sum by part of the subvention applied for from UNESCO.

Further the Secretary informed the Executive Committee that about one year ago a new Federation was established, namely the Federation of Astronomical and Geophysical Permanent Services (FAGS), which receives financial assistance direct from UNESCO and not through the intermediary of the International Council of Scientific Unions (I.C.S.U.). The I.A.U. had to spend a considerable part of its UNESCO subvention for two such permanent services, the Bureau International de l'Heure and the Quarterly Bulletin on Solar Activity. Both these services have joined F.A.G.S., in which permanent services of the I.A.U., the I.U.G.G. and the U.R.S.I. have been brought together. For the year 1957 UNESCO has allocated \$ 22000 to F.A.G.S., of which the two services of the I.A.U. will receive at least \$ 5500. This means that the creation of F.A.G.S. is to the advantage of the I.A.U., as a larger part of the UNESCO subvention to the I.A.U. can now be used for other purposes.

However, the budget of the Bureau International de l'Heure will be considerably higher than normal in the years 1957 and 1958 on account of the International Geophysical Year and this budget will not return to normal before 1960. The increase in the Bureau International de l'Heure's budget for 1957 can partly be met by a special subvention from I.C.S.U. But the situation for the year 1958 is still very uncertain. If the Bureau International de l'Heure would comply fully with the requirements of the International Geophysical Year the budget of 1958 would be about \$ 15000 higher than normal. The General Secretary of F.A.G.S. and the Bureau of I.C.S.U. are still investigating how they can cover these extra expenses.

The Secretary was authorized by the meeting to prepare the applications for UNESCO subventions for the years 1959 and 1960.

Professor Rybka informed the meeting that the Polish Academy of Science had applied for a sum of \$ 1000 for astronomical equipment from UNESCO and he asked the Executive Committee to support this application. The meeting concluded that more efficient help could probably be obtained if Professor Rybka would ask for support from Directors of large Observatories in other countries.

4. The Executive Committee decided to admit Bulgaria as a member of the I.A.U. This country will adhere to the Union through the "Bulgarische Akademie der Wissenschaften" in Sofia. It was agreed that Bulgaria can adhere under category 1. Bulgaria is not a member of the International Council of Scientific Unions and it does not adhere to any other Unions of I.C.S.U.

The General Secretary informed the meeting that during the last two years letters were exchanged with astronomers in Turkey and with some officials in Pakistan concerning adherence of these countries to the I.A.U. Although the situation in Turkey is still rather confused it is hoped that Turkey will make a definite application for membership before the Moscow General Assembly, as a National Committee of Astronomy has already been formed.

5. The General Secretary had indicated to the President of the Union that he wanted to resign after the Moscow General Assembly, as he will have served then two full terms and one year as assistant General Secretary. As the secretariat of the Union has become quite complicated, a change of General Secretary would be greatly facilitated if the new General Secretary, who will have to be nominated at the next General Assembly, could be appointed by the Executive Committee as assistant General Secretary for one year. The President of the Union had inofficially asked Dr. Sadler, whether he would be willing to accept a nomination as assistant General Secretary. On account of his heavy duties at the Royal Greenwich Observatory, Dr. Sadler felt obliged to decline such a nomination.

The Executive Committee consequently spent a considerable time in discussing various other candidates. A proposal by the President to invite Professor Heckmann to undertake this task was unanimously supported by the meeting. Although Professor Heckmann was deeply impressed by the spirit in which the President made this suggestion, namely to enhance the influence of Germany in the activities of the Union, he nevertheless felt obliged to his regret not to accept, as the duties of a General Secretary would conflict with his deeply felt personal desire to spend a certain part of his time on pure research.

After several other candidates had been discussed, Professor Woolley announced that he was prepared to allow Dr. Sadler to spend part of his time on the work of assistant general secretary of the I.A.U., although this means a considerable sacrifice for the Greenwich Observatory. He was convinced that Dr. Sadler would accept an appointment as assistant General Secretary now that he had decided to lessen the duties of Dr. Sadler at the Greenwich Observatory. No objections against this nomination from the Admiralty are to be expected. The Executive Committee was unanimously in favour of the nomination of Dr. Sadler and consequently it was decided that Dr. Woolley should inform Dr. Sadler about the discussions in the Executive Committee concerning the function of assistant General Secretary.

