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COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE  
VERBATIM RECORD OF THE TWENTY-NINTH MEETING

Held at Headquarters, New York,  
on Friday, 30 October 1964, at 3 p.m.

Chairman:

Mr. MATSCH

(Austria)

General debate (continued)

64-26813

## GENERAL DEBATE (continued)

Mr. OSIECKI (Poland) (interpretation from French): The agenda of the sixth session of the Committee on the Peaceful Uses of Outer Space is richer than the preceding ones. We have a certain number of documents and reports on the activities of the United Nations, the specialized agencies and other international competent organs. We likewise have to examine a long list of national activities and international co-operative activities in the field of space research. A study of these documents makes it possible to see that we are doing well and that the process of the conquest of space by man is unfolding favourably in all directions.

Within the context of our brief intervention, we cannot enumerate all the recent facts which deserve the attention of the Committee. However, we cannot overlook an event which constitutes a new stage in the short but glorious history of the voyages by humans in outer space. I am referring to the expedition of three Soviets on board the space-craft VOSEKOD. It is the first time that next to the pilot there were representatives of science and medicine on board, who had an excellent opportunity of making their scientific contribution to the solution of different problems posed by and in outer space. It is to be hoped that their observations and studies will make it possible to enrich our knowledge of the world and will facilitate future collective expeditions.

There is also another fact which I am pleased to mention here because it highlights the role played by my country in the field of space science. On 7 September, the Fifteenth Astronautical Congress met at Warsaw. This Congress, which was organized by the International Federation of Astronautics, and which made it possible to bring together 500 scientists coming from twenty-six countries devoted its work to the study of the moon and the piloting of rockets. The American specialists, Dr. Pickering and Dr. Schurmayer, presented the highly interesting results obtained in connexion with the launching of Ranger-7, which was an important event in the progress of the conquest of outer space. At the same time, the Seventh Legal Conference took place at Warsaw, which was convened by the

(Mr. Osiecki, Poland)

Institute of Astronautical Law, in which thirty-one jurists participated coming from fifteen countries. In the course of that Conference, the legal status of outer space was discussed, and reference was also made to certain problems of space law -- terminology, influence of space law on the concept of sovereignty, a comparative study of air and space law, peaceful collaboration with a view to the conquest of outer space, etc.,

On the basis of the common opinion of those attending the Congress, the Warsaw Congress constitutes an important contribution to the development of space science. The Polish delegation considers that the scientific results and the exchanges of view between eminent specialists of international law are highly useful for the elaboration of new legal documents. Doctrine plays a great role in this field and it is therefore necessary to heed attentively the voice of science if notable progress is to be achieved.

For these reasons, my delegation supports the recommendation of the Scientific Sub-Committee on the gathering of all useful information concerning conferences and meetings dealing with space problems in which scientists from Member States might participate.

I should like to mention another important question -- that of the proliferation of international organizations and of international organs which deal with space problems. The results of their scientific activities continue to increase. The diversity and complexity of studies requires, in our opinion, a certain co-ordination, and even a discussion among all the parties concerned.

(Mr. Osiecki, Poland)

It is because we are convinced of this that we welcomed with satisfaction the recommendation of the Scientific and Technical Sub-Committee, which proposed the organization in 1967, under the auspices of the United Nations, of an international conference on the exploration and peaceful uses of outer space. This conference, if properly prepared, could emphasize the role of the United Nations as a co-ordinating centre for this activity. In addition, it would make it possible to accelerate and examine in greater detail the results supplied by various studies.

My delegation similarly supported the proposal to create at our present session a preparatory committee for such a conference.

Outer space poses problems, the solution of which requires international collaboration in the widest sense of the term. It not only requires the assistance of competent organizations and organs, but it also requires the co-operation of all States. I stress the words "all States" because we are in favour of the universal character of such an operation.

We do not see how it could be otherwise. The conventions which are now in the course of preparation are of a humanitarian character, and they therefore have a universal vocation. Because of that, they are in keeping with the principle stated on numerous occasions in documents of the United Nations, in the declaration of principles governing the activities of States in outer space, and, lastly, in the interventions of the representatives of a large number of countries. Two days ago, this was brilliantly referred to by the representatives of Italy and Hungary. This principle, as a matter of fact, is not a new one, and by way of precedent we might mention a certain number of conventions of a humanitarian character which are universal. I am thinking, in particular, of the Conventions of the International Red Cross concluded in Geneva in 1949. But together with this formal element which is so important, it is also necessary to stress the substance of the problem.

It would be absolutely unjust to deprive certain nations of the possibility of receiving compensation for damage caused by space objects. Moreover, the absence of a system of assistance in the event of an accident over certain territories would constitute an additional threat and one which would be difficult to comprehend for astronauts and for the countries from which they come.

(Mr. Osiecki, Poland)

The results obtained by my country in the field of space research, modest though they may be in comparison with the achievements of other countries, are within the limits of our means. Several centres successfully conduct scientific research. In particular, we have extended the study of the structure of the ionosphere and of the exosphere, that of selenodisidia and the liberation of the moon, the observation of artificial satellites in geodetic astronomy, the theory of flight of artificial satellites and celestial mechanics, and the relative research of cosmic space, belonging to such conventional branches as astrophysics, theoretical physics and so on.

