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Chairman:

Mr. AMADEO

(Argentina)

Report of the Committee on the Peaceful Uses of Outer Space
(A/4987; A/C.1/857) [21]

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AGENDA ITEM 21

REPORT OF THE COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE (A/4987; A/C.1/857)

Mr. STEVENSON (United States of America): The subject before this Committee this morning is outer space -- and what we together decide to do, or not to do, to promote its exploration and use through peaceful co-operation.

This is Year Five in the Age of Space. Already, in four short years, scientific instruments, then animals, then men, have been hurled into space and into orbit around the earth. Within a few more years, satellites will bring vast new developments in weather forecasting and in world-wide telephone, radio and television communications. More than that: rocket booster capacity will become sufficient to launch teams of men on journeys to the moon and to the nearest planets. And, after that, one can only speculate on what may come next.

Unhappily, this astounding progress in space science has not been matched by comparable progress in international co-operation. In the race of history, social invention continues to lag behind scientific invention. We have already lost valuable time that can never be recovered. Unless we act soon, the space age -- like the naval age, the air age and the atomic age -- will see waste and danger beyond description as a result of mankind's inability to exploit its technical advances in a rational social framework. In short, unless we act soon, we shall be making the old mistakes all over again.

Despite the urgent need for immediate international action, I fear that we come to this subject ill-prepared to think clearly about it. I suspect that we are handicapped by our heritage of thought about the affairs of this single planet. We are conditioned to think in terms of nations. Our lives and concepts are predicated upon States whose boundaries are fixed by oceans and rivers and mountain ranges, or by man-made lines drawn sharply across the two-dimensional and finite surface of planet Earth. We are conditioned to think in terms of nations defined by finite areas expressed in finite measurements -- nations with more or less known resources and more or less counted populations. And especially we are conditioned to think in terms of national sovereignties.

(Mr. Stevenson, United States)

Such concepts have no meaningful application to the unexplored, unbounded and possibly unpopulated reaches of outer space, which surrounds no nation more than any other nation and which is innocent of the idea of national sovereignty.

We are further handicapped, many of us, by the impression that the exploration of outer space is a matter of concern only to the great Powers because they alone have the capacity to penetrate space. That impression gains force from the belief that outer space is unrelated to the day-to-day problems of nations whose energies are absorbed by such earthly daily questions as growing enough food to feed their peoples.

This impression, I submit, is totally and dangerously wrong. The smallest nation represented here in the United Nations is deeply concerned with this question before us -- and so is the poorest of our Members. Indeed, they may have far more to gain from the shared benefits of space science -- and on just such matters as growing food -- than the larger and richer societies.

Moreover, the small nations have an overriding interest in seeing to it that access to space and the benefits of space science are not pre-empted by a few nations, that space exploration is not carried forward as a competition between big-Power rivals, that the ideological quarrels which so unhappily afflict this planet are not boosted into space to infect other planets yet unsullied by the quarrels of men.

Finally, all nations can play a part in assuring that mankind derives the maximum advantage from space technology in the here and now and not just in the hereafter. Every nation can co-operate in the allocation of radio frequencies for space communications. Every nation can participate in global systems of weather prediction and communications.

In outer space we start with a clean slate -- an area yet unmarred by the accumulated conflicts and prejudices of our earthly past.

We propose today that the United Nations write on this slate boldly, in an orderly and creative way -- to narrow the gap between scientific progress and social invention -- to offer to all nations, irrespective of the stage of their economic or scientific development, an opportunity to participate in one of the greatest adventures of man's existence.

(Mr. Stevenson, United States)

large and small, which are interested in identifying, tracking and communicating with space vehicles. It could lay the basis for later arrangements for termination of radio transmission and for removal of satellites when their useful lives were ended.

The Secretariat should perform other useful functions beyond those connected with the registry of space vehicles. It could, in consultation with appropriate specialized agencies, maintain close contact with governmental and non-governmental organizations concerned with outer space matters. It could provide for the exchange of information which Governments might supply in this field on a voluntary basis -- supplementing but not duplicating existing exchanges. It could assist in the study of measures for the promotion of international co-operation in outer space activities. Finally, it could make periodic reports on scientific and institutional developments in this field.

It is time to invest the Secretariat with these basic service functions. The report of the Ad Hoc Committee on the Peaceful Uses of Outer Space suggested that some functions of this kind should be performed by the Secretariat. It noted with approval the conclusion of its Technical Committee that

"there is a need for a suitable centre related to the United Nations that can act as a focal point for international co-operation in the peaceful uses of outer space". (A/4141, p. 75)

We believe that this recommendation should be implemented without further delay, making the fullest possible use of existing resources of the Secretariat. We understand that the services specified in this draft resolution can be performed with the addition of a very small number of personnel. The measures taken to carry out the new functions could be reviewed by the Assembly at its next session.

The third part of our proposed programme calls for a world-wide effort under the auspices of the United Nations in weather research and weather prediction.

The dawn of the space age is opening vast new possibilities in the weather sciences. Satellites and sounding rockets have supplemented other advances in meteorological techniques such as the use of radar and electronic computers. They make it possible for the first time in history for man to keep the entire atmosphere in every region and at every altitude under constant surveillance.

(Mr. Stevenson, United States)

This portends a revolution in meteorology -- a peaceful revolution which can benefit all peoples on this earth, particularly in the less developed regions which at present lack adequate weather information. Meteorological satellites hold special promise for the improvement of weather forecasting capabilities in the tropics and in the Southern Hemisphere, where vast oceans cannot be covered by present techniques.

