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CONTENTS

Chairman: Mr. Mario AMADEO (Argentina).

AGENDA ITEM

Report of the Committee on the Peaceful Uses of Outer Space (A/4987, A/C.1/857, A/C.1/L.301)

- 1. Mr. STEVENSON (United States of America) said that the astounding progress made in space science had not been matched by progress in international cooperation; unless the world acted soon, it would be making the old mistakes over again. It was dangerously wrong to think that the exploration of outer space concerned only the great Powers; the smallest and poorest States might have the most to gain from the shared benefits of space science, even in its applications to such matters as food growing, and it was in their interest that space exploration should not become a competition between Powers and that ideological quarrels should not infect other planets. Every nation could co-operate in such matters as the allocation of radio frequencies for space communications and global systems of weather prediction.
- 2. The United States, together with Australia, Canada and Italy, was therefore submitting to the Committee, in document A/C.1/L.301, a programme of international co-operation in outer space. The first part of that programme, which was described in draft resolution A, looked towards a system of law and order in outer space based on two fundamental principles.
- 3. The first principle was that international law, including the Charter of the United Nations, applied to outer space and celestial bodies. In that connexion, he pointed out that the Ad Hoc Committee on the Peaceful Uses of Outer Space had observed in its report of 14 July 1959 (A/4141) that, as a matter of principle, the United Nations Charter and the Statute of the International Court of Justice were not limited in their operation to the confines of the earth.
- 4. The second principle was that outer space and celestial bodies were free for exploration and use by all States, and were not subject to national appropriation. Freedom of space and of celestial bodies, like freedom of the seas, would serve the interests of all nations; man should be free to venture into space without any restraints except those imposed by the laws of his own nation and by international law, including the United Nations Charter. That principle also had been recognized in the report of the Ad Hoc Committee and had since then been confirmed by the practice of States.

- 5. It was too early to define where outer space began. The boundary between air space and outer space could be drawn only after further experience, and by consensus of opinion among nations.
- 6. The second part of the programme, described in draft resolution B, would help all countries to take part in space activities and would foster mutual trust and confidence. All States launching objects into orbit or beyond would be required to inform the Secretary-General. The Secretariat would record that information and send it on request to Member States and specialized agencies. The establishment of a complete register or census of space vehicles would be an important step towards openness in space activities, and would benefit all nations. It could be used later in connexion with the termination of radio transmission and the removal of useless satellites. The Secretariat would also maintain close contact with governmental and other organizations concerned with outer space; it would provide for the exchange of information voluntarily supplied by Governments, in such a way as to supplement, not duplicate, existing exchanges; it would assist the study of measures to promote international co-operation in outer space; and it would make periodic reports on scientific and institutional developments. In that connexion, he recalled that the Ad Hoc Committee had noted with approval the conclusion of its Technical Committee that there was a need for a suitable centre related to the United Nations that could act as a focal point for international co-operation in the peaceful uses of outer space. The services described in the draft resolution could be carried out with the addition of a very small number of staff, and the measures taken could be reviewed by the Assembly at its next session.
- 7. The third part of the programme, described in draft resolution C, called for a world-wide effort in weather research and prediction, under the auspices of the United Nations. It was now possible to keep the entire atmosphere under constant observation-which portended a revolution in meteorology that could benefit all peoples. Meteorological satellites held special promise for the improvement of weather forecasting in the tropics and the southern hemisphere, where vast oceans could not be covered by present methods. The accurate forecasting of typhoons, floods, rainfall and drought would save human life, reduce damage, make possible the efficient use of water resources, enable farmers to plant according to future rainfall and benefit fishing, grazing and the transport and storage of fuels and raw materials. The resulting progress in industry, agriculture and health would raise living standards throughout the world. It might later prove possible to change the weather, a power which should be used for peaceful and constructive purposes, to benefit all rather than to gain special advantages for a few. The draft resolution therefore envisaged preparatory studies for two co-ordinated programmes. The first was an international atmospheric science