The Polish scientific centres similarly participate in the International Year of the Quiet Sun, and in this regard their activities include a certain number of branches such as meteorology, the earth's magnetism, the study of cosmic radiation, aeronomy, the study of the ionosphere, the sun's activity and so on. All this work is co-ordinated by an organ of the Academy of Science, namely, the Committee on Space Research which was created in 1963.

As I have already pointed out, my country attaches considerable importance to international co-operation in the field of space research. We are a member of the Committee on the Peaceful Uses of Outer Space of the United Nations, and our Space Research Committee is a part of COSPAR. Representatives of my country have been elected members of the Bureau of the International Federation of Astronautics and of the Board of the International Institute of Space Law.

Our research centres collaborate and participate actively in the work of international organizations, including the International Council of Scientific Measures.

Our centres for the observation of artificial satellites co-operate with the co-ordinating centre of Moscow and form part of the world network. To sum up, my delegation is pleased to stress how fruitful this collaboration is.

This now leads me to speak of the work of the two Sub-Committees, the Scientific and Technical Sub-Committee and the Legal Sub-Committee.

The Polish delegation wishes warmly to congratulate the Scientific and Technical Sub-Committee for its activity in all the fields falling within its purview. In the case of the international research programme, we wish to support the efforts made by the Committee in inviting the specialized agencies and the international organizations concerned to contribute to the expansion of our field of activity. The most recent reports of international organizations, such as the

(Mr. Osiecki, Poland)

International Telecommunication Union and the World Meteorological Organization, are most encouraging in this regard.

We are similarly pleased to stress the great value of the contribution of COSPAR in the field of space research, and we welcome with interest the proposals and recommendations which it has made in connexion with the risks involved in space experiments.

We are gratified at the good results obtained at the launching station for sounding rockets at Thumba. However -- in view of the doubts and difficulties to which they give rise -- I cannot pass over in silence the two agreements, establishing a temporary arrangement for a world commercial system of telecommunications by means of satellites and concluded by certain countries, because they constitute a discriminatory measure against other States. There is no doubt that one of the essential conditions for the peaceful uses of outer space is the establishment of a legal code compatible with the interests of all States.

(Mr. Osiecki, Poland)

My delegation attaches considerable importance to the declaration of the General Assembly concerning principles governing the activities of States in the exploration and use of outer space. This declaration constitutes for the United Nations an important achievement provided that it is viewed only as a step toward the establishment of space law. That is why the Polish delegation, during the course of the session of the Sub-Committee in Geneva, drew the attention of other delegations to this particular problem when supporting the proposal aimed at opening a discussion for the purpose of enshrining the principles of the declaration in an international treaty. My delegation feels that we must redouble our efforts in order to create a solid legal basis, namely, an instrument of a general character which would be linked to detailed agreements. This should be the purpose of the legal Sub-Committee.

It is difficult to put on the same level the results obtained by this Sub-Committee and those achieved by the Scientific Sub-Committee. Their activities belong to two very different fields and in principle they are not comparable. In fact, legal training requires a certain backward movement which is the only way of analyzing clearly the problems that are to be solved.

In these circumstances, my delegation feels that the Legal Sub-Committee has done everything within its power in order to achieve the goal set for it. During the two parts of its third session -- in the spring in Geneva and in the autumn in New York -- all the legal questions on its agenda were discussed in a thorough and fruitful manner. The draft conventions presented by certain delegations were revised by their authors in the light of the comments made by other delegations.

It is certainly not impossible to come to agreement on the convention on the rescue of cosmonauts and space vehicles in case of accident or forced landings on land or sea, but the short time available to the Sub-Committee did not permit it to solve all its problems although some important issues have been settled once and for all. It is no less regrettable, however, that during the present session the Sub-Committee was unable to come to agreement on the whole of the draft convention. However, my delegation feels that this is the goal which we must seek to achieve.

(Mr. Osiecki, Poland)

We consider that the difficult task of creating space law requires considerable patience, wisdom and good will. If it is not possible to solve simultaneously all the questions under study, it will be necessary to proceed by successive stages. But we are of the opinion that the other draft convention, the one which deals with liability and is likewise on the agenda of the Legal Sub-Committee, must be elaborated and prepared as soon as possible. The discussion which took place in the Sub-Committee has made it possible to make headway in our work and has been reflected in a drawing together of the different positions.

The Polish delegation would wish to point out that, in its opinion, the Hungarian draft constitutes a good basis for the elaboration of the convention concerned. We consider that it gives all the necessary importance to the two problems of greatest importance in the field, namely, that of the participation of international organizations in the convention and that of liability in the event of common undertakings in outer space. The first question must be settled in a simple fashion, taking account of the legal principles existing at the present time. In fact, the final basis of each common undertaking is an agreement among two or more States; that is the essential feature of the problem. On the other hand, only the initiative taken by an international organization constitutes the most perfect and the most stable form of this kind of agreement.

In the last analysis, everything is based upon the will of the States which conclude the agreement or which form the organization. That is why these States must be liable for damages caused by their activities in outer space. However, we do not see the necessity of complicating the problem by considering that an international organization is, as such, a party to the convention and by imposing on Member States second degree liability; such a system of liability would not in practice serve the interests of the States nor that of the individuals that the convention is designed to protect.

