

(Mr. Fedorenko, USSR)

that success in the elaboration of basic international legal principles in this field is not utterly remote. The Soviet Union, for its part, will spare no effort to attain this goal which, we are convinced, is the common aim of all Member States represented in this Committee, as well as of all Member States of the United Nations.

The meeting rose at 4.37 p.m.

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COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

VERBATIM RECORD OF THE TWENTY-FIRST MEETING

Held at Headquarters, New York,
on Tuesday, 12 September 1963, at 3 p.m.

Chairman:

Mr. MATSCH

(Austria)

1. General debate (continued)
2. Report of the Scientific and Technical Sub-Committee:
reports of WMO and ITU

GENERAL DEBATE (continued)

Mr. FAHMY (United Arab Republic): The delegation of the United Arab Republic cannot but share the views of the representatives of the United States and the Soviet Union when they said that the Outer Space Committee has really convened in an unprecedented atmosphere, unprecedented in the sense that it is not only the first time in more than a decade that the two big Powers have signed an international agreement of extreme importance, but also because it is an agreement of direct impact on the work of this Committee and its basic objectives for the peaceful co-operation and exploration of outer space. The Moscow Agreement already had its effect felt in this hall through the conciliatory statements which we have heard from the representatives of the United States and the Soviet Union.

If I recall this fact at the very beginning of my brief statement, I do so not because I believe that all our problems are solved, but because of my delegation's belief that behind those two statements there is a sincere and real desire for co-operation.

As we all know, the United States took the first step on 26 July, when it submitted to the Soviet Union certain proposals in connexion with the remaining issues on our agenda. We commend this initiative, together with the very encouraging response which came from the Soviet Union during Ambassador Fedorenko's statement.

So we expect that during 1964 the meeting of the Outer Space Committee, and in particular its Legal Sub-Committee, will be more fruitful, and an agreement on a set of general principles to enhance peaceful co-operation in outer space will be unanimously approved so that a regime of law can be developed on a firm and sound basis.

I do not believe that it is fitting in this session to reopen in detail either the conclusions of the Scientific and Technical Sub-Committee or the various issues with which the Legal Sub-Committee was engaged.

As to the report of the Scientific and Technical Sub-Committee, we generally approve its recommendations because it will ultimately lead to the attainment of

(Mr. Fahmy, United Arab Republic)

the basic objectives which motivated my delegation in submitting its proposals regarding the training and exchange of information, and promotion of the peaceful uses of outer space.

We take particular cognizance of the recommendation to establish the launching facilities of sounding rockets. We hope that the Committee will recommend the Indian project from which we hope nationals of many countries will benefit.

Similarly, we agree to the recommendations regarding the training of specialists in the field of space research.

Before I comment on one of the main recommendations of the Scientific and Technical Sub-Committee, I have to state that the general impression of my delegation regarding the whole report of the Scientific and Technical Sub-Committee is that the recommendations are so wide and drafted in such a general way that, I am afraid, they will not help in assessing how these recommendations could be really implemented. For this reason, my delegation believes that the Secretariat, with the facilities at its disposal, should be asked to prepare working papers on each of these recommendations. In these working papers we expect the Secretariat to outline how, in its judgement, these recommendations could be implemented. The Secretariat, no doubt, will not fail to consult with the other specialized agencies and international organizations like COSPAR. In addition, these working papers should be circulated two months before the next meeting of the Scientific and Technical Sub-Committee; otherwise, we do not see how the Scientific and Technical Sub-Committee could proceed further if the necessary material is not before it for examination.

Now, Mr. Chairman, with your permission, I would like to revert to the concern expressed by the Scientific and Technical Sub-Committee regarding the dangerous experiments in outer space. This unanimous concern of the Scientific and Technical Sub-Committee was based on a genuine fear as to the safety of outer space. There is no doubt in our minds that the test-ban agreement will help in alleviating a part of this fear, but because of the legitimacy of our concern about the safety of outer space some agreement should be accomplished on how outer space can best be used solely -- and I stress the word "solely" -- for peaceful purposes.

(Mr. Fahmy, United Arab Republic)

This fundamental issue, as you may have expected, will force me once again to reiterate one of the basic principles which the United Arab Republic has presented to this Committee, namely, the use of outer space solely for peaceful purposes.

It was evident during the meetings of the Legal Sub-Committee that this proposal was supported by many delegations from all over the world. It was supported because it provides, in a vital area like outer space, the security which mankind is yearning for. This principle was proposed with a deep sense of responsibility, and it is the firm belief of my country that this new field of outer space should be an area of co-operation, and not an arena of competition in the arms race. Outer space should be kept a healthy and clean area, and not an area full of nuclear weapons, weapons of mass destruction, or military bases.

For these reasons, we cannot concur with the view that no agreement on the peaceful uses of outer space can be achieved unless the disarmament question is solved.

We realize that there is a relationship, but it is a relationship similar to that which exists between the various problems which face the world. Any activity in our daily life has direct or indirect impact on the military problems of mankind.

For these reasons, we will, at the proper time, demonstrate as clearly as possible that no set of general principles, no regime of law in outer space can be of real significance to mankind unless we admit that we are co-operating for the sake of peace and that no weaponry of any kind is left looming in outer space.

The members of the Committee may recall that the Mexican delegation to the Eighteen-Nation Disarmament Conference in Geneva submitted specific proposals on this subject. We believe that the adoption here of a set of general principles containing all the principles on which we agree, in the form of a firm declaration from the General Assembly, would undoubtedly facilitate the discussions either in Geneva or elsewhere.

Now I believe that what we can do at this session is to complete our report and bring it up to date so that it records the auspicious atmosphere to which I referred earlier in my statement.

(Mr. Fahmy, United Arab Republic)

Similarly, we should agree on our time-table for 1964, and in this connexion I have in mind the next session of the Legal Sub-Committee which we believe should take place in February of next year.

Thirdly, we agree to the establishment of a panel or panels of legal experts, a proposal which was originally proposed by the Austrian delegation, and supported by many delegations, including the delegation of the Soviet Union in its statement two days ago.

Mr. Chairman, with your permission I cannot conclude without registering once again that it is very important for us to grasp this felicitous atmosphere which the Moscow Agreement provided us, and proceed in a businesslike manner to make co-operation and collaboration in the peaceful uses of outer space a reality, a reality which was made possible not only by the Moscow Agreement, but by the Dryden-Blagonravov Agreement. This agreement as Ambassador Plimpton rightly said in his statement, "is a matter for general congratulations because the real beneficiary is all mankind."

Mr. MARSCHIK (Austria): The Austrian delegation would like to comment briefly on the reports submitted to us by the Scientific and Technical Sub-Committee and by the Legal Sub-Committee.

We have received once again an encouraging report from our Scientific and Technical Sub-Committee. We had noted with much satisfaction that the work of this Sub-Committee under the fine leadership of its Chairman, Dr. Martin of Australia, is proceeding smoothly and that the Sub-Committee has been able to agree unanimously on a number of recommendations for increased international co-operation and co-ordination in outer space activities, recommendations which I am sure this Committee will have no difficulty in endorsing.