It is to be understood that an appointment by the Executive Committee of an assistant General Secretary does not lead automatically to the nomination of General Secretary of the same person at the next General Assembly, as the General Assembly must nominate the General Secretary.

(In the meantime Dr. Sadler accepted the nomination as assistant General Secretary).

6. Dr. Kulikovsky communicated that the meetings during the 10th General Assembly of the I.A.U. will be held in the new University building and that the Rector of the University had expressed as his wish that the University building be cleared after the meeting not later than August 20-22, as courses in the University will start again on September 1. The General Secretary had proposed to let the meeting begin on August 13 and to have it closed on August 20, so that Sunday would fall about in the middle of the meeting. This suggestion was approved by the Rector of the University and the Executive Committee decided to fix the date of the Assembly according to the suggestion by the General Secretary.

The opening ceremony will take place in the morning of August 13, while the first General Assembly will be held in the afternoon of that same day. The second session of the General Assembly will be on August 20.

It is customary and necessary that the Executive Committee will meet before the first meeting of the General Assembly. The meeting agreed that it would be wise to plan a meeting for two days.

Attention was drawn to the fact that August 15, Assumption of the Holy Virgin, is a very important Catholic Holyday. The catholic members of the Executive Committee, however, were of the opinion that meetings could well be held on this day, if the schedule of meetings would permit the participants to go to church in the early morning. The secretary promised to have no meetings on this day before 10 o'clock in the morning.

The question was then raised whether it would not be useful for the Executive Committee to meet once every year. Although the secretary remarked that each meeting results in expenses for the Union, the advantages of an annual meeting were emphasized by Dr. Woolley and Professor Kukarkin. As the Executive Committee cannot take any decisions which would commit the new Executive Committee after the Moscow General Assembly, it was decided to make a note in the minutes of the meeting to the effect that the present Executive Committee suggests to its successor to organize annual meetings.

7. On behalf of Dr. Kukarkin, Dr. Kulikovsky told that since the Dublin meeting the conditions of participation have been worked out in more detail. All the members of the I.A.U. will be the guests of the Moscow Academy of Sciences during the Assembly, including a few days before and after the meeting. Most of the participants will be housed in the University building, the others in a hotel not far away from the University. The meals will be served in the Restaurant of the University building. After the Assembly the participants will be invited for a short visit to Leningrad, to see the Pulkovo Observatory, the Hermitage and other sights.

The members of the I.A.U., who travel by train or plane should order their tickets and pay for them as far as Moscow. It has not yet been decided how the transport within the U.S.S.R. will be arranged for those members of the I.A.U. who will arrive by boat by the way of Leningrad, Odessa, or Libau. All tickets should be ordered through the normal travel agencies.

No details could be given at this meeting concerning the possibilities of traveling through the U.S.S.R. by car, but Dr. Kulikovsky promised to investigate this matter.

It will be arranged that participants in the Moscow meeting can buy rubels for pocket money and small expenses against a rate of exchange of 10 rubels per dollar.

Ladies and relatives, who will accompany members of the I.A.U., will have the same facilities as the members, provided that they pay a sum of 600 rubels, equivalent to 150 dollars, in the currency of their country before the assembly. The same conditions will be of force for those astronomers and scientists who are not a member of the I.A.U., but who will be invited personally by the President of the I.A.U. to partake in the meetings.

Dr. Kulikovsky further announced that the Soviet National Committee intends to prepare an exhibition of books on astronomy and that every country which may want to prepare special displays of books, photographs and so on, will be enabled to do so.

The Executive Committee then agreed that the General Secretary will make a preliminary announcement concerning the tenth General Assembly to the members of the I.A.U. in a circular, which will be issued this summer, and that the National Committee for the organization of the Assembly will forward a booklet to all the members of the I.A.U., probably in the month of October, in which all the details concerning travel arrangements, visa, housing, trips etc. will be given, together with participation forms, in order that before the end of this year the list of participants will be reasonably complete.