I am sorry that I called attention of the Committee, within the framework of a general debate, to some of the details concerning the work of the Legal Sub-Committee, but the problems that I have referred to have been in the centre of the debates of that Sub-Committee. In conclusion, the Polish delegation is convinced that the Legal Sub-Committee has gone through the most difficult part of its work in preparing conventions on assistance and liability and has thereby in a large measure fulfilled the task entrusted to it by the General Assembly.

Mr. MATSUI (Japan): Since mankind first embarked upon the exploration and use of outer space several years ago, the strides of scientific and technological progress have never ceased to be phenomenal. And the past few months have witnessed some particularly impressive events in this new field of human endeavour.

First in order, we recall with great admiration the launching of Ranger 7, which successfully conveyed to earth pictures of the lunar surface from hundreds of thousands of miles away. The photographic data thus furnished are invaluable to the space scientist, as well as being of significance to the historian.

This great achievement of the United States last August was followed by another spectacular accomplishment, this time by the Soviet Union. The Voskhod, the first multi-manned spacecraft, majestically circled our globe, and successfully ended its mission by a soft landing, returning its gallant crew of three safe and sound to their own homeland. Thus, the days are approaching when man can travel in outer space, further still even to other planets, as we now do on the oceans or in the air. A few decades ago, such a possibility was no more than a figment of the imagination, the dream of an exceptional few, the subject of science fiction.

These two epoch-making events in outer space, though widely different one from the other in this mission, purposes and scientific concept, have one thing in common. They both represent the highest realization to date of modern science and technology in the direction of the peaceful uses of this hitherto unknown world.

In addition to these gigantic events, there has been another which is none the less remarkable both from the scientific and practical points of view. A small communication satellite, the Syncom III, launched on 19 August from Cape Kennedy and successfully used in relaying the 18th Olympiad from Tokyo to all parts of the world, was for us a great source of joy and satisfaction. This artificial satellite, as we see it, was an unprecedented scientific experiment and a daring human enterprise. The idea was brought forward some twenty years ago by Arthur C. Clarke, a British author and rocket engineer, and the dream of his genius has at last been realized, thanks to the initiative of the United States and, if I may say so, the co-operation of the Japanese. This satellite, turning around our planet at a height of 37,000 kilometres and at the same rate of velocity as the earth itself, appears to be stationary at a fixed point above the Equator and the middle of the Pacific Ocean. The placing in orbit and operation of this satellite, it is quite obvious, was not an easy task. But, as we all know, the opening ceremonies of the recent Olympic Games at Tokyo were successfully relayed by Syncom III to all parts of the world. Was this not a striking example of international co-operation, of the peaceful exploration and use of outer space for the benefit and in the interests of all mankind? And beyond the Olympic Games, can we not all imagine how this latest advance in the arts and sciences of communication through the medium of space may serve to draw the peoples and governments of all lands closer together in the pursuit of their common, peaceful aims?

I would now like to turn to some of the questions which we have before us. We are gratified to note that the Scientific and Technical Sub-Committee has successfully carried out its tasks, the result being a number of important recommendations contained in its report. My delegation is particularly happy to note that the Sub-Committee recommended United Nations sponsorship for the equatorial launching site facilities at Thumba, India, and the use of this station as a centre for international co-operation and training. Our countryman, Professor Maeda of Kyoto University, participated in the group of scientists which visited that launching site and subsequently recommended that such United Nations sponsorship be granted to India for the continuing operations of the Thumba rocket launching facilities.

Referring now to the possibility of organizing in the near future an international conference for the peaceful uses of outer space under United Nations auspices, there has been, and still continues to be, some difference of opinion among delegations. It is our view that such an international gathering would be of a great use and would help to expedite still further international co-operation in the field of space science and technology. But, quite frankly, we do not believe that this Committee, at this time, is in a position to decide on the holding of such a conference, or any details concerning it. Important as it is, the question of an international conference might more appropriately be dealt with by the General Assembly, or by some other means. The suggestion made last Wednesday by the representative of Italy to the effect that a small working group should be established within this Committee specifically for this purpose certainly deserves careful consideration. But I wonder whether this matter might not just as well be taken up informally by the parties particularly interested in it, with a view to arriving at a solution acceptable to all.

Now I would like to express some of the views of my delegation on questions of a legal nature.

On numerous occasions in the past, in this Committee as well as in the General Assembly, we have stressed the need for establishing as a legal principle that the use and exploration of outer space should be limited to peaceful purposes only. As I said last year, before undesirable faits accomplis can accumulate in outer space, which is a fairly new area of human activity and in which no nation as yet has established vested interests, we must take the fullest possible advantage of the present situation and strive hard to ensure that the exploration of outer space will be carried out in accordance with law and order and under a peaceful regime, so that the welfare of man would be the prime objective of all outer space activities.

We are aware that the term "peaceful" has given rise to problems of interpretation and that there is a question concerning the proper forum in which the goal of "peaceful purposes only" should be sought. But we are convinced that this goal is universally desired. The unanimous adoption of General Assembly resolution 1884 (XVIII), calling upon all States to refrain from placing in orbit any objects carrying nuclear weapons or any other weapons of mass destruction

is a long step forward. We are hopeful, and indeed confident, that the time will come before long when all the members of the world community will be able to agree to implement this principle without reservation.

Resolution 1963 (XVIII), which set forth the guiding lines of the work of this Committee, recommends that

"...consideration should be given to incorporating in international agreement form, in the future as appropriate, legal principles governing the activities of States in the exploration and use of outer space".