Compared to the spectacular advance of technology in the conquest of outer space and compared to the encouraging progress in the work of our Technical Sub-Committee, it is somewhat difficult to suppress a certain disappointment when reading the report of our Legal Sub-Committee. In spite of the efforts of its members, and of its excellent Chairman, Professor Lachs, the Legal Sub-Committee was once again unable to report agreement in substance. Nevertheless, the report

(Mr. Marschik, Austria)

which we receive this year induces my delegation, for one, to considerable optimism than the first report a year ago.

The Sub-Committee itself reports that its discussions this year had been useful and constructive, and my delegation feels that this statement is more than that, a close study of the records of the discussions seem to show that the Sub-Committee did in substance achieve even more progress, and that at greater agreement than seems at first glance to be reflected in its report.

It is apparent that the various proposals submitted to the Sub-Committee have already demonstrated substantial areas of agreement. The evolution of the discussions in the Legal Sub-Committee only confirmed this impression. In fact, opinion appears to have been unanimous that international agreements should be concluded on the question of liability for damage caused by space vehicles and for assistance to space vehicles and their personnel in case of distress. On the subject of a draft declaration of basic principles, should be the following: That international law and the principles of the United Nations Charter should govern the activities of States in the conquest of outer space; that outer space and celestial bodies should be free for exploration and use by all States, and that all States have equal rights in this field; that sovereignty could not be acquired over outer space or celestial bodies; that States should retain their sovereignty over space launched into space; that States should be liable for damage caused by space vehicles; that assistance should be accorded to space vehicles and their personnel.

On all these points the Legal Sub-Committee had reached virtual agreement in principle.

On several other principles, the Sub-Committee's report shows that agreement has not yet been reached. But my delegation sincerely believes that on almost all as yet unresolved issues an acceptable compromise could be found.

Let me refer, first of all, to the proposed principle that the use of outer space for propagating war, national or racial hatred or enmity between States should be inadmissible. My delegation wonders whether a possible solution could not be found by extending resolution 110 (II), adopted unanimously by the

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Second General Assembly in 1947, and entitled "measures to be taken against propaganda and the inciters of a new war" to the field of outer space. The provisions of this resolution, adapted to the particularities of activities of outer space might enable us perhaps to find the common language which would be acceptable to all countries.

A second point which presented a problem in the discussions of the Legal Sub-Committee was the question whether activities in outer space should be carried out solely by States or whether private initiative could also have its place in the exploration and use of outer space. On this issue my delegation believes that a common ground could perhaps be found in requiring specific government authorization for all non-governmental undertakings in space exploration. This formula, we believe, could reconcile the wish of many countries not to exclude private initiative from the exploration of outer space with the generally acknowledged necessity of maintaining government supervision over outer space activities, this particularly in view of the fact that States and not private individuals or enterprises would have to assume liability for damage caused as a result of the launching of space vehicles.

Thirdly, with regard to activities that might hinder the peaceful use of outer space by other countries, my delegation believes to have detected a flexibility in the attitude of various delegations, and in particular a hopeful development in the designation of COSPAR as a suitable international forum for the discussion and evaluation of the probable results of such experiments.

Thus, there remain, of course, the major differences of view which persist on the question of gathering of information by satellites. Full agreement on this issue will surely be difficult, in view also of the predominantly military character of this problem. We do hope, however, that the necessity of possibly prolonged negotiations on this aspect will not necessarily delay agreement on other issues where such agreement would otherwise be possible.

(Mr. Marschik, Austria)

It appears to us a matter of course that, as international co-operation in the exploration and use of outer space will expand, the proposed declaration of basic principles will be supplemented by a number of further principles on which agreement will eventually have been reached.

My delegation has dwelt upon the various aspects of the work of our Legal Sub-Committee in perhaps more detail than it should have done at this juncture of the discussion. If we have done so, it is because we are convinced that significant areas of agreement do exist now and that the progress of the technology of outer space and the co-operation in the Technical Sub-Committee could be supplemented by equal progress in the legal and in the political aspects of international co-operation in outer space.

It was with these considerations in mind that the Austrian representative in the Legal Sub-Committee had suggested the establishment of informal working or drafting groups, for the purpose of finding the common language in those areas where agreement in substance seems to have been reached. At the Sub-Committee's meeting earlier this year the establishment of such drafting groups has not yet been possible, but we listened with keen interest to the representative of the Soviet Union who, the day before yesterday, announced that his Government would agree to the establishment of one or two working groups for the drafting of the international agreements on liability for damage caused by space vehicles and on the question of assistance to space vehicles and their personnel in case of distress. My delegation considers this fact as a propitious one for the future work of the Legal Sub-Committee. We sincerely hope that agreement will also be reached soon on entrusting a similar working group perhaps with the task of finding the most appropriate wording for those general principles on which agreement seems to have been reached in substance among the members of the Legal Sub-Committee. The Legal Sub-Committee will thus, for the first time since its inception, be able to proceed from a general exchange of views to the actual drafting of legal instruments, the task for which it was primarily created.

(Mr. Marschik, Austria)

My delegation believes that several statements made during the present session of our Committee will have a positive influence on the future work of our Sub-Committees, and I would trust that this development will be reflected also in our report to the General Assembly.

Mr. HAY (Australia): This session of our Committee is being held in the wake of significant agreements which augur well for our future work. Previous speakers have already referred to the advantages of the nuclear test ban treaty, which not only has affected the work of this Committee directly by largely removing, for instance, the threat of harmful effects in outer space from nuclear explosions, but also has had an indirect effect on the atmosphere in which the discussions of the various subjects are being continued. Australia joins with all here in welcoming this development wholeheartedly.

Another agreement of moment to this Committee and its work is that embodied in the first memorandum of understanding to implement the bilateral United States of America-Soviet Union space agreement of 8 June 1962. That memorandum and related documents have been circulated as Assembly document A/5482, dated 26 August 1963. The Australian delegation has studied it with interest and looks forward to being informed of the practical results which will flow from implementation of the various programmes agreed on in the memorandum.

Perhaps not in the same category, but of even more direct interest to this Committee, is the series of agreements embodied in the report of our Scientific and Technical Sub-Committee, under the continued chairmanship of Dr. D.F. Martyn. This report, like the Sub-Committee's 1962 report, is modest in its scope, but in the view of the Australian delegation we should not be too concerned about that. Indeed, it is remarkable how much, in its short life, the Sub-Committee has been able to accomplish on the scientific and technical side, especially given the natural limitations imposed on our work in that sphere. The Scientific and Technical Sub-Committee's report attests to this accomplishment. It is true that three of the five headings under which the Sub-Committee's recommendations fall can be found in last year's report, but even under those three headings there have been useful advances. Perhaps it may be useful if I indicate briefly what the Australian delegation believes those advances are.

(Mr. Hay, Australia)

Paragraph 11 of the Sub-Committee's report calls attention to the unanimous agreement reached in previous Assemblies that Member States be requested to supply information on their national space programmes, and invites those Member States that have not yet done so to provide that information. That, in our view, is an important recommendation which reaffirms the desirability of keeping Member States, through the United Nations, up to date with what other countries are doing in this area -- and that notwithstanding the fact that a number of Member States transmit similar reports to COSPAR.

