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COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

VERBATIM RECORD OF THE TWO HUNDRED AND ELEVENTH MEETING

Held at Headquarters, New York,
on Friday, 27 June 1980, at 10.30 a.m.

Chairman: Mr. JANKOWITSCH (Austria)

General exchange of views (continued)

Organization of work

80-61439

The meeting was called to order at 10.45 a.m.

GENERAL EXCHANGE OF VIEWS (continued)

Mr. GOULDING (United Kingdom): Mr. Chairman, may I begin by taking this opportunity to express my delegation's satisfaction at your once more being in the Chair of this Committee. We should also like to pay a tribute to the Chairmen of our two Sub-Committees and to the Chairmen of the Working Groups established by the Sub-Committees over the past year. We also express our appreciation of the work of the Outer Space Affairs Division, and wish especially to extend good wishes to Mr. Perek on his retirement. Finally, I should like to thank Mr. Garcia for his work as Rapporteur of the Committee and to welcome his successor, Mr. Betancourt Bueno.

(Mr. Goulding, United Kingdom)

Since the Committee's last meeting the United States and the Soviet Union have continued to lead the way in exploration of outer space. Their forays this year have permitted us to continue to develop substantial knowledge of our own planet and of a number of others in the solar system. Moreover, progress in space technology has brought direct benefit to people in their ordinary lives, in such fields as telecommunications, remote sensing and meteorology.

International organizations which have been set up to exploit space for the benefit of mankind are growing in importance. The International Telecommunications Satellite Organization continues to expand its membership, thus improving communications between countries. In this context, the United Kingdom welcomed the conclusion reached at the extraordinary meeting of the Fifth INTELSAT Assembly of Parties in April that proposals by the Arab Setellite Communications Organization were technically compatible with INTELSAT and would not cause the latter significant economic harm.

INMARSAT has been set up to serve the whole maritime community. At its first Assembly in London last October, it completed its initial steps. It now plans to establish itself as an operational entity in the near future.

At the end of 1979, the World Administrative Radio Conference met to establish a framework to regulate radio communications up to the year 2000 with important implications for the use of space communications. The conference made appropriate frequency allocation provisions to facilitate the future development of the various space radio-communications services and revised and adjusted the procedures for the international co-ordination of the development of such services. It also resolved that a specialized conference would be held to review further the whole question of the use of the geostationary orbit and the arrangements for assigning frequencies and orbital locations to countries wishing to establish space radio-communications services. Although there were inevitable differences of opinion over some of the questions with which the conference had to deal, these were, without exception, resolved amicably and in a spirit of compromise and international co-operation.

Nineteen seventy-nine also saw the completion of the first experiment of the Global Atmospheric Research Programme for the world-wide observation of the atmosphere. Europe made an important contribution to this experiment through the METEOSAT Programme.

(Mr. Goulding, United Kingdom)

Turning to Europe, the European Space Agency (ESA) has continued to look to the practical effects of space technology in, for example, the fields of meteorology, communications, remote sensing and science. The development of the maritime European communications satellites is well under way. There are plans for a large multi-purpose communications satellite which is designed to bring together television, business systems and telecommunications on a single platform. The successful launch of the first ARIANE launcher has marked a new era in the Agency's history, bringing nearer the aim of an independent European launch capability. We do not regard the recent failure of the second test launch as a significant set-back and confidence in the ARIANE launcher has been borne out by the great interest which has been widely demonstrated, not only within Europe, in using ARIANE as a space transportation vehicle in the coming years.

Many of the significant events during the past year in space have involved international co-operation between scientists of different countries. The International Ultra-Violet Explorer was launched in January 1978, as a joint project involving the European Space Agency, the United States National Aeronautics and Space Administration (NASA) and in Britain the Science Research Council. It is continuing to provide astronomers of all countries with an observing facility for ultra-violet spectrometry and imaging of celestial objects. In March this year, the Science Programme Committee of the European Space Agency chose the space astrometry mission, HIPPARCOS, as the Agency's next major mission. It will be designed for the accurate measurement of the trigonometric parallaxes, proper motions and positions of about 100,000 selected stars. The estimated lifetime of this mission will be two and a half years and the launch date on ARIANE is targeted for 1985-1986. The European Space Agency is also developing for launch in 1981 EXOSAT, a satellite to measure with high accuracy the positions of X-ray sources. There are also plans for a collaborative project with the National Aeronautics and Space Administration in an International Solar Polar Mission to explore the solar system's third dimension by sending two satellites in 1985 beyond the ecliptic plane with the help of Jupiter's gravitational field.

(Mr. Goulding, United Kingdom)

As regards the United Kingdom's own space activities, the Committee will know that a scientific satellite, ARIEL 5, was launched on 15 October 1974 from the Italian San Marco range off the coast of Kenya on a Scout rocket. The satellite's outstandingly successful science mission ended in March 1980, when it re-entered the earth's atmosphere and disintegrated harmlessly. ARIEL 5 had two scientific objectives; the first was to prepare a new catalogue of X-ray sources and the second was to study the sources in the catalogue with the aim of exploring the physical conditions within them. This work has increased the number of galaxies recognized as X-ray emitters from a handful to over 50. Many important scientific discoveries have been made by astronomers using ARIEL 5 during its five-year life, and its record of achievement makes it the most successful scientific satellite to have been launched by Britain.

ARIEL 6, whose successful launch was reported to the Committee last year, continues to supply the scientific community with data on X-rays and cosmic rays.

I should now like to turn briefly to the work of the Outer Space Committee. As my delegation sees it, this Committee's task at this session is to consolidate the work which has been accomplished by the two Sub-Committees this year. Last year we succeeded in completing the Moon Agreement. We cannot expect such conclusive evidence of international collaboration every year. Nevertheless, the United Kingdom, as in previous years, will approach the discussion of each item on the Committee's agenda in a constructive spirit. Our brief comments on certain specific items on the agenda are as follows.

We believe that practical progress on the preparations for the Second United Nations Conference on Outer Space will be achieved this year. The Secretariat is to be commended for having already paved the way with valuable preparatory work in tandem with the Scientific and Technical Sub-Committee, which has acted as our advisory committee.

(Mr. Goulding, United Kingdom)

As regards the venue of the Conference, the United Kingdom delegation has noted with gratitude the Austrian Government's offer of Vienna. We share the hope already expressed so eloquently two days ago by the representatives of Italy and Japan and by other speakers that the Committee will be able to agree, at its present session, to accept the Austrian Government's offer, which we believe offers an efficient, economical and, if I may say so, a very agreeable solution to the question of where the Conference should be held.

As regards remote sensing, the United Kingdom has noted that at the meeting of the Legal Sub-Committee earlier this year in Geneva there was perceptible progress in the continuing discussions of a set of principles on remote sensing of the earth by satellite. This is an important application of space technology which can have a direct effect on people and the quality of their lives. We must therefore make sure that what is eventually agreed in this forum is of direct benefit to all.

As for direct television broadcasting by satellite, the British Government's attitude on the establishment of a set of principles - or, indeed, guidelines - continues to rest on our concept of the free dissemination of information across frontiers and the right to receive information and to impart it. Our attitude is also influenced by the fact that the International Telecommunications Union (ITU) has already established a comprehensive body of regulations governing direct broadcasting by satellite. We should not want this Committee to overlook the importance of the contribution already made by the ITU in this field, or to do anything which would go further than or detract from the provisions already established by the ITU.

Finally, I should like to say a word on nuclear power sources in outer space. We can at least congratulate ourselves on the fact that there has been some small progress in the area of nuclear power sources this year. We have a remit to discuss this issue, but we must not stop short, in my delegation's view, at mere discussion. We have a responsibility to protect our fellow citizens from the consequences of outer space exploration and activities which, for example,

(Mr. Goulding, United Kingdom)

could involve the uncontrolled re-entry of space debris, and space accidents. Although various instruments, such as the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, the Convention on the Registration of the Objects Launched into Outer Space and the Convention on International Liability for Damage Caused by Space Objects, contain certain legal provisions relevant to the use of nuclear power sources in outer space, important gaps still remain.

We believe, therefore, that serious consideration must now be given to filling those gaps by creating a generally accepted code of conduct to minimuze the risks of accidents caused by satellites carrying nuclear power sources which could have very damaging consequences for mankind.

Miss CABRERA (Mexico) (interpretation from Spanish): With all due respect the rules relating to extending congratulations to the officers of any given body, my delegation cannot but express its pleasure at seeing you, Mr. Chairman, presiding once again over our work. In repeating our appreciation, we assure you that you can count on the full co-operation of the Mexican delegation.

