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Outer Space

14-19 March 59

- Observations on the U.N. Committee on Outer Space, by S. Schwarz.
- press clippings conc. COSPAR

Mr. Dobrynin 18 March 1959

The following are notes on recent happenings relating to outer space:

COSPAR Meeting (12-14 March, 1959, The Hague)*

The Committee on Space Research of the International Council of Scientific Unions held its second meeting from 12-14 March 1959 at The Hague. Attached is an account of the meeting which was published in the New York Times on 15 March.

Among the matters included in the provisional agenda were: (1) procedure for data exchange; (2) co-operation in tracking; (3) availability of suitable radio frequencies. Information concerning the discussion of these matters is not yet available.

At the conclusion of the meeting, the President of COSPAR, Professor H. C. van de Hulst, announced that the representative of the United States, Dr. R. W. Porter, had communicated to COSPAR the offer of the United States National Academy of Sciences to make its facilities available to help the scientific experiments of other nations by launching earth satellites containing their apparatus. A copy of the communication from Dr. Porter is attached.

UN Committee on Outer Space

United States views on the convening of the Committee and on the program it should undertake appear to be as follows:

> A Committee meeting early in April is envisaged, but the process of canvassing of other members of the Committee on the subject of the date and the program has not yet been completed.

*The members of COSPAR are the National Academies of Science (or their equivalents) of Australia, Canada, France, Japan, USSR, United Kingdom, United States (as countries actually launching earth satellites or conducting fundamental researches involving the use of rockets), India, Peru and South Africa (as countries maintaining tracking stations elected for three-year terms), and the International Astronomical Union, the International Union of Geodesy and Geophysics, the International Union of Pure and Applied Chemistry, The International Scientific Radio Union, The International Union of Theoretical and Applied Mechanics, The International Union of Physiological Sciences, and the International Union of Biochemistry.

The work of the Committee is conceived on a modest scale and is thought of as limited initially to study and report on the scientific and technical aspects of international co-operation in outer space. Thus, while each member would be represented at the opening meeting by its permanent representative, his place would thereafter be taken by a scientific expert. For the United States this would be Dr. Hugh L. Dryden, Deputy Director of the National Aeronautics and Space Administration.

Of the tasks laid down in operative paragraph 1 of General Assembly resolution 1348 (XIII), sub-paragraph (a) relating to activities and resources of the United Nations, of its specialized agencies and of other international bodies would be assigned to the Secretariat for study and report. Sub-paragraph (b) relating to the area of international co-operation and programmes in outer space which could be undertaken under United Nations auspices and sub-paragraph (d) relating to legal problems would be examined by committee working groups. Sub-paragraph (c) concerning future organizational arrangements to facilitate international co-operation would be left until later.

On 6 March 1959 Assistant Secretary of State Francis O. Wilcox made a statement to the Committee on Science and Astronautics of the House of Representatives, on what the United Nations Committee could do (see pp. 5 and following of the attached statement). After paying tribute to non-governmental accomplishments in bringing about international co-operation in peaceful exploration of outer space, Mr. Wilcox stressed the importance of international co-operation at the governmental level with the assistance of the United Nations. He thought it urgent to take steps in this direction very shortly in order not to prejudice future work.

Among possible United Nations tasks, Mr. Wilcox envisaged creation of a United Nations central depository of data on the orbits of objects sent into outer space in order to prevent collision. He looked for a United Nations resolution urging international agreement on the regulation of radio transmission from space satellites in order to avoid cluttering radio frequencies with transmissions which were no longer useful. He called for international agreement through the United Nations to eliminate satellites which had served their purpose. He also thought the United Nations could play a useful role in connexion with the re-entry and recover of manned satellites.

Mr. Wilcox declared that the United States had not as yet developed definite views concerning future United Nations organisational arrangements for international co-operation. In this connexion he stressed the point that the United States would not

support any action which would result in the exclusion of non-governmental international organizations from the field or would make their functioning more difficult.

A statement made at the same meeting by Mr. Loftus Becker, the Legal Counsel of the State Department, concerning the legal problems to be studied by the United Nations Committee, is not yet available.

General Observations

The United States offer to facilitate foreign scientific space experiments recommended by COSPAR appears to be in harmony with the objectives stated in the General Assembly resolution in seeking to benefit States irrespective of the state of their economic or scientific development. Nevertheless, it poses somewhat urgently the question of establishing in the near future at least a provisional relationship between the UN and COSPAR in order to avoid a shift in emphasis from international co-operation to national competition and, also, in order to ensure that such activities will not make more difficult future global arrangements under United Nations auspices.