It has been clearly understood that the Declaration of Legal Principles, adopted as General Assembly resolution 1962 (XVIII), is neither comprehensive nor final, that it must be developed further, expanded or supplemented and, where necessary, elaborated and revised. All this will certainly require time and careful study, but we believe that the principle of peaceful use is undoubtedly one of the most important principles of a regime of law in outer space and must be incorporated in a final legal document with clearly defined expressions.

Resolution 1963 (XVIII) to which I have just referred also requests this Committee

"... to arrange for the prompt preparation of draft international agreements on liability for damage caused by objects launched into outer space and on assistance to and return of astronauts and space vehicles".

Faithful to this mandate, the Legal Sub-Committee met twice this year, first in Geneva and then here at Headquarters, to prepare these two international agreements. The efforts of all those who participated in these discussions and the enlightened chairmanship of Professor Lachs are both worthy of our most sincere appreciation. Thanks to these commendable efforts, a great deal of progress has been made, and it is now within reasonable expectation that, with the continuous goodwill of all parties concerned and in a spirit of mutual accommodation, some positive results may be attained for both agreements in due course.

I would, however, venture to submit one or two remarks at this particular juncture.

First, it is a commonplace that in any international agreement the rights and obligations of all parties must be equitably balanced. It follows that the convention on liability and the agreement on assistance and return are in fact closely connected with one another and mutually complementary. This consideration should always be borne in mind, since the possibility cannot be excluded that one or the other agreement might be completed earlier and independently. For example, regardless of whether one agreement may happen to come into force before the other, justice and equity would seem clearly to demand that the right to claim return of an object should be matched by assurances of compensation for damages caused by that object.

Secondly, we believe that an international registration system for launchings is not only desirable but even essential for the establishment of law and order in outer space. For the purpose of facilitating the identification and return of a fallen object, as well as of ensuring prompt compensation for damages caused by it, an international registry of launchings, kept by such an authoritative world body as the United Nations, would be of great help.

(Mr. Matsui, Japan)

As we all know, the General Assembly, in resolution 1721 (XVI), recommended the maintenance of a public registry of data furnished to this Committee by States launching objects into outer space; both space Powers have faithfully supplied such information. But this registry is still far from satisfactory. Notifications to the Secretary-General are sometimes considerably delayed and the description of launchings is in some cases quite insufficient. We do not believe, therefore, that an improvement of present procedures and speedier and more detailed information for the registration of launchings would be asking too much.

We share the view expressed the other day by Ambassador Plimpton that "by the end of the first decade of space -- in 1967 -- there should not be just two satellite launching nations but a significant number of other States and several international organizations conducting such launchings, or participating directly in them". Mr. Plimpton's comments would seem to indicate all the more reason for us to provide now, in the interest of all non-launching as well as present and future launching States, for an effective system of international registration. We would like to see such a system legally established; this is a point, however, that I shall not press further at this time.

May I close my statement today, Sir, by pledging to you and all the members of this Committee our continued co-operation. We have many difficult and important tasks to accomplish, but I am confident that we shall all work harmoniously together towards the successful conclusion of our labours.

Mr. QUIJANO (Argentina) (interpretation from Spanish): My delegation is gratified to participate in the work of the Committee on the Peaceful Uses of Outer Space, since we consider that these meetings become more necessary and desirable each year and their importance increases as greater progress is achieved in the exploration of outer space and the practical applications for the benefit of the whole of mankind become more real.

The Committee is the main governmental body where apprehensions, doubts and problems connected with these activities can be raised. Its scope is further broadened by the submission of the reports prepared by the Committee to the General Assembly of the United Nations.

(Mr. Quijano, Argentina)

We can appreciate from this year's session the great achievements attained in a very short time, and we trust the development of the use of outer space will be further accelerated in the near future. Significant conquests were achieved in this field in 1964, for which reason it is no longer enough to speak of experiments. The flight of the Soviet spaceship Voskhod, the photographs taken by United States technicians of the surface of the moon and communications through satellites, which we have all been able to appreciate and which are daily being improved, surpass the realm of experiments and constitute the true application, fortunately of a peaceful nature in all cases, of the conquest of space by man.

Another positive element highlighted by the agenda of the present session and the valuable documentation prepared by the Scientific and Technical Sub-Committee, the Legal Sub-Committee and the Secretariat, is the marked importance given to international co-operation in this field. Despite the fact that two countries stand out clearly while several others are only beginning to put their scientific centres into operation and the majority of countries still view this field of endeavour as something for the future, there is nevertheless a general desire for the widest possible participation and co-operation. This factor must be stressed and we were gratified to hear references to this question in the statements of the delegations of the United States, the Soviet Union, Italy and others.

This spirit of international co-operation is also confirmed by the review of activities connected with outer space as reported in document A/AC.105/L.13. We see reflected therein the efforts at present being made by many countries in the field of outer space, and there are practically no cases where we do not find multi-national participation. With respect to Argentina, all the work that we have done has been carried out with the co-operation of the United States and France, and talks are in progress with a view to establishing co-operation with Italy. Our case is not the exception but rather the rule. I could give an exhaustive list of other countries that are also working on the basis of co-operation merely by reading the list of those that have supplied information, which appears on page 1 of document A/AC.105/L.13.