(Mr. Stevenson, United States)

Increased knowledge of the forces that shape the weather will enable man to forecast typhoons, floods, rainfall and drought with greater accuracy. These possibilities will mean the saving of human life and reductions of property damage. They will make possible the more efficient use of limited water resources and enable the farmer to adjust the timing and nature of his planting to the rainfall which his fields will receive. Fishing and grazing will also benefit. Fuels and raw materials can be transported and stored more efficiently with better foreknowledge of the weather.

In short, by making the weather and the events which depend on it more predictable, we can foster progress in industry, agriculture and health, and contribute to rising living standards around the world.

But the enhancement of our knowledge of the weather is only the beginning. In the more distant future looms the possibility of large-scale weather modification. If this power is to be used to benefit all rather than to gain special advantage for a few, if it is to be used for peaceful, constructive purposes, progress toward weather control should be part of a co-operative international venture.

With these exciting prospects in mind, we propose preparatory studies for two co-ordinated programmes in part C of the draft resolution.

The first is an international atmospheric science programme to gain greater knowledge of the basic forces affecting the climate. This will yield information essential for improved weather prediction and eventually for possible weather modification.

The second is an international meteorological service programme. The aim of this programme would be to enable men everywhere to reap the practical benefits of discoveries in basic weather science. Under this programme, steps could be taken leading to the establishment of a global network of regional weather stations located in less-developed as well as developed areas of the world. Weather information obtained from satellites could be transmitted directly to such centres or communicated indirectly after receipt in other areas of the world.

The concept of regional meteorological centres is already accepted and being applied in the Northern Hemisphere, where there are five such centres serving regional needs for weather communications and analysis. The needs of the tropics and the Southern Hemisphere are now being studied. There is, for example, a plan for establishment of an international meteorological centre in Bombay in connexion with the four-year International Indian Ocean Expedition.

(Mr. Stevenson, United States)

To put such a world weather network in operation will require co-operative efforts of many nations. The World Meteorological Organization, called WMO, has played an important role in supplying technical assistance in the training of weather technicians, particularly in less-developed areas. We believe this activity of WMO should be continued and strengthened in the future. National and international suppliers of capital can help finance the establishment of centres in countries which cannot afford them. Nations which have developed weather satellites can make the weather information available freely for use in this system.

So far as the United States is concerned, we stand ready, here and now, to make the weather data received from our satellites available for such a global system. In fact, we are already making such data available to other countries. We are developing methods which would permit direct transmission of satellite cloud photography to any part of the world. If this is successful, the way will be opened for a marked increase in the timely availability of useful data.

The fourth part of our space programme looks toward the establishment of a global system of communications satellites.

Space technology has opened enormous possibilities for international communications. Within a few years satellites will make possible a vast increase in the volume and quality of international radio, telephone and telegraph traffic. In addition, something new will be added -- the possibility of relaying television broadcasts around the globe. This fundamental break-through in communication could affect the lives of people everywhere. It could forge new bonds of mutual knowledge and understanding among nations. It could offer a powerful tool to improve literacy and education in developing areas. It could support world weather services by speedy transmittal of data. It could enable leaders of nations to talk face to face on a convenient and reliable basis.

The United States wishes to see this facility made available to all States on a global and non-discriminatory basis. We conceive of this as an international service. We would like to see United Nations Members not only use this service but also participate in its ownership and operation if they so desire.

The United Nations Organization itself stands to benefit directly from the use of satellites both in communicating with its representatives around the world and in disseminating programmes of information and education. As an example of

(Mr. Stevenson, United States)

the potentialities of such use, we hope to have before long an experimental satellite which will transmit across the Atlantic, for brief periods, live television excerpts of debates in the General Assembly.

In preparation for these developments, the United States proposes that the International Telecommunications Union consider the various aspects of space communications in which international co-operation will be required. This will assure all Members of the United Nations a fair opportunity to express their views. It is particularly important that the necessary arrangements be made for the allocation of radio frequencies for space communications.

In order to enable less-developed countries to participate in effective use of satellite communications, the Expanded Technical Assistance Programme and the United Nations Special Fund should give sympathetic consideration to requests for assistance from less-developed countries to improve the state of their domestic communications.

The principles I have mentioned are embodied in part D of the draft resolution now before you. If implemented with dispatch, they could help to clear the way for co-operative use of a world-wide system of satellite communications.

The fifth part of our programme seeks to put new life and new responsibilities into the Committee on the Peaceful Uses of Outer Space.

As we all know, this Committee was established two years ago for an indefinite period by resolution 1472 (XIV) with a continuing mandate to study programmes on peaceful uses of outer space which might be undertaken under United Nations auspices, to study the legal problems which might arise from the exploration of outer space, and to plan an international conference for the exchange of experience in the exploration of outer space.

We propose that, in addition to the responsibilities laid down in this original mandate, the Committee should review the activities provided for in this draft resolution and make such reports as it may consider appropriate. In the four previous parts of the draft resolution, we have specifically noted the role the Committee could play in studying the legal problems of outer space, in reviewing the service arrangements undertaken by the Secretary-General, and in examining the proposals for international co-operation in weather and communications.

As my colleagues are aware, resolution 1472 (XIV) provided for twenty-four members of the Committee on the Peaceful Uses of Outer Space elected for a period of two years.

(Mr. Stevenson, United States)

We propose to continue the same membership, augmented by the addition of Nigeria and Chad in recognition of the increase in the membership of African States in the United Nations during the past two years.

Let the Committee make a fresh beginning. Let it meet early in 1962 to undertake its original tasks and its new responsibilities in connexion with these co-operative programmes.

We recognize that activities in outer space are unique in many respects and that international co-operation is a prerequisite to progress. Although we cannot, of course, accept the veto in the work of the Committee, we expect that this work can be carried out in a spirit of mutual understanding. We do not anticipate that the nature of the Committee's work would give rise to differences that could not be resolved by discussion. We hope that, proceeding in this spirit, we can finally put life into the Committee that was created three years ago.