Next, we should like to acknowledge the invaluable services rendered the Committee by Mr. Carlos Garcia of Brazil and to wish his successor, Minister Bueno, every success in the difficult task awaiting him as our new Rapporteur.

While on this subject, our gratitude goes also to Professor Carver of Australia, Chairman of the Scientific and Technical Sub-Committee, who, not content with that difficult responsibility, presided with equal skill over the Working Group on the utilization of nuclear power sources in outer space. My thanks go also to Ambassador Wyzner of Poland for his tireless efforts in guiding the work of the Legal Sub-Committee, and to the Chairmen of the working groups of that Sub-Committee, Mr. El-Ibrashi of Egypt, and Mr. Winkler of Austria.

(Miss Cabrera, Mexico)

Having fulfilled that pleasant duty, I shall now broach an issue of constant concern to the Mexican people and Government, namely, the growing militarization of outer space and the risk that the arms race, so intensely pursued on earth, may spread to outer space. Certainly, this is no new concern: in this and other forums we have already voiced alarm over this matter. As early as 1967, the Mexican delegation proposed to the then Eighteen-Nation Disarmament Committee a first article to a draft treaty providing for the prohibition of any kind of military activity in outer space, including the celestial bodies.

We have since noted with concern that certain satellites bearing surveillance equipment have become an integral part of strategic sttack and interception weapons systems and that the development of "killer satellites" increasingly threatens the conduct of peaceful space activities. For this and other reasons too numerous to enumerate, we endorse the position of the Swedish delegation, supported by many other delegations, that the international community has the right and, indeed, the obligation to take part in the drawing-up of measures prohibiting anti-satellite systems and must urgently ensure strict observance of the relevant disarmament provisions in the Outer Space Treaty.

Speaking for the record, I wish to reaffirm my country's position on some of our agenda items and on the reports of the two Sub-Committees which we shall be discussing.

As to direct broadcasting by satellite, Mexico continues to maintain that every receiving State is entitled to prior notice of a broadcast or series of programmes. Similarly, we have constantly maintained that any tranmission of television signals from outer space by satellite must be previously agreed upon between the transmitting and receiving States. In this respect, direct broadcasting and remote sensing by satellite constitute uses of outer space which, in our view, must be subject to special regulation. In such cases, article I of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, is not applicable, nor should it be interpreted as being so.

(Miss Cabrera, Mexico)

As to the definition and/or delimitation of outer space and outer space activities, with special reference to the geostationary orbit, Mexico, as always in line with the thesis maintained by certain equatorial States, holds that such orbit is a "limited space resource" and as such is not adequately regulated in the Outer Space Treaty. We must see to it that the Legal Sub-Committee continues its efforts aimed at working out a set of principles that would complement the existing Treaty.

As to the use of nuclear power sources in outer space, it is an incontrovertible fact that international legislation in this realm is inadequate. Naturally, that legislation includes the Outer Space Treaty of 1967 and the Convention on International Liability for Damage Caused by Space Objects, concluded in 1975. These juridical instruments do not satisfactorily lay down the rights and duties of States in this delicate field. Indeed, there is no regulation whatever to compel a launching State to warn possible States victims of the re-entry into the atmosphere and impact of a space object as it falls back to earth. Since we are talking in this connexion also about nuclear powered space objects, the launching State's obligation to prevent damage from such impacts by providing the necessary information prior to re-entry into the atmosphere and the possible impact of a space object is not adequately covered either. International responsibility in these cases is indispensable. Hence, both Sub-Committees must continue their efforts to establish as soon as possible international and universally acceptable norms, and in this connexion we endorse the recommendation that the necessary arrangements should be made for the Working Group of the Scientific and Technical Sub-Committee dealing with these matters to meet for one week during the next session of that body in order that it may continue its consideration of the working papers that have already been submitted and of those which have yet to be submitted. In so far as the inclusion of the item on the use of nuclear power sources in outer space on the agenda of the Legal Sub-Committee is concerned, we feel that not only should the consideration of this item be given priority but that the wording of the item should be changed. Indeed, we are not talking about reviewing existing standards and norms, or even about the desirability of complementing those norms; we must proceed without further delay to draft such provisions as would safeguard the rights and specify the obligations involved in the use of nuclear power sources in outer space.

(Miss Cabrera, Mexico)

As regards space transportation, Mexico has always maintained that its development and improvement should contribute to the greater well-being of the international community, such as would stem from the general strengthening of technological co-operation among States in this area.

Lastly, in so far as remote sensing of the earth by satellites is concerned, we continue to maintain that we must strengthen the co-ordinating role of the United Nations so far as it relates to the gathering and dissemination of information obtained through satellites. We must ensure the most appropriate classification of primary data and, starting from that basis, clearly formulate valid international norms that would prevent the indiscriminate dissemination both of primary data and of information that has already been processed. We should thus avoid what may be described as an abuse of information that would prejudice the legitimate interests of States observed by remote sensing.

Although it is true that at the present time major limitations stand in the way of the dissemination of satellite-derived data in those cases where such data relate to strategic or national security matters, it is also true that there is no problem whatsoever preventing the collection of information relating to natural resources. Along these lines, many States, including Mexico, are profoundly interested in ensuring that machinery similar to that which protects strategic data be applied to information on natural resources, over which the States concerned exercise full sovereignty and control, in accordance with existing norms of international law such as the United Nations Charter and the relevant General Assembly resolutions. The restriction of the indiscriminate dissemination of primary data or processed information relating to natural resources would not be an impediment to technical advances in remote sensing, inasmuch as the United Nations - as we have proposed - would act as the co-ordinating body entrusted with the promotion of technological development. We repeat our firm conviction that any State observed by remote sensing has the unrestricted right to priority access at all times to the information thus obtained.

Although we cannot fail to acknowledge the progress that has been made in the deliberations of both Sub-Committees, particularly in substantive matters, there is room for much more. We should also point out that the preparatory work for the Second United Nations Conference on the Exploration and Peaceful Uses of Outer

(Miss Cabrera, Mexico)

Space is proceeding satisfactorily; indeed, we can already cherish the hope that its upshot and ripple effects will redound to the good of all mankind, and particularly of the developing countries. Hence, my delegation is taking part and will continue to take part in the work of the Committee with great enthusiasm since we are convinced that there is no international problem, however difficult it may appear, that cannot be settled when people negotiate in good faith, with imagination and in the conviction that if we are to survive, a dialogue between States is our only guarantee of such survival.

Mr. DIEZ URZUA (Chile) (interpretation from Spanish): Mr. President, the Chilean delegation is pleased to open a new session of this Committee under your skilful and experienced chairmanship. Your well-known ability and competence, as well as the effective work done by the Chairmen of the Sub-Committees, Professor Carver of Australia and Ambassador Wyzner of Poland, have been a constant incentive spurring us on to success in our work. We have no doubt that it will prove so again this time.

Before I get to the heart of the matter, I should also like to express our gratitude to someone who, since 1978, has acted as Rapporteur of this body of ours, Mr. Carlos M. Garcia of Brazil. At the same time, we should like to welcome his successor, the Deputy Permanent Representative of Brazil, Mr. Carlos B. Bueno, and to wish him every success in his new post.

As you so deftly put it a few days ago, Mr. Chairman, this Committee is considered in the United Nations as an exemplary body, a fact that is due to the effectiveness with which it has managed to cope with the tasks entrusted to it for the last two decades. The conclusion in 1979 of the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies bears faithful witness to the way in which the spirit of collaboration and the political will to act have proved to be decisive factors when people are working on behalf of equality, co-operation and justice for all peoples the world over.

Since we attach great importance to the development of space technology and to finding ways and means whereby those advances may be used for peaceful purposes and for the benefit of all States regardless of their level of social and economic development, we agreed to participate in the deliberations of the

(Mr. Diez Urzua, Chile)

Committee and its subsidiary bodies, and have done so year after year; always with a mind to co-operating in completing the tasks entrusted to us by the General Assembly.

Although the experience and, more than anything else, the technological capacity of Chile in terms of using the advances made in space are limited, our country is fully aware of the importance for the developing countries of the advances and new applications of space science. During the seventeenth session of the Scientific and Technical Sub-Committee, a document was circulated on national experiences in the field of remote sensing of the earth by satellites, which gives one a precise idea of how indispensable for the well-being of all are co-operation and utilization of space technology put at their disposal. That document (A/AC.105/257/Add.1 and Corr.1) features more than 20 projects that are being carried out in my country in the field of the applications of remote sensing alone.