It might be asked why such information should be sent both to COSPAR and to the United Nations. In our view there are two answers. In the first place, COSPAR is a body of very limited membership, and not all delegations have ready access to its reports and proceedings. Secondly, the purpose of the two reports is slightly different, if only because the United Nations reports reach and are designed to serve a wider and not so strictly scientific audience. In any case, to be of most use information supplied to the United Nations should be as comprehensive as possible. It follows that the very large gap which exists in the information supplied to the United Nations at present is a serious one, especially in view of the useful recommendation in paragraph 14 of the Sub-Committee's report that a summary of national and of co-operative international space activities be prepared for circulation to Member States.

Another useful advance under the heading "Exchange of information" is contained in paragraph 13 concerning the preparation of a working paper on the activities and resources of the United Nations, of its specialized agencies and of other competent international bodies relating to the peaceful uses of outer space. The number of international bodies doing work connected with outer space is now quite large, and if we in this Committee are to discharge our task properly it is important that we should be able to keep informed on the activities of those bodies. We therefore welcome this recommendation which we suggest might take the form of bringing up to date a very comprehensive section on this subject in the 1959 report of our predecessor, the Ad Hoc Committee on the Peaceful Uses of Outer Space.

(Mr. Hay, Australia)

Before leaving the recommendations under this heading, perhaps I might be allowed to draw the attention of the Committee to the Sub-Committee's understanding, recorded on page 72 of document A/AC.105/C.1/SR.12-20, that on approval by our Committee of the Sub-Committee's recommendations under this heading the Secretariat, without need for further authorization, would forthwith produce for consideration by our Committee the paper referred to in what is now paragraph 15 of the Sub-Committee's report, the summary referred to in paragraph 14 and the list referred to in paragraph 15.

Under the next heading, "Encouragement of international programmes", there is again nothing particularly new. The recommendations in this section are, however, important as a further indication of our concern to encourage international organizations and Member States to take continuing steps in those two areas -- communications and meteorology -- where outer space can perhaps be of the most immediately practical benefit. It is, I think, appropriate to note that the encouragement by this Committee, endorsed by the General Assembly, has had very practical effects. I refer particularly to WMO and ITU, both of which have paid close regard to resolutions 1721 (XVI) and 1802 (XVII) adopted by the General Assembly.

(Mr. Hay, Australia)

Both WMO and ITU set up special groups to assist them in formulating proposals and decisions on matters to which the General Assembly had suggested that they might give close consideration. This is not to suggest that WMO or ITU would have failed to act in the absence of these Assembly resolutions, as is quite apparent from the reports that the recommendations of this Committee of the General Assembly have indeed encouraged them in the discharge of their new responsibilities arising from the opening up of outer space.

In this connexion I should like to draw special attention to the forthcoming Extraordinary Radio Conference to be held in Geneva in October of this year. The decisions taken at this Conference will be of great importance to members of this Committee and I hope that it will be possible for the Secretariat to arrange for us to be kept informed of the outcome of the Conference's deliberations.

The third heading, "International Sounding Rocket Range Facilities", can be found in last year's report. But here again advances have been recorded. In particular, the Sub-Committee, in its recommendations under this heading, has taken a step further the procedures for according United Nations sponsorship to the sounding rocket range at Thumba. Australia agrees that it would be appropriate for five scientists to visit the station when it is fully operative and to advise this Committee on the acceptance of United Nations sponsorship in accordance with the basic principles approved by us in 1962.

Another new and important recommendation under this heading is that invite COSPAR to review the geographic distribution of sounding rocket launching facilities and to advise the Scientific and Technical Sub-Committee from time to time on desirable locations and important topics of research. Sounding rocket ranges are the first step taken by any country into space and it is important not only that there should be developed a comprehensive grid, so to speak of sounding rocket ranges around the world so that no important areas are neglected but also that the opportunity be left open for the smaller States to take this step into space with the encouragement of the United Nations. It may be, for example, that COSPAR, in conducting this review, will come to the conclusion that while the Northern hemisphere is reasonably well served by existing sounding rocket ranges, work on existing ranges in the Southern hemisphere could be expanded and supplemented. For example, it seems possible that it might be used

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to have a sounding rocket programme co-ordinated with the forthcoming International Indian Ocean Expedition.

I now turn to the two new headings in the Scientific and Technical Sub-Committee report: Education and Training, and Potentially Harmful Effects of Space Experiments.

Australia accepts all the recommendations on Education and Training and, in so doing, we pay tribute, first, to the valuable initiative in this Committee by the United Arab Republic, which prompted our consideration of this subject, and, secondly, to the efforts of all those scientists in Geneva who worked so long and hard to draft recommendations of real use and importance. It was not due to them that their original recommendations were reduced in scope very considerably by the objections of one of the great space Powers. The recommendations now before us are undoubtedly useful, but the original draft recommendations were rather wider and more positive. The Australian delegation still does not fully understand why the original recommendations were not found completely acceptable. Australia in no way discounts arguments in this Committee stemming from considerations of national security in relation to training at national rocket ranges, but we find it hard to see why this consideration should have prompted objections to any reference in the recommendations on Education and Training to the possible role of international agencies in helping to satisfy the training requirements of the smaller countries. The Australian delegation can only join with those many delegations which, at Geneva, deplored the cutting down of the original recommendations on this topic. What is left is still useful, however, and we hope that the Sub-Committee's recommendations will be only the beginning of a new fruitful development.

In this connexion, may I draw attention to the Sub-Committee's understanding, recorded on page 67 of the document which I have referred to, that the information referred to in paragraph 24 (a) of the Sub-Committee's report would be sought from the Member States of the United Nations, from the member States of the specialized agencies, and from regional and international organizations. I take it that this understanding, like the one previously referred to in connexion with the exchange of information recommendations, will also, in the absence of objections, be the understanding of this Committee.

(Mr. Hay, Australia)

On Potentially Harmful Effects of Space Experiments, the Australian delegation feels that the Sub-Committee very properly confined itself to an expression of scientific interest in and concern about this problem, drawing our attention to the existence of the COSPAR Consultative Group on the potentially harmful effects of space experiments and to the fact that this group's assistance is available to members of COSPAR, the International Scientific Unions and bodies of the United Nations, and to inviting our attention to the urgency and importance of this whole problem.

The Australian delegation shares this interest and concern, but, like the Scientific and Technical Sub-Committee itself, believes that the question of how to prevent potentially harmful interference with the peaceful uses of outer space is a political and legal matter falling within the province of this Committee of its Legal Sub-Committee.

This brings me to the report of the Legal Sub-Committee (A/AC.105/12). Unfortunately, here there are no recommendations whatsoever. That report did, however, hold out some hopes of progress. It indicated that while differences of view remained on particular principles, there were others on which there were no differences of views or on which there had been a certain rapprochement of certain points of view. Furthermore, the Legal Sub-Committee recommended that the delegations taking part in its work should continue their contacts and exchanges of views before this session of the parent Committee. Unfortunately, there has not been much opportunity for these consultations in the months since the Legal Sub-Committee's session. Only two members of the Committee have found it possible to get together, and even they exchanged views only a few hours before this Committee began its present session. For this reason, as well as the limited though important, nature of that contact, it was our view at the beginning of this session that the only remaining hope of incorporating meaningful legal recommendations in our report to the General Assembly lay in reaching quick agreement amongst ourselves during the course of this week.