I ask the representatives to bear in mind that with regard to weather and communications, the resolution embodies no commitment to any specific program. It merely calls upon the Secretary-General, in co-operation with the specialized agencies and other organizations, to submit proposals for action. These proposals would be presented to the Economic and Social Council at its thirty-fourth session, to the seventeenth General Assembly, and to the Outer Space Committee.

In short, the resolution in these fields merely clears the way for the deliberate consideration of programmes by Government representatives. Such basic studies ought not be further delayed.

We have sought, in good faith and so far as possible, to present a programme which is above the clash of partisan politics or the cold war. The principles and programmes embodied here bestow no special advantage on any State; they are in the interest of all States. The resolution deals exclusively with the peaceful uses of outer space. The military questions of space are closely entangled with the military questions of earth. We believe that they require urgent study as part of comprehensive negotiations for general and complete disarmament.

(Mr. Stevenson, United States)

This does not mean, however, that the programme of peaceful co-operation that is now before you has no bearing on the issues of peace and war; it does. If put into operation without delay, it can help lay the basis for a relaxation of tensions and facilitate progress elsewhere toward general and complete disarmament.

I must close with the same thought as that on which I commenced this presentation: we cannot afford to delay. The space programmes of the great Powers are well advanced. Our own nation is proceeding with the development of satellite systems for weather forecasting and communications. In the months ahead important decisions will have to be made. If the opportunity for United Nations action is missed, it will be increasingly difficult to fit national space programmes into a rational pattern of United Nations co-operation.

Our first choice is a programme that makes maximum use of the United Nations for at least three reasons: because it could bring new vitality to the United Nations and its family of agencies; because it would help to assure that all Members of the United Nations, developed and less-developed, could have a share in the adventure of space co-operation; and because a programme of such magnitude should be carried out, so far as possible, through organizations of the world community.

As I say, this is our first choice. But the march of science is irreversible. The United States has a responsibility to make the fullest possible use of new developments in space technology -- in weather forecasting, in communications, and in other areas. These developments are inevitable in the near future. We hope they can take place through co-operative efforts in the United Nations.

I suppose that the great climaxes in the drama of history are seldom evident to those who are on the stage at the time. But there can be little question that man's conquest of outer space is just such a moment, that we -- all of us -- are on stage and that the manner of our behavior now will have a profound impact upon the course of human affairs in the decades ahead.

There is a right way and a wrong way to get on with the business of space exploration. In our judgement, the wrong way is to allow the march of science to become a runaway race into the unknown. The right way is to make it an ordered, peaceful, co-operative and constructive forward march under the aegis of the United Nations.

(Mr. Stevenson, United States)

I most earnestly recommend your serious attention to the proposals my Government is making to this end.

Mr. BROOKS (Canada): The Canadian statement in the general debate on 3 October opened with the observation that at no other time in its sixteen years has the United Nations faced so many large issues, some of which threaten its survival. As our Secretary of State for External Affairs stressed in that address, one of the questions in this potentially fateful category is that of outer space. Mr. Greene emphasized that "unless there is some body of law, outer space could be exploited for aggressive purposes, with greatly increased danger for all nations on this earth."

All of our Governments and our anxious peoples have noted the Soviet claim that new bombs can be produced with a yield equivalent to 100 million tons of TNT and that rockets similar to those used in orbital flights by astronauts can be used to deliver weapons of this fearsome character to any point on the globe. The two greatest Powers, which at this moment in history are alone capable of this giant effort that is required to send satellites into orbit in outer space or beyond, are here on earth postured in tense mutual suspicion and vigorous competition.

All of us must welcome the indications that have been made that neither of these two great States intends a selfish conquest of space. Nevertheless, none of our countries can rest easily while nagging concern remains that the earthly rivalry of these two Powers, and perhaps of other States, may yet be carried into the infinite reaches of the universe.

(Mr. Brooks, Canada)

The spectre of a titanic struggle for mastery of space fills the most complacent of us with foreboding for the future. It is that spectre which has prompted the Prime Minister of Canada, on many occasions over a number of years, to assert that "outer space must be available for peaceful purposes for all nations great and small, and outlawed for every military use. An international ban should be placed on the mounting of armaments on orbital satellites and no planet or body in space should be appropriated by any nation."

I do not believe that there is any dispute as to the urgency and importance of our concern for outer space. It has been said in this room that, whatever we may or may not decide under item 21, outer space will still be where it is -- the implication being that there is no need to hurry.

I understand why comments of that kind were made at the time and in the context of their presentation, but I am persuaded that even those who felt it necessary to use that argument at that time and in that context themselves fully recognized United Nations concern to be not with outer space as such, but with the use which mankind has now begun to make of it.

Mankind's activities in outer space must be regulated by observed rules in the interest of all. This would help to ensure that the great positive achievements of man's conquest of space will not also add a new and potentially dangerous dimension to the tensions dividing the nations of our planet. The rule of reason and law in this infinite new field can bring infinite benefits to man. That is the challenge which we face in the United Nations. If we fail to meet the challenge of wisely ordering man's activities in space, another measure of certainty may be added to the growing possibility that the days of life on planet Earth are numbered. If we are successful in meeting it -- and, we ask, why should we not succeed? -- our planet may yet face the universe with unity of purpose and effort. We may thus assure our children's children a new horizon of beckoning promise, perhaps the most significant ever to be envisioned in the unfolding destiny of man.

Quite obviously, the problem of outer space has two main facets. It has a military and security aspect which represents, in a sense, its essentially negative side. Military and security considerations, however, are not our immediate concern under item 21.