(Mr. Diez Urzua, Chile)

Referring to the work that the subsidiary bodies of this Committee have been carrying out this year, we must take note of the fact that the results have been chequered. It is discouraging to see that once again the Legal Sub-Committee has found it impossible to agree on principles relating to direct television broadcasting by satellite. In this connexion we repeat that we are prepared to work towards a formula which, without doing violence to fundamental principles such as the free dissemination of ideas and of information, is in harmony with the inalienable right of States to protect their social traditions and their cultural identity.

In this connexion, and with regard to the principles governing the use of satellites for remote sensing of the earth, we reiterate that our position favouring prior consent between the States concerned is consonant with my country's conviction that only an internationally accepted juridical norm would guarantee equity and justice in relations between States.

Power relationships and the conflict of interests between industrialized States and the developing world compel all of us to agree on principles and norms whereby not only the rights of the weakest would be respected but also access to and sharing of the benefits of space science and technology would be guaranteed. That is the task of the United Nations and of the States represented here.

Because we are convinced of the above and because we have made that objective a central pillar of our participation in this Committee, we believe that other issues to be considered by the subsidiary bodies should be approached from the same angle. Issues bearing on the use of the geostationary orbit, which is being considered by both Sub-Committees, is one of the aspects where the approach must be integrally defined in a spirit of co-operation and justice, so that all States, in consonance with their needs, will have the opportunity to share in the enormous benefits. As a State abiding by the rule of law and its contribution to peaceful coexistence and relations between States, we seek regulations capable of providing all countries with a genuine possibility of access to this natural resource of limited dimensions.

(Mr. Diez Urzua, Chile)

The Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space will be a major event for the international community. As the Preparatory Committee for this Conference, the Committee has the responsibility for recommending and proposing, as it has done in the past, measures essential for carrying it out. We reiterate our opinion that the decisions to be adopted will have to take due account of the essential objective of promoting and ensuring the participation on an equal footing and with the broadest possible co-operation of all States, quite apart from their degree of technological and scientific achievement with respect to outer space.

As to the use of nuclear power sources in outer space, our delegation hopes that, on the basis of the strides made in identifying those areas deserving greatest attention, the Working Group will continue in 1981 to perform the tasks assigned to it. Similarly, we view with interest the deliberations which began in Geneva during the nineteenth session of the Legal Sub-Committee with a view to determining the desirability of complementing the existing norms on the use of nuclear power sources in outer space.

We believe that an effective formula for studying complementary norms for the use of such sources is the proposal to prepare draft principles comprising a legal framework and constituting a code of conduct for States that carry out activities in this sphere.

Hence these principles must clearly define each of the requirements to ensure that the use of such nuclear power sources in a satellite does not entail any danger for mankind or the environment.

On this same question, we should like to state our view that the State using such sources has a broad responsibility for its actions and that any indiscriminate use of nuclear sources must be regarded as an abuse of this right.

The above also applies to problems arising out of the arms race in outer space. As we have done in previous years, we mention this problem with concern. We maintain that this body, precisely because it is entrusted with the peaceful uses of outer space, has a commitment vis-à-vis peace and security for all States which is indivisible and, hence, we must speak out against the rivalry between the great Powers to secure military control of outer space. They are acting against the wishes of the vast majority of nations desirous of living in peace and in violation of the agreements they have signed to preserve outer space for peaceful uses.

(Mr. Diez Urzua, Chile)

Every day, Chile looks to outer space with growing interest and expectation. On its territory the vastness of the sea, desert areas, agricultural wealth, the mountains of the Andes and the Antarctic are harmoniously juxtaposed. As a result, the systems of communication and of monitoring and evaluating natural resources are often inadequate. Hence, space technology opens up incalculable opportunities for fishing, prospecting for minerals, analysing crop patterns, protecting forests, urban analysis and a host of other applications of remote sensing of the earth by satellite. We also have a special interest in communications technology, meteorology, the use of space transport systems and the use of research stations in space. We are prepared to co-operate and we are therefore enthusiastically taking part in the work of the Committee; we are therefore considering the establishment at the national level a comprehensive political body allowing for the expression at the international level of all the experience and ideas of the bodies involved in the use of such technology. Thus we hope to co-operate increasingly in attaining the objectives of this body as well as others.

In conclusion, we should like to express our sincere appreciation to the Outer Space Affairs Division and the Legal Department for the effective co-operation they have always given us in our tasks.

Mr. RICHER (France) (interpretation from French): Mr. Chairman, I should like first of all to say how happy I am that your competence, your devotion to duty and your authority will again ensure the proper guidance of our work and its satisfactory outcome. We wish to include in our tribute the Chairmen of our Sub-Committees, Professor Carver and Mr. Wyzner, and also to welcome our new Rapporteur, Mr. Bueno of Brazil. Further, I wish to mention Mr. Perek, who, as Chief of the Outer Space Affairs Division, showed an activity and a competence which earned him the esteem of everyone.

After making a brief survey of French activities in outer space, I shall have some comments to make on certain aspects of the work of this Committee.

For France the year 1979 was characterized by the continuation of a major national effort, on the one hand, and the vigorous impetus given to international co-operation, on the other. Both are directed by the National Centre for Outer Space Studies. The Centre's budget in 1980 amounts to 1,806 million francs - that is, $430 million - an increase of 16 per cent in one year. Sixty-two per cent of that amount is for joint activities.

(Mr. Richer, France)

At the national level, we have continued to carry out programmes involving telecommunications and direct television broadcasting with the final establishment of the national satellites TELECOM-1 and TDF-1. The latter project was the subject of an important co-operation agreement with the Federal Republic of Germany in April 1980.

At the present time, the appropriate French groups have established a spatial engineering organization, Satelconseil, with a view to making the benefits of French space technology available to interested countries.

With regard to remote sensing, the developmental phase of the SPOT system, which was worked out in co-operation with Belgium and Sweden, has recently begun. That satellite is to become operational in 1984. As a corollary of those preparations, the structure has been developed for links between the SPOT system and its French or foreign users.

France is participating in all the programmes of the European Space Agency. Within that framework the first qualifying test of the ARIANE launcher took place in December 1979, with the National Centre for Space Studies (CNES) directing the test. That test was of course followed by a recent failure, which will not, however, affect the normal development of the programme. In order to meet the foreseeable demand, the ARIANESPACE company was established at the beginning of 1980; this reflects willingness of States members of the European Space Agency to put the services of the ARIANE launcher at the disposal of the international community, under the best possible conditions.

The National Centre for Space Studies has also perfected the ARGOS system in the localization of data collection; it has been installed aboard American satellites of the NOAA-A family. That system gives an idea of the further developments that may be expected from the ARGOS system, which will be used in research and rescue missions within the framework of the international SARSAT programme, in co-operation with the National Aeronautics and Space Administration on the one hand and the Canadian Ministry of Communications on the other hand. Co-operation with the United States in space matters is also continuing, with France actively participating in numerous experiments carried out on board American satellites or space probes.

(Mr. Richer, France)

Scientific co-operation between France and the Soviet Union, has been going on for a long time and it has now been extended to preparations for sending a French cosmonaut into space aboard a SALYUT spacecraft, to take place in 1982, and to the VENERA project for the study of Venus by means of space probes employing a large amount of French scientific equipment.

France has also co-operated with several other States in Africa, Latin America and Asia, and particularly with India in the launching of the Indian experimental telecommunications satellite APPLE. Such activities reflect our desire to facilitate the access of developing countries to the benefits of the progress made in the fields of remote sensing and space communications. In the same context, France takes in numerous scholarship and fellowship students from those countries.

Finally, France co-operates closely in the training programmes of the United Nations by providing experts. In that regard we are pleased to note the considerable improvement in the dissemination of preliminary information on those programmes, thus permitting better arrangements for the participation of specialists, who cannot easily be mobilized at short notice.

The French delegation would now like to share with the Committee some of its observations on the work of its two Sub-Committees.

By abstaining from speaking in the so-called general debate in those two Sub-Committees, we feel that a large number of delegations have shown that the debate should be limited to the framework suggested by this Committee. No one will be surprised, moreover, to hear that the French delegation considers better co-ordination of the work of the two Sub-Committees to be desirable, and that that could be achieved by holding simultaneous meetings of those two bodies.

The Franch delegation will now make certain remarks on the more technical items on our agenda.

With regard to remote sensing by satellite, my delegation believes that the rapid pace and complexity of technical progress should be taken into account if our discussions are to be oriented in a more promising direction. The following is a possible breakdown of the controversial items: first, the question of access by the sensed State to data collected by remote sensing over its territory; and secondly, the access by third States to such data.

(Mr. Richer, France)

The solution to those problems should obviously take two things into consideration: first, there should be no slowing down of progress in remote sensing and measures should be taken to promote its beneficial applications; and secondly, national sovereignty must be duly taken into account in the dissemination of data which will doubteless become more and more detailed as technology develops.