programme aimed at gaining greater knowledge of the basic forces affecting the climate, which would yield information essential for improved weather prediction and perhaps for weather modification. The second was an international meteorological service programme designed to enable men everywhere to benefit from discoveries in basic weather science. Steps could be taken to establish a global network of regional weather stations, to which weather information from satellites could be communicated directly or indirectly. There were already five regional meteorological centres serving the northern hemisphere; the needs of the tropics and the southern hemisphere were being studied. and a centre was planned at Bombay in connexion with the four-year international Indian Ocean expedition. The work of WMO in supplying technical assistance in the training of weather technicians should be strengthened. National and international suppliers of capital could help to finance the establishment of centres in countries which could not afford them, and nations with weather satellites could make weather information freely available to the system. The United States was ready at once to make weather information received from its satellites available for such a global system. It was already making such information available to other countries and developing methods for the direct transmission of satellite cloud photography to any part of the world.

- 8. The fourth part of the programme, described in draft resolution D, looked towards the establishment of a global system of communications satellites. Such satellites would soon make possible a vast increase in the volume and quality of radio, telephone and telegraph traffic and the relaying of television broadcasts around the world. They could increase knowledge and understanding among nations, improve literacy and education, support world weather services and enable leaders of nations to talk face to face. All States should be able not only to use the service, but to take part in its ownership and operation. The United Nations itself could use satellites to communicate with its representatives and to disseminate programmes of information and education.
- 9. The United States proposed that ITU should consider the various aspects of space communications in which international co-operation would be required, so as to ensure that all Member States were able to express their views. It was particularly important to make arrangements for the allocation of radio frequencies for space communication. The Expanded Programme of Technical Assistance and the Special Fund should give sympathetic consideration to under-developed countries' requests for assistance in improving their domestic communications by using satellites.
- 10. The fifth part of the programme, described in draft resolution E, would give new responsibilities to the Committee on the Peaceful Uses of Outer Space. The United States proposed that in addition to its original duties, as laid down in General Assembly resolution 1472 (XIV), that Committee should review the activities provided for in the draft and make such reports as it might consider appropriate. It might usefully study the legal problems of outer space, review the service arrangements undertaken by the Secretary-General and examine proposals for international co-operation in weather and communications.
- 11. As would be seen from draft resolution E, it was proposed that Nigeria and Chad should be added to the existing membership of the Committee on the Peaceful

Uses of Outer Space, recognition of the recent increase in the number of African States represented in the United Nations.

- 12. The Committee should make a fresh start early in 1962. The United States could not accept a veto in the Committee's work, but it felt that that work could be carried out in a spirit of mutual understanding, and that by its very nature it should give rise to no differences which were not capable of settlement by discussion.
- 13. With regard to weather and communications, no commitment to any specific programme was implied in the draft. The Secretary-General, in co-operation with the specialized agencies, was merely requested to submit proposals for action to the Economic and Social Council, to the Assembly at its seventeenth session, and to the Committee on the Peaceful Uses of Outer Space.
- 14. The sponsors of the draft resolutions in document A/C.1/L.301 had sought in good faith to present a programme which was above partisan politics or the cold war and bestowed no special advantage on any State. The draft resolutions dealt exclusively with the peaceful uses of outer space; the military questions of space should be studied within the context of comprehensive negotiations for general and complete disarmament. Nevertheless, if the United States programme were given effect without delay, it could help to reduce tensions and facilitate progress towards disarmament.
- 15. He wished to repeat that the world could not afford to delay. If the present opportunity for United Nations action was missed, it would become increasingly difficult to fit national space programmes into a rational pattern of international co-operation, Moreover, the United States preferred a programme which was centred around the United Nations because it could bring new vitality to the Organization and its agencies and ensure that both the developed and the less developed nations had a share in the adventure of space cooperation. Moreover, a programme of such magnitude should be carried out, so far as possible, through organizations of the world community. It would be wrong to allow the march of science to become a runaway race into the unknown; it should be made a peaceful, co-operative and constructive advance under the aegis of the United Nations.
- 16. Mr. BROOKS (Canada) said that the question of outer space belonged to the potentially fateful category of issues which threatened the survival of the United Nations. All Governments had noted the Soviet claim that new bombs could be produced with a yield equivalent to 100 million tons of TNT, and that rockets similar to those used in orbital flights by astronauts could be used to deliver such bombs to any point on earth. Moreover, they were acutely aware of the intense mutual suspicion and rivalry between the two Powers capable of sending satellites into orbit in outer space. It was the grim possibility of a struggle for mastery of space that had prompted the Prime Minister of Canada to assert on many occasions that an international ban should be placed on the mounting of armaments on orbital satellites and that no planet or body in space should be appropriated by any nation. Man's activities in outer space should be regulated by rules observed in the interest of all; his achievements in space must not be permitted to add a new and potentially dangerous dimension to the tensions dividing the world. It was gratifying to note that both the United States and the Soviet plans for disarmament contained provisions

