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COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

VERBATIM RECORD OF THE FOURTEENTH MEETING

Held at Headquarters, New York,
on Thursday, 13 September 1962, at 8.30 p.m.

Chairman: Mr. MATSCH (Austria)

Consideration of the report of the Scientific and Technical Sub-Committee on the work of its first session (A/AC.105/5), of the reports prepared by the World Meteorological Organization (E/3662) and the International Telecommunication Union (E/3645) in response to General Assembly resolution 1721 (XVI), and of the resolution concerning international co-operation in the peaceful uses of outer space adopted by the Economic and Social Council on 2 August 1962 at its thirty-fourth session (continued)

63-00114

(24 p.)

CONSIDERATION OF THE REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE ON THE WORK OF ITS FIRST SESSION (A/AC.105/5), OF THE REPORTS PREPARED BY THE WORLD METEOROLOGICAL ORGANIZATION (E/3662) AND THE INTERNATIONAL TELECOMMUNICATION UNION (E/3645) IN RESPONSE TO GENERAL ASSEMBLY RESOLUTION 1721 (XVI), AND OF THE RESOLUTION CONCERNING INTERNATIONAL CO-OPERATION IN THE PEACEFUL USES OF OUTER SPACE ADOPTED BY THE ECONOMIC AND SOCIAL COUNCIL ON 2 AUGUST 1962 AT ITS THIRTY-FOURTH SESSION (continued)

Mr. BARTON (Canada): My delegation found the spirit which prevailed at our meeting this morning encouraging after the intensity of some of the exchanges at yesterday's meeting. I realize that the considerable responsibility which my delegation bears for the fact that we are meeting tonight imposes a rather formidable obstacle. Nevertheless, I trust that the remarks that I make this evening on the subject of the report of the Scientific and Technical Sub-Committee will contribute to the maintenance of the atmosphere of reasonableness and harmony and to the progress of our work.

I think that the feature of the report of the Scientific and Technical Sub-Committee which has impressed me particularly is its modesty. It includes no wild or controversial or, for that matter, expensive schemes. None of the proposals is likely to have world-shaking consequences. But -- and this is the most important -- all of the proposals are, in the judgement of our delegation, useful, practical and capable of immediate application. They are, in the words of General Assembly resolution A/1472 (XIV), "a practical and feasible means for giving effect to programmes in the peaceful uses of outer space which could appropriately be undertaken under United Nations auspices".

My delegation believes that the scientists who served on the Sub-Committee are deserving of our appreciation for the responsible and sound manner in which they have carried out the instructions of the General Assembly. In its work the Sub-Committee demonstrated the practical possibilities for co-operation. Although some may feel that the results are limited, it must surely be admitted that on entering a field as complex as outer space, a measure of caution is reasonable. In our judgement, all the members of the Sub-Committee have set an example both in their work and in the report which they have drafted of the manner in which we should approach the problem of expanding co-operation in the field of outer space.

(Mr. Barton, Canada)

Obviously, the most novel and imaginative recommendation which the Sub-Committee had to make was the proposal to establish a sounding rocket range in the equatorial region. Delegations have referred favourably to this proposal. The establishment of a sounding rocket range in this scientifically significant zone where no such facilities now exist should lead to the discovery of important scientific information from which we should all benefit. Moreover, the establishment of a range under United Nations auspices is an important innovation in that the host State will be in a position to request advice and assistance from all United Nations Members and agencies.

My delegation is pleased to learn that the Government of India is considering the establishment of a sounding rocket range on its territory, and we shall be glad to make available the experience we have gained through the operation of our rocket range which is established at Churchill, Manitoba, and which is operated in association with the United States.

I do not wish to comment in detail on the proposals for exchanging information and encouraging international programmes. Although these proposals may seem limited in character, I think we can expect that the arrangements to be instituted will develop rapidly because of the advantages -- which will prove obvious -- which all of us can derive from sharing information with each other and from co-operating in international programmes. The success of the International Geophysical Year demonstrated to all how much we could benefit from such co-operation. From the exchanges which took place in Geneva, it was apparent that many scientists attending the Sub-Committee meetings were impressed to learn from their contacts with other scientists, and from information made available at the meetings, of the scope and nature of research activities in outer space being undertaken in other regions of the world.

I wish to refer only in passing to the important reports of the World Meteorological Organization and the International Telecommunication Union. My Government is still studying the implications of their reports. However, apart from the proposals contained in these reports, we must commend the two organizations for the useful surveys of information which they have completed, particularly of such significant subjects as weather and communications satellites.