(Mr. Brooks, Canada)

We have spent many weeks discussing disarmament in general and, in particular, nuclear weapons and rockets which carry them through outer space. Both the United States and the Soviet Union plans for disarmament contain provisions to prevent the use of outer space for war-like purposes. If disarmament negotiations are resumed, we might hope that agreement could be reached to prohibit military use of outer space under effective international safeguards. This is an objective which Canada will pursue vigorously.

I have said that our immediate concern under item 21 is with the other more positive facet of our problem, namely, the exclusively peaceful uses of outer space. In this regard our objective is not only to head off international rivalry in outer space before it has become too serious for us to control; our efforts must be directed to the early development of international cooperation in all phases of the exploration and use of outer space. Co-operation, not competition, must as always be the watchword of United Nations involvement in the problem of outer space. Only by achieving co-operation will it be possible to avoid the extension of present rivalries into this new field and to ensure that the exploration and use of outer space will be only for the betterment of mankind and to the benefit of States irrespective of the stage of their economic or scientific development.

I have borrowed freely from the preamble to resolution 1472 (XIV). In the light of these fundamental considerations, the General Assembly, by that resolution, set up the Committee on the Peaceful Uses of Outer Space. At the fourteenth session it proved to be exceptionally difficult to reach common accord on the composition of the Committee. Nevertheless, after diligent and lengthy examination of this contentious issue, a number of delegations, including that of Canada, succeeded in evolving acceptable compromises on the question of membership and on the terms of reference of the Committee. As a result, resolution 1472 (XIV) was adopted without opposition.

In company with most other countries, Canada had great hopes that, after the initial period of hesitancy, the United Nations would at last be able to expedite its important work. To the very deep regret of Canada, agreement would not be reached on the designation of officers for the Committee and for the international conference which it was expected to prepare.

(Mr. Brooks, Canada)

As time passed, a further element of discord began to assume greater importance. That was the Soviet insistence that all action in the Committee on Outer Space, in its proposed scientific and legal sub-committees and in the executive of the proposed international conference, must be on the basis of unanimity. In effect, this was a demand for the right of veto over progress in any of the vital directions along which the Assembly had unanimously urged the Committee on Outer Space to proceed as quickly as possible. Thus, despite unopposed acceptance of the composition and unopposed recognition of the importance and urgency of the Committee's responsibilities, no progress was in fact made through 1960 and most of 1961.

As far as Canada is concerned, this was an intolerable and seriously disturbing situation. In our view, the working arrangements of the Committee were clearly governed by the applicable rules of procedure of the General Assembly. We cannot accept that the views of one or two countries should prevent the meeting of the Committees which the General Assembly has seen fit to appoint. This is especially so in a field of such vital concern to all nations as that of outer space. Canada is deeply convinced that the world community cannot long afford to permit the responsibilities of the United Nations in respect of outer space to remain unattended. It has, therefore, been one of the countries pressing consistently for a meeting of the Committee on Outer Space. We were very gratified that the Committee did in fact, at long last, meet on 27 November. We were also glad that all its members attended. That was good, and very encouraging. In the time available, attention could not be given, in the Committee on Outer Space, in any meaningful way, to the substantive question within its terms of reference. Nevertheless, the meeting of 27 November served to emphasize two points of exceptional significance; in the first place, it reinforced the view that the authority of the General Assembly in creating a committee must be respected, whether or not all its members are in full agreement as to the arrangement for the conduct of its business; secondly, the discussion in the committee served once again to emphasize the widely shared concern of all countries for the importance and urgency of United Nations action in the field of outer space.

(Mr. Brooks, Canada)

My delegation trusts that it will now be possible for the General Assembly once again to set on its assigned road the Committee on the Peaceful Uses of Outer Space, with a renewed determination to overcome all obstacles in the way of its contribution to the early achievement of international co-operation in the peaceful exploration and uses of outer space.

(Mr. Brooks, Canada)

As my colleagues here are aware, resolution 1472 provided that the initial term of office of the twenty-four countries listed in the first operative paragraph would continue only to the end of 1961. Having in mind the great difficulty entailed in the selection of these countries in 1959 and recalling that one of the main criteria for their selection was the contribution which each could be expected to make, the Canadian delegation is strongly of the opinion that the membership of the Committee for the years 1962 and 1963 should again include the same twenty-four countries. At the same time it is desirable to take account of the increases in the membership of the United Nations since 1959. My delegation would, therefore, favour adding to the Committee two African countries chosen from among those admitted to the United Nations in recent years.

When matters of this kind were discussed at the fourteenth session, the Vice-Chairman of the Canadian delegation drew attention to the fact that informal exchanges among scientists constitute the ideal in international co-operation. He observed that the success in any United Nations activity in this area should be measured partly against its usefulness in promoting further collaboration among scientists. He went on to say:

"It is clear that there are large areas of activity in space research that must ultimately become the responsibility of the United Nations, if only because activities in space are outside national boundaries and therefore raise legal and regulatory problems that can be settled amicably only in an international organization. It seems to my delegation that the unique contribution to be made by the United Nations lies in these areas.

"However, to suggest that there are certain regulatory functions which are appropriate for the United Nations is not by any means to suggest that the United Nations itself should have the overriding responsibility. It is clear that some of the specialized agencies in their respective fields have a role to play. In their relationships to one another ... in the outer space field, it is desirable to avoid the competition which has posed difficulties for the United Nations in ... other fields. There is a danger otherwise that much useful energy may be expended to little profit and we consider that the right basis for co-ordination must be established at an early stage. This is one of the questions which should be looked into at an appropriate stage in the discussions of the new committee." (A/C.1/PV.1080, page 41)

(Mr. Brooks, Canada)

My delegation believes that the points then made by the Canadian representative are still valid today.