to prevent the use of outer space for military purposes; it was to be hoped that in the disarmament negotiations agreement would be reached on that subject and on the establishment of effective international safeguards. However, the Committee was not now dealing with the military aspects of the question; its objective should be to ensure the use of space for peaceful purposes only, by fostering internal onal co-operation in all phases of space exploration. Government of the ensure that space would be used exclusively for the benefit of States irrespective of the stage of economic and scientific development they had reached.

- 17. The Canadian delegation had been among those which had succeeded in evolving acceptable compromises on the question of the membership and terms of reference of the Committee on the Peaceful Uses of Outer Space, as a result of which the resolution under which it had been established (General Assembly resolution 1472 (XIV)) had been adopted without opposition. Unfortunately, the Committee had been unable to function properly owing to the absence of agreement on various procedural matters, the most important of which had been the Soviet Union's insistence that all action in the Committee itself, in its proposed scientific and legal sub-committees and in the executive of the proposed international conference should be taken on the basis of unanimity. That was a seriously disturbing situation. In the Canadian view, the working arrangements of the Committee were clearly governed by the applicable rules of procedure of the General Assembly; it was not to be accepted that the opinions of one or two countries should prevent the meeting of subsidiary organs appointed by the Assembly, Moreover, the question of outer space was of vital concern to all nations, and the responsibilities of the United Nations in that new field should be defined as rapidly as possible. Consequently, Canada had been gratified when the Committee had at long last met. The meeting had served to strengthen the view that the Assembly's authority in creating a committee must be respected, whether or not all its members were in full agreement on the organization of its work and the conduct of its business, and had once again emphasized the concern of all States that the United Nations should take urgent action in respect of outer space. Canada hoped that the Assembly would enable the Committee to make a fresh start, with determination to overcome all obstacles to the early achievement of international ${\tt co\mbox{-}operation}$ in the peaceful exploration and use of outer space.
- 18. Recalling that the main criteria applied in the selection of the present membership of the Committee on the Peaceful Uses of Outer Space had been the contribution which each member could be expected to make, he urged that for the years 1962 and 1963 the Committee should continue to be composed of its original twenty-four members, together with two African States chosen from among those admitted to the United Nations in recent years.
- 19. Canada believed that the success of United Nations action in the field of outer space should be measured partly by its usefulness in promoting further collaboration among scientists. While, moreover, there were certain regulatory functions which could appropriately be assigned to the United Nations itself, there were other aspects of space problems which should become the responsibility of the specialized agencies.

In that connexion, care would have to be taken to avoid competition between the various agencies.