(Mr. Barton, Canada)

I assume that the unanimous commendations in statements made during the last four days on the report of the Sub-Committee will lead to its approval by our Committee and subsequently by the General Assembly. The approval of these bodies would then make it possible for the proposals to be implemented. This, of course, would result in a shift in the centre of activity in the months thereafter to the Member States, to the Secretariat, to the specialized agencies, including UNESCO, WMO, ITU and COSPAR. My delegation looks forward to that development as the first practical fruits of the work of our Committee, which would then be forced to turn its attention to the elaboration of new areas for extending co-operation.

I should like to commend the Bureau of our Committee for its useful work in preparing a working paper based on the Sub-Committee's report. My delegation approves the changes which have been made and considers that the working paper, excluding, of course, its introductory paragraph, could serve verbatim as the first part of our Committee's report to the General Assembly, the completion of which is provided for under the sixth item of our agenda.

Mr. EL-REEDY (United Arab Republic): My delegation has studied the reports of the Scientific and Technical Sub-Committee as contained in the informal working paper prepared by the Bureau of the Committee, as well as the reports of the World Meteorological Organization and the International Telecommunication Union. It is not my intention to go into the details of these reports, but rather to confine myself to some general comments on the recommendations and proposals.

Section A of the report of the Scientific and Technical Sub-Committee deals with exchange of information on space research. Obviously, this information would flow mainly from the countries advanced in space research as well as from the governmental and non-governmental organizations active in the subject, particularly COSPAR, WMO, UNESCO and ITU.

We all recognize that information received from Member States advanced in space research will greatly contribute to the development of space science in other countries and will be of great value to organizations interested in that field. My delegation, therefore, fully endorses the Sub-Committee's recommendation on this matter and trusts that the United States and the Soviet Union especially will respond positively in lending their experience in this field.

With regard to information to be received from COSPAR, my delegation is aware of the limited financial resources of that organization, but since we believe that COSPAR is in a position to render considerable assistance to countries less advanced in the field, we would suggest that this Committee might consider in the future the usefulness of arranging with COSPAR for the Secretariat of the United Nations to make a periodical selection of studies in space research for publication and distribution to all Member States. This procedure might bring more positive results than a mere request to COSPAR to make its publications available to Member States.

As for Section B, my delegation attaches great importance to the programme for the International Year of the Quiet Sun, sponsored by the International Council of Scientific Unions. We all recall the vast amount of international information gained as a result of the International Geophysical Year, and we believe that IYQS will be of similar value and importance.

(Mr. El-Reedy, UAR)

My delegation is of the opinion that all possible means should be made available for the success of IYQS. This will doubtless include the facilities provided by the United Nations and by interested specialized agencies. The usefulness of such facilities is obvious with regard to Member States which are not represented in the International Council of Scientific Unions. It should also apply to the programme for the World Magnetic Survey sponsored by ICSU.

The third section of the Sub-Committee's report concerns the establishment of international equatorial sounding rocket launching facilities. My delegation was happy to note that the Sub-Committee developed this idea which was first presented in the COSPAR meetings. We are confident that a United Nations international site will contribute positively to the development of space science and will enable small States to join in the great journey into space. In this connexion we also appreciate the offer made on behalf of the Italian National Institute for all States to make full use of the San Marco mobile platforms which could be used in launching sounding rockets for peaceful purposes.

My delegation has also studied the reports submitted by the World Meteorological Organization and the International Telecommunication Union in response to General Assembly resolution 1721 (XVI). I should like to express my delegation's appreciation of these two reports. We are aware of the growing responsibilities of these two specialized agencies. Their task will continue to grow as activities in space increase.

In the field of atmospheric science, space offers equally great prospects. We have noted the sense of urgency displayed by WMO in establishing a panel of experts pending the establishment of an advisory committee, composed of leading scientists, to recommend the action required to fill the gap in our knowledge of the atmosphere and its basic physical forces. We trust that the scientists will be selected on a wide geographical basis so that the interests of all geographic areas may be taken into account.

WMO also expressed its belief that the full exploitation of the new meteorological data provided by artificial satellites necessitates an expansion and rearrangement in the present system. Among the measures proposed in this respect by WMO is the establishment of regional centres. We welcome this proposal because we believe that it enhances the possibilities of international co-operation in space meteorology in addition to its scientific significance.

(Mr. El-Reedy, UAR)

In our part of the world we shall look forward to seeing one of the regional centres established and contributing to world meteorology. We are equally enthusiastic about the awareness of the role of WMO in arranging schemes for the training of personnel.