Dr. Kulikovsky remarked that participants in the General Assembly can make trips to the Crimea, Abastumani, Erevan, Tashkent and Samarkant at their own cost. These trips will be arranged by the travel bureau Intourist. The approximate cost of these trips of about five days each, vary between \$ 150 and \$ 265 per trip.

At the request of Professor Heckmann, Dr. Kulikovsky will look into the possibility to arrange a special trip along some of the most important observatories in the southern U.S.S.R.

All particulars concerning these trips will also be included in the booklet mentioned above.

It was agreed, that the U.S.S.R. like all the other adhering countries of the I.A.U., will present to the President of the I.A.U. a list of young astronomers, whom they would like to be invited personally for the assembly. Participation in the General Assemblies and other technical meetings will be limited as far as possible to the members of the Union and the invited astronomers. At the symposia a larger group of young astronomers could be invited.

Professor Kukarkin indicated further that a visit of the General Secretary to Moscow in the spring of 1958 would be very useful, in order that the organization of the Assembly could be discussed in detail on the spot.

8. The secretary reminded of the resolution of Commission 40, adopted by the General Assembly in Dublin, in which it was suggested that the I.A.U. and U.R.S.I. would organize together a short time before the Moscow General Assembly a second symposium on Radio Astronomy, to be held in France (Paris). Members of the organizing committee would have to be the President of Commission 40 of the I.A.U., Dr. Pawsey, and the President of Commission V of U.R.S.I. In the meantime some preparations for this symposium have already been made. Dr. Denisse was appointed as President of the local organizing committee.

The Executive Committee approved the plans for this symposium and decided that Dr. Pawsey be a member of the organizing committee and that it will be left to him to ask some other astronomers to take part in this committee for the I.A.U.

The General Secretary will write to U.R.S.I. in order that the organizing committee can be fully set up during the U.R.S.I. General Assembly in Boulder, where Dr. Pawsey will also be present.

The I.A.U. as well as U.R.S.I. have asked for a UNESCO subvention for this symposium and consequently part of the travel expenses of the speakers can be reimbursed.

The Executive Committee decided in principal that this symposium be published in the symposium series of the I.A.U., if U.R.S.I. would agree.

The problem was then discussed in how far the publication of symposia could be speeded up. The secretary fully realized that such publications often come out too late, a fact which is not only due to the Cambridge University Press or to the editors and the I.A.U. secretariat, but mainly to the authors.

It was agreed that the situation could be improved if during the symposia use would be made of modern equipment, like tape-recording and if a staff were selected to work out the recordings and to type out the discussions during the meeting. Several members of the Executive Committee were of the opinion that it is more important for a symposium publication to be ready quickly than to be printed with the greatest care. In this respect the Cambridge University Press refuses to print anything which is not of the highest quality.

The Secretary will look into this matter and will do his utmost to speed up publications.

During the Assembly in Moscow some symposia should be organized. In view of the heavy schedule for the Assembly, it was decided that not more than two symposia will be organized. In Dublin also two symposia were held; one of two sessions of approximately three hours each, and the other of one session. During these symposia no other meetings of any kind will be held in order that all the participants, who are interested can attend the symposia.

The Secretary then mentioned a letter of Dr. Masevich and Dr. Kulikovsky in which the national organizing committee made proposals for two symposia, namely one on "the Rotation of the Earth", and the other on "the Hertzsprung-Russell Diagram".

As no further suggestions were made the Executive Committee decided to accept the topics mentioned above. The first one on the Rotation of the Earth should have one session only and at the suggestion of the President it should be emphasized that also the question of Atomic Time Standards might be included. The following organizing committee was then appointed: Dr. Mikhailov (President), Dr. Clemence, Dr. Fedorov, Dr. Markowitz and Dr. Melchior.

With regard to the second symposium, which may count on two sessions, Dr. Heckmann pointed out that this topic practically covers a very large part of modern astrophysics. The Executive Committee felt that it was not its task to decide which aspects of the problem should be discussed at the symposium. This decision should be left to the organizing committee, which was appointed as follows: Dr. Greenstein (President), Dr. Parenago, Dr. Schatzman and Dr. Struve.