- 20. Those and other matters of a legal nature, including the question of legal liability for damages which might be occasioned by outer space activities, should be considered at an early stage by the Committee on the Peaceful Uses of Outer Space. The Committee could, for example, in consultation with ICAO and other international bodies, embark on the preliminary scientific and legal studies which would be necessary before even the lower boundary of outer space could be precisely defined. Pending such definition, however, it was still desirable that the Committee should make progress in the exhaustive studies which must form the basis of detailed rules specifically applicable to the peaceful use of outer space.
- 21. The draft resolution in document A/C.1/L.301, of which Canada was a sponsor, reflected the Canadian Government's preoccupations and the aims of nearly all Members of the United Nations in regard to outer space, and sought to initiate preliminary activities in a few areas in which primary responsibility for operational and administrative matters resided outside the Committee on the Peaceful Uses of Outer Space. By endorsing the proposals contained in those draft resolutions, the First Committee would enable the Assembly to reaffirm its continuing concern for orderly progress in outer space.
- 22. Mr. ZORIN (Union of Soviet Socialist Republics) said that man's centuries-old dream of penetrating the secrets of space had finally become a reality. Within four years of the initial break-through, Soviet science and technology had accomplished a series of wellknown feats, culminating in the flights of the cosmonauts Gagarin and Titov. The United States had also had considerable success in space exploration. The day was not far removed when space-ships would fly to the planets. As a result of such scientific advances, man's conception of the earth's atmosphere, and in many respects of the planet itself, was constantly changing. Information had been obtained on the structure, composition, temperature and density of the atmosphere, and the existence of a belt of radiation round the earth had been discovered. Space exploration had made it possible to investigate the nature and origin of cosmic rays and to study the sun's radiation. Valuable data on the propagation of radio waves in space and the use of solar energy had been collected. and progress had been made towards the establishment of long-range radio systems. The effects of weightlessness and of greatly increased gravity on human beings had been studied. The conquest of space would extend man's knowledge of himself in many fields of science, and would enable scientists to solve many problems concerning the origin of life on earth. It would also reveal whether there was life on other planets. Already at the present stage, the use of satellites was making a considerable contribution to scientific research and to the solution of many problems of economic importance. As further progress was made, new possibilities would be opened up of increasing the welfare not only of the highly developed countries, but also of the developing young countries in Asia, Africa and other continents.
- 23. As far as practical problems were concerned, a system of satellites orbiting the earth every twenty-four hours at a height of about 36,000 kilometres could be used for communications purposes and for relaying radio and television broadcasts. It would be economi-

cally more advantageous than an earth-bound system and could be used by ships and aircraft as a reliable guide in navigation. At lower altitudes, satellites would provide information on the weather, thus making more accurate forecasts possible. Astronomical observations and the transport of mail, freight and passengers were other fields in which space exploration had much to offer.

- 24. As the Chairman of the Council of Ministers of the USSR had said, the results of Soviet progress in space exploration would be made available for the benefit of other countries. Soviet scientists had given notice of all their launchings without exception, thus enabling other countries to make observations which could be used for the development of science throughout the world. Soviet scientists played an active part in the work of the Committee on Space Research (COSPAR) of the International Council of Scientific Unions and in the work of the International Astronautical Federation; in recent years those organizations had held several conferences at which scientists from different countries had discussed all the main findings of space exploration. In addition, Soviet scientific institutions had published a vast amount of data on the subject.
- 25. The conquest of space was the greatest scientific achievement of the present day; but it could be used for bad purposes as well as good, for peaceful or for military ends. Mankind was confronted with a tremendous task, the very nature of which made extensive international co-operation essential. The questions to be investigated did not relate merely to one area of the world, but were the concern of all. Moreover, the process of space exploration was extremely expensive, and co-operation between States would enable more effective use to be made of the available resources. That was particularly important for the under-developed countries, which could not afford their own programmes. That such co-operation was possible was shown by the experience of the International Geophysical Year, in which States with different social systems had worked together to solve problems of common interest. On the other hand, independent action by States might do serious harm to space exploration. For instance, the United States' West Ford project, in which 350 million copper needles were supposed to have been scattered in outer space, had drawn protests from the International Astronomical Union, the International Scientific Radio Union and the USSR Academy of Sciences, on the grounds that it would endanger future space flights.
- 26. It would be recalled that the question of the peaceful uses of outer space had been raised at the fourteenth session of the General Assembly. At the initiative of the Soviet Union, it had been decided to convene an international scientific conference, under United Nations auspices, for the exchange of experience in that field. Agreement had also been reached, with the active participation of the Soviet Union, on the establishment of a United Nations Committee on the Peaceful Uses of Outer Space. Since then two years had passed. In those years, great progress had been made in space exploration, and collaboration between non-governmental scientific organizations had developed. But the United Nations, which should be playing a leading role, had lagged behind. Why? It would be remembered that at the fourteenth session the Soviet ${\tt delegation\ had\ stressed\ that\ fruitful\ co-operation\ would}$ be possible only if it was based on full equality between the participants. It was well known that at the

present time only the Soviet Union and the United States were in a position to conduct space programmes of any size. Thus any useful international co-operation presupposed agreement between those two Powers. The successful work of COSPAR over the past two years showed that it was possible for the two countries to reach joint decisions in that sphere. The international Conference on Antarctica had yielded positive results on the basis of unanimous decisions. Thus, the representative of Canada had been wrong to speak of the unsuitability of solving problems on such a basis.