My delegation has devoted considerable attention to the first report submitted by the International Telecommunication Union on telecommunication and the peaceful uses of outer space. We believe that the responsibilities of ITU vis-à-vis space communication will be greater in the future. It will remain the important task of ITU to lay down regulations and procedures for the radiocommunication used in space travel. ITU will also have to attach considerable importance to the field of the promotion of satellite communications. We were gratified to note the sense of urgency of this double role in the report submitted by ITU. We are confident that the Extraordinary Radio Administrative Conference to be held by ITU in October next year will bring about the progress needed in allocating frequencies for space research.

Another specialized agency which is expected to provide assistance particularly to less advanced countries is UNESCO. The General Assembly, in its resolution 1721 (XVI), recognized this responsibility, and we have observed that UNESCO has reported on the matter to the Scientific and Technical Sub-Committee.

UNESCO responded to the space age even before the adoption of resolution 1721 (XVI). It gave considerable assistance to the International Council of Scientific Unions in organizing IGY. Our expectations regarding the assistance which it will render to countries less advanced in space science are, therefore, justified.

(Mr. El-Reedy, U.A.R)

Science in my country has become a cornerstone of our national programme and has its priority on our agenda. In the early ages of our history, we had great scientists who contributed to the foundation of astronomy as a branch of science. Today, we in this dimention are sparing no effort to live up to our heritage in an atmosphere of co-operation and universal understanding. A special section in the Faculty of Science in Cairo University has already been established, and the newly created Ministry of Scientific Research is devoting a great deal of its energy to developing our knowledge of space. But we have no illusion about our resources. We are confident, however, that in co-operating with other countries we shall be able to benefit, and we hope that within the framework of this Organization my country, jointly with other countries, will make man's space age an age of peace, co-operation and prosperity.

Before concluding, my delegation proposes that, after the general debate on the present item is exhausted, the Committee should approve the report on the informal working papers dealing with the technical aspects and that the Committee should proceed with the next item on our agenda, namely, the report of the Legal Sub-Committee.

Mr. DAVIES (World Meteorological Organization): This is the second occasion on which I have had the privilege of addressing this Committee. The first occasion was during the session of the Committee held in March of this year.

At that time, I outlined the steps which the World Meteorological Organization had taken and was planning to take in the implementation of part C of General Assembly Resolution 1721 (XVI). I explained that WMO had had the meteorological aspects of outer space activities under study for several years before the adoption of Resolution 1721 and that the Organization was therefore not entirely unprepared to meet the request addressed to it by that resolution -- that is, the preparation of a plan for the development of the atmospheric sciences -- both from a practical and a research point of view -- in the light of developments in outer space.

I explained also that to assist in this task scientists from the United States and the Soviet Union had come to Geneva, to the WMO Secretariat, to work together.

As you yourself mentioned in your opening statement, Mr. Chairman, one of these scientists, Dr. Harry Wexler, of the United States, has since died, and I would like on behalf of WMO to associate myself most sincerely with your expression of sympathy and condolence at this very sad event. Dr. Wexler was not only a scientist of the highest standing but had great personal qualities which did much to foster the spirit of international collaboration upon which the efforts of WMO in this field and indeed in all other fields depend.

I made reference also in my previous remarks to the steps which had been taken to invite -- indeed to encourage -- other international organizations concerned (governmental and non-governmental) to collaborate with WMO in meeting this new and important responsibility.

In my previous remarks I described, too, the vast range of new observations which the development of scientific satellites were likely to make available and how these could be used to improve man's knowledge of atmospheric processes and hence facilitate the practical application of such knowledge for the benefit of all mankind. I referred to the type of observations, such as photographs of cloud systems and of snow and ice areas over land and sea. I referred also to the various ways in which infra-red radiation measurements were likely to be of assistance, as well as to the possibility of radar techniques being used for the detection of precipitation.

(Mr. Davies, WMO)

With my previous remarks as a background I would like tonight to give an account of what has transpired in the intervening period of six months since I spoke last, in particular to explain the report which WMO has prepared and which is now before this Committee for consideration.

With the assistance of the American and Russian scientists and with the benefit of the advice and suggestions of the other international organizations concerned, a first draft of the report was prepared and completed some two months after I addressed your last meeting. This first draft was then considered towards the end of May by a meeting of experts especially convened for that prupose, including, of course, the two scientists nominated by the Soviet Union and the United States to whom I have just referred. Several improvements were introduced and in its modified form the report was submitted in June to the WMO Executive Committee, comprising eighteen members from countries all over the world. Further improvements were introduced and the report was then adopted in its final form. It is in this form that the report is now presented to you.