To the extent that there is already a consensus in the Committee on the recognition of the right of access to data collected by remote sensing, it appears to the French delegation that emphasis should be placed on seeking a solution which would permit each country to derive equitable benefits from such data. In particular, it is necessary to adopt guidelines for the dissemination of data which would permit any sensed country to have access to the data collected over its territory, on the one hand, while its national interests were duly respected, on the other.

With regard to the problem of direct television broadcasting by satellite, while we should welcome a flexible broadcasting system, my delegation believes that the concerns of receiving countries must be given very careful consideration. Technology will be of assistance here, thanks to the provisions which exist in the framework of the International Telecommunication Union (ITU).

As to the delimitation of outer space and the question of the geostationary orbit, I should note that technical problems dominate the field. Those problems lead us to adopt a cautious attitude, lest premature decisions be taken which may thereafter have to be reversed.

I shall not dwell upon the problems posed by the use of nuclear power sources in space. Indeed, that question will doubtless play a large part in our future deliberations because of its importance and its topical character. It will be more appropriate for my delegation to give its views when that item comes up for debate.

We would take the same potition with regard to preparations for the Second Conference on Outer Space. For the time being, all I shall say is that France will organize an interregional seminar at Toulouse in 1981 which will help to prepare for that important Conference.

Mr. RYCHLEWSKI (Poland): Mr. Chairman, let me first express my satisfaction at your again presiding over our deliberations. I am confident that you will discharge your duties as Chairman with your customary skill and dedication and that under your guidance the Committee will successfully deal with the matters that are on its agenda at the current session.

In the period that has elapsed since the Committee's last session we have been able to witness further outstanding results from various national programmes as well as from increasing international co-operation. We have in mind particularly the manned space flights carried out within the framework of the INTERCOSMOS programme. My delegation would like sincerely to congratulate Hungary on its first manned space mission, which it successfully accomplished, together with experienced Soviet cosmonauts, a few weeks ago. Thanks to the sophisticated space technology of the Soviet Union cosmonauts from Czechoslovakia, Poland, the German Democratic Republic, Bulgaria and Hungary have already taken part in space flights. In speaking today, exactly on the second anniversary of the first Polish cosmonaut's flight, we look forward to the extended manned space programme of the USSR and other socialist countries. My delegation highly appreciates the very important scientific experiments that have been carried out on board the space station SALYUT-6 for 33 months now. We think very highly of the valuable step towards the further elaboration of space technology taken by the experimental flight of the Soviet vehicle SOYUZ T-2. The wide variety of scientific and technological results deriving from space experiments and INTERCOSMOS manned space flights are of significant value to the international community as a whole.

We fully share the concern expressed by you, Mr. Chairman, in your introductory statement that outer space should be used only for peaceful purposes. In this regard I should like to stress that the activities carried out within the INTERCOSMOS programme are exclusively of a peaceful nature and are used for the benefit of all the participating countries.

My delegation has listened carefully to the presentation of national programmes by different States. It is our view that the progress made in this domain since the last session of the Committee is impressive. The launching of ARIANE L-01 by the European Space Agency was one of the important events of that kind.

(Mr. Rychlewski, Poland)

Poland is among those States which take an active part in the exploration of outer space. The Polish space programme is based on the international co-operation programme INTERCOSMOS. As in previous years, space research in Poland has continued in space physics, satellite geodesy, satellite meteorology, remote sensing, material science, space communication, and space biology and medicine. Experimental and theoretical work and the construction of equipment for space experiments have also been carried out. In particular, the processing of the data from the Soviet-Polish manned space flight concerning remote sensing, space technology and space biology and medicine has been carried out.

In space physics, two significant experiments have been performed together with our friends of the USSR, Bulgaria, Czechoslovakia, the German Democratic Republic and Hungary. An instrument for measuring natural radio emissions and the artificially created electron resonances in the ionospheric plasma has been launched on the INTERCOSMOS-19 satellite. The measurements obtained from that experiment show a variety of structures of electromagnetic noises in ionospheric plasma, particularly in the polar regions.

Work has been continued in the field of the theoretical as well as the practical aspects of solar physics, the physics of interplanetary space, and the physics of the magnetosphere and the ionosphere, in particular in co-operation with some United States and West European universities.

In satellite geodesy, investigations concentrated on the doppler technique and determination of the ground station co-ordinates. A number of projects concerning satellite cloud picture analysis, and the investigation of the atmospheric model of the wind and temperature fields and a study of the influence of solar activity on temperatures in the stratosphere have been carried out.

In remote sensing, the investigations are proceeding in three principal directions: the creation of the system for analogue and digital processing of multiband spectral data; the development of methods for the interpretation of satellite data for concrete problems of the national economy ; and the use of satellite data for the compilation of thematic maps.

(Mr. Rychlewski, Poland)

On the basis of results interpreted from satellite and airborne data, an album containing examples for thematic elaborations has been compiled. Several problems of importance to agriculture, forestry, hydrology and geology have been investigated.

During the flight of the orbital station SALYUT-6, a few material processing experiments prepared by Polish research institutes were performed. The study of the results of the experiments concerned homogeneity associated with the mass transport in zero-gravity conditions, cavitation, crystallographic structure and the rate of growth of crystals.

In space communications, a model of a receiver for the collective antenna installation has been designed for receiving television signals from the geostationary broadcasting satellite in the 12 GHz band on five frequency channels.

The significant part of the research in the field of space biology and medicine concerned the results obtained on the SALYUT-6 space station.

Using the model of movement restriction, an increase was demonstrated in the effectiveness of the processes of regeneration and changes in reactivity in the human organism.

We fully share the opinion expressed by the representative of the USSR concerning the importance of the problem of long-lasting work by man in outer space. As we have good research groups in this domain, we will continue to work actively in this field of space medicine.

Being active in international scientific co-operation, we listened with great satisfaction to the statement of Mr. Denisse, the President of COSPAR, which plays a significant role in the elaboration of the intellectual basis of space programmes.

Being engaged in space research and international co-operation in the peaceful use of outer space, we are fully aware of the important role which our Committee and its two Sub-Committees have to play. We are also of the opinion that both Sub-Committees and the Committee as a whole have achieved important progress in the solution of difficult issues. Those achievements hold out the hope that our Committee will continue to be the forum for the constructive exchange of views and the elaboration of compromise and constructive solutions.

(Mr. Rychlewski, Poland)

One of the important items on the agenda of the last session of the Scientific and Technical Sub-Committee was the preparation of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space. We highly appreciate the work already done in this respect. However, the question of the venue of the conference and some other issues still remain unresolved. We hope that at least some of them will be decided during the current session of the Preparatory Committee.

The Scientific and Technical Sub-Committee is also charged with the scientific aspects of nuclear power sources (NPS), remote sensing and space transportation systems which are very important for legal reasons. With respect to remote sensing of the earth from space, there have been a number of proposals in the past. We are ready to accept compromise solutions, but we should also like to stress that the dissemination of data should be consistent with the economic and political interests of the States concerned. We strongly believe that the spirit of compromise will enable the Legal Sub-Committee to complete its work on the draft principles of remote sensing. In our opinion, a step toward this end was achieved during the last session of the Legal Sub-Committee.

Another important item on the agenda of both Sub-Committees is the use of nuclear power sources in outer space. We have already presented our point of view on several occasions. But it is still useful to stress that this kind of energy can be safely used in outer space under certain conditions. We are also of the opinion that the existing legal instruments provide the necessary provisions concerning all aspects of the use of NPS in space.

The agenda which is before us shows how manifold are the issues which we are going to discuss. We hope that the spirit of compromise and goodwill will enable us to reach a solution of the problems we are facing during the present session. My delegation will endeavour to work towards a successful conclusion of this session. I am convinced that thanks to your competent and wise leadership, Mr. Chairman, this goal will be achieved.

Mr. OSAH (Nigeria): Mr. Chairman, the Nigerian delegation is pleased once again to see you preside over the deliberations of this Committee. It is our hope that under your able guidance, this Committee will find solutions to some

(Mr. Osah, Nigeria)

of the issues which the two Sub-Committees at their respective sessions earlier in the year were unable to resolve.

I wish to express on behalf of the Nigerian delegation our gratitude to the Committee, the entire staff of the Outer Space Affairs Division of the Secretariat, and the staff of the Food and Agriculture Organization (FAO) for the joint UN/FAO seminar on remote sensing held in Ibadan, Nigeria from 5 to 23 November 1979. Our sincere thanks go also to the lecturers at the seminar for their invaluable contribution to the success of that seminar. The participants and indeed Nigeria as a whole benefited immensely from that seminar.