It was decided that a report of both symposia will be published in the I.A.U. symposium series.

Dr. Kulikovsky expressed the wish of the national organizing committee that papers would be presented before the meeting in order that they could be translated and that most of the time available for the symposium could be used for discussions. After some discussion, it was agreed that the best procedure would be if the speakers at the symposia would prepare well in advance of the meeting detailed abstracts in time for translation and multiplication.

9. Some proposals were made for joint discussions. Mr. Vsekhsvyat-sky proposed a joint discussion on the Origin of Comets. The President of Commission 15, Prof. Swings, was not very much in favour of the organization of such a joint discussion, and he proposed that Commission 15 would ask for an extra meeting of this commission of one hour to be devoted to this topic.

The National Committee for the organization of the General Assembly in Moscow proposed a joint discussion on Atmospheric Extinction and one on Explosions and High-Frequency Radiations from the Sun.

The Secretary mentioned that it was customary that the Presidents of Commissions could propose joint discussions and in a few months time they will be invited to make proposals for the total number of meetings of their commissions, for combined commission meetings and for joint discussions. As at the most four joint discussions could be held, the general secretary proposed that he shall submit to the Executive Committee in the course of this autumn all the proposals made concerning Joint Discussions.

In the past reports on Joint Discussions have been published in the Transactions.

10. In September of this year the International Union of Geodesy and Geophysics and the International Union of Pure and Applied Physics will have their General Assembly in Toronto and Rome respectively. The I.A.U. has been invited to appoint an official representative for these two assemblies. As we have no funds to pay travel expenses for these representatives, it was decided that the President and the General Secretary be authorized to appoint as representative a member of the I.A.U., who will attend these meetings.

11a. The Executive Committee read with great interest the memorandum prepared by Dr. Greenstein and Dr. Unsöld on behalf of the Presidents of Commissions 10, 11, 12, 29, 36 and 36b. It realized that the present structure of the commissions is not always satisfactory and that a serious proposal for a change in the structure of certain commissions should be submitted to the General Assembly, especially since this proposal will result in a simplification of the structure of the commissions concerned.

However, the problem is rather complicated and it was not clear to the Executive Committee in how far the radio observations on the sun, which fall under Commission 40, have been taken into account in the new structure of the commissions, as Commissions 40 has not been explicitly mentioned. Furthermore Prof. Swings believed that the Commission on Stellar Spectra, which deals with non-variable stars only would have to leave a very large part of its work to its sub-commission on the Spectra of Variable Stars.

As a suggestion had been put forward by Dr. H. W. Babcock concerning the work of the solar commissions, Commissions 29, 35, 36b and 40 and concerning the possibility of the establishment of a new Commission on Hydromagnetics in Astronomy, the Executive Committee felt that these two proposals could not be dealt with separately.

As the formation of new commissions and the change in the structure of existing commissions can only be decided upon by the General Assembly and as this body is not very suitable for detailed discussions in such difficult matters, the secretary suggested and the Executive Committee approved that the members of the commissions concerned will receive a draft proposal before a definite proposal is made to the General Assembly.

Consequently Dr. Greenstein and Dr. Unsöld will be requested to discuss their proposal also with Dr. Pawsey and with Dr. Babcock and to send a draft proposal to the members of the Commissions concerned, although it is to be understood that the authors of the memorandum will be absolutely free in the formulation of the new proposal.

Dr. Babcock will be requested to consult also Dr. Greenstein and Dr. Unsöld, and as far as the formation of a new Commission on Hydromagnetics in Astronomy is concerned to consult Dr. Chandrasekhar, Dr. Cowling, Dr. Rosseland and Dr. Alfvén.

Dr. Struve emphasized that we should not hesitate to establish new commissions if a new branch of astronomy would really require such a commission, especially so if the number of existing commissions could be diminished, as it seems to be the case with the solar commissions.