I think it will be clear to representatives that, while time was very short to prepare a report of this nature, a careful screening process was applied so that as authoritative and reliable a report as possible was drawn up and published.

I should also perhaps refer to the action which has subsequently been taken on the report. In the first place, the report was distributed to all member countries in accordance with the request contained in the original resolution 1721. Thus, all members have by now had the report for some time and will have also had opportunity to consider it.

The report was also made available to the Technical and Scientific Sub-Committee of this Committee during its meeting in Geneva in June. It may be useful if I read the relevant section of the report of the meeting of the Sub-Committee.

"The Sub-Committee expressed appreciation of the information presented by WMO about its programme and about the studies which it has been conducting in response to General Assembly resolution 1721 (XVI).

"The importance of the technical and scientific contributions which can undoubtedly be made to the science and practice of meteorology through the use of artificial earth satellites, and the desirability of

(Mr. Davies, WMO)

creating, at the earliest practicable date, an operational meteorological system using satellites were noted. Such a system will be of great value for all States, regardless of their economic or scientific development.

"The Sub-Committee therefore recommends that the Committee invite all Member States to study carefully the various programmes and suggestions put forward by WMO for the operational and research use of meteorological satellites, so that they may be thoroughly prepared to comment constructively when the WMO report is submitted to the seventeenth session of the General Assembly.

"It further recommends that the Committee call upon all Member States and the specialized agencies concerned to take the necessary steps, within the limitations of their financial and other capabilities, to support improvement of the world-wide system for distribution of meteorological information, in anticipation of the imminent availability of meteorological data from satellites, and in anticipation of the need for its effective dissemination and interpretation."

A few weeks later, that is, in July, the report was considered by the Economic and Social Council at its thirty-fourth session in Geneva, when resolution 913 was adopted, dealing with the WMO report and the corresponding report submitted by ITU. I will not attempt to read out the whole resolution, which is rather lengthy, but I would like to underline some of the points it contains. The resolution notes:

"that the report discloses the advances in the science of meteorology and its applications which would follow the development of a coordinated international meteorological satellite programme".

It further expresses the appreciation of the Economic and Social Council to the responsible organs of WMO for their forward-looking approach to the advancement of atmospheric sciences and records the view of the Council that the various suggestions for further action contained in the report merit careful and sympathetic study.

The resolution goes on to note with approval that WMO will continue to consider and keep under close review future activities pertaining to outer space and requests WMO to give attention to such educational and training programmes on space meteorological techniques as may be necessary in response to part C of General Assembly resolution 1721 (XVI).

(Mr. Davies)

The resolution concludes by urging all Member States to give all possible assistance to WMO in this field and transmits the report to the seventeenth session of the General Assembly in accordance with the terms of resolution 1721 (XVI). Thus the report now before you has not only been through a careful screening process within WMO in its preparation, but has also been previously considered, without dissident comment, by two other bodies of the United Nations.

Turning now to the report itself, as it has been in the hands of Member States, it is, I feel sure, unnecessary for me to explain it in detail. There are, however, some aspects of the report which are worthy of special mention and some recommendations which I would like to underline.

In the first place it is important to note that the terms of the General Assembly resolution are very broad and involve, in effect, a complete reappraisal of the atmospheric sciences and their applications in the light of satellite developments, together with the preparation of a plan with organizational and financial details.

These are, however, tasks which cannot be fully accomplished in the interval of six months or so available for the preparation of the report. Thus the report as now presented should be regarded as a preliminary report. Further studies and further reports will be needed to complete the ideas and proposals put forward in the report and to ensure that the aims of the resolution of the General Assembly are fully attained in the coming years. Not only will the technical bodies within WMO need to study the aspects which fall within their respective fields of responsibility, but also the studies which Member States may make in response to the resolution should evidently be taken into account, and it should be noted that the resolution specifically recommends that Member States should make such studies.

In this latter connexion I may mention that the National Research Council of the National Academy of Sciences of the United States has recently published a study entitled "The Atmospheric Sciences 1961-1971". This is an excellent and in many ways a remarkable publication to which the most careful attention should certainly be given in any further steps which may be taken in implementation of the resolution of the General Assembly. The present report is therefore termed the "First Report" and WMO recommends that it should submit further reports at appropriate intervals.

