

UNITED NATIONS
GENERAL
ASSEMBLY



Distr.
GENERAL

A/AC.105/39
6 September 1967

ORIGINAL: ENGLISH

COMMITTEE ON THE PEACEFUL USES OF
OUTER SPACE

REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE
ON THE WORK OF ITS FIFTH SESSION

I. INTRODUCTION

1. The Scientific and Technical Sub-Committee of the Committee on the Peaceful Uses of Outer Space held its fifth session at United Nations Headquarters, New York, from 28 August to 6 September 1967, under the chairmanship of Dr. D.F. Martyn, F.A.A., F.R.S. (Australia).
2. Representatives of the following States Members attended the session: Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Czechoslovakia, France, Hungary, India, Iran, Italy, Japan, Mongolia, Morocco, Poland, Romania, Sweden, Union of Soviet Socialist Republics, United Arab Republic, United Kingdom of Great Britain and Northern Ireland and the United States of America.
3. Representatives of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Telecommunication Union (ITU), the World Health Organization (WHO) and the World Meteorological Organization (WMO), the Inter-Governmental Maritime Consultative Organization (IMCO), the International Atomic Energy Agency (IAEA) and of the Committee on Space Research (COSPAR) of the International Council of Scientific Unions attended the session as observers.
4. Mr. M.A. Vellodi, Deputy to the Under-Secretary for Political and Security Council Affairs, represented the Secretary-General. Mr. Marvin W. Robinson, Scientific Secretary of the Outer Space Affairs Group, served as Acting Secretary of the Sub-Committee.
5. A list of the representatives of States members of the Sub-Committee, of the representatives of the organizations participating in the Sub-Committee's proceedings as observers, and of the members of the Secretariat attending the session is annexed.

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6. Agenda. At the opening meeting of the session (A/AC.105/C.1/SR.38) the Sub-Committee adopted the following agenda:

1. Statement by the Chairman
2. Statement by the representative of the Secretary-General
3. Consideration of scientific and technical aspects of international co-operation in the peaceful exploration and use of outer space
4. Report of the Sub-Committee on the work of its fifth session.

7. At the same meeting the Sub-Committee agreed that on completion of the general discussion, it would continue its deliberations under the following main headings:

- (a) Exchange of information
- (b) Encouragement of international programmes
- (c) International sounding rocket facilities
- (d) Education and training
- (e) Definition of outer space

8. Meetings and documentation. The Sub-Committee held eleven meetings, the summary records of which have been circulated as documents A/AC.105/C.1/SR.38-48 and form part of the present report.

9. In conducting its work, the Sub-Committee followed the agreement reached in the Committee on the Peaceful Uses of Outer Space that it would be the aim of all members of the Committee and its Sub-Committees to conduct the Committee's work in such a way as to be able to reach agreement without need for voting.

10. The Sub-Committee had before it the following documents:

- (a) Review of national and co-operative international space activities

(A/AC.105/L.36, Add.1 and Add.2)

- (b) Review of the activities and resources of the United Nations, of its specialized agencies and of other competent international bodies relating to the peaceful uses of outer space (A/AC.105/C.1/L.20)

- (c) Sixth report by the International Telecommunication Union on telecommunication and the peaceful uses of outer space (A/AC.105/L.37)

- (d) World Weather Watch: the Plan and Implementation Programme (A/AC.105/L.38) and The Role of Meteorological Satellites in the World Weather Watch submitted by the World Meteorological Organization

(e) Experimental Satellite Communication Earth Station, Ahmedabad, India
(A/AC.105/C.1/L.19)

(f) Satellite communications: an Indian study (A/AC.105/36)

(g) Thumba Equatorial Rocket Launching Station, report of the Advisory Panel
(A/AC.105/L.30)

(h) International directory of facilities for education and training in basic subjects related to the peaceful uses of outer space, report of the Secretary-General (A/AC.105/C.1/R.1)

(i) Letter dated 21 July 1967 from the Chairman of the Committee on the Peaceful Uses of Outer Space addressed to the Chairman of the Scientific and Technical Sub-Committee (A/AC.105/C.1/L.22)

11. The Sub-Committee commended the Outer Space Affairs Group of the Secretariat for the dedication and high competence shown in the preparation of documents A/AC.105/L.36 and Add.1 and 2, A/AC.105/C.1/L.20, A/AC.105/C.1/R.1 and a background paper on definition of outer space, which were extremely useful during the session in helping the Sub-Committee to achieve unanimously agreed recommendations, thus furthering the cause of international co-operation in the peaceful uses of outer space.