11b. Already in 1956 Professor Woolley suggested to the General Secretary that a commission be established to coordinate routine solar observations. His proposal was now submitted to the Executive Committee. The general idea of Dr. Woolley's proposal was that in view of unnecessary duplication in the routine solar observations coordination be reached, as has been done for several years in the Nautical Almanac work. In order to achieve this aim, consultation with U.R.S.I. would be required. The Executive Committee felt that such a commission can do valuable work and that it probably could do this by correspondence. It nominated the Presidents of Commissions 10, 11 and 12, Dr. d'Azambuja, Dr. Allen and Dr. Righini respectively, as the three representatives in the committee for the I.A.U. and Dr. Ohman, who is now the representative for the I.A.U. in the special committee for the International Geophysical Year and decided to ask U.R.S.I. to appoint three representatives in this commission for this Union. It will be suggested that Dr. Pawsey be one of the U.R.S.I. representatives. The task of the committee will consist of the preparation of a report, which should be presented to the Executive Committee at its meeting in Moscow.

Dr. Woolley preferred not to be a member of the committee, but he would be prepared to give all information required.

12. The Secretary informed the meeting that the Executive Board of I.C.S.U. had decided in its meeting of Bagnères-de-Bigorre in 1956 to increase the subscription of the Unions from 1 to 2% of their proper income. Consequently the I.A.U. will have to pay to I.C.S.U. from 1956 on 2% of its income from subscriptions of the adhering countries.

13. The Observatory of the Pic-du-Midi has been recognized by I.C.S.U. as an International Research Institute. This decision is important, as this recognition makes it possible for the observatory to obtain funds from I.C.S.U. and other international bodies. On June 19, 1956 a provisional board was nominated for this international foundation of the Pic-du-Midi. This board consisted of the following persons:

Sir Harold Spencer Jones (I.C.S.U.) President

Dr. Ronald Fraser (I.C.S.U.)

Prof. A. Danjon (I.A.U.)

Prof. K. R. Ramanathan (I.U.G.G.)

Prof. P. Fleury (I.U.P.A.P.)

Prof. M. B. Visscher (I.U.Ph.S.)

French members: Prof. J. Baillaud (first Vice-President)

Prof. L. Leprince-Ringuet

Prof. R. Girard

Foreign members: Prof. P. M. S. Blackett (second Vice-President)

Prof. J. F. Cox

Prof. C. M. Monge,

while Dr. J. Rösch, Directeur de l'Observatoire du Pic-du-Midi, will act as General Secretary and Mr. Taule, Chef des Services Administratifs de l'Observatoire du Pic-du-Midi, as treasurer.

According to the statutes of the new foundation the International Council of Scientific Unions, the International Astronomical Union, the International Union of Geodesy and Geophysics, the International Union of Pure and Applied Physics, the International Union of Physiological Sciences and the University of Toulouse are the "Membres fondateurs".

This article of the statutes can only become of force after the Executive Committees of the Unions involved have agreed to this article. As the participation of the I.A.U. in this foundation does not imply any financial aid from the Union, the Executive Committee decided to partake in this foundation.

As Professor Danjon had already provisionally represented the I.A.U. in the Board of this foundation, the Executive Committee appointed him as the official representative of the I.A.U. on this Board.

14. Dr. Laclavère, General Secretary of the International Union of Geodesy and Geophysics, made a proposal to coordinate the general assemblies of I.U.G.G., U.R.S.I. and I.A.U. in such a way that one General Assembly would take place every year.

General Assemblies of two large related Unions in the same year cause several difficulties, mainly of a financial nature. For many countries it is difficult to finance the travel expenses of participants in two general assemblies in the same year. Furthermore ICSU usually allocates to a Union a somewhat larger sum of the UNESCO money in the year of a general assembly, which is difficult to achieve when several of the large Unions have a general assembly in the same year. On the other hand general assemblies in the same year and on the same continent make it considerably easier for members in far away countries to partake in both of them, as they often do not get the funds to make large trips every year.

The Executive Committee was rather doubtful whether a certain rhythm in the times of the general assemblies of these three Unions could be maintained for long. They were unanimously against adopting the time schedule proposed by Dr. Laclavère for the I.A.U., according to which an interval of four years would be required after the Moscow meeting.