(Mr. Davies)

Turning now to the plans and proposals put forward in the report, a clear distinction is made between the operational aspects, that is, the immediate use of the data for practical purposes and the research aspects. As regards the former, a system known as the World Weather Watch is envisaged whereby the data from a system of meteorological satellites are combined with what might be called the conventional data from surface stations, to maintain a continuous watch on the weather systems, including, of course, all major storms, over the whole globe. Moreover it is planned that through a system of world centres and regional centres, the information will be promptly made available to all countries of the world. Moscow and Washington have already been designated as world centres. A third world centre in the Southern Hemisphere is planned.

The scheme will involve not only the establishment, the equipping and the staffing of the various centres, but also improved telecommunications facilities for the rapid dissemination of the information throughout the world. Improvements in the network of surface stations will be necessary in some areas to ensure that the maximum use is made of satellite data.

As regards the research aspect, as foreseen in the General Assembly resolution, this new observational device opens up vast fields for research and the report mentions in a very tentative way some of the fields in which important progress is likely.

The World Meteorological Organization plans to establish a committee of high level scientists to study and advise on all aspects of research in the atmospheric sciences and the report formally proposes to the coming WMO Congress in April next year the establishment of such a committee. It is important to note that UNESCO and the International Council of Scientific Unions will be invited to nominate scientists to serve on this committee, and to work with others nominated by WMO, so that representation on as broad a basis as possible will be assured. In order to enable the preliminary work to proceed, WMO has already established a provisional group of scientists on a similar broad basis and steps have already been taken to invite selected scientists to serve on the group. The first meeting is planned for later this year. The representative of the United Arab Republic has just made reference to this important aspect of WMO's recommendations.

(Mr. Davies)

The General Assembly resolution specifically requires the WMO report to contain, inter alia, the financial arrangements necessary to achieve the purposes of the resolution. The report points out the general nature of the financial consequences of the resolution but indicates that precise financial figures cannot be submitted without further study, especially as far as financial assistance from international sources is concerned. Nevertheless, some specific financial proposals are given.

First, the report suggests that all countries should be urged to do everything possible within national programmes and budgets to implement the proposed plan of action. It is hoped and believed that most countries will feel that the great practical benefits which the availability of satellite data will bring will more than justify the provision from national sources of the necessary telecommunications and other facilities. Nevertheless, external assistance will no doubt be necessary in some cases.

The report therefore suggests that requests for assistance under the Expanded Programme of Technical Assistance and the Special Fund to implement this plan should be given sympathetic consideration. The report suggests, however, that this form of assistance alone may not suffice and recommends that consideration be given by the United Nations to the establishment of some special financial arrangements for the implementation of the plan. The creation of a United Nations World Weather Fund is tentatively put forward. It is our hope that this Committee and the General Assembly will give careful consideration to these proposals.

That is all I wish to say in introducing the WMO report to the Committee. Before concluding I should like, however, to stress that one of the most pleasing features of the studies and discussions which have taken place in the past months has been the friendly and willing co-operation which has been shown on all sides. Not only has UNESCO and the International Council of Scientific Unions co-operated fully at all stages of the work, but also the International Telecommunication Union, the International Civil Aviation Organization and the International Atomic Energy Agency have attended meetings or have collaborated in other ways. In addition, the two leading countries in satellite techniques, the Soviet Union and the United States, have made available to WMO the services of high level scientists in this field, thereby ensuring that the report now before you is based upon the most reliable and up-to-date knowledge, skills and techniques.

Mr. SALSAMENDI (UNESCO): I thank the Chairman for giving me this opportunity to address the Committee on the Peaceful Uses of Outer Space. The purpose of my statement, which will be brief, is to bring the Committee up to date on actions taken by the Acting Director-General of UNESCO as a result of the recommendations of the Scientific and Technical Sub-Committee. The recommendations of the Sub-Committee were addressed to UNESCO, among other institutions, with reference to the problems of the exchange of information, the encouragement of international programmes, and questions of education and training. At the same time the Sub-Committee met, UNESCO's programme and budget for 1963-64 had already been issued in draft form. In an addendum to this programme and budget the Acting Director-General said:

> "On the basis of the report of the United Nations Committee on the Peaceful Uses of Outer Space, March, and in response to the recommendations of its Scientific and Technical Sub-Committee, May and June, I propose, in line with resolution 1721 (XVI) of the General Assembly of the United Nations, to strengthen substantially the programme of scientific research in geophysics and space, a field in which international co-operation can contribute greatly to the peaceful exploitation of natural resources and to the development of mutual understanding between nations. The budgetary provision has been increased from $65,000 to $300,000."