For the coming period, the Committee's original mandate, amplified by any decisions we may now take, should continue to provide a useful framework for fruitful work. Within the broad area of international co-operation the Committee would be expected to foster research and to encourage mutual exchange of scientific and technical information. It would also be a helpful step forward in this regard if there were a means of recording, and eventually distributing, information supplies by States on the wide variety of their space ventures. There is much that can be done in the meteorological and telecommunications fields in respect of which the Committee might be able to play a worth-while part. Furthermore, we would hope that the Committee would now be able to lay the groundwork for a successful international conference which could in turn greatly contribute to the exchange of experience of all States in the peaceful uses of outer space.

The scientific and technical matters to which I have referred are among the important questions on which early progress towards international co-operation could be achieved. However, in the view of my delegation, the legal aspects of the peaceful uses of outer space provide the United Nations with the opportunity to play an even more significant role, especially in the long term. Certainly it is imperative that the world community recognize that international law, including the provisions of the Charter, applies to all of mankind's activities in outer space. It is also equally essential that there should be universal acceptance that outer space is free for peaceful exploration and use by all States whatever their strength or size, and that no nation or group of nations can lay claim to appropriate outer space or any planet or celestial body it contains. I do not think any country would dispute that this is now the case. Indeed, the public statements of Mr. Khrushchev and President Kennedy on these matters have encouraged my delegation to hope that there will be no opposition to these principles. None the less, to record these principles in a United Nations resolution would be to take an immediate, significant and non-controversial step towards the orderly development of man's activities in outer space. That is, of course, our essential objective.

(Mr. Brooks, Canada)

My delegation is aware that there will be no little difficulty in working out the details for the practical application of these principles to the peaceful uses of outer space by man. These and other matters of a legal nature, including the question of legal liability for damages which might be occasioned by outer space activities, merit early and thorough consideration in the Outer Space Committee. Considerable scientific and legal studies will be required before even the lower boundary of outer space can be defined with a desirable degree of precision. The Outer Space Committee can also make a contribution to this important task in consultation with ICAC and other international bodies. However, even in the absence of precise definitions of this sort, it is still as possible as it is desirable to make substantial progress on the exhaustive studies which must precede the formulation of detailed rules specifically applicable to the peaceful use of outer space.

My delegation is co-sponsoring a draft resolution which, I feel sure, this Committee will carefully study. Its provisions reflect the considerations and the preoccupations of my Government in regard to outer space, as I have sought to indicate in this intervention. Moreover, my delegation is confident that the fundamental aims which we and our co-sponsors are advancing in this draft resolution will echo very closely those which motivate nearly all the countries represented here. I am hopeful, therefore, that by endorsing the proposals in this Committee it will be possible for the General Assembly to reaffirm its continuing concern for orderly progress in outer space. The draft resolution seeks to set in train preliminary activities in a few fields in which the primary responsibility for operational and administrative matters reside outside the Committee. At the same time, the Committee is asked to address itself vigorously to its part in relation to these matters and the other tasks assigned to it by General Assembly resolution 1472 (XIV).

If we can do this much at this time, my delegation believes that the sixteenth session will have taken a big step forward. In so doing, we cannot fail to earn the approval of peoples all over the world who have been watching with admiration not unmixed with apprehension, the accelerating pace of man's exciting conquest of outer space.

The CHAIRMAN (interpretation from Spanish): Before calling on the representative of the Soviet Union I wish to draw the attention of the Committee to document A/C.1/L.301 which has just been distributed. It contains a draft resolution submitted jointly by the delegations of Australia, Canada, Italy and the United States, and deals with the subject that the Committee is now considering.

Mr. ZORIN (Union of Soviet Socialist Republics) (interpretation from Russian): The political Committee is today examining the question of the peaceful uses of outer space. For centuries man has dreamed of the possibilities of leaving the earth to penetrate the secrets of space, and of other worlds. This dream is reflected in myth, legend, in poetic and literary works. This age-old dream has finally become a reality. On 12 April 1961 the first cosmonaut, a citizen of the Soviet Union, Yuri Gagarin, in his sputnik "Vostok", circled the globe and landed in the prescribed area. The first window into space was opened not so long ago -- hardly four years ago -- and so much has been done since then. Step by step science and technology has solved ever more complex problems in the field of the conquest of space. One can judge this by the launching of the heavy sputniks in various orbits, the flight to the moon and then around it, the photographing of the moon's unseen side, the flight of an automatic interplanetary station to Venus, the launching and landing of multi-ton sputniks with animals, the flight of Yuri Gagarin and the lengthy trip into outer space which followed -- that of the second cosmonaut Gherman Titov -- all these show that the day is not far removed when space ships directed by man will blaze interplanetary trails towards the moon, Mars and Venus.

Wide perspectives are open to humanity, for the conquest of space and flights to the various planets of the solar system. American science has also had considerable success in space exploration. It has successfully launched rockets with a man on board over a distance of 300 miles and at an altitude of 115 miles. As a result of scientific exploration of space man's concept of the atmosphere around the earth and of numerous characteristics of our planet has been changed radically. These investigations have made it

(Mr. Zorin, USSR)

possible to increase our knowledge of the composition of the atmosphere, of its temperature and of its density, and have revealed the existence around the earth of a radiation belt. They have enable us to study nature and to explain the origin of cosmic rays. It has become possible to better study the radiation of the sun and the ultra-violet rays in the atmosphere.

Valuable information has been gathered on the distribution of radio waves in space. Importance experience has been garnered on the creation of a system of far-ranging radio communications, and the possibility of successfully using solar energy for sputniks and cosmic rockets.