The simplest solution would be to ask U.R.S.I. to have the next two General Assemblies in 1957 and 1959. If all the three Unions would keep to an interval of three years, they would after that automatically meet in different years.

The Secretary was requested to write to Dr. Laclavère accordingly.

15. The Executive Committee discussed the proposal made by a committee, consisting of Sir Harold Spencer Jones, Dr. McKellar and Dr. Oosterhoff, concerning a special committee for the nomination of the President and other members of the Executive Committee of the I.A.U. This committee of three was appointed in Dublin as a consequence of a recommendation by the Canadian National Committee of Astronomy.

The proposal by the committee of three, submitted to the Executive Committee, was not approved, as Professor Kukarkin felt that this solution was not sufficiently democratic. He would prefer a larger committee in which each adhering country would have one representative.

Consequently the Executive Committee decided to discuss this matter anew at the Moscow General Assembly.

The President, however, suggested that for the nomination of a new President, four new Vice-Presidents and a new General Secretary at the Moscow General Assembly a Nominating Committee of five be appointed, according to the proposal made by the committee of three. This was unanimously approved.

Professor Danjon and Professor Struve will be a member of this committee "ex officio". Professor Swings was appointed a member as retiring Vice-President and Professor Ambartsumian and Dr. McKellar were appointed as ordinary members of the I.A.U.

16. The General Secretary reminded of the statement made by the American delegation at the Dublin General Assembly concerning the 11th General Assembly in 1961 (which has been published on page 25 of volume 9 of the I.A.U. Transactions), and asked Professor Struve whether he had anything to add at this moment.

Professor Struve replied that the invitation was still in force. The U.S.A. national committee, however, had realized that the cost of transport of the participants from the East to the West coast and back would be very high and therefore the possibility was investigated to hold the General Assembly in Washington. For those astronomers interested to see the Californian observatories, a symposium could be organized in Pasadena shortly after the Assembly.

The President of the U.S.A. national committee, Prof. Goldberg, who is in contact with the State Department, will probably make an official statement in a few months time in which all details will be given of the conditions under which I.A.U. members can partake in the meetings.

In connection with a question from Prof. Kukarkin, whether all the members of the I.A.U. would be enabled to partake in the Assembly, the President remarked that the Executive Committee would never accept an invitation if this were not the case. Professor Struve remarked that the U.S.A. National Committee hopes that all the members of the I.A.U. will indeed be invited for the 11th general assembly. But he added that no countries will be invited.

Members of the I.A.U. living in countries in which there are no U.S.A. diplomatic representatives could obtain their visas in another country.

The Executive Committee decided to await Dr. Goldberg's official statement.

Concerning future general assemblies of the I.A.U., the General Secretary mentioned that invitations, some official and some rather vague, had been received in the past years from several countries. In the first place there is a permanent invitation from Belgium, while South Africa, Australia, the Argentine and Egypt had inquired informally after the possibility of a General Assembly in their country. Professor Heckmann added that Germany would be glad to invite the I.A.U. for a General Assembly there, in case the I.A.U. would be interested.

For the time being no decision has to be taken concerning these invitations.

17. In his report on the meeting of the Executive Board of I.C.S.U. the secretary mentioned the plans for a reorganization of the administrative secretariat of this council. It has been decided that the administrative secretariat will have a permanent home in Belgium, the Netherlands or Switzerland. This secretariat will have a staff, consisting of an administrative secretary, an assistant administrative secretary, an accountant and three typist-secretaries. As the salaries of this staff were increased by 20% a sum of \$ 20.000 was budgetted. Although the representatives of the I.A.U. had voted against these heavy expenses for pure administration, the proposal by the Executive Board of I.C.S.U. was accepted.

The secretary then mentioned that the Executive Board of ICSU decided to publish a quarterly I.C.S.U. review, which will be printed at the Pergamon Press. Sir Harold Spencer Jones was appointed editor. The main purpose of this new review will be to give more publicity to I.C.S.U. As far as the Unions are concerned, it is proposed that reports on important symposia be included in the review. These reports are especially meant for scientists from other Unions to become acquainted with new developments in other branches of science.