The principal objectives of the UNESCO programme in this area are to further international co-operation in basic research and to assist developing countries to make useful scientific contributions to the exploration of outer space through astronomical and geophysical observations. To carry out these objectives, the Acting Director-General makes specific proposals which I am sure will be of interest to the members of the Committee. I am therefore taking the liberty of putting on the record a brief summary of these proposals.

First, with a view to furthering the international exchange of information and ideas in geophysics and space sciences, and encouraging co-operation between scientists throughout the world in analysing the results of research and in formulating new research programmes, assistance will be provided to COSPAR, the interested scientific unions and to the International Astronomical Federation to meet the cost of symposia, study groups and other scientific

(Mr. Salsamendi, UNESCO)

meetings at which the results of research will be evaluated, integrated and discussed. A regional training course in a selected branch of geophysics or space science will be organized by a field science co-operation office.

Secondly, for the purpose of meeting the demand for technical information on various aspects of space research and exploration, assistance will be provided to COSPAR to prepare and publish a series of manuals on the technical requirements for optical and radio tracking of artificial satellites, telemetry reception, sounding rocket launching sites, etc.

Thirdly, assistance will also be given to competent non-governmental scientific organizations in the planning of international research programmes and, in particular, that of the International Year of the Quiet Sun. In co-operation with WMO, ICSU and IUGG, pilot studies of the use of photographic and other data from satellites in the study of the earth's atmosphere and hydrosphere will also be undertaken. In consultation with COSPAR, the International Astronomical Federation and appropriate scientific unions, the theoretical and practical problems of extra-territorial biology will be examined.

Fourthly, in 1963 and 1964, within the framework of the United Nations programme of the peaceful uses of outer space, UNESCO will offer assistance to Member States in the establishment or modernization of about ten suitably located astronomical and geophysical observatories during a period of about seven years, especially in geographical areas of scientific interest such as the equatorial regions of the earth, through short-term missions of experts or fellowships and in certain cases the supply of special instruments and equipment. These observatories will thus be able to make useful contributions to the study of the earth's magnetic field and ionosphere and the physics and chemistry of the upper atmosphere, etc. Fellowships for scientific students from less advanced countries will be provided to enable them to participate in training courses in space research techniques to be held at appropriate existing research centres.

Fifthly, in order to ensure that the assistance to astronomical and geophysical observatories is planned and executed on a sound basis, a panel of experts will be designated in consultation with the International Committee for Geophysics, COSPAR, the IQSY Committee and the interested scientific unions.

(Mr. Salsamendi, UNESCO)

In addition to these proposals, it has been noted that certain of the problems before the Legal Sub-Committee involved further scientific research. In this respect UNESCO is ready to serve as a meeting place for the exchange of ideas and information between scientists and jurists concerned with these problems.

It should be noted that this programme is planned to complement and not to overlap other programmes, whether bilateral or multilateral. To ensure that no duplication will take place, close consultative arrangements have been established with COSPAR, WMO, ITU and other institutions concerned. The Committee may also find it of interest to know that the UNESCO Executive Board, at a session now in progress, has discussed these proposals and substantially approved them. The programme will be implemented when the General Conference, which will meet in November, takes appropriate action.

May I point out in closing that the actions just described stand as evidence of our intention to co-operate with this Committee and its Sub-Committees.

Mr. COLT DE WOLF (International Telecommunications Union): It has been indeed very gratifying to hear the very commendatory remarks which the various representatives in this Committee have made concerning the reports of the ITU and its sister organization, the WMO. I was particularly interested in what I considered the very incisive summary of the position of the ITU in this matter, which we had this morning from the representative of Italy.

The ITU is fully mindful of the importance of outer space communications. This is evidenced by the fact that two years before the unanimous adoption of General Assembly resolution 1721 (XVI) in December 1961, the ITU at the plenary assembly of the International Radio Consultative Committee (CCIR) in Los Angeles established a new study group -- study group 4 of CCIR with the express purpose of studying the various technical elements which go in the question of the propagation of frequencies in this field. Study group 4 had a meeting in March this year in Washington where it was in the position to make numerous recommendations which will be considered by the plenary assembly of the CCIR in New Delhi in January 1963. The recommendations of this plenary in 1963 will then be forwarded to the Frequency Conference which is to meet in Geneva in October of 1963. The International Frequency Registration Board (IFRB) of the ITU has likewise been conducting a series of studies, also to be helpful, for the Conference in 1963.

The ITU therefore, as you may note, is actively preparing for this Conference. This was mentioned in the report to the Economic and Social Council which all of you, I imagine, have had an opportunity to examine.