It is not the intention of this delegation to comment at lenth at the current session on the failure or success of the work of the two Sub-Committees. Our views on the several unresolved issues have been adequately elaborated upon at earlier sessions of this Committee and we reserve our right to offer further comments if and when necessary. We hope, however, that the political goodwill that emerged at the twenty-second session of this Committee,during which the unresolved issues on the draft treaty relating to the moon and other celestial bodies were agreed upon,would once again prevail. It is regrettable to note that no appreciable progress was made by the Legal Sub-Committee, for instance, in the formulation of principles governing the use by States of artificial earth satellites for direct television broadcasting, and also in the consideration of the legal implications of remote sensing of the earth from space. The Scientific and Technical Sub-Committee fared no better, in our view, in the consideration of those items referred to it. We do appreciate,however, the efforts made by the two Sub-Committees in trying to carry out their respective mandates.

Some of the statements made at this session have, as usual, recounted the remarkable feat of human endeavour at national levels in the exploration of outer space. We have been told of efforts made by those Governments to share the benefits of their scientific achievements with other Governments. We have also heard the laudable programmes carried out by those Governments which are seemingly designed to ensure that the benefits of their endeavours are shared in the true spirit of international co-operation. Thus, we have been made to believe that the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space is being organized for the benefit of developing countries.

(Mr. Osah, Nigeria)

Man's ingenuity in making discoveries and in finding alternative uses for his products have also led those space Powers to explore the military potentialities inherent in the control of outer space. Fears have been expressed ever since the beginning of the space age dating from 1957 and at this session about the danger of extending the arms race to outer space. Several efforts aimed at ensuring that the exploitation of outer space is solely for peaceful uses have been frustrated by the space Powers that have not spared their efforts in designing "killer satellites" or the "big birds", as the case may be.

Yet those same space Powers and their surrogates have come here to read their statements highlighting their achievements in the space programmes designed, according to them,for the benefit of mankind.

These well orchestrated statements are made to focus the attention of the international community only on the well-known civilian space activities while the never-publicised military space programmes are being pursued with the same vigour and even at an alarming rate. It is now known that at least 33 per cent of the total amount of money spent by some of those space Powers within the past two decades has been on defense-related programmes. These revelations are of grave concern not only to my delegation but also to some members of the international community, particularly at a time when the United Nations Committee on Disarmament is spending so much time and effort on trying to halt the arms race. Perhaps the terms of reference of that Committee should be broadened to include disarmament in outer space.

Unless our Committee addresses itself to this issue promptly and makes definite recommendations to the General Assembly with a view to ensuring stronger protection against the militarization of outer space and a complete ban on the development and testing of all nuclear weapons in outer space, the much talked about peaceful uses of outer space will become secondary "as space develops into a military arena". Consequently, we should like to see some positive steps taken to ensure that effect is given to paragraph 80 of the Final Document of the special session of the General Assembly devoted to disarmament which called for appropriate negotiation within the spirit of the Outer Space Treaty. It is the hope of my delegation that a review of the existing law will be undertaken and, where possible, additional protocols will be concluded.

(Mr. Osah, Nigeria)

On the work of the Preparatory Committee for the UNISACE 82, my delegation wishes to offer a few comments. The team of experts commissioned to prepare the background papers, in our view, does not adequately reflect the usual United Nations criterion of equitable geographical distribution as much as possible. We are happy to note, however, that this issue has been raised and is being discussed by the Preparatory Committee. It is our hope that the suggestion by Mr. Perek of the Outer Space Affairs Division to the effect that any delegations that may wish to submit names of suitably qualified experts in these fields and that are willing to contribute to these background papers may do so to the Secretariat for some action. While we agree that the criterion of equitable geographical distribution may not always be feasible, we find no justification for the apparent neglect of experts from Africa in the preparation of background papers.

(Mr. Osah, Nigeria)

Some of the following papers are of particular importance and relevance to us in Africa: "Relevance of space activities to earth resources management and to the environment"; paper 111 (i), "Relevance of space activities to economic and social development"; and paper III (ii), "Training and education of users of space technology".

The views of experts from Africa in these areas will certainly reflect upon earth resources management and economic and social development in Africa and will naturally be different from those from other regions. We would therefore request the Secretariat to redress this imbalance. I am sure there are experts in Africa who are able and willing to participate in the preparation of these papers. The various remote sensing seminars organized both within and without Africa have shown that there are such experts. The report of the seminar held at Ibadan, Nigeria, and published by the Secretariat noted that:

> "This seminar demonstrated that experts abound at the local level; the ones invited to participate in this seminar performed exceptionally well. Such individuals should be encouraged to assist the United Nations in its training programmes in the future." (A/AC.105/254, para. 84)

Finally, while we endorse the idea of an essay contest for students, we would suggest that the age range of 12 to 16 be extended to 18 to enable more students to participate, as most of the students from Africa do not graduate from secondary schools until the ages of 17 or 18.

Mr. DEBERGH (Belgium) (interpretation from French): Mr. Chairman, this year, once again, I wish to express my delegation's satisfaction at knowing that the conduct of the work of our Committee is in your capable hands. Similarly, I welcome the designation of Mr. Bueno as our Rapporteur, replacing our eminent colleague who has just left us.

This year marks a turning point in the history of our Committee because we must take note of the departure of Mr. Perek as Chief of the Outer Space Affairs Division. Mr. Perek was for us a wellspring of experience and insight and, above all, of good counsel. My delegation wishes to express our special gratitude to him.

I shall not burden the Committee with either the policies or the programme of action pursued by my country in the realm of space technology and the exploration of space: existing documents contain relevant data on this score. But I should like, none the less, to say that everything we undertake in this field is essentially oriented towards international co-operation. To be sure, we view activities in and through outer space as a way of rounding off a national future tailored to the dimensions of our country. But, above all, we view them as a way of bringing nations closer to one another - as a way of making international law, as a renowned international jurist has put it. a right of good-neighbourliness. Along these lines, we conceive of outer space activities as intimately affecting the ethical solidarity of mankind - a new kind of solidarity, because it is based on the needs of the nations in greatest want. From this standpoint we cannot but share the concerns already voiced here on the subject of a disturbing trend in what should have been a harmonious and peaceful development.

You touched on this subject in your introductory remarks, Mr. Chairman, and we fully share your concern. Upon reflection it will be realized that material resources and intellectural energies run the risk of being put to uses totally alien to the creation of a better world. We are, after all, the guardians of a certain 1967 Treaty - a treaty which emerged from this very Committee, and which spells out particular, very precise obligations for States in the peaceful use of outer space. Hence we cannot pretend to be unaware of the consequences of a possible militarization of outer space.

(Mr. Debergh, Belgium)

As to the practical problems that are part and parcel of the work of our Committee and its two Sub-Committees, my delegation intends later on to set forth its views on some of these issues when we take up agenda item 4. But by way of general comments, my delegation wishes to say a few words on what you, Sir, have called the reluctance of Member States to draw closer together in their views on some of the issues before us. You mentioned direct television broadcasting and remote sensing, but it is clear that this reluctance applies equally to other issues, such as the delimitation of outer space and the use of nuclear power sources in outer space.

My delegation rejects the notion of viewing this issue in cut and dried terms, as if it were a simple matter of a basic antagonism brought into the international community by "certain circles opposed to international co-operation". Actually, all these are new and complex issues. There are a host of divergent factors at play - factors which at times are equally divergent in each particular country, with the result that it is not always easy to perceive right away and in toto the reasonable and reasoned average criteria concerning the varying interests of countries and the international community as a whole.

We should resist the temptation of spelling out abstract, pre-conceived principles; we should not like to lose sight of what is actually happening and what will happen, bearing in mind the limits set by technological constraints. Thus, as regards remote sensing by artificial satellites, rather than debate what should be done, whether in a restrictive or a non-restrictive way, with data which are available, in any event, in the realm of scientific discovery - an international realm par excellence - we feel that there would be much more to gain from pondering the question of the prerequisites for co-ordinating systems for the remote sensing of the earth so as to avoid overlapping and useless rivalry.

As to the crux of the matter, it is a truism to say that countries that are the object of remote sensing have an absolute right of access, as a matter of priority, to data relating to their own territory.

(Mr. Debergh, Belgium)

On the other hand, as regards the dissemination of information thus derived one must likewise find a way of harmonizing the interests of sensed countries with those of other countries. Above all, we must avoid the development of a privileged status among the other countries.