(Mr. Quijano, Argentina)

With respect to Argentina's activities, the National Commission for Space Research continued the programme that it began in 1962. The programme centres mainly on the field of cosmic radiation, and studies of the atmosphere and ionosphere. These experiments are carried out with rockets launched from the base at Chamical in the northwest of Argentina for the study of winds and turbulence in the upper atmosphere. This work is carried out in close co-operation with the National Centre of Space Studies of France and in co-ordination with several other countries. Other experiments carried out this year are designed for ionospheric research and were drawn up in co-operation with the space body of the United States, NASA. A series of launchings are being planned from that base.

We wish to point out that in pursuance of the policy we announced in past years, we have reaffirmed our offer of the use of the base at Chamical for the execution of space scientific research plans. This offer was most favourably received, and one Latin American country has expressed its desire to participate as an observer in future Argentine launchings so as to train its own personnel in techniques connected with the launching of rockets and the conduct of scientific experiments which I mentioned earlier.

Furthermore, our position in the hemisphere, which is unique in view of our extreme southern latitude, could be useful for various types of research. Argentina is quite prepared to try to implement, or to contribute to the implementation of, the recommendations of international bodies, such as COSPAR or this Committee, which refer specifically to that region of the world.

We should also like to refer to a plan duly proposed for the conduct of synoptic meteorological research through the co-ordinated launching of rockets along a meridian from bases situated in the northernmost point of America down to the Antarctic. Argentina, through its Committee on Space Research, intends to co-operate fully in this interesting endeavour, including the technical aspect of the possible preparation of other ground installations and the new personnel which would participate in these tasks.

(Mr. Quijano, Argentina)

International co-operation -- the only means of progress for countries taking their first steps in this complex field of scientific activity -- is evident in all those projects. In that connexion we support what was said yesterday by the representative of the United Arab Republic, Mr. El-Kony -- namely, that one of the main objectives of this Committee should be the promotion of an international system of education and training which would enable the largest possible number of countries to participate actively in and make their contribution to the exploration of outer space. We also believe that the United Nations technical assistance programmes and the programmes of the Special Fund can play an important role and that there must be no delay in using their services. Thus, those bodies could take a hand in certain plans for education and training, just as at present they place their resources at the disposal of other enterprises connected with economic and social development.

Argentina attaches particular importance to another aspect of the problem of outer space -- that is, the use of satellites for communication; the representative of Japan referred to that matter very eloquently a moment ago. The most recent advances made by that kind of satellite leads us to predict that satellites will soon have practical use in world-wide radioelectric communication; that gives them technical and scientific importance, as well as political and commercial importance. The International Telecommunications Union is devoting ever-greater attention to the problem, as is shown by the report which has been circulated in document document E/3890/Add.1. The delegation of the United States has distributed to this Committee a provisional report (A/AC.105/22) on negotiations designed to reach an agreement among seventeen countries. The agreement, which still has a provisional character, came into force on 20 August of this year. As we said earlier, the experimental stage is thus a thing of the past and we are now in the presence of a practical reality and a system that is fully operative.

Convinced that such a system of communications will acquire considerable importance in the near future, the National Committee for Space Research of my country would like to see established in Argentina, under international auspices,

Mr. HAJEK (Czechoslovakia): In reviewing the results of the work of our Committee during the past year, we note considerable progress. As a result of the common endeavour in a spirit of mutual understanding and co-operation, fruitful solutions have been found to many problems and have been expressed in important recommendations both of a scientific and technical and of a legal character. In such a way solid bases for the further development of research in and the peaceful use of outer space have been laid. In that sense, the Declaration of legal principles governing the activities of States in the exploration and use of outer space (A/RES/1962 (XVIII)), unanimously adopted by the eighteenth session of the General Assembly, constitutes an important achievement, both because it broke the deadlock concerning the legal side of our work and because it marks a step forward towards creating a system of law for outer space; it also is a significant impulse for the further strengthening and development of international co-operation in this field.

The spirit of that Declaration is also reflected in recommendations of both Sub-Committees. In particular we regard as very useful the conclusions of the Scientific and Technical Sub-Committee concerning a broadening and extension of the exchange of information, the support for such programmes as the International Year of the Quiet Sun, new initiatives in the field of the education and training of specialists for outer space activities, and further recommendations on the launching base in Thumba -- and here we should like to express appreciation to India for the considerable results achieved. Finally, there are the recommendations on the possible harmful effects of certain experiments in outer space. Those conclusions and recommendations undoubtedly facilitate broader international participation in outer space activities and the intensification of international co-operation. Of paramount importance are the practical measures taken through co-operation between the Academy of Sciences of the Soviet Union and the National Aeronautics and Space Administration of the United States.

(Mr. Hajek, Czechoslovakia)

We are happy to observe certain, though modest, progress also in the legal activities of our Committee. After having overcome, as we noted through the Declaration of legal principles, the long deadlock in its work, the Legal Sub-Committee has discussed the draft conventions on the rescue and return of cosmonauts. We consider the results of this discussion as positive and encouraging thanks to the co-operative spirit of the authors of the principal drafts -- in the first place, thanks to the flexible position taken by the Soviet Union, and to the helpful approach by the other authors, such as Canada and Australia. Though complete agreement has not been achieved, we hope that practical needs, common sense and a pragmatic approach may prevail and overcome the last obstacle, which consists in disagreement on whether participation in the envisaged convention should be universal or limited. In the view of our delegation, humanitarian reasons, practical utility and the happy precedent created by the Moscow agreement on the partial cessation of nuclear tests should help those who still hesitate to accept the position of universality of a convention applied to outer space problems, and not to persist in limiting the efficiency of such an agreement and such a convention by deficiencies and crippling obstacles rooted in the past.