12. At the opening meeting on 28 August 1967 (A/AC.105/C.1/SR.38), after hearing statements by the Chairman and by the representative of the Secretary-General, the Sub-Committee began a general discussion of scientific and technical aspects of international co-operation in the peaceful uses of outer space. Statements were made by the representatives of Canada, France, the United Kingdom, Czechoslovakia, the USSR, Japan, Italy, India, Brazil, the United States, Hungary and Australia. The statements are reported in the summary records of the thirty-eighth to fortieth meetings. The Sub-Committee also heard statements by the representatives of ITU and WMO. The statements are reported in the summary records of the forty-first and forty-second meetings. The representative of COSPAR made a statement at the thirty-ninth meeting.

13. Following the general discussion, the Sub-Committee undertook a more detailed examination at its forty-first to forty-eighth meetings of specific topics, under the general headings of exchange of information, encouragement of international programmes, international sounding rocket facilities, education and training and definition of outer space.

14. The recommendations approved by the Sub-Committee are set out below under the appropriate headings.

II. TOPICS AND RECOMMENDATIONS

A. Exchange of Information

15. The Sub-Committee examined the two reports (A/AC.105/C.1/L.20 and A/AC.105/L.36, Add.1 and 2) prepared by the Secretariat and commented favourably on the value of these reports.

16. With regard to the report on national and co-operative international space programmes (A/AC.105/L.36) the Sub-Committee recommended that in the future, Member States submitting information for this report should include details such as where and when these programmes were carried out, by whom, and for what purpose, to enhance the value of this report as a source of reference, and that it should be given as wide a distribution as possible.

B. Encouragement of International Programmes

World Weather Watch

17. The Sub-Committee examined with great interest two documents submitted by the World Meteorological Organization, "World Weather Watch: The Plan and Implementation Programme" (A/AC.105/L.38) and "The Role of Meteorological Satellites in the World Weather Watch", and heard the representative of the WMO outline the essential features of the World Weather Watch adopted by the Fifth World Meteorological Congress in 1967.

18. The Sub-Committee noted the emphasis placed on the role of meteorological satellites as the main hope for ultimately obtaining the world-wide coverage of meteorological observations needed for both operational work and research.

19. The Sub-Committee expressed great appreciation for the World Weather Watch Plan, which it considered to be an excellent demonstration of the practical benefits which could be derived from the peaceful uses of outer space. The Sub-Committee agreed that the Plan appeared to be realistic and hoped that Member States would do their utmost to ensure its early implementation. In particular, the Sub-Committee recommended that Member States should give high priority to the space activities included in the World Weather Watch.

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Mass Communications

20. The Sub-Committee studied with interest the report presented by the Government of India "Satellite Communications: An Indian Study" (A/AC.105/36), and congratulated the Government of India for its thoroughness in planning and executing this experiment.

21. The Sub-Committee agreed that the results of the Government of India's experiment as well as the planned UNESCO pilot programme which may follow could have great importance for many Member States. The Sub-Committee invited the Government of India to continue to inform the Sub-Committee on this matter as it progressed.

International Telecommunication Union

22. The Sub-Committee noted a report from the International Telecommunication Union (A/AC.105/L.37) and commended that agency for its important work in the peaceful uses of outer space, particularly in the technical assistance rendered during the planning and testing of the Experimental Satellite Communications Earth Station at Ahmedabad, India (A/AC.105/L.19), and in regard to the progress made in planning for orderly use of the radio frequency spectrum during the XIth Plenary Assembly of its International Radio Consultative Committee (CCIR) in Oslo (1966).

Other Matters

23. The Sub-Committee took note of proposals submitted by Austria, Iran and the United Arab Republic on the desirability of enlarging the "personnel, budget and power" of the Outer Space Affairs Group of the United Nations Secretariat, and of the proposal by Iran on the desirability of establishing a specialized agency to deal with outer space activities.