The Australian delegation accordingly listened with particular attention to the statement of the Soviet representative on Monday, and we have since studied closely the text of that statement in its English translation. We hoped to find in it an indication that it might be possible for this Committee to accept the fact of certain disagreements on general legal principles, but to adopt a report

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embodying those elements in which agreement does exist. For, in Australia's view, as was stated by the Australian representative in the Legal Sub-Committee on 25 April of this year, this would have a double advantage. First, it would record progress by the Committee, so confirming our continued usefulness and avoiding any necessity for the General Assembly to take matters into its own hands or to make other arrangements for the continuation of the work. Secondly, it would secure the least possible delay in seeing to it that Member States, in the conduct of their activities in outer space, have adequate guidance from the international community whose interest those activities so closely affect.

The Soviet representative's statement does in fact confirm once again that it has by no means a closed mind. For its part, Australia welcomes this renewed Soviet willingness to accommodate itself to the views expressed around the Legal Sub-Committee table at the April session. Australia, like many other countries, had itself made compromise suggestions at that session on various draft general legal principles and we are hopeful that this evident anxiety on all sides to avoid rigid positions will shortly lead to useful agreement.

We are particularly glad to note the Soviet Union's list of legal principles which, in its view, seem to have won general acceptance, and we wonder whether the Soviet Union would now be ready to spell out in some way, in our report to the General Assembly, those principles on which there are no differences of views.

We also particularly welcome the Soviet statement that it does not object to the establishment of one or two groups of experts to elaborate draft agreements on Rescue and Return and on Liability. Here again we hope that this advance can be recorded in our report to the Assembly.

(Mr. Hay, Australia)

Having said this, however, my delegation must record its disappointment that the Soviet Union, if we understood it correctly, continues to insist on a number of principles which at least in their existing form are not generally accepted. I cite as one example the Soviet draft legal principle which, at least as presently drafted, in effect gives each State a veto over the outer space work of all other States. The Australian delegation, for one, continues to think that such a provision in these terms would be unwise in principle and unworkable in practice. For our own part, we continue to prefer the suggestion made by the Australian representative in the Legal Sub-Committee in April that consideration be given whether a duty of international consultation in the event of a proposed activity which the State thinks may be potentially harmful could not be linked explicitly with having regard to the international procedures currently available, with the Consultative Group of COSPAR.

Turning now to our own Committee's programme of work, I think it has become apparent that, in the twenty-four hours available for us to complete our report, it will simply not be feasible to do much more than bring paragraph 11 of the Legal Sub-Committee's report up to date in the light of the advances made at this meeting. Nevertheless, even this would be well worthwhile, and we would hope that the Rapporteur will be able quickly to produce an agreed form of words giving effect to this. However, in the view of the Australian delegation, there would be many advantages in continuing, between now and the First Committee's consideration of our report at the General Assembly, contacts and exchanges of views among all of us, with a view to reaching, if possible, some more concrete agreement to put before the First Committee. This could be done in a variety of ways. We do not think it is necessary for the Committee to attempt to lay down precisely how it should be done, though we would suggest that the wider the circle of contacts and the range of consultations, the more likely will progress be made. The views of the two great space Powers are indeed of great importance, but others in this Committee have a very real interest in general legal principles either because they are now or potentially launching States themselves or because what is done or not done in space can affect every Member State whatever its size or resources. Moreover, each of us here has not only individual interests to preserve but also individual contributions to make.

(Mr. Hay, Australia)

Finally, I suggest that the experience of this Committee in the last two years has proved the impracticability of holding the Committee's pre-Assembly session so close to the opening of the General Assembly. Both this year and last, restrictions of time have prevented us from doing all that we might and should have done. I would suggest, therefore, that serious thought be given next year to holding this session of the Committee not later than August, and perhaps even in June or July. I quite realize that this would involve various considerations, including the relationship of this Committee and its Sub-Committees to the Economic and Social Council and of the Economic and Social Council's consideration of the ITU and WMO outer space reports. But if we are not to be disrespectful of the General Assembly and disappointing not only to the United Nations but to all its Members, it is, in my delegation's view, incumbent upon us to ensure that we give proper consideration to discharging the very important responsibilities placed upon this Committee by decision of the General Assembly.

Mr. CSATORDAY (Hungary): Since the second session of the United Nations Committee on the Peaceful Uses of Outer Space, held in September 1962, many remarkable events and developments have occurred and taken place in the complex field of outer space activities. Presently, at the fourth session of our Committee even a short review of these activities on behalf of the participating States and the international organizations concerned as well, may present a significant record for the last year.

Space research and flight experiments which are actually conducted nowadays by the Soviet Union and the United States have become symbolic of our age indicating the tremendous progress in science and technology marked, among others, by the names of the excellent Valentyina Tyereskova, Valery Bikovszky, Gordon Cooper, and so on.

However, the commendable progress in science and technology of space research as well as that of the other related branches of human knowledge are rightly regarded by all mankind as its own for the sake of present and future general betterment in the lives of men on our planet. From this point of view my

(Mr. Csatorday, Hungary)

delegation welcomes the encouraging signs of continued co-operation in the peaceful exploration and utilization of outer space between the Soviet Union and the United States as expressed in document A/5432, containing the "First Memorandum of understanding to implement the bilateral space agreement of 8 June 1962".

We hope that the implementation of this accord will be beneficial to international co-operation in this field generally and will further the scientific space endeavours for the benefit of all of mankind.

The collaboration of the scientists of the two countries in space exploration may and actually should be accompanied by the co-operative efforts of statesmen, politicians and diplomats in order to bring about a better atmosphere of understanding and friendship among the peoples of the world.

It is gratifying to note in this Committee of ours too that the conclusion of the Moscow "Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water" has invited so many favourable reflections and is considered to call for further repercussions in our work generally.

This has been manifested in our Committee too when the representatives of the two great Powers, the Soviet Union and the United States, delivered their statements, full of encouraging evidence as to the future perspectives of our deliberations.

From this point of view my delegation warmly welcomes the very constructive statements of the delegation of the USSR at our last session and hopes that the study of those proposals will result in a favourable reply on behalf of all the members of our Committee.

Lastly, I would like to mention and express my delegation's appreciation of the work done by the competent United Nations specialized agencies in the field of outer space activities, two of which, the WMO and ITU, have presented their second reports for consideration by our Committee.

The report of the Legal Sub-Committee, as contained in document A/AC.105/12, indicates in the summary of results that "a very useful and constructive exchange of views has taken place" which led in its turn to "a certain rapprochement of points of view" with regard to a definite group of problems.

(Mr. Csatorday, Hungary)

However, taking into consideration the present circumstances, one should emphasize not only a certain rapprochement but also definite progress towards the identification of views. The fact that the discussions in the Legal Sub-Committee have been mainly concentrated on the basic legal principles governing the activities of States in the exploration and use of outer space seems sufficient to indicate the importance which has been given by the members of the Sub-Committee to that really significant item.

From this point of view, the consensus of opinion of the members of the Sub-Committee that the basic principles should take the shape of a declaration is a valuable one. My delegation, like many others, favours the treaty-type document with legally binding force.