We appreciate equally the debate on the problems of liability for damage done in connexion with the exploration of outer space. We consider the well-balanced and juridically well-founded draft submitted by Hungary an excellent basis for agreement. We note a considerable degree of clarification and of rapprochement of views brought about by the discussion.

Though both conventions -- that on rescue as well as that on liability -- have much in common and are closely related, the slow progress in debate on liability should not, in our view, delay the agreement on rescue and return of cosmonauts and space objects. We feel that the time has arrived to conclude the convention on rescue and return of cosmonauts and space objects, without useless delay.

(Mr. Hajek, Czechoslovakia)

Some positive aspects which emerged recently in the work of the Legal Sub-Committee should not make us forget a grave deficiency, namely, the fact that in general the legal side of the work of our Committee is still lagging behind the progress in the results of the Scientific and Technical Sub-Committee. This is a weakness which we have not yet been able to overcome. Consequently, the Legal Sub-Committee has not yet been able to proceed to its major task which was defined by General Assembly resolution 1962 (XVIII), namely, to incorporate the legal principles expressed by the Declaration into an international convention. Our delegation continues to consider this to be a primary task of the Legal Sub-Committee, and we cannot but regret that the favourable opportunities created by the adoption of the Declaration have not yet been used for taking a step in this direction.

The Czechoslovak Socialist Republic contributes to peaceful outer space research by using its limited means, especially conducting ground-based experiments, telemetry, and data acquisition facility programmes and other programmes.

Our scientific workers and their institutions obtained some results, notably in the field of solar physics, by means of the spectral analysis of the eruption of 7 August 1961. In the sphere of meteorological astronomy the conditions of the passage of bodies through the atmosphere by cosmic speeds were observed. High atmospheric studies, the measuring of the diffusion of the solar light in the proximity of the earth confirmed the existence of meteoric dust nebula around the earth which was discovered by means of artificial satellites.

Our scientists made a test reception of these signals of the solar radiation satellite in the "Real Time Telemetry" system. Our Academy of Sciences is conducting a large programme of research in space medicine, including research on the influence of radiation on tissue processes in organisms, the influence of vibration on human organisms, the methodology of observing the influence of isolation and deprivation and other important topics of space medicine.

(Mr. Hajek, Czechoslovakia)

Czechoslovak participation in the International Year of the Quiet Sun has been appreciated many times, and our scientists will continue to contribute to this important programme in a number of fields covering branches of astronomy, geophysics, geodetics and meteorology.

The scientists and institutions of Czechoslovakia have been advanced by making ample use of the great possibilities facilitated by intensified co-operation with the Soviet Academy of Sciences.

On the basis of experiences achieved in this co-operation, they welcomed the new opportunities for increasing their contributions to international co-operation through and with the United Nations.

In the deliberations of the Scientific and Technical Sub-Committee, as well as in the speeches of some of our colleagues here, considerable interest has been devoted to the development of space communication. This field of space research and utilization belongs to those where great benefit can be drawn for improving the present techniques or substituting them by more perfect means. At the same time, rapid development in this field calls for positive international action in order to secure that this benefit should go to all nations on a non-discriminatory basis, as was requested by General Assembly resolution 1721 (XVI). The necessity of such co-operative international action was once more stressed by General Assembly resolution 1802 (XVII). Such co-operation should, in our view, be based on some clearly defined legal principles which would guarantee -- and I have in mind the terms of General Assembly resolution 1802 (XVII) -- the world-wide, that is, the truly universal character of this co-operation and at the same time prevent its misuse by private profit-taking interests. Above all, the developing nations, which are in the stage of building up their system of communications, should be assisted in benefiting from the space communication development.

(Mr. Hajek, Czechoslovakia)

It was in this sense that the Czechoslovak delegation submitted at the third session of the Scientific and Technical Sub-Committee a proposal that the attention of the Committee should be drawn to the urgent need to formulate the legal principles governing the use of satellites for global telecommunications.

In order to avoid misunderstanding, I would like to repeat that what we proposed was simply that the Sub-Committee should draw the attention of the Committee to the need for such legal activity -- for which the Sub-Committee was fully competent -- and not to do the drafting itself. A number of delegations supported this proposal, and we were gratified with that support, but unfortunately some other delegations in the Scientific and Technical Sub-Committee, perhaps because they misinterpreted our proposal, objected and maintained afterwards that the Scientific and Technical Sub-Committee was not competent to express such an opinion. In view of the importance of the matter, our delegation reserved its right to reintroduce the proposal whenever and wherever we consider this appropriate, and I take the liberty of repeating this reservation.

It was exactly from the point of these views that we examined most carefully the information communicated to our present session, and mentioned by some of our colleagues here, concerning agreements completed by nineteen countries on 24 July 1964 for the establishment of interim arrangements for a global commercial communication satellite systems. Having studied the text of these arrangements, we cannot but underline that these arrangements are considered and should be considered as interim and perhaps tentative as has been said, and we are glad that they themselves do not insist that they be considered as definitive, because by the whole concept of these agreements they cannot be considered, in the view of my delegation, as corresponding to the intentions of resolutions 1721 (XVII) and 1802 (XVIII) of the General Assembly. A world-wide system on a non-discriminatory basis cannot, in our opinion, be built on a basis of a capitalistic share corporation which at the same time limits, by restrictive definitions, the number of States which may adhere to such a system. After having examined this interim arrangement, the need for defining the principles of this co-operation in concordance with the general principles of the declaration on principles governing the use of outer space seems to us to be even more urgent.