The flight of man into space is of enormous significance for the further development of science. The animals sent in the sputniks were passive objects of investigation. The cosmonaut is an active helper of science in the further work of the conquest of the space, and the development of inter-planetary communications. For the first time in history scientists find it possible to study the state of a man after, and during a long period of weightlessness; and the work of the space ship and its system through the cosmonauts themselves, Yuri Gagarin and Gherman Titov, who were the first to see the earth as a planet, were able to verify many hypotheses, superstitions and premises. They saw that the sky was black, that stars did not twinkle, and that the earth was slowly moving. They saw the solar fire. The first cosmonauts underwent a reduction in weight, and even experienced its complete disappearance.

The conquest of space will increase our knowledge of mankind in many fields of science, and will enable scientists to solve many problems concerning the origin of life on earth. The penetration of man into space will enable him to learn whether there is life on neighbouring planets in our solar system, if so what stage of development it has reached and so on. At the present stage of cosmic investigation the use of sputniks and other space ships is of great interest for scientific research, and also for the solution of many secondary tasks which are of very great importance for the national economy of various countries. One can safely state that the widening horizons of science, and man's penetration of space open new possibilities for increasing the well-being of humanity, and will thus redound to the benefit not only of highly-developed countries but also newly-developing States such as those of Asia, Africa and other continents.

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What are the practical tasks that can be solved by the use of sputniks? Scientists consider that the use of sputniks for communications will radically alter communications and television. The creation of several sputniks, at altitudes of about 36,000 kilometres with a 24-hour orbit around the earth would ensure general links and relays, for radio and television broadcasts. From the economic point of view, this system is more advantageous than a complicated system of radio relays on earth. These permanent sputniks of our planet, orbiting with great accuracy, will serve to give orientation to, and solve the navigation problems of, ships and planes. A system of sputniks circling the earth at lower altitudes might furnish constant information on the state of the weather, and for the forecasting of its changes in the higher layers of the atmosphere and in the clouds. Such a system of sputniks will allow a deep and uninterrupted study of those layers of the atmosphere, and space around the earth.

The use of a system of sputniks will also be extremely valuable for astronomical investigations. Space flight opens a prospect of ultra-rapid communications in postal, freight, and passenger communications. With the help of cosmic ships having a speed of several tens of thousands of kilometres an hour, the greatest distance will be covered in several minutes.

Recognizing the very great importance of space investigation for the progress of humanity, the Soviet Union is in favour of having the fruits of scientific work, performed by Soviet and other scientists, become the property of all. The Chairman of the Council of Ministers of the Union of Soviet Socialist Republics, Nikita Khrushchev, when speaking at a meeting in Moscow, held after the successful flight into space of Gherman Titov, said:

"Flying over the continents, a Soviet man has sent our greetings to all the people on earth. A Soviet cosmic space ship has flown through space as a messenger of peace and friendship to all peoples. Our powerful rockets, which are without equal in any country, are used for the solution of peaceful tasks, for the widening of our knowledge of the world. The new information gathered by Soviet science during the last flight into space will become the property of all scientists, of all peoples, and thus will usefully serve the cause of progress for the whole of humanity, and the cause of peace."

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The practical actions of the Soviet Union in the field of the study of space bears witness to the sincere desire of our country to place the fruits of our research at the disposal of the whole of humanity. It is well known that Soviet scientists have given full information on all launchings without exception of sputniks in orbit and space rockets. This allows the possibility of following them in their course for all countries and for using the results of this investigation for the development of science in our world. Soviet scientists participate directly in the work of the Non-Governmental Committee on the study of space, Cospas and the International Astronautical Federation. In recent years these groups have organized several scientific conferences where scientists of various countries have seriously studied all the basic results of space exploration.

Soviet scientific institutions have published a huge quantity of material which was gathered doing the study of the upper layers of the atmosphere of the earth, of inter-planetary space, of the moon and so on.

The launching of sputniks and rockets and other installations into space is the greatest scientific and technological conquest of our time. But this can be used not only for good but also for bad causes. It all depends upon the direction that will be given to the conquest of space and the answer to the question as to whether the activities of States will be directed at solving peaceful and constructive tasks or whether it will serve the goals of destruction, of a rocket and nuclear war or of cosmic espionage.

There are tremendous tasks which humanity has to solve in the field of the conquest of space. The very nature of the problem requires abundant and broad international co-operation in this field. Indeed, investigation and exploration of space is by its very nature an international activity which requires united efforts on the part of all those who are devoting themselves to this task. This is not a problem of investigating certain areas of the world which are interesting only to a given country or a group of countries. It is not even the exploration of our planet as a whole but of the unlimited field which goes far beyond the existing frontiers of states and which interests the whole of humanity.

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The launching of space installations, especially the artificial satellites of the earth and of space rockets, is a complex and very costly affair. Future cosmic space exploration will certainly be on a much broader scale, more grandiose and thus more costly. Given the condition of co-operation among States, the possibility will exist of making more effective and rational the complex investigations of space. Such co-operation is especially important or could be especially important for under-developed countries which are not yet able to investigate space by themselves. The fruitfulness of the co-operation of scientists from various countries is well known within the framework of the programme of the International Geophysical Year, 1957-1959. Experience gathered by the IGY showed that the peaceful co-operation and competition of States, whatever their social system, is wholly possible when problems of interest to the whole of humanity are being solved.

Such co-operation is possible in the most variegated fields, including that of the peaceful uses of outer space. Such co-operation would undoubtedly benefit all people. At the same time the isolated activities of States may be quite harmful to scientific exploration of outer space. In this connexion I must draw the attention of the Committee to the launching by the United States, in the framework of the so-called West Ford Project, of a satellite which was to disseminate 550 million copper needles in outer space. This experiment, which was not agreed upon with anyone else, has given rise to protests from many scientists in international scientific organizations such as, for instance, the International Astronomical Union and the International Scientific Radio Union. The Academy of Sciences of the USSR has protested to the National Academy of Science of the United States in a letter in which it underlined the dangers of such experiments for future trips by cosmonauts.