I should like to mention that before this report was transmitted to the Economic and Social Council, the Administrative Council of the ITU, which met in Geneva in May and June of this year, sent a telegram to all the members of the ITU asking them whether they were in agreement with the proposal of the Council to call this Conference on 7 October 1963.

I should recall that in 1959 the International Radio Conference which met in Geneva had suggested that this Conference should meet, in principle, in 1963, provided that the Council felt that sufficient study had been made to permit the calling of the Conference. The overwhelming majority of the members of the Union agreed with the proposal of the Council and with the agenda which had been proposed by the Council. I will not go into the details of that agenda.

(Mr. Colt de Wolf, ITU)

As you are probably aware, the main task of the Conference will be to consider the allocation of radio frequency bands for operational earth satellite systems, together with bands for telemetry command and control facilities necessary for such systems. At the same session of the Council, and also after the report had been sent to ECOSCC, the Council adopted another resolution on telecommunications in the peaceful uses of outer space. This resolution has not been printed with the report to ECOSCC since it was passed after that report was terminated, but it has been sent to all the members of the Union. In this resolution the Council instructs the Secretary-General to send an invitation to all members and associate members of the Union so that those who so wish may by 31 December 1962 submit information on: (1) technical progress and developments in space telecommunications; (2) subjects which they regard as appropriate for international co-operation in order to achieve the objectives set forth in General Assembly resolution 1721 (XVI), Part D; (3) which of those subjects, if any, should be included in the agenda of the proposed 1963 extraordinary administrative radio conference. They requested the Secretary-General, in consultation with the IFRB and the Directors of the CCIR and the International Telegraph and Telephone Consultative Committee (CCITT), to prepare a report on these questions for the 1963 annual session of the Council which, in 1963, will meet earlier than usual. It will meet in March so that there will be sufficient time to consider the various proposals which the administrations of the ITU may send to the Council through the Secretary-General.

This, of course, leaves open to the members of the Union the possibility of making various suggestions differing from the purely technical question of the allocation of frequencies. It will be up to the Council to determine which subjects should be put on the agenda of the 1963 Frequency Conference; and which matters might be considered by some other body of the ITU, possibly, the International Telegraph and Telephone Conference, the CCIR or even the plenipotentiary conference, which is the supreme organ of the Union and which will meet in Switzerland in 1965, at the invitation of the Swiss Government, to celebrate the 100th anniversary of the oldest intergovernmental union in the world, namely, the International Telecommunications Union.

(Mr. Colt de Wolf, ITU)

I think this indicates that although the Union is the oldest existing intergovernmental union, it is fully aware of the necessity of keeping abreast of all developments in the field of telecommunications. It has done so in the past. It did so with the advent of telephony, radio, television and all the other developments in electronics which are taking place at such a tremendous rate, especially since the conclusion of the Second World War.

Therefore, I feel that the ITU will at all times be responsive to any suggestions that may come either from this Committee or from the General Assembly of the United Nations so that we may all work together towards a common objective: the improvement of outer space telecommunications.

Mr. van der HULST (CCSPAR): There are not many precedents in the history of the United Nations to guide a representative of a non-governmental committee who has an opportunity to make a brief statement at a meeting of a committee of Government representatives. CCSPAR has already co-operated to its very best with this Committee and its Sub-Committees in providing all the data which were requested and by being present, with an observer status, at the earlier meetings of this Committee and at the meetings of its Sub-Committees. It has also helped, in perhaps even a more efficient manner, the work of this Committee by holding its own meetings at which scientists from all the countries in the world met together and discussed their research problems, on which some scientists later had an occasion to advise their own Governments and be present as representatives at meetings of this Committee and its Sub-Committees. I would prefer not to try to enter into the somewhat difficult task of going through the excellent reports which have been prepared by the Scientific and Technical Sub-Committee, by the World Meterological Organization and by the International Telecommunications Union and add notes of importance to the many different important points which are mentioned in these excellent reports. Instead, I should like to use these few minutes by making some remarks on the peculiar character of the scientific non-governmental international organizations in order that the representatives present here may form a very clear opinion of these organizations, which include CCSPAR, and the advantages and disadvantages which may be involved in making use of the services of this committee.

I feel very strongly that I should make the point first that CCSPAR is only one of the committees of the International Council of Scientific Unions. All these unions, and specifically those for world-wide problems such as the International Scientific Radio Union, the International Astronomical Union and International Union for Geology and Geophysics, are very keenly aware of the new opportunities involved in space exploration and space tools. In fact, CCSPAR was created for providing a liaison between these unions, as well as the different nations embarking or planning to embark on these new research possibilities. Therefore, CCSPAR was created to contain the representatives of the international scientific unions as well as of the national academies.