(Mr. Csatorday, Hungary)

It does not seem necessary to reiterate in detail my delegation's position on the problem of basic principles. Therefore, I should like merely to state that my delegation continues to be disposed to support that kind of approach to the legal regulation of exploration and use of outer space which is aimed at creation of a comprehensive system of political and legal guarantees ensuring the interests of the whole of mankind, as well as the freedom and equality of rights for all the States. The declaration to be signed should reaffirm the applicability of the United Nations Charter and the generally recognized principles of international law to outer space. It should also state the responsibilities and obligations of States as to co-operation and mutual assistance, as well as to obtaining prior agreement of other countries concerned upon any measures that might in any way hinder the exploration or use of outer space for peaceful purposes. It flows from the spirit of our whole work that the instrument should finally safeguard outer space from being used for propagating war, national or racial hatred, as well as for the collection of intelligence information in the territory of foreign States.

One can note with satisfaction that in the present circumstances a rather large area of these problems seems to be agreed upon, or to be near an agreement, if both sides show a positive approach in the manner demonstrated in the opening meeting of this session.

The Sub-Committee dealt shortly with two specific issues too, namely the rescue of astronauts and space vehicles making emergency landings, and liability for space vehicles accidents. It has been agreed that the relevant instrument should take the shape of international agreements.

That is why my delegation is presently prepared to move forward with the proposal of the Soviet Union, seconded by other delegations, to create expert groups in the Legal Sub-Committee for further elaboration of the relevant instruments for the legal regulation of outer space problems and thus try to expand the areas of our agreement on outer space matters.

In the opinion of my delegation now, we are facing new circumstances and the divergencies have narrowed enough to allow us to concentrate our efforts to facilitate the outcome of unanimity on every major issue concerning the basic principles. I fully agree with the representative of the United Arab Republic

(Mr. Csatorday, Hungary)

who said that in the future we can expect more fruitful work in our Committee. We are of the opinion that we shall be able to elaborate precisely those paragraphs on which agreement has already been reached in principle; and concurrently we have to seek agreement on the disputed points.

With regard to the reports of the Scientific and Technical Sub-Committee, we must congratulate it on the results of its work, as well as on the ways and means it applied in attaining those achievements in the course of its deliberations. After thorough study and consideration my delegation is prepared to approve the report as a whole, as well as its recommendations concerning the exchange of information, encouragement of international sounding rocket facilities, education and training, and finally, potentially harmful effects of space experiments.

My delegation hopes that this Committee too will give thorough consideration to the recommendations contained in the report and will approve it unanimously.

There have been two problems which could be of special interest to our Committee: Firstly, in the course of the debates many delegations have rightly emphasized the close interrelations, the necessity of co-ordination between the two Sub-Committees and the two fields in general, as well as the desirability of simultaneous sessions.

Secondly, my delegation would like to express its satisfaction that the Sub-Committee has dealt with the harmful effects of space experiments. This initiative was taken there by the delegation of India. These recommendations undoubtedly are of great importance because they represent a significant step toward the general elimination of all the harmful and dangerous experiments in outer space. It is the policy of my country that outer space should be used for peaceful purposes and therefore all actions which are dangerous in any sense -- politically and physically as well -- should be effectively prohibited and thus eliminated from outer space. As the representative of the United Arab Republic stated, outer space should be an area of co-operation which should contribute to the strengthening of peace.

The second report of the WMO and that of the ITU has been already noted in these debates by many speakers. Actually, these specialized agencies, among

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others, are successfully implementing the relevant provisions of General Assembly resolutions 1726 (XVI) and 1802 (XVII). Their work could be of great help and assistance to all the countries which are interested in co-operation on an international level to comply in technical fields with tasks promised in the endeavours and feasible for the present time.

International co-operation in outer space research and related fields is steadily widening. My country also has associated its efforts on a regular basis with those of some of the Eastern European countries, to assist within the frameworks of Interobs to make observations on the flights of the space stations launched by the USSR. We are gratified to note that our humble contribution to this practical field is considered useful and promising.

The interests of international co-operation guided my country when a competent scientific organization joined COSPAR in the course of the recent sessions.

Summing up, my delegation is convinced of the fact that we face great opportunities to move forward from the temporary setback of the spring sessions. While expecting fruitful results from the bilateral negotiations carried on by the two "space Powers", it would be erroneous for the other members of the Committee to take a "wait and see" attitude. As in the past, all the work of this Committee could certainly contribute to the successful work of the Committee at present, and in the future as well, in fulfilling our obligations to our parent body, the General Assembly, which expects us to report on our achievements in the field of peaceful use of outer space.

Miss GUTTERIDGE (United Kingdom): My delegation has listened with the greatest attention and very great interest to the statements made so far in our general debate. I hope that I may be allowed to refer in particular to the statements made by the representatives of the United States and the Soviet Union which were made last Monday, 9 September, at the opening of our general debate. It is a welcome, in particular, the recognition by both speakers of the encouraging developments in the field of outer space which have taken place since the last session of this Committee, and of the favourable international atmosphere in which the present series of meetings of this Committee is being held.

Outstanding amongst the developments to which I have just referred is the conclusion of the Treaty banning nuclear testing in the atmosphere, under water and in outer space. The original signatories of the Treaty -- the United States, the Soviet Union and the United Kingdom -- have now been joined by about eighty other States. The Treaty therefore constitutes, amongst its other achievements, a strong affirmation of the desire of all nations that outer space should be used for peaceful purposes, and that the arms race should not extend to outer space. As stated by the British Secretary of State for Foreign Affairs in a speech which he made in Moscow upon the signing of the Treaty, it puts "a brake on the arms race in the nuclear field" and, as Lord Home went on to say, "we are now given a chance to employ our great resources so that men may live more abundantly".

Further steps have been taken during the last few months in the peaceful exploration of outer space. We have followed with the greatest interest the flights of the United States and Soviet astronauts. In referring to the latter I should like to make a special mention of the flight of Vostok VI which was piloted by Valentina Tereshkova, the first woman cosmonaut in the world. I need hardly say that, as a woman, I followed this flight with particular interest which was, I am sure, shared by women throughout the world.

My delegation also recognizes that another notable achievement in the field of outer space is the Dryden-Blagonravov Agreement and the Memorandum of Understanding resulting from it which has been approved by the United States National Aeronautics and Space Administration and the Academy of Sciences of the Soviet Union.

(Miss Gutteridge, United Kingdom)

Of special interest to my own delegation is the intention, in conformity with the Memorandum, of the United States and the Soviet Union to carry out in 1964 a joint experiment on the implementation of long distance radio communications by the use of the American satellite, Echo 2. As has already been mentioned in this Committee, the British observatory at Jodrell Bank will take part in this experiment.

The example I have just given of British co-operation in the field of space research is evidence of the desire of my Government to encourage, wherever possible, the highest degree of international co-operation in the exploration of outer space and its use for peaceful purposes. It is for the same reason that the United Kingdom will be a member both of the European Launcher Development Organisation (ELDO) and the European Space Research Organisation (ESRO).