Concerning the special committee for the International Geophysical Year, the Executive Board decided to establish a terminating committee. The Unions were requested to nominate members for this terminating committee. As the representatives of the I.A.U. in the C.S.A.G.I. are Prof. Danjon and Dr. Ohman, the Executive Committee decided to appoint Prof. Danjon as representative of the I.A.U. in the terminating committee, if only one representative of the I.A.U. is required and Prof. Danjon and Dr. Ohman if two representatives have to be appointed.

The allocation by UNESCO to I.C.S.U. and its Unions has been fixed for several years at about \$ 180.000 annually. As the activities of the Unions increase and as the number of Unions adhering to I.C.S.U. increases also, the Unions obtain a decreasing fraction of the money for which they apply each year. The Executive Board of I.C.S.U. has considered this problem and is seriously uneasy about the fact that UNESCO has spent in recent years at the most 10% of its budget for science. Therefore the Executive Board adopted at its last meeting the following resolution:

"The Executive Board, I.C.S.U., at its Ninth Meeting, Brussels June 27-29, 1957, having been apprised of the Recommendation of the UNESCO Advisory Committee on Research in the Natural Sciences Programme of UNESCO, adopted at its Fourth Meeting, Stockholm, April 10-12, 1957

being constantly aware of the danger that the program of the Natural Sciences Department UNESCO, with which it has such close and fertile relations, may be truncated for lack of funds

ENDORSES the Recommendation of the UNESCO Advisory Committee on Research in the Natural Sciences Programme of UNESCO

and

RESOLVES to transmit to all National Members of ICSU its urgent plea, that they make immediate contact with the UNESCO National Commission in their respective countries, urging the Commissions to ensure that the corresponding National Delegations to the Tenth General Conference UNESCO bring pressure to bear on the General Conference, so that the percentage of the total budget for 1959-60 to be allocated to the Natural Sciences Department be substantially increased; and so that the Departments of Education and Mass Communication be instructed to devote more effort to science education and the dissemination of scientific knowledge."

The Executive Committee of the I.A.U. warmly supported this resolution.

Further Captain Maxwell, Director of the Pergamon Institute, told at this meeting of the Executive Board about the aims and work of this institute. Among other things the Pergamon Institute translates and publishes Russian scientific books. Soon an English translation will be published from Ambartsumian's book on "Theoretical Astrophysics" and from Shklovsky's book on "the Solar Corona". The secretary had asked Captain Maxwell whether the Pergamon Institute would undertake translation and publication of Russian books, if suggestions were made by the I.A.U. If the I.A.U. would recommend the translation of certain books, the Pergamon Institute would make it its task to comply with such a request. The Executive Committee consequently asked Prof. Kukarkin and Dr. Kulikovsky to make up a list of those books in the Russian language which would be most valuable for western astronomers to have at their disposal in a translation.

18. Dr. Demetrescu had informed the secretary that he would like to see invited for the Moscow meeting six professors in astronomy, all non-members of the I.A.U. and two young astronomers.

As we do not yet know how many applications will be made for invitations by the President, the Executive Committee suggested that Dr. Demetrescu be asked to give some more information about the persons proposed for invitation and to indicate the order of preference, in which they will be invited.

19. The Secretary pointed out that several members of the I.A.U. have left astronomy, but that their names remain on the list of members. The Executive Committee suggested that the National Committees of Astronomy be asked to investigate which names should be deleted from the list of members.

20. During the last General Assemblies the late Professor Greaves used to be President of the Nominating Committee and due to his efforts the nominating procedure has been considerably simplified at the Dublin meeting. It seems very important that his place be taken by someone who is well acquainted with the nominating procedures. The Executive Committee decided that Professor Minnaert be asked to act as President of the Nominating Committee at the Moscow meeting.

21. The Secretary told that some members of the I.A.U. are disappointed by the fact that most of the symposia held in recent years were restricted to persons especially invited and consequently the question arises in how far symposia organized by the I.A.U. should be open to all the members. The Executive Committee agreed that very large symposia are much less satisfactory than small meetings and after some discussion they only saw one solution, namely to have two types of symposia. Some of the restricted type and other open to everyone interested. The open symposia could be held during general assemblies, when very many members of the I.A.U. are present anyway. It is practically impossible not to restrict the other symposia for the simple reasons of accommodation etc. However, it will be important that at the restricted symposia a sufficient number of young astronomers be invited, and that reports on such symposia will be made available to all members soon after the symposia have been held.