As many people in this room will recall, the question of the peaceful uses of outer space were examined at the fourteenth session of the General Assembly. At this session, on the initiative of the Soviet Union, a decision was taken concerning the calling under the aegis of the United Nations of an international

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conference of scientists to exchange information in the field of outer space exploration. With the active participation of the Soviet Union an agreement was reached on the creation of the United Nations Committee on the Peaceful Uses of Outer Space.

Two years have elapsed since then. Tremendous successes have been achieved in the field of the conquest of outer space. We can say that this progress is using seven league boots. Scientific collaboration among non-governmental organizations is developing and the United Nations, which, so it seems, should play an important role in this field is lagging behind. Why is it that the United Nations has in practise not done anything in this field? It would be useful to recall that when the question of outer space was examined at the fourteenth session of the General Assembly, the Soviet delegation stressed that fruitful co-operation in the field of the exploration of outer space was possible only if such co-operation is based on the principle of the full equality of all participants, when equal conditions are created for all those who desire to bring their contribution to this common cause and when no one advances claims for a privileged position.

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It is well known that at present only two powers, the Soviet Union and the United States of America, are able to penetrate deeply into outer space and to explore actively the fields of outer space. It is clear that fruitful international co-operation in the field of the exploration of outer space cannot exist if it is not based on agreement first of all between the Soviet Union and the United States.

I would like to recall in this connexion that the well-known scientific organization, the International Committee on the Investigation of Outer Space, has been established taking due account of this important element. Its successful work for over two years clearly shows that there is the possibility of reaching agreed decisions between the Soviet Union and the United States on this important problem.

It is also well known that the International Conference on the Antarctic, in which twelve States participated, based its work on the principle of unanimity, which yielded positive results.

That is why when today the representative of Canada spoke of the difficulty of solving all problems on the principle of unanimity, he was quite incorrect. Experience in international co-operation in a field such as the Antarctic, that is to say a territory which is on this earth, clearly shows that such co-operation on the basis of unanimity is quite possible. If it is possible on questions concerning this earth, why should it be impossible if it has to do with outer space? I do not really understand.

If someone should endeavour to use the noble idea of international co-operation for the selfish interests of a particular group of States, then no real co-operation would be possible. This is why the Soviet delegation, during negotiations with the delegation of the United States on the question of the composition of the Committee on the Peaceful Uses of Outer Space, negotiations which began a few days after the General Assembly decided to create a United Nations Committee on the Peaceful Uses of Outer Space, always supported a procedure which would ensure equitable representation for the three main groups of States participating in its work, in its direction, in its auxiliary organs in international scientific conferences, and in the reaching of decisions by agreement among the interested parties and not on the basis of formal votes.

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However, despite the unstinting efforts of the Soviet Union to solve these problems on an equitable basis so as to embark as soon as possible on the task of engaging in real international co-operation in the field of the exploration of outer space, the United States during the whole period of the negotiations unfortunately attempted to ensure for themselves and their allies of the military blocs an advantageous position in the Committee. The United States has always rejected the principle advanced by the Soviet Union that decisions in the Committee should only be taken by agreement of its members. The United States, in fact, has attempted to retain the possibility of imposing decisions on the Committee through mechanical majorities, basing themselves on numerical advantages in the Committee through membership of the various military blocs.

The attempts of the United States to acquire a preponderant position in the Committee on the Peaceful Uses of Outer Space are completely unfounded from the political point of view and from the point of view of achieving scientific results in the field of the conquest of outer space. I think that this is apparent to all. Yet because of such a position on the part of the United States, it was impossible to organize the work of the Committee on the Peaceful Uses of Outer Space and to call an international conference of scientists for the exchange of information in this field.

The position of the Soviet Union on these matters was stated in detail in the letter dated 14 November 1961 from the permanent representative of the Soviet Union to the acting Secretary-General of the United Nations (A/C.1/857). Despite the fact that up to now all the efforts we made to reach agreement for the establishment of wider international co-operation in the field of outer space have not yielded any positive results within the framework of the United Nations, the Soviet Union still continues to hope that it will be possible to organize such co-operation on the basis of equal rights for all States. Be that as it may, for our part we shall spare no effort to succeed.

I should like to express the hope that during the forthcoming discussion in the First Committee and the General Assembly of the question of the peaceful uses of outer space, agreed decisions will be taken on the course which should be followed in the field of international co-operation and the composition of the

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Committee on the Peaceful Uses of Outer Space, a composition which should reflect the deep changes that have occurred in international life.

With respect to the arguments and the draft resolution put forward by the United States and certain other countries, which was presented this morning by Mr. Stevenson and supported by the representative of Canada, the Soviet delegation will give its views after studying them.

To conclude, allow me to give the assurance to all members of this Committee that the Soviet Union will continue to bend every effort in order to set up the widest possible and most fruitful international co-operation on the basis of the equality of rights in the field of the conquest of outer space in the interests of peace and of the whole of humanity.

Sir Patrick DEAN (United Kingdom): I am grateful for the opportunity, at the outset of our debate on the question of the peaceful uses of outer space, to set out generally some of the views of the United Kingdom Government on this subject and the role of the United Nations in connexion with it. I should like to say now that I may ask to speak later to develop in rather more detail our position on the very substantial resolution which is now on the table before us and on questions which may arise with regard to the continuation of the Committee on the Peaceful Uses of Outer Space. I may also have comments to offer on the statements which we have just heard, particularly that of the representative of the Soviet Union, when we have had an opportunity to consider them carefully.