As regards direct television broadcasting by satellites, is the issue really one of finding out who, in the final analysis, will be the sensor of certain television programmes - the owner of the receiving set or his Government? Must we seek in outer space law a response to a question that falls within the purview of telecommunications law? This law, based on technological constraints, limits direct television broadcasting to an exclusively national enterprise which cannot be broadened to include other countries without running the risk of shaking the international telecommunications system to its roots. One delegation said last year and has repeated this year, that in view of the national character of direct television broadcasting, it would be better to seek instead ways and means of making direct international television broadcasting possible. These ways can be only ways of co-operation - regional and interregional co-operation - of interconnexion, if I may use that unorthodox wording, between national and regional radio transmitting systems.

I know that verification of the facts does not keep certain delegations from accepting the conflicting texts that are before our Legal Sub-Committee. My delegation has a different point of view on this question since we find that those texts do not provide an adequate response with regard to laying down a rule which for us would be pointless but which would have repercussions that would impinge on other areas and, in particular, on areas which fall within the purview of exclusive national jurisdiction.

This is not a matter of a conflict between thesis and antithesis - in dialectical terms. We are talking simply about coming to different conclusions on the basis of different criteria, using the same facts.

As to the problem of the use of nuclear power sources in outer space, you, Mr. Chairman, pointed out that a competent working group has voiced its conviction that those power sources could be utilized without risk in outer space, provided that certain security rules were observed. But this affects outer space. There still remains the likelihood of re-entry into the earth's

(Mr. Debergh, Belgium)

atmosphere or on the earth's surface. My delegation wonders what really should prevent us from identifying and perfecting these security conditions, this security standard, in an instrument which would be the basis for international confidence as to the use of these power sources in outer space.

Mr. MANDESCU (Romania) (interpretation from French): My country's position of principle on the questions that are on our agenda has already been stated on several occasions; we will therefore not emphasize that position or its details. However, we regard it as necessary to recall some aspects which seem to us to be essential, hoping thereby to contribute to the crystallization of trends and of solutions that will enable us to make further progress.

Aside from their technical nature, the agenda items have multiple highly political implications because they touch on such problems as the sovereignty of States, and their economic and social progress through international co-operation in a new field - outer space. This field lends itself to the establishment of a new kind of relationship between States that is more just and more equitable than in the past and the more necessary because in this field certain States already have sophisticated technology at their disposal, whereas others - the great majority - are deprived of it or have too little of it.

We feel that one should never lose sight of the reason for this Committee's existence, namely, the use for exclusively peaceful purposes of outer space. Like many other delegations, we feel that this objective should be pursued with the greatest attention and firmness because of facts which have recently accumulated, and have warned us of the incalculable dangers that could develop for international peace and security. Outer space has now become another field where the arms race is possible and where military rivalry could develop.

Our Committee must therefore always bear in mind its basic objective, which is the reason for its existence, and we fully share the concern expressed here by quite a number of the delegations which have already taken the floor and which have drawn attention to the dangerous potential of armaments in outer space.

(Mr. Mandescu, Romania)

Finally, before expressing the views of my delegation with regard to the items on our agenda, we should like to provide some brief information on the space activities developed by Romania during this year.

Romania is involved in several space activities oriented, first, towards the application of space technology in order to resolve problems connected with the national economy of Romania; secondly, towards the participation of Romanian scientists and experts in world-wide efforts of research and exploration of outer space and of the earth's surface and environment.

Thus, in the field of telecommunications we already have a ground station with two standard antennae of 32 metres diameter for the INTELSAT satellite, one oriented towards the satellite over the Atlantic Ocean which was put into service in 1977 and the other oriented towards the satellite over the Indian Ocean, which became operational at the end of last year. Those two antennae represent the first stage of a programme aimed at putting into operation in the 1980s a space telecommunications complex on the same site where provision has been made for the construction of further ground stations for specialized telecommunications services.

(Mr. Mandescu, Romania)

In the field of meteorology, the Romanian specialized services have been able accurately to receive and then to make use of data transmitted by meteorological satellites.

With regard to the applications of remote sensing, we have given particular attention to training. Many specialists in our country are now familiar with the use of remote sensing data.

The Romanian Space Activities Commission is now holding discussions with the National Aeronautics and Space Administration (NASA) on the conclusion of an agreement for the setting up of a LANDSAT ground station.

As to scientific research in outer space, thanks to the existing international co-operation in this field, Romanian specialists are taking part in scientific experiments in outer space on spacecraft launched by other States. Thus last year several instruments were launched into outer space on rockets and satellites of the INTERCOSMOS programme; among them the magnetometer with ferromagnetic probes deserves special mention: it has received much praise and is in great demand to equip other satellites. It was built in co-operation with Soviet specialists and has been installed on INTERCOSMOS-18 and INTERCOSMOS-20 satellites.

Preparations are under way for experiments to be conducted by a Romanian cosmonaut aboard SALYUT.

With regard to the American SPACELAB-3 vessel, an experiment linked to the study of the discharge of liquid in space is under way.

Turning to the items on the Committee's agenda, the documents before us offer proof that little genuine progress has been made recently. For example, we mention first the case of remote sensing. For some time now we have been continuing to discuss in the Committee and, of course, in its Sub-Committees, the technical and scientific aspects of remote sensing. At the same time, practical achievements are continuing. For a number of years we have been asking that studies and analyses on the concept of resolution in remote sensing be undertaken. If we continue in this fashion, we run the risk of losing a great deal of time without being able to arrive at decisive results. It might be said that the Romanian delegation has a certain responsibility in this connexion, for it proposed at the 1977 session of the Scientific and Technical Sub-Committee,

(Mr. Mandescu, Romania)

held at the United Nations Office in Geneva, that a study should be made of that concept. What the Romanian delegation had in mind in making that proposal was to resolve the impasse in the Sub-Committee on the criteria for evaluating remote sensing data.

The studies made since 1977 have shown that the idea of broadening the criteria used for multispectral scanning data of various types is far-fetched. That is also the case for multispectral data of the visible zone and even more so for infra-red or radar data.

We believe that those studies have shown the impossibility in practice of finding a single criterion at this stage. The difficulty in resolving this problem is increased by the constant and spectacular technological developments in this field.

In conclusion, and in order not to tax the Committee's attention unduly, we propose that the question of the study of the concept of resolution be entrusted to scientific bodies dealing with this matter, such as the Committee on Space Research (COSPAR) or the International Society of Photogrammetry and Remote Sensing, without linking the solution of these problems to approaching the aspects of co-operation and co-ordination of remote sensing activities for the benefit of all nations without discrimination. If we do not proceed in this manner, the Committee will find itself faced with a fait accompli, with the existence of organizations, agencies and machinery which will have difficulties in responding to the needs of all nations.

With regard to the dissemination of data obtained through remote sensing, the Romanian delegation has pointed out many times that it would be desirable, and even necessary, for recordings with a high-level resolution not to be distributed freely or it would be even more desirable for no such recordings to be made on the national territory of States. However, in view of the increasing number of States which have or will have the possibility of emitting or receiving by means of ground stations - of which there will undoubtedly be more as time goes on - the principle of equality presupposes that all States must benefit from the advantages of these new space techniques. All States must have access to all the remote sensing data relating to their territory and, in general, to all data obtained by satellite. This is an incontestable right, for it flows from the principle of the sovereignty of States over their territories and their natural resources and from the right of each State to have access to acquired knowledge in science and technology.

(Mr. Mandescu, Romania)

It is particularly important to eliminate discriminatory restrictions and barriers, including financial ones, which impede the access of developing countries to such data. There again, the objective is to make remote sensing an important factor in the elimination of under-development by accelerating economic progress in the less advanced countries.

(Mr. Mandescu, Romania)

With regard to direct television broadcasting by satellite, we believe that all such activities should conduce to mutual trust and mutual respect among States and peoples, friendly relations between them and the maintenance of international peace and security.

Direct television broadcasts should help to raise the cultural and scientific levels of the world's peoples. They should serve for the dissemination of universal cultural values and for the education of the masses in the spirit of humanism and for improving the quality of life for all. Such broadcasts must also be in conformity with the principles of universally recognized law, among which respect for sovereignty and non-interference in the domestic affairs of States are particularly important.

Consequently, programmes dealing with the territory and population of a given State should never be broadcast without the agreement of that State, that is to say, the State receiving such programmes. At the same time, that State has the right to pronounce on the content of the programme broadcast to it. The transmitting State is responsible for illegal broadcasts, in conformity with the current norms of international law.

The Romanian delegation believes that the Legal Sub-Committee must continue the work of formulating norms in this field, norms which must not conflict with the generally recognized principles of law, such as the principle of non-interference.