It is, indeed, only through international co-operation that the majority of individual countries can share in the benefits to be derived from space research. It is because the recommendations made by the Scientific and Technical Sub-Committee in its report are concerned with the furtherance and development of such international co-operation that my delegation whole-heartedly welcomes and supports all those recommendations. We have noted, with particular interest, the recommendation designed to further the progress of the sounding rocket station at Thumba in India. In the context of the exchange of information I may, perhaps, single out for special mention the first recommendation on this subject, and draw attention to the up-to-date details concerning its own space research activities and organizations with which my Government has supplied the Secretary-General of the United Nations and which have been circulated in documents A/AC.105/7 and A/AC.105/11/Add.1.

My delegation also welcomes the reports submitted by WMO and ITU in accordance with resolution 1802 (XVII). Whilst we do not consider that detailed discussion of these reports, which are, of course, of a technical nature, would be appropriate in this Committee, my delegation wishes to emphasize the desire of Her Majesty's Government that all countries, no matter what the state of their development, should be enabled to enjoy the advantages of the important new developments in communications considered in the ITU report. We would once again wish to support the view expressed in the first ITU report that when the

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reliability of space telecommunications has been approved they should be integrated into the existing world-wide networks, and therefore that an immediate task in the technical co-operation field would seem to be the survey of needs and the development of the domestic facilities of member countries.

As all delegations here will remember, there was discussion both in the Legal and in the Scientific and Technical Sub-Committees this year of the subject of the "potentially harmful effects of space experiments". My delegation fully supports the resolution adopted under this heading by the Scientific and Technical Sub-Committee.

I turn now to the report of the Legal Sub-Committee. My delegation particularly welcomes the rapprochement of ideas concerning assistance and return of space vehicles and astronauts and liability for space vehicle accidents which was achieved in the Legal Sub-Committee this year, and we believe that the early conclusion of international agreements to cover these questions is desirable. We have noted with pleasure that the United States and the Soviet Union have both taken steps forward in this direction. The United States, as its representative stated during meetings of the Legal Sub-Committee, is now prepared to agree to the drafting of an international agreement on Assistance to and Return of Space Vehicles and Astronauts, as well as to a similar agreement on the question of liability for space vehicle accidents; the Soviet Union in its turn, as Mr. Fedorenko stated last Monday, is now prepared to agree to the establishment of one or two groups of experts whose task will be to elaborate drafts of these agreements. These steps forward are an encouraging sign, and we believe that an early opportunity should be taken to proceed with arrangements for drafting these agreements.

My delegation also believes that what has already been said in this Committee by the representatives of the United States and the Soviet Union holds out substantial hope that further discussions, at an appropriate time and place, on the two topics to which I have just referred and on other legal issues, will produce fruitful results.

We believe that the meetings of the Legal Sub-Committee this year narrowed the areas of disagreement, and, as stated in that Sub-Committee's report, disclosed

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a number of basic principles on which there were no differences of view. On which there has already been a certain rapprochement of points of view. A number of important provisions on which he considered there to be no disagreement were listed by the representative of the Soviet Union in this Committee last Monday, and he then expressed the hope that "agreement on questions which still remain to be settled may be achieved on the basis of reasonable compromise and mutual concessions".

(Miss Gutteridge, United Kingdom)

It is, however, clear, Mr. Chairman, that in the time which remains at the disposal of this Committee during its present series of meetings further and more complete rapprochement on the questions which still remain to be settled cannot be achieved. Most delegations, like my own, will, in particular, wish to give most careful consideration to Mr. Fedorenko's recent statement. The nature of his statement and of other suggestions which have emerged during our debate increases our belief in the value of further meetings whose purpose will be to discuss the legal issues raised by activities in outer space and also of the desirability of further exchanges of views between all the delegations represented in this Committee.

Finally, I would once again emphasize the belief of my Government that agreement should be recorded wherever it is found to exist. The conclusion of a Test Ban Treaty was not delayed because agreement has not yet been reached on the subject of underground tests. Similarly, we should seek at the earliest possible date agreement on legal topics of a practical nature in the field of outer space. The conclusion of such agreements, and the recording in a suitable form of those basic principles on which agreement already exists or on which agreement, being very near at hand, can be achieved, need not, in the view of my delegation, await the resolution of all controversial questions of a legal nature. It is the hope of my delegation that progress in the legal field will reflect the substantial measure of progress and international co-operation which has already been achieved in other areas of outer space.

The CHAIRMAN: Since no one else wishes to speak in the general debate, in order to save time and with the consent of the Committee, we might proceed temporarily, to item 4 on our agenda. Such a procedure has often been followed in United Nations bodies. We can resume the general debate tomorrow morning because there are four delegations wishing to participate in it who are not yet prepared to speak or have expressed the wish to speak tomorrow.

REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE: REPORTS OF WMO AND ITU

Mr. BLAGONRAVOV (Union of Soviet Socialist Republics) (interpretation from Russian): The Soviet delegation would like to make a few comments on the report of the Scientific and Technical Sub-Committee.

In our statement in the general debate we expressed our favourable view of the work which has been done by that Sub-Committee, in spite of the various difficulties which we also mentioned. The Sub-Committee, in its report, devoted its attention to the question of the popularization through United Nations channels of information on achievements in the field of the peaceful exploration of outer space. The new scientific discoveries and achievements in space, as in other fields in science, start off by being the property of a limited group of scientists and research workers. In the early stages it is sometimes difficult to evaluate the importance of the success of the progress made and to provide opportunities for practical use of this research. Nevertheless, as new discoveries appear, and as the scope of research widens and more and more countries and research workers become involved in it, space science is arousing much greater interest among the public in many countries. This interest is of a practical nature because broader avenues are opened up for the use of scientific research in space in raising the standard of living and of well-being throughout the world.

The Sub-Committee adopted a recommendation that the Committee should compile a periodic booklet on the achievements of States in the peaceful exploration of outer space and the activities of international organizations in this field, together with the compilation of lists of bibliographical publications and summaries of literature on space research.

The Soviet Union, for its part, will submit to the United Nations Committee on Outer Space short summaries on peaceful research into space for the period which has just elapsed, bearing in mind that this material will be used for the popularization of achievements in the peaceful exploration of outer space.

With regard to the exchange of scientific information of a more specialized nature in national scientific research in space, the Sub-Committee recommended, as a useful channel for this exchange of information, COSPAR and the World Data Centres for Rockets and Satellites. As we see it, this is the most practical expedient at this stage of space research for an exchange of scientific results of space exploration.

(Mr. Blagonravov, USSR)

In addition to submitting to COSPAR annually a national report on the research done by the USSR, the Academy of Sciences also submitted the reports of many Soviet scientists on the latest results of their research. Many scientific reports on space research done in the Soviet Union, using sounding rockets and inter-planetary stations and satellites, are submitted annually by Soviet scientists at scientific symposia and conferences: for example, the one organized by the International Astronautical Federation and other international scientific associations connected with research in space, for the exchange of scientific information. Exchange of various types of scientific publications with different scientific institutions is also proceeding at the World Data Centre in Moscow.

In order more widely to distribute scientific information and to acquaint scientists of many countries with the scientific literature on questions of space, the decision of the Committee on the publication of a list of bibliographical sources of references on problems of space would be of very great value. We also think that it would be useful to expand the work in this field and to consider the question of the publication of a periodical international manual in English, French and Russian. The publication of such a manual in those languages could be entrusted to UNESCO and COSPAR and, for the publication of such a manual, Member States of the United Nations would submit to the Committee on Outer Space summarized bibliographical data and brief annotations of publications on the questions mentioned.