(Mr. Hajek, Czechoslovakia)

Otherwise we feel that we would be in a very dangerous position. The consideration of the activities of our Committee cannot, of course, be divorced from the general development of space research and use, as well as its techniques. The confrontation of the material progress of science and technology in this field with our work here in the Committee is a permanent indication of tasks to be accomplished in promoting international co-operation and in directing the space activities towards peaceful purposes. The material progress, together with the new possibilities and opportunities it creates, constitutes at the same time by itself a powerful appeal for peace and co-operation.

Every new space discovery, all progress made in space exploration, seems only to stress and emphasize more this appeal. Such also is the message of the recent magnificent achievement of the Soviet space ship, Voskhod, whose crew proved the possibility and utility of team work not only in the strictly technical sense. These and other discoveries -- such as the American success in mapping the surface of the moon as a preparation for a possible landing -- by speeding up the development of space research and use confront us at the same time with new possibilities and tasks for international co-operation.

Therefore, the idea of holding an international conference in 1967 on the exploration and use of outer space to mark the ten years of what has been properly called here the space era of human history, in the view of my delegation, is fully justified. We support the suggestion that such a conference should be held under the auspices of the United Nations and that this Committee should take the initiative for securing the co-operation of the interested international organizations and the co-ordinating of their already planned activities. Our experience of conferences of a similar character on the peaceful uses of atomic energy has proved the usefulness of such gatherings, and we hope that it may be possible for this Committee practically to endorse this initiative and to make a decisive step towards its implementation. Our delegation will co-operate in making this possible.

Mr. HAY (Australia): Many of the Committees of the United Nations General Assembly are concerned with redressing past wrongs or removing existing inequalities. That is right and natural. The Outer Space Committee has a rather different role in that it is largely concerned with problems of the future. This is one reason why Australia particularly values the existence of the Outer Space Committee, Australia's own membership of it and of its predecessor the Ad Hoc Committee, and the honour of having Dr. D.F. Martyn, F.A.A., F.R.S., as the Chairman of the Scientific and Technical Sub-Committee.

Although so much of what we do here is concerned with the future, our work in this Committee necessarily rests on the actual achievements in space science and technology of the various countries of the world engaged in this activity. In this regard, of course, we rely principally on the achievements of the United States and of the Soviet Union, which are primarily responsible for leading mankind into the space age. To both, the Australian delegation renews its congratulations, in particular for the extraordinary achievements of photographing in such detail a portion of the moon, of successfully launching Nimbus, an earth-oriented weather satellite, and Syncom, a synchronous communications satellite, and of sending the troika to outer space.

But while the United States and the Soviet Union are the leaders in this effort, many other countries are actively engaged in one way or another in space research and in the practical application of space research and technology. Among these countries is Australia. The reasons for our playing a relatively active role are many. Australia is in the Southern Hemisphere, whereas most of the other countries actively engaged in space are in the Northern Hemisphere which looks out on a different aspect of the heavens. Australia's open spaces are peculiarly suitable for certain types of space activity. It so happens that many launchings from Cape Kennedy necessarily pass over Australia. We are a relatively advanced scientific country and have been so for some time, with the result that a scientific base was already in existence when the space age began. For all these reasons and for others, we have in Australia done much research in the physics of the upper atmosphere. We have contributed much to the findings and the instrumentation of radio astronomy and have in the Parkes Radio Telescope perhaps the world's best steerable radio telescope. There are tracking stations for both satellites and deep space probes in West Australia, in South Australia

(Mr. Hay, Australia)

and in the Australian Capital Territory. At Woomera there is an extensive and complex launching site which has been used in quite large sounding rocket programmes both of our own and in conjunction with the United Kingdom, and for two successful firings, the latest just ten days ago, of Blue Streak, the rocket which is to be the first stage of the launcher for an ELD0 satellite. Preliminary research has begun for a new satellite launching site in Northern Australia which would be used to put satellites into equatorial instead of polar orbit. Finally, Australia has joined with others in participating in and contributing to the interim arrangements for a global commercial communications satellite system. The Australian delegation recalls in this connexion that the Commonwealth Prime Ministers, taking note at their meeting in July of this year of the concurrent international discussions on the establishment of a global system of satellite communications, endorsed the desirability of establishing such a system and considered how Commonwealth countries could best co-operate with each other and with other countries in its development.

Perhaps of particular interest to this Committee is the European Launcher Development Organization, ELD0, which exemplifies one of the ways -- in some cases the only way -- for smaller nations to participate as principals in space activities. It is only through regional or wider international associations that smaller nations will be able, on any basis, to enter the space age. The experience of ELD0 may accordingly be a useful guide to this sort of international co-operation.