(Mr. van der Hulst, CCSPAR)

Generally, in these non-governmental organizations the nations are not represented as such but by the scientific academies, so in CCSPAR the space committees created by such academies of science are represented. As a result, CCSPAR, as well as the international scientific unions, forms organizations which are strictly meant to be and try to remain organizations of scientists.

Scientists among themselves have fewer problems than perhaps the Governments have among themselves, and generally are facing very well defined common in the pursuit of research, and this introduces a natural point of convergence, namely, the correct result. Although occasionally rivalries occur and different methods or schools of thought may prevail in a certain scientific approach, this has never cut very deep, and they can exist as well within one country as within different countries. There is no correspondence at all to the political situation there, they are truly non-political in that respect.

Another consequence is that these organizations have rarely worried much about their own legal status . The idea of an international geophysical year was conceived within the framework of these international scientific unions, and the project was already partly underway before it was even clear who was going to organize this year. Of course, when the project grew it was very necessary to obtain the concurrence, the encouragement and the financial help both of the different Governments involved and of the international specialized agencies, and notably UNESCO and WMO have been of very great help in making the International Geophysical Year a success.

I consider it as a very good omen that so many of the representatives here have spoken highly of their expectations of this new enterprise of the International Year of the Quiet Sun, an enterprise in which CCSPAR is involved as one of the committees and one which we very much hope will give us unique data which have never been obtained before and which will mean a real advance in science.

The further consequence of this, so to say, professional status of a committee like CCSPAR is that it has been kept relatively small on purpose. Many of the people involved have done work in CCSPAR strictly as a part-time

(Mr. van der Hulst, COSPAR)

occupation, in addition to their normal research or teaching jobs. In this context, I wish to apologize on behalf of COSPAR that it has not produced a beautiful report to this Committee on its own activities. We have been very much occupied by a meeting, with a very heavy schedule, which was held in Washington last spring. It takes some time to prepare a report containing all the recommendations and resolutions and to implement these by correspondence of a semi-official and sometimes of a very personal nature with colleagues all over the world. We are already preparing our next meeting which is to be held in Warsaw next summer. I hope that this absence of a written report to this Committee will be somewhat remedied by the presence of an information bulletin which we send out regularly, and I think that the Secretariat has received many copies of this for distribution. In fact, any information from COSPAR is available to anyone who asks for it, but some of the documents are very bulky.

We are extremely grateful that with our relatively modest aims -- there is, of course, an expanding tendency -- a request for financial assistance has never been made in vain. Our working assumption, I hardly dare say this, has been generally that whenever the scientific manpower could be found to do a certain job, then the money could also be found. This is not true in all walks of life, and it may not be true at all times, but as a rule of thumb it has worked. COSPAR has been cautious of not expanding too rapidly into very vague tasks. We have embarked upon a few specific tasks. We have prepared the COSPAR International Reference Atmosphere, which is a set of tables of densities and temperatures in the upper atmosphere which has been opened up by sounding rockets and satellites for scientific research.

(Mr. van der Hulst, COSPAR)

We have a report on polar cap stations. We have a list of optical tracking stations. We have further plans which have already been mentioned in the report of the representative of UNESCO.

We are very grateful for the suggestion made earlier this evening by the representative of the United Arab Republic that, rather than give vague tasks to COSPAR, an effort should be made to try to find specific tasks which may be within its competence. In that case we shall be very grateful to assume the tasks and also to receive the money which may be necessary to carry them out.

In summarizing, COSPAR -- and again I wish to say that I speak also on behalf of the International Council of Scientific Unions and all the bodies represented within it -- is very eager to co-operate with your Committee and to answer any specific requests for assistance, information or working papers. I sincerely believe that progress towards world co-operation in space exploration, which is the aim of COSPAR and of this Committee, will be best helped if all such requests or suggestions can be made in such a form as not to impair the particular character of COSPAR as a professional committee of scientists.

The CHAIRMAN: I have no further speakers for this meeting. Tomorrow morning we shall hear the last two speakers in the general debate and one representative who wishes to exercise his right of reply. With these three statements, the general debate will be terminated. We shall then continue the consideration of item 4 of our agenda. I should like to remind members that we shall also have a meeting tomorrow afternoon. I would urge members to be here promptly so that we can begin the meeting at 10.30 a.m.

The meeting rose at 10.5 p.m.