24. The Sub-Committee did not reach a consensus on these two proposals, but did agree to keep them under review in future sessions.

25. Arising out of this discussion, the Sub-Committee requested the Outer Space Affairs Group to report to the Sub-Committee at its next session on the status of implementation of the recommendations and suggestions made by the Committee on the Peaceful Uses of Outer Space and its Scientific and Technical Sub-Committee and by the General Assembly and the problems faced by the Secretariat in this regard.

C. International Sounding Rocket Launching Facilities

26. The Sub-Committee noted with appreciation the report of the Advisory Panel on the Thumba Equatorial Rocket Launching Station (TERLS) in India (A/AC.105/L.30) and recommends that the United Nations continue to grant sponsorship to TERLS.
27. The Sub-Committee in further reviewing its work on international sounding rocket launching facilities appreciated the request by the Government of Argentina for United Nations sponsorship of its sounding rocket launching facility at Mar del Plata.
28. The Sub-Committee took note of the manual entitled "Chemical Rocket Range and Summary Information on the Atlantic Range" submitted by the Government of Argentina and commended this report of activities.
29. The Sub-Committee took note of statements made by various representatives concerning their Governments' complete satisfaction with the co-operative programmes involving the utilization of sounding rocket launching facilities in the peaceful exploration of outer space provided by the Government of Argentina. It noted also that these Governments intend to continue such co-operative programmes with the Government of Argentina.
30. The Sub-Committee took note of statements made by various representatives supporting the Government of Argentina's initiative and commending the work already accomplished by the Government of Argentina in using its facilities for international co-operation and training in the peaceful scientific exploration of outer space.
31. Arising out of its discussions of this matter, and following the request of the Government of Argentina, the Sub-Committee recommends that the Committee on the Peaceful Uses of Outer Space approve that a small group of scientists, drawn from States members of the Committee and familiar with space research and facilities, visit the station near Mar del Plata when it is operative to advise the Committee on the acceptance of United Nations sponsorship in accordance with the basic principles approved by the Committee in 1962 (A/5181).
32. The Sub-Committee decided to consider, at its next session, the question of criteria which should be satisfied prior to recommending sponsorship of international sounding rocket launching ranges.

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D. Education and Training

33. The Sub-Committee noted with satisfaction and appreciation that the Experimental Satellite Communications Earth Station at Ahmedabad, India (A/AC.105/C.1/L.19) was operational and would be utilized for training and research by both Indian and other nationals.

34. The Sub-Committee also expressed its appreciation of the report of the Secretary-General titled "International Directory of Facilities for Education and Training in Basic Subjects Related to the Peaceful Uses of Outer Space" (A/AC.105/C.1/R.1), and felt it would be an extremely helpful guide.

35. The Sub-Committee recommended that the printed International Directory be given as wide a distribution as possible, and that UNESCO be requested to refer to this Directory in the UNESCO publication "Study Abroad". The Sub-Committee further recommended that the printed International Directory should be updated biannually.

E. Definition of Outer Space

36. The Sub-Committee in considering the request made by the Legal Sub-Committee of the Committee on the Peaceful Uses of Outer Space (A/AC.105/C.1/L.22) agreed as follows:

(a) That there was consensus in the Scientific and Technical Sub-Committee that it is not possible at the present time to identify scientific or technical criteria which would permit a precise and lasting definition of outer space;

(b) That the working papers prepared by the delegations of Canada and France, as well as the background paper prepared by the Outer Space Affairs Group of the United Nations Secretariat, and the relevant summary records of the Scientific and Technical Sub-Committee's meeting would be made available to the Legal Sub-Committee to assist its deliberations;

(c) That a definition of outer space, on whatever basis recommended, is likely to have important implications for the operational aspects of space research and exploration, and that it is therefore appropriate that the Scientific and Technical Sub-Committee continue consideration of this matter at future sessions; and that Member States be invited to submit further relevant material for the study of the Sub-Committee.

ANNEX

LIST OF PARTICIPANTS

List of representatives of States members of the Scientific and Technical Sub-Committee, of representatives of organizations invited by the Sub-Committee to participate as observers, and of members of the Secretariat attending the session

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