On several important space problems, we think that it would be useful to publish from time to time a joint scientific manual. For example, when a new branch of science connected with man's conquest of space by astronauts is opened up, that is worthy of deep attention. To conquer space, man must learn to live and work in it. Cosmonauts now have to work in space for several days at a stretch, and every year the length of time that a man can remain in space will increase. It is a humane and noble task on the part of scientists to guarantee the security and safety, from the point of view of health, of those people who remain in space for longer periods. For this, it is essential also to explore the secrets of space biology.

(Mr. Blagonravov, USSR)

In this connexion we propose the question of the publication in 1964-1965, under UNESCO or COSPAR, with the support of the United Nations of a comprehensive work of two or three volumes on the basis of bio-astronomy. This question should be considered. This will be a summary of research information which has been accumulated in the past decade in this field. In order to compile this publication it will be possible to set up on the recommendation of the Scientific and Technical Sub-Committee a collective of authors comprising the leading scientists and specialists in various countries in this field. The work should be published also in English, Russian and

In contrast to last year in the report of the Scientific and Technical Sub-Committee, there is a section on the potentially harmful effects of space experiments. This is a very important question and the solution of this question will determine the success or failure of many scientific research programs in space.

In the recommendations of the Sub-Committee we find mention that: "... humanity, alarmed by the potentially dangerous effects of such space experiments, is trying to have scientific assurances that such space experiments will not lead to harmful negative changes in outer space, nor will they have bad or negative effects on other experiments in space."

The Scientific and Technical Sub-Committee in its report recognizes the need for a very meticulous preparation and conduct of experiments in order to avoid the potentially dangerous experiments, and draws the attention of the Committee to the urgency and importance for the solution of the problem of averting such potentially dangerous experiments.

After the conclusion of the Moscow Treaty, which bans tests of nuclear weapons in outer space, favourable conditions are being created for solving the question of other potentially dangerous experiments in space. The Soviet delegation considers it essential once more to stress the importance of a complete solution of this question that prevents the arbitrary holding of research and experiments which might involve or entail harmful consequences

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the work of other scientists in space. The Soviet draft declaration, which contains the principles for space activity which is before the Committee for consideration, provides for the specific solution of this question. The Soviet delegation considers that the carrying out of measures in space which might hamper research or the peaceful uses of space by other countries, can only be carried out or achieved after a preliminary discussion and international agreement. Such a solution would be universally approved by scientists who are concerned with prompt and rapid progress in space research and would remove the unjustifiable feelings of alarm of the rest of humanity about possible harmful effects of such experiments in space.

A number of very useful and interesting recommendations were prepared by the Sub-Committee on the report of the World Electro-Communications Union. International collaboration in the field of the use of artificial satellites is substantial, one can even say revolutionary, improvement of the means of long-range communication is absolutely essential. Everybody recognizes this. And useful measures in order to organize such collaboration on a wide international basis is also made up by the International Union.

The Sub-Committee thus for this reason proposes to recognize that the recommendations of this organization should be borne in mind in the creation of an international system of space communications. This system obviously should be made available to all countries without any discrimination.

The Soviet delegation attaches great importance also to the interesting recommendations made by the Sub-Committee on this score. For the practical organization of long-range communications by satellites, many technical and organizational problems will have to be overcome. One of these is the distribution of radio wavebands for communication in space and through space. We hope that a solution for this will be found at the next conference of the Commission which will begin its work in Geneva.

At this session of our Committee we are summing up the work done by a large number of international organizations in the field of international collaboration and the peaceful study and use of space for the period which has elapsed. In this connexion we ought to point out the activity of the

(Mr. Blagonravov, USSR)

World Meteorological Organization. The reports submitted by this organization were prepared as a result of a creative and fruitful collaboration by a group of scientists from a number of countries, approved by the Fourth Congress of the WMO. It contains the different basic trends of the great programme of scientific research connected with the use of artificial satellites for meteorology. In order to have an effective use of satellites for weather forecasting, especially for long-term weather forecasting, a great amount of scientific research work must be done on the strata of the atmosphere, the atmospheric phenomena, and in connexion with solar activity, etc. This extensive programme of scientific research can be carried out rapidly and fully successfully only if scientists of many countries collaborate together closely.

The Scientific and Technical Sub-Committee attaches great importance also to the activity of COSPAR as the international organization which unites the scientists of many countries working in space research. I think that we can point out with satisfaction that at its last session COSPAR also considered the recommendations of the Scientific and Technical Sub-Committee carefully and worked out a number of measures which might prove useful for its connexions and links with the United Nations.

In conclusion, I should like to express my hope that the Scientific and Technical Sub-Committee in its future activity will give even fuller and more complete help to this Committee.

The CHAIRMAN: Is there any other member who wishes to take part now in the discussion of item 4? Of course, any member will have the opportunity tomorrow, after the conclusion of the general debate, to make a statement on item 4. The discussion has shown that several members have already elaborated in detail on some of the issues of the two Sub-Committees. If no member is ready to speak now on item 4, with the permission of the Committee, I would now invite the representative of ITU to make a statement.

Mr. GROSS (International Telecommunication Union): ITU members of the Committee have already received and have had in hand for some time the report which I have here, prepared by the ITU in response to the resolution for the attention of this Committee and also for the Economic and Social Council. It has been in the hands of all members of the Committee for some little time. In order to save your time I shall not attempt to review again what is in this report. What I should like to do, after listening with great attention to the speakers who have preceded me, is to look a little into the future and consider where we are going in the field of space communications.

(Mr. Gross, ITU)

Immediately looming on the horizon is our worldwide extraordinary administrative radio conference for Space communications which, as has just been stated by the last speaker, will start in Geneva on 7 October of this year, that is, some three weeks from now. We hope at that conference to lay the basic foundations for frequency allocation and, at the same time, adapt and perhaps modify the international radio regulations where required in order to co-ordinate and give adequate protection to space communications for the foreseeable future. As a result of early work in the field of outer space, the whole fascinating field covered by this Committee, beginning in October 1957 when Sputnik I went up, and later the Vanguard, the Vostoks and the Mercury flights, we have now made a good start in the functional and operational problems involved in the operation of these vehicles.

In the communications field, there have been the experiments with Echo, Telstar, Relay and, more recently, Syncom, which, as the members of this Committee know better than I do, is the communications satellite not in synchronous orbit, or almost in synchronous orbit, so that it approximates the speed of the earth somewhere over the northern part of Brazil, travelling in an orbit of approximately 22,000 miles or 30,000 kilometres. These experiments have shown the possibilities that do exist in this field. It is true that so far the work has been largely experimental, and it is also true that at this time we do not know what the final system will be for communications satellites, because we still have a great deal to learn. But I am happy to say that, as in the case of Sputnik, Vostok and Mercury, these experiments to which I have just referred have been successful.

It is important, in view of these early successes and the possibilities for operational use some time in the foreseeable future that we plan adequately now for the proper co-ordination and for the rational and economic use of the frequencies involved in these communications satellite systems which will be used.