Of particular interest in this connexion are those sections of the report of the Scientific and Technical Sub-Committee dealing with the exchange of information and international co-operation in the field of education and training in space activities. Neither of these two sections in the Sub-Committee's report is new, but both represent in their detailed recommendations an advance over the previous recommendations of the Sub-Committee. It is worth noting that they accord with the views expressed in the Declaration adopted on 10 October by the Cairo Conference of Heads of State or Governments of non-aligned countries who requested, as the representative of the United Arab Republic reminded us yesterday,

"those States which have succeeded in exploring outer space to exchange and disseminate information related to the research they have carried out in this field, so that scientific progress for the peaceful utilization of outer space be of common benefit to all." (A/AC.105/PV.28, pps. 3,4)

(Mr. Hay, Australia)

The General Assembly has indeed long been seized of the importance of the exchange of information and this Committee has done much to give effect to this objective. Nevertheless, as the Sub-Committee points out, it has become clear that there are still ways open to us to improve the exchange of information on the various aspects of the peaceful uses of outer space; and the Australian delegation wholeheartedly supports the specific recommendations of the Sub-Committee to this end. Our only reservation relates to the fact that not all the useful proposals made at Geneva have found their way into the Sub-Committee's report.

As for the education and training section, the Australian delegation endorses the Sub-Committee's comment about the value of international co-operation in this particular field and its importance in achieving the common objective, which is to ensure that the exploration and use of outer space should be for the benefit of States irrespective of their economic and scientific development. The Australian delegation therefore notes with particular pleasure that the Sub-Committee has gone beyond its previous recommendations on this subject, in particular by recommending that the Committee invite Member States desirous of having their nationals take advantage of training to make their needs known to the Secretary-General, and by recommending that the Committee correspondingly invite Member States to continue to inform the Secretary-General of their facilities for education and training.

The Australian delegation notes what the Sub-Committee has to say under the heading "Encouragement of International Programmes", which is concerned with the most valuable work being done by WMO and ITU, and welcomes the Sub-Committee's recommendation that this Committee endorse the recommendation that United Nations sponsorship be granted to India for the continuing operation of the Thumba Equatorial Sounding Rocket Launching Facility. The Australian delegation also especially endorses the recommendation that COSPAR again be invited to review the geographic distribution of sounding rocket launching facilities and to advise on desirable locations and important topics of research.

(Mr. Hay, Australia)

Reference has already been made to the section entitled "Potentially harmful effects of space experiments", and the Australian delegation joins with those who have expressed their pleasure and relief that the method of dealing with this particular problem has now been settled in a manner satisfactory to all concerned.

As for the one new section in the Sub-Committee's report, that headed "General", the Australian delegation would like particularly to welcome the Sub-Committee's recommendations that this Committee commend the Secretary-General and, particularly, the Outer Space Affairs Group of the United Nations Secretariat, for their preparation of draft reviews on the activities and resources of various international organizations and bodies relating to the peaceful uses of outer space, on national and international space activities, on bibliographies and abstracting services, and on education and training; and that the Committee, in co-operation with the Secretary-General and making full use of the functions and resources of the Secretariat, up-date and republish these reviews at least every two years.

I turn now to the Legal Sub-Committee's two reports. The Australian delegation, while regretting that more progress was not made, is convinced that agreement will soon be reached on the issues now before it. As both a potential launching country and as a country with a large territory, Australia is in the fortunate though sometimes difficult position of not having to look at either convention solely from the point of view of how the one may benefit Australia and of how the other may impose obligations on it. We appreciate that this is not so of all countries but nevertheless hope that considerations of this nature will not be allowed to prevent wide agreement being reached on at least one of the two draft conventions in the near future.

The Australian delegation to the Legal Sub-Committee, in conjunction with the Canadian delegation, was able to play a constructive part in the Legal Sub-Committee's drafting efforts as well as in its deliberations. Both at Geneva and again in New York these two delegations presented compromise draft conventions on assistance and return which appear to have been of assistance to the Legal Sub-Committee.

Finally, may I say a word or two about the future organizational arrangements of our Committee and our two Sub-Committees. The interval between the ending of the forthcoming session of the General Assembly and the beginning of its next session

(Mr. Hay, Australia)

in September 1965 will be only some six months instead of the usual nine months. This means that all of the Committees of the General Assembly will have to exercise restraint in scheduling meetings next year. Our own Committee could, in the view of the Australian delegation, well confine itself to one meeting next year.

In view of this requirement for restraint in 1965, in view of the need to digest the most productive work of the Scientific and Technical Sub-Committee in each of the last three years, and in view of the rather long-term nature of some of the tasks that the Sub-Committee has asked the Secretariat to undertake, it may be that we could give consideration to deciding now that the Scientific and Technical Sub-Committee's next session take place in 1966 and not 1965. We believe, however, that all delegations here would favour an early meeting of the Legal Sub-Committee next year to carry its work forward, if possible to completion.

But whatever our decisions on the organization of the future work of our Committee and our Sub-Committees, the Australian delegation would repeat the plea which it made last year that the Committee on Outer Space not meet immediately before the opening of the General Assembly session. The period before a session is always an anxious and busy time for delegations and it would help delegations -- and indeed the Committee itself -- if the timing of the Committee session next year could be different from what it was last year and from what it would have been this year if the General Assembly session had not at the last minute been postponed until 1 December.

The CHAIRMAN: Does any other representative wish to speak at this time?

Since no one wishes to take the floor, the general debate will be continued on Monday, 2 November, when we shall hear statements from the delegations of the United Kingdom, India, Brazil, Romania and France. It is hoped that the general debate will be concluded by noon on Tuesday, 3 November.

The meeting rose at 4.45 p.m.