22. During the last decades the archives of the I.A.U. have become very bulky and it has become impractical to transfer this material every time a new secretary has been appointed. At a meeting in Brussels Dr. Bourgeois suggested that the archives of the Union be stored at the Uccle Observatory. The Executive Committee agreed to accept this offer from Dr. Bourgeois.

23. At the Rome General Assembly a special subvention of \$ 1633 was allocated to commission 29 for the production of an Atlas of Spectra of Diatomic Molecules. The work of this atlas was done first by Dr. Gatterer at the Vatican Spectroscopic Laboratory with the cooperation of Dr. Rosen and others. After the death of Dr. Gatterer the work was completed by Dr. Junkes. The subvention was given to buy certain rare-earths. As these samples had been obtained free of charge, it was intended to use the subvention for the publication of the Atlas. However, the cost of publication will now be borne by the Vatican Observatory.

The President of Sub-Commission 29b on Molecular Bands in Stellar Spectra and Dr. Junkes therefore suggested that the subvention be used to provide copies of this expensive and valuable Atlas against a reduced price to certain individuals or institutes. A resolution to this effect was adopted by the General Assembly at the Dublin meeting.

The price of the Atlas if ordered through a bookseller is \$ 25, while the actual price is \$ 22.

After some correspondence with the secretariat, Dr. Junkes proposed that members of the I.A.U. be enabled to order copies for a price of \$ 10. He suggested that this opportunity be announced in a circular to the members of the I.A.U. and that copies be delivered against a price of \$ 10 as long as the subvention can cover the difference between the actual price and the reduced price. The delivery would take place in the order in which requests will be received.

The Executive Committee agreed with this procedure and suggested that the secretary would make it clear in a circular to the members that the reduced price can only be given for personal copies and not for copies meant for libraries and institutes.

24. According to its statutes the International Telecommunication Union has made an agreement with U.R.S.I. and some other Unions that observers from these Unions can be present at all the meetings of the Telecommunication Union, in which problems on assignment of wave-lengths are discussed.

As this problem is a very important one for the I.A.U. as well in connection with Radio-Astronomy, as for the work of the Bureau International de l'Heure and Commission 31 of the I.A.U., the General Secretary had inquired whether a similar arrangement could be made for the I.A.U. The answer was in the affirmative and from now on the I.A.U. will be informed about all the meetings of the Telecommunication Union where such problems will be discussed.

The I.A.U. can be exempted from any financial contributions in connection with such meetings on condition of reciprocity. Therefore if the Telecommunication Union would send an observer to any of the meetings of the I.A.U., they do not have to contribute towards the expenses of the meeting.

The Executive Committee agreed to this arrangement. The Observer for the I.A.U. shall be appointed in due time.

The following items were put on the agenda during the meeting.

- a. The secretariat of the Union often receives petitions and letters concerning the abolishment of atomic bombs. So far the secretary has answered these letters by saying that the Astronomical Union is not competent in taking decisions of this type and that it has to restrict itself to purely astronomical matters. The secretary asked the meeting whether it can agree with this policy. No unanimity could be reached in this matter, which was then put to the vote. Prof. Kukarkin and Prof. Rybka were against the policy followed by the secretary, while the other members of the Executive Committee were in favour.
- b. A letter was received from Dr. Randić, in which he invited the Executive Committee to organize at the Moscow General Assembly a meeting of experts in order to exchange ideas about teaching in astronomy at Universities. The Executive Committee felt that Dr. Randić's proposal was too vague and that such a meeting probably would yield little results, as this is a matter which could much better be discussed in conversation between individuals. The Executive Committee asked the General Secretary to write to Dr. Randić in this sense and to invite him to make a more detailed proposal to be presented to the Executive Committee at its next meeting.

The meeting was then adjourned on July 6 at 10.30 A.M.