The problems before the October Conference of the ITU have been delineated in the agenda which has been reported to this Committee, and which I shall not take your time now to repeat. The members are familiar with the agenda. It is for the most part framed round the urgency of providing adequate frequencies for space communications. Later on it will be necessary, of course, to consider other aspects of these problems, and this will develop as the problems develop.

(Mr. Gross, ITU)

The Economic and Social Council when it considered some of the problems urged upon Member Governments the importance of full participation on a universal and worldwide basis by all governments in this conference in order to ensure its success, and I would hope that this distinguished and important Committee will take an equally firm stand so that we may have at that Conference the best minds in the world to help to solve problems the vastness of which is still unknown to us because the whole communication policy of the world ten or twenty years from now may be shaped by some of the decisions which will be made, beginning with our first conference in October this year.

I know it is getting late, and I do not want to take up too much of your time. You also expect to hear from my colleague of WMO, so unless there are questions at this time I will conclude. I would be happy to answer any questions you might have.

Mr. JOHNSON (World Meteorological Organization): In May of this year I had the pleasure to present to the Scientific and Technical Sub-Committee of this Committee on the Peaceful Uses of Outer Space, a statement concerning developments in this field in the World Meteorological Organization during the past year. The Secretary-General of the WMO, Mr. Davies, is unable to be in New York today, and has asked if I could again represent the organization in your deliberations here.

The members of the Committee will remember that in response to General Assembly resolution 1721 (XVI) the WMO prepared the "First report on the advancement of atmospheric sciences and their application in the light of developments in outer space". The so-called "first report" has become a truly basic document in WMO circles, and contains the outline of forward looking plans and programmes for the advancement of the atmospheric sciences, especially with respect to the new possibilities afforded by the advent of meteorological satellites. This Committee considered the first report at its session in September of 1962, and endorsed it favourably to the General Assembly, which eventually adopted the now familiar resolution 1802 (XVII). Resolution 1802 (XVII) notes with appreciation the prompt initial response of the WMO to resolution 1721 (XVI) and, in addition, contains several important decisions

(Mr. Johnson, WMO)

and requests. In particular, WMO is requested, in consultation with other interested organizations, to develop in greater detail its plan for an intensive programme to strengthen meteorological services and research, with emphasis on artificial satellites, education and training. The WMO is further requested to report to the Committee on the Peaceful Uses of Outer Space and to the Economic and Social Council on steps taken relating to these activities.

In response to this request for further reporting, the WMO has now prepared the second Report on the Advancement of atmospheric sciences and their application in the light of developments in outer space. This report is intended as a status report, and has been prepared subsequent to the important decisions of the recent quadrennial WMO Congress. The report was submitted to the Economic and Social Council at its summer session in Geneva, where it was received favourably and commended to your Committee and to the General Assembly.

Before discussing the report itself, it may be useful to summarize briefly the particular steps taken by WMO in order best to meet its responsibilities in the field of outer space. As a result of resolution 1721 (XVI), the WMO Executive Committee established an ad hoc working committee on the research aspects of meteorological satellites. This Committee was composed of outstanding scientists in the atmospheric sciences, and it held two successful sessions.

The meteorological satellite has already demonstrated that it can provide vast quantities of unique types of data which should contribute greatly to the solution of problems in the atmospheric sciences. At the same time, it has reaffirmed the need for improvements in networks of observing stations that provide the more conventional types of weather information. Thus, the satellite has provided a stimulus and hope for further improvements in all aspects of global networks. The ad hoc committee therefore discussed a broad spectrum of research problems which can now be tackled as a result of these expanded sources of information. It recommended that the WMO Congress establish an advisory committee on a permanent basis and suggested revised terms of reference. These terms of reference direct the attention of the new committee to research, education and training, and operational problems. Heretofore, the operational aspects -- as distinguished from research -- have been considered by an Executive Committee Panel of Experts on Artificial Satellites. This panel has

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made specific recommendations in the fields of observing networks, communications, and long range plans for satellite development.

The first WMO report put forward a new concept of a world weather service, to be composed of the integrated efforts of national meteorological services. All countries would benefit from the vast amount of information becoming available, including that from meteorological satellites and meteorological rockets. This concept has now been identified as the World Weather Watch. It was endorsed by the recent WMO Congress, and is described in some detail in the second report (E/3794) now before you. The idea of the World Weather Watch is exciting and filled with promise. It puts into the planning stage the hopes and desires of meteorologists over many, many years. It is promulgated now because of the impact of vast amounts of meteorological satellite data, which not only contribute to improved knowledge of the atmospheric sciences, but force a reconsideration of our methods of carrying out the day to day tasks of international co-operation in meteorology. We have therefore developed the concept of world, regional, and national centres, all of which will receive the basic unprocessed data needed for their own particular purposes. then will also receive analyses, processed data, and forecasts which can best be prepared centrally at large world and regional centres, where the necessary sophisticated data processing techniques can be available.

The WMO Congress accepted the recommendation to establish a standing advisory committee, composed of eminent scientists, who would advise the organization on research and operational problems. This committee is in the process of formation and should hold its first session before the end of this year. The Committee will have available the reports of the former working groups which provide a good base from which to proceed. Specifically, the Advisory Committee will advise on principal research problems in the atmospheric sciences, including ways of promoting this research, and the other scientific aspects of the objectives set forth in United Nations resolutions 1721 and 1802, including of course education and training.

The WMO Congress recognized that these new observing platforms provide an unprecedented opportunity to atmospheric scientists, and hence a challenge to

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examine in detail the relationships and impact of new data on the whole of weather observation, communication, data processing, forecasting and distribution of analyses, advisories and warnings. This challenge is being met by the establishment within the WMO Secretariat of a new planning office which will be responsible for development of the global plan for the World Weather Watch, for liaison with the United Nations and other agencies concerned, and for continuing efforts to obtain the necessary resources for the implementation of these plans.

Although the WMO has for more than a decade provided substantial assistance through the aid programmes of the United Nations, many urgent requirements have not been met because some types of assistance could not be provided under the terms of reference of the existing agencies, or because insufficient funds were available. In view of this, the WMO has established a new development fund of modest size, which can be used to help satisfy requests of Members for assistance in the implementation of valid projects which cannot be otherwise supported. A plan for the operation and management of this fund has been prepared and distributed to Members of the organization for comment, before consideration by the Executive Committee at its next session. However, even with the assistance for this new fund, it is quite clear that the requirements, particularly for capital investment, will be such that they cannot be met for many years by only the aid of the new development fund. It is therefore necessary to continue increasing effort by national meteorological services and to hope for the award of assistance at an increasing rate by the international aid organizations which have already assisted so generously.

We in WMO feel that the recent WMO Congress was the best we have ever had. New advances in technology have presented us with a fresh challenge. The United Nations has encouraged us to capitalize upon the opportunity for improvement in our knowledge. We have accepted the challenge. A new high level Advisory Committee is established, facilities for planning in this technological area have been authorized, the World Weather Watch is endorsed, and a New Development Fund is established. We have organized ourselves to get on with the task and are proceeding to do so as expeditiously as is possible.

(Mr. Johnson, WMO)

We are convinced that meteorological satellites will continue to make the most practical contributions to man's use of his physical environment on this planet and will provide further encouragement for all nations to support the peaceful uses of outer space technology through the United Nations.

The meeting rose