- 27. If the idea of international co-operation was to be used in the interests of any particular group of States, real co-operation would, of course, he impossible. That was why the Soviet delegation, during its negotiations with the United States delegation on the organization of the work of the Committee on the Peaceful Uses of Outer Space, had insisted that the three main groups of States should be equitably represented in all aspects of the Committee's work and at the international scientific conference, and that decisions should be taken by agreement between the parties and not by formal vote. However, the United States had constantly tried to obtain a position of advantage for itself and its military partners in the Committee. It had rejected the principle of agreed decisions and had sought to ensure that it should be able to impose its will by the operation of a mechanical majority. Such a policy could not be justified in terms either of political considerations or of scientific achievements, but it had frustrated the work of the Committee on the Peaceful Uses of Outer Space and prevented the organization of the international conference.
- 28. The Soviet Union's position on the questions at issue was given in detail in document A/C.1/857. Although all its efforts to achieve agreement on broad international co-operation in the field of outer space had not produced results within the framework of the United Nations, it still hoped that such co-operation could be initiated on a basis of equality and would spare no effort to achieve that end. It also hoped that the General Assembly would adopt appropriate decisions at the present session, particularly regarding the composition of the Committee on the Peaceful Uses of Outer Space.
- 29. Sir Patrick DEAN (United Kingdom) said that the practical applications of space research would soon affect all mankind, and would undoubtedly require an expanding apparatus of international co-operation. The work of the various agencies concerned needed to be co-ordinated; that should be part of the task of the Committee on the Peaceful Uses of Outer Space. Man's knowledge of space could also be extended on the initiative of particular groups of States; the United Kingdom was particularly gratified at the progress made towards forming a European Space Research Organization and a European Launcher Development Organization, both of which would be precluded from extending their activities into any but peaceful uses of outer space. Of great value also were bilateral arrangements, which permitted the use of specialized knowledge found in countries which could not alone carry out complete programmes. Under an arrangement of that kind between the United Kingdom and the United States, progress had been made towards putting a British research satellite into orbit around the world. The United Kingdom Government was also proud that scientists at Jodrell Bank had helped in tracking space vehicles launched by the United States and the Soviet

- 30. It was of great importance that is atisfactory legal régime should be established for outer space and the celestial bodies. Such a régime, however, must be established step by step; a comprehensive code of law for outer space was not yet practicable or desirable. However, certain broad legal principles could be laid down and should be regarded as injunctions of great weight and as useful steps towards such a legal régime.
- 1 31. The first such principle, which seemed to be generally accepted, was that international law, particularly the Charter of the United Nations, applied to outer space and celestial bodies. The second, which was also generally accepted, was that outer space and celestial bodies were available for exploration and use by all States in conformity with international law and were not subject to national appropriation by claim of sovereignty or otherwise. Many other complex legal issues arose and should be studied in careful co-operation between Governments and between jurists and scientists. That was another part of the task of the Committee on the Peaceful Uses of Outer Space.
 - 32. Although that Committee should not be too large for technical discussions, the expansion of the United Nations should be reflected in it. The addition of two members would perhaps strike the best possible balance.
- $33. \;$ His delegation was satisfied with the Committee's terms of reference, as set out in General Assembly resolution 1472 (XIV). However, he hoped that the Committee would soon begin its work. The reasons why it had not yet done so were bound up with principles of procedure which had far-reaching implications for the United Nations. His delegation could not agree with any suggestion which would formally establish a pattern of voting different from that which applied to all other United Nations business; yet there seemed no reason why there should not be unanimity on all questions of importance. It would be pointless to adopt major decisions without the agreement of the Powers which had the skill, knowledge and ability to use outer space. He agreed with the representative of the Soviet Union that there must be full equality of all participants. That was why he could not admit any right of veto in the work of the Committee, any more than in the work of the United Nations as a whole.
- 34. His Government thought it important that the present opportunity to set a pattern of co-operation and harmony in the peaceful use of outer space should be seized; otherwise it might soon be too late. If the United Nations acted today, the real benefits which co-operation in the field of outer space could bring to mankind would soon be seen.

The meeting rose at 12.50 p.m.

Litho in U.N.