My purpose this morning is to consider two separate but related topics. The first of these concerns the challenge which we face as a result of the extension of man's knowledge of the regions beyond the atmosphere in which we live. I will have some remarks to make both about the legal and about the technical aspects of the problems and opportunities which arise for the United Nations, and indeed for individual Governments or groups of Governments and the various governmental and non-governmental agencies which have special interests in this subject. Secondly, I should like to speak more particularly of the Committee on the Peaceful Uses of Outer Space and the future which we see for it.

First, the subject of space research and space exploration is so complex, so technical, that even its language is difficult for the layman to master. The technical words and terminology represent real problems which are being tackled in various ways by national or international endeavour. In all of them, no doubt, there is room for further work, and it is becoming increasingly important to make sure that they are getting adequate attention and that any necessary co-ordination of effort is achieved. The fact is that the exploration of outer space has reached the stage where the knowledge which has been acquired, and which will shortly be acquired, can be put to solid use. It is not just a question of a few spectacular initiatives. We are fast approaching the stage at which all mankind will be directly affected by the application of space research and technology. This is why it is now appropriate to consider the sort of questions which are spelled out in the draft resolution before us.

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While some time may be required before techniques are perfected, it is no longer impractical to think of precise weather forecasts giving accurate warning of violent storms or prolonged drought, with all that this warning means to mankind. World-wide communications, too, may shortly be improved beyond all measure through the use of communications satellites. We can hope perhaps -- if "hope" is indeed the right word -- that it will be as easy to speak half-way round the world as it is now to make a telephone call locally. Other practical applications to which we can look forward include the relaying of television programmes, giving a vastly wider range to television services, and the use of satellites for navigation so that ships and aircraft can more surely find their way in safety.

All these activities will certainly require an increasing apparatus of international co-operation. Already serious work goes on in such organizations as the World Meteorological Organization, the International Telecommunication Union, the International Civil Aviation Organization, and also, on the international but non-governmental level, in COSPAR, the space research offshoot of the International Council of Scientific Unions. These various agencies are certainly best qualified to pursue each their particular effort. The expertise they have already built up justifies every confidence that their future endeavours will be a real service to man. But the multiplicity, both of the organizations and the applications, of which I have made brief mention, clearly indicates that the time has come when it would be useful for the United Nations to consider how these various efforts can most usefully be co-ordinated. This, then, is one aspect of the work which, in our view, the United Nations Committee on the Peaceful Uses of Outer Space should undertake.

In approaching discussions in the United Nations forum, Governments will no doubt have in mind also the initiatives which have been taken, or which might usefully be taken, in other less comprehensive groups of States. In saying this, I have particularly in mind the prospect of the early establishment of two organizations with a European membership. The United Kingdom takes great satisfaction in the progress which has been made toward the formation of a European Space Research Organization and a European Launcher Development Organization. Both of these organizations would be precluded by their terms of

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reference from extending their activities into any but peaceful uses of outer space. We expect that the co-operation which should be possible in them will produce real benefits not only to their members but for the enlargement of man's knowledge of space as a whole. Of the greatest value also are bilateral arrangements which permit the application to space research of specialized knowledge and capabilities found in countries which cannot alone mount a complete programme. Under such an arrangement between the United Kingdom and the United States, such progress has been made that we look forward in the near future to having a British research satellite in orbit around the world. My Government also has been very glad and very proud that scientists working at Jodrell Bank have been able to give great help in keeping track of the various space vehicles which have been launched by the United States and the Soviet Union.

Let me now turn to the legal side of the matter. In the view of Her Majesty's Government in the United Kingdom, it is of very great importance that a satisfactory legal regime should be established for outer space and the celestial bodies. This is, however, necessarily a process of evolution, and such a regime must be established step by step. It is still true, as it was in 1959, when the Ad Hoc Committee on the Peaceful Uses of Outer Space considered the legal aspects of this matter, that a comprehensive code of law for outer space is neither practicable nor desirable in the present state of knowledge and development. Indeed, premature codification might prejudice subsequent efforts to develop the law on the basis of a more complete understanding of the practical problems involved. It is, however, possible even at the present time to establish certain broad legal principles, which at the very least must be regarded as injunctions of great weight and as a most important and useful step toward working out a proper legal regime for outer space and the celestial bodies.

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The first of these principles is that international law and, in particular, the Charter of the United Nations apply to outer space and celestial bodies. As was stated by the Ad Hoc Committee in 1959, the United Nations Charter is not limited in its application and operation to the confines of the earth. We believe that this statement has been generally accepted, and that it is common ground among us that international law is not earthbound.

The second of the principles is that outer space and celestial bodies are available for exploration and use by all States in conformity with international law and are not subject to national appropriation by claim of sovereignty or otherwise. This principle is also, we believe, generally accepted. In the context of outer space, the Ad Hoc Committee considered in 1959 that the recognition or establishment of a rule embodying the first part of this general principle, of which the second is necessarily a corollary, had already then been initiated. Developments since 1959 lead to the conclusion that this principle is now firmly grounded in the practice of States and that it applies both to outer space and to celestial bodies.

There are, however, numerous other legal issues which arise in connexion with these general and, we believe, generally accepted legal principles. It must be obvious to us all that these legal issues, many of which are unique and nearly all of which are of great complexity, should be studied with care and that there should be close and continual co-operation between jurists and scientists on the many new legal problems which arise out of activities in outer space and of advances in science and technology. These legal problems must be discussed between Governments as well as at the purely professional level. This should, in our view, be a major part of the task confronting the United Nations Committee on the Peaceful Uses of Outer Space and one on which it should make an early start.

These are the main aspects of the subject as we in the United Kingdom see them. I think I have said enough to show why we are anxious that the United Nations Committee on the Peaceful Uses of Outer Space should begin its work. We regret that it took two years from the time when it was set up for this Committee to meet at all. Still, it has now met, and we hope that in the New Year it will embark upon a programme of substantial discussion.