Among the ideas and proposals for the attainment of that major goal, which must be taken up again, defined and translated into concrete programmes of action, my delegation would suggest the establishment of a special training programme under the auspices of the United Nations Development Programme (UNDP) in the field of space technology, for a large number of specialists from developing countries; conrete measures to broaden international co-operation so as to ensure the genuine transfer of technology to developing countries and the training of national experts in the practical applications of space technology; the broadening of the United Nations programme on the applications of space technology, including economic assistance projects, based on the technology of remote sensing and directed towards developing countries. The additional expenses incurred

(Mr. Mandescu, Romania)

for that programme could be offset by increasing the appropriations under the United Nations budget and by voluntary contributions by the developed States.

We believe that the legal solutions which we are now in the process of working out should fully conform with international law, in the interests of all countries, and should take into account the specific needs of the developing countries.

With regard to the use of nuclear power sources in outer space, it is certainly not a question of prohibiting such uses but rather of developing more effective guarantees for the protection of States and their peoples against the possibility of certain accidents that might occur. That is why the preparation of additional norms could prevent such accidents and forestall catastrophe.

In connexion with the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space, we should like simply to reaffirm our position of principle that it is necessary to exert every effort to achieve the fundamental objective of the Conference, primarily the strengthening of the role of the United Nations in the development of international co-operation in the field of outer space,and the more effective use of space technology for the benefit of all nations and particularly for the developing countries. The composition of the organs of the Conference must be in conformity with the principle of equitable geographical representation. And, given the purposes of the Conference, the developing countries should be represented in an appropriate manner.

With respect to the relatively advanced preparatory phase of the Conference, the Romanian delegation wishes to reaffirm its position that at all stages and with regard to all the basic procedural questions on the organization of the organs of the Conference, the objectives of the Conference must be borne in mind.

We should like to re-emphasize once again that the preparations for the Conference should not follow the path appropriate to a strictly scientific gathering, which is a tendency that unfortunately still exists. On the contrary, all the phases and all the documents of the Conference should be governed by its aims, particularly the stimulation of international

(Mr. Mandescu, Romania)

co-operation in the area of outer space for exclusively peaceful purposes, to the benefit of the economic, social and cultural progress of all nations, and particularly of the developing countries.

The Conference must clearly define the main guidelines for future international co-operation and the political and legal principles governing such co-operation, in the interests of peace and of establishing new, and more equitable relations in that field, thus helping to establish a new international economic and political order.

In conclusion, Mr. Chairman, we should like to express to you our gratification at seeing you again presiding in this Committee. We wish particularly to congratulate you for your opening speech, which showed us the difficulties to be overcome and the path we must follow to do so.

We should like also to congratulate Mr. Bueno, our new Rapporteur.

Our congratulations go also to Mr. Perek for the contributions he has made over the years to the work of this Committee.

For its part, the Romanian delegation would like to assure the Committee of its full co-operation and assistance so that the Committee might make further progress in its work.

Mr. ZAMBRANO (Colombia) (interpretation from Spanish): Mr. Chairman, the Colombian delegation would like to extend its warmest greetings to you, Sir, and to those who share with you the work of guiding this Committee, in the certainty that under your outstanding leadership we shall surely make good progress.

After a brief survey of the achievements of Colombia in the peaceful uses of outer space, my delegation will deal with remote sensing, the use of nuclear power sources in outer space, the delimitation of outer space, direct television broadcasting on an international scale by satellite and the forthcoming United Nations Conference on the Use of Outer Space.

(Mr. Zambrano, Colombia)

I shall first deal with Colombia's achievements. Following the declaration of principle made by Colombia at the thirtieth session of the General Assembly, in 1975, as to "national space", which has been enshrined in our laws for many years now, we decided to set up two national radiocommunications stations, SATCOL, in the segment of the geostationary orbit that crosses our territory. We have complied with all the relevant notification and co-ordination procedures relating to these stations.

The two domestic space stations are currently at the drawing-board stage. They are to be launched in 1983. Meanwhile, we have put into service a number of land-based stations in island areas and remote parts of the Amazon region of our territory, using leased circuits.

Coming now to remote sensing and observation, it is assumed that, from the viewpoint of technology, a distinction may be made between macro remote sensing and micro remote sensing, based on the physical limits that the atmosphere imposes upon satellites in gravitational flight from any feasible altitude - in other words, beyond the atmosphere, in the absolute void of outer space.

Hence, macro remote sensing is of limited resolution potential and has specific purposes for which it can always be used to the benefit of mankind. It must not, therefore, be limited by or subjected to authorizations by States situated in remotely sensed parts of the earth, for if the data and information collected for peaceful purposes are to be fresh and timely, there must be no delay on the pretext of some ill-conceived idea of sovereignty, because any such delay in dissemination would render them worthless.

On the other hand, the Colombian delegation feels that, in view of their nature and scope, micro remote sensing and observation call for express authorization from the remotely sensed States in conformity with appropriate regulations to be devised within the relevant bodies of the United Nations.

I come now to the use of satellite-based nuclear-power sources. My delegation agrees that the use of satellite-based nuclear power sources is indispensable and can be safe provided that the appropriate procedures are complied with when devices are activated after entry into orbit and provided that the proper safety devices are provided. Therefore, positive rules of law are essential to ensure that any State which launches a satellite that gets

(Mr. Zambrano, Colombia)

out of control will speedily make a notification of its loss of control and will do everything possible to determine the possible points of re-entry into the atmosphere and impact with the earth's surface, without prejudice to the other norms laid down in the Outer Space Treaty of 1967.

I come now to the delimitation of outer space. As to the geostationary orbit, the Colombian delegation's point of view continues to be that voiced in 1975, that is:

> "Colombia does not object to free orbital transit or to communications requiring the devices envisaged and authorized by the International Telecommunication Union (ITU), as long as those devices ply the territorial sky in a gravitational flight, from any practical height to infinity. But a clear exception is to be made in the case of devices which are to be fixed on a segment of /its territory/". (A/PV.2376, p. 42)

We should point out in this connexion that, although it is true that at the last session of the Legal Sub-Committee in Geneva my delegation stated that the limit for outer space should be set at a distance of about 100 kilometres, it did so because that is the most logical and practical altitude in line with given technological and scientific facts, since there can be no satellites or orbits within the atmosphere, but only out in the void of outer space.

On the other hand, we should like to state that, as we understand it, there is no connexion between the altitude to be adopted for delimiting outer space and that set by the laws of gravitation for the geostationary orbit.

Like Ecuador, Indonesia and other States whose geographical location has condemned them to all the ills of a tropical existence, this same location has brought them a limited natural resource which must be regulated for the benefit of mankind, bearing in mind the rights enshrined in specific treaties already signed, within a juridical system which Mr. Sunaryo, Head of the Indonesian delegation, called a "sui generis" system at our last meeting.

In our judgement there is a similar need for an early and appropriate definition of and legislation on the beginnings of outer space and on the geostationary orbit inasmuch as if that is not done in timely fashion rules will be of no avail against the de facto occupation of the orbit in virtue of operational requirements that would transgress the provisions of international law which clearly prohibit the emplacement in a fixed orbit of radiocommunications

(Mr. Zambrano, Colombia)

stations at any altitude without the express authorization of the State below, as in the specific case of the States that are crossed by the Equator.

We are afraid that these same operational requirements may be used as a basis for an allocation of satellite orbit locations in perpetuity, which would be at variance with clear principles of international public law adopted by the world community through the multilateral treaties that are now in force.

I come now to direct international satellite-based television broadcasting. The Conference held in Geneva in 1977 on television broadcasting from geostationary satellites prohibited all international broadcasts not carried out under regional agreements. Notwithstanding that, the spill-over there envisaged is substantially increased in view of the new technological resources which multiply the potential areas of coverage. Because of that, direct international television broadcasts are tending to become legalized de facto and to cover vast contiguous areas, which can entail a host of sociological, economic, cultural and political implications for some continents.

(Mr. Zambrano, Colombia)

The contention that article 19 of the International Covenant on Civil and Political Rights, which proclaims the right of everyone to receive information regardless of frontiers, lays down the obligation to authorize this kind of direct broadcast to receivers in any given country, cannot be upheld. We feel that the right laid down in that article was adopted to protect the individual against all forms of subjugation, of which direct television broadcasting, regardless of frontiers, can, in the final analysis, be one. This is especially so if the broadcasting resources, as efficient as they are limited, are left in the hands of a few privileged anonymous individuals, who can persuade, create habits, set trends and arouse a homogeneous awareness among individuals across vast continental areas.

This could apply to Latin America, from Mexico down to Chile, which speaks the same language and has the same colour television system - a situation in which no one could accurately predict who in the medium or long term would be the true sponsors and who would determine the use of those resources, which, in the light of the principle I referred to, would have no limitation whatever, inasmuch as consultations and agreements on such programmes would become a utopian dream.

As to the United Nations Conference on the Use of Outer Space for Peaceful Purposes (UNISPACE 82), my delegation views the holding of that Conference as of major importance and wishes to point out the following:

First, we feel that the most appropriate venue would be Vienna, since that city was so graciously offered by the Austrian Government as early as last February, and since it hosts a United Nations office, which would lower conference costs.

Secondly, as to the duration of the Conference, we consider two weeks would be appropriate.

Thirdly, with respect to the composition of the bureau and of the committees, there can be no doubt that this must be equitably based on the criterion of ensuring appropriate geographic representation to the participating States.

I apologize for the length of my delegation's statement, but we wished to spell out our thinking on the various matters before us for the record.

Mr. SHAO TIANREN (China) (interpretation from Chinese): It is a great pleasure for the delegation of the People's Republic of China to attend a session of the Committee on the Peaceful Uses of Outer Space for the first time as an observer. I should like to take this opportunity to thank you, Mr. Chairman, and many of my fellow representatives for the welcome you have extended to us.

With the rapid development of world science and technology, particularly that of space research and technology since the middle of this century, the exploration and utilization of outer space has attracted ever greater attention and interest among various countries of the world. As men's activities have extended to vast and boundless space, a brilliant prospect such as never known before is being unfolded before the eyes of the people of the world. The question of utilizing advanced science and technology for outer-space exploration and research so that the use of outer space may serve peaceful purposes and truly benefit human society is one of major importance which has a bearing on the interests and betterment of the people of the world and is an important task facing all countries of the world.

China is a developing socialist country. It is our consistent stand and desire to safeguard world peace and develop co-operation among nations on an equal footing. While committing ourselves to socialist economic construction in recent years, we in China are also making active efforts in outer-space exploration and utilization.

China's outer-space research programme started in 1958. In 1970, we successfully launched the first man-made earth satellite, which was followed by the successful launching of seven more. To meet the needs of China's economic construction, we have also mapped out programmes for the development of satellites for meteorological, communication, earth resources and scientific purposes. We have always held that outer-space exploration and utilization should serve the interest of maintaining world peace and security and that of the entire human race. We also believe that increasing exchanges and co-operation in space technology among nations will help countries to learn from one another and blaze new trails in this field. In recent years, China has signed with a number of Governments and scientific research institutes of friendly countries a series of agreements on scientific-technological co-operation,

(Mr. Shao Tianren, China)

including those on co-operation and exchanges in space technology and the exchange of visits by personnel or experts, making study tours or giving lectures. We are ready to strengthen our links and co-operation with all peace-loving countries in a joint effort to promote the peaceful uses and development of outer space science and technology.

The primary task for the Committee on the Peaceful Uses of Outer Space established in pursuance of a General Assembly resolution is to address itself to the promotion of the peaceful uses of outer space science and technology. We have noted that a number of important principles governing the exploration and utilization of outer space have been established in the various resolutions, declarations, conventions and other legal instruments adopted by the United Nations General Assembly or the Committee on the Peaceful Uses of Outer Space, such as the need for the use of outer space to serve the interests of mankind, the need of free exploration and use of outer space and celestial bodies by all countries on an equal footing vis-à-vis the attempt to subject outer space and celestial bodies to appropriation by any country, the need for all countries to comply with international law and maintain world peace and security in their exploration and uses of outer space, and the need to take account of the interests of the develping countries in outer space technological co-operation and in the sharing of benefits derived from outer space resources.

(Mr. Shao Tianren, China)

In our view, these principles have in the main given expression to the common desire of all peace-loving countries, especially that of the developing countries, and constitute the correct orientation along which the Outer Space Committee should operate and function. We are also pleased to note that the Committee, on the basis of the above principles, has made efforts and achieved a certain measure of success in the peaceful uses of outer space, in promoting international co-operation and in rendering technical assistance to the developing countries. This is primarily due to the joint efforts of all peace-loving States members of the Committee. We hope that the Committee will follow this correct orientation, further promote the development of outer space science and technology and make greater contributions in the interests of human society.

China has always pursued a foreign policy of peace in international affairs. China is now in a new historical period. The Chinese people are dedicating themselves to the socialist modernization drive. We are prepared to broaden our exchanges and co-operation with other countries in outer space exploration and study and its peaceful utilization. Our purpose in attending the current session is to learn more about the activities of the Outer Space Committee, strengthen our friendly contacts with various quarters and increase mutual understanding through the exchange of views. The Chinese Government hopes that China will be admitted as a full member of the United Nations Committee on the Peaceful Uses of Outer Space at the coming session of the United Nations General Assembly.

It is our earnest hope that, through the joint efforts of all the representatives of the participating countries, this session will achieve positive results and be crowned with complete success.

The CHAIRMAN: I now call on the representative of the European Space Agency (ESA).

Mr. MELLORS (European Space Agency): First, Mr. Chairman, we wish most sincerely to associate ourselves with all the other delegations which have expressed their pleasure at attending another meeting of the Committee under your wise chairmanship and, at the same time, we wish to reaffirm our appreciation of the privilege of having observer status with the Committee on the Peaceful Uses of Outer Space and its two Sub-Committees under the leadership of their respective competent Chairmen. Secondly, we wish to offer our very best wishes to Dr. Perek

(Mr. Mellors, ESA)

as he leaves the United Nations after a period of extremely distinguished service as head of the Outer Space Affairs Division. Thirdly, we are pleased to report that the Agency last October welcomed Austria as an associate member and that we look forward to that State's becoming a full member in due course.

As regards the Agency's space activities, several of these have already been mentiond by the representatives of a number of States and, in consequence, I shall be selective and, I hope, acceptably brief.

To the European Space Agency, the most important event since the last session of the Committee was the completely successful first flight trial of the European launcher ARIANE, which was effected from the French space centre in French Guiana on 24 December last year. That flight demonstrated that the basic design was sound, and we are proceeding with further development which will increase the performance by some 40 per cent.

Also in the field of space transportation, the development phase of Spacelab has been completed, and we will deliver the first flight model to the National Aeronautics and Space Administration (NASA) nearly next year.

The Agency's programme in space science proceeded smoothly, all satellites in orbit performing correctly throughout the year. A new project that may be of interest to members of the Committee is an astrometry satellite, the development of which has just started. By means of this satellite, it is proposed to measure the parallaxes and the proper motions and positions of more than 100,000 stars with much greater precision than has hitherto been possible. We are also studying the feasibility of a mission to Halley's Comet when it next approaches the earth in 1986.

In November of last year, after two years' operation and just after successfully completing its role in the Global Atmospheric Research Programme of the World Meteorological Organization (WMO), the Agency's meteorological satellite ceased to function. The Agency very much regrets this break in the provision of meteorological data, which had proved useful to many countries in Africa, the Middle East and South America, as well as to those in Europe, and plans to launch a second model towards the end of this year.

In the field of remote sensing, in addition to sponsoring, in collaboration with the Food and Agriculture Organization (FAO), a training course in Rome in October of last year, the Agency was gratified by the invitation of the Canadian Government to participate in the recent meeting in Ottawa and is pleased to act as host for the second such meeting in 1981. Meanwhile, the planning of our own remote sensing system, which will consist of two satellites, is going ahead.

(Mr. Mellors, ESA)

Finally, the Agency is fully aware of the great importance of UNISPACE 82. The number of countries that can by themselves afford a comprehensive space programme is still small, but the benefits of space technology and exploration can be made available to all countries, whatever their state of development, through international co-operation. We are convinced of the great value of international co-operation in space activities since the Agency is itself an example of what can be achieved by such co-operation. The Agency is carrying out preparatory work for the Conference, both at the request of the Secretariat and on behalf of its member States. Beyond that, if requested to do so, we are willing to consider further contributions in whatever way may be suggested.

The CHAIRMAN: The Committee has now finished consideration of agenda item 3, "General exchange of views".

ORGANIZATION OF WORK

The CHAIRMAN: I should like to give a brief preview of our work programme over the next day or two.

The next meeting of the Committee will be held on Monday morning at 10.30 to begin consideration of agenda item 5, "Programme and activities of the United Nations relating to Outer Space". This agenda item, as members are aware, should have been considered this morning, but in view of the length of the list of speakers we did not come to its consideration. I would therefore suggest that when we reconvene on Monday morning, in order to make up for the time lost we begin consideration of agenda items 4 and 5 concurrently. This will help us to get through these two agenda items and at the same time to approach other activities which are still before us.

If I hear no objection it will be so decided.

It was so decided.

The meeting rose at 1.10 p.m.