The urgency of international regulatory action in this field (a matter not necessarily identical with action by the UN Committee) is indicated by an article in the USSR periodical, "International Affairs" (January, 1959, p. 53), written by a leading Soviet legal authority, E. Korovin. Differentiating between acts of war in the cosmos and those acts "that are not acts of war but serve in international relations as expressions of mistrust, ill-will and similar cold-war consequences, Mr. Korovin wrote:

> "It is scarcely to be expected for governments to be indifferent to acts of foreign intelligence directed against them solely because they are conducted not in the air, but in cosmic space." He added that "interested governments have a right to [take] measures conforming to the letter and spirit of the United Nations Charter in order to avert actions taken in space which are directed against them. They may undertake diplomatic representations as well as reprisals and retaliation of a non-military nature. Retaliatory measures of this kind need not necessarily be carried out in the cosmos, since this would restrict their application solely to countries possessing space techniques. They may well be applied on the ground and in the air".

It is perhaps also significant that Mr. Korovin was at pains in this connexion to stress the point that a denial of sovereignty in space does not signify absolute and unlimited freedom of cosmic action for all countries. Acts endangering the security, life and property of people on earth were forbidden.

Sanford Schwarz

WORLD PROMISED U. S. AID IN SPACE

Offer to Test Satellite Gear for Other Nations Made at Hague Parley

By HARRY GILROY

Special to The New York Times.

THE HAGUE, the Netherlands, March 14—An American offer to help the scientific experiments of other nations by launching earth satellites containing their apparatus was announced here today at the meeting of the Committee of Space Research.

This was the second assembly of the committee, which was established by the International Council of Scientific Unions in London last October. The committee, generally known as COSPAR, has the purpose of aiding investigations that employ space rockets.

The American offer was announced by Prof. H. C. van de Hulst, a Dutch astronomer who is president of COSPAR. It had been extended during the two-day private session by Dr. Richard W. Porter of the United States National Academy of Sciences.

Dr. Porter informed COSPAR that the United States National Aeronautics and Space Administration would undertake to launch an entire payload weighing 100 to 300 pounds in a rocket vehicle and to place this in orbit ranging from 200 to 2,000 miles above the earth.

He explained that the proposal was made because COSPAR could "serve as an avenue through which the capabilities of satellite-launching nations and the scientific potential of other nations may be brought together."

Scientists Invited

Scientists from abroad could work in American laboratories to get help in adjusting their experiments to the American rocket equipment. However, the United States is also willing, Dr. Porter said, to accept from abroad a completely packaged experiment.

Dr. Porter said that the National Aeronautic and Space Administration offered another form of support for COSPAR in resident research associateships in space research with stipends of $8,000 a year and up. He said that these study grants were open to scientists from both sides of the Iron Curtain.

COSPAR heard reports from the scientific academies of the United States, the Soviet Union, the United Kingdom, Australia, Canada, France and Japan in connection with rocket experiments. A number of suggestions were received including the idea that a world rocket week should be held during which all nations experimenting with rockets would fire them at a time when the upper atmosphere conditions would be the same for all the experiments.

Suggestions for broadening the scope of COSPAR have been forwarded to the International Council of Scientific Unions. Professor van de Hulst said there was a general feeling at the meeting that the present organization was not sufficiently representative of the scientists of the world.

At a press conference, a Dutch reporter challenged the Soviet member of COSPAR, Prof. E. K. Federov, on the willingness of the Soviet Union to supply data to the present organization and in the past to agencies connected with the International Geophysical Year.

Professor Federov, a member of the Soviet National Academy of Sciences, who has the reputation of being the chief link in the Soviet Union between space scientists and the Government, said the Soviet Union had lived up to all agreements it made about the exchanges of scientific data.

He said that at the present meeting there had been no controversy that he was aware of over the publication of data.

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Advise Dryden Berkner Lewis following letter to COSPAR President released publicly this afternoon. COSPAR has truly historic opportunity to become effective force for international cooperation in space research. This cooperation will be most fruitful and meaningful if maximum opportunity to participate in, and contribute to, all aspects space research can be provided entire scientific community. In this regard, COSPAR can serve as avenue through which capabilities of satellite launching nations and scientific potential other nations may be brought together. United States will support COSPAR in this objective by undertaking launching of suitable and worthy experiments proposed by scientists other countries. This can be done by sending into space either single experiments as part of larger payload or groups of experiments comprising complete payloads. In case of individual experiments part of larger payload, originator will be invited to work in U.S. laboratory on construction, calibration, and installation of necessary equipment in U.S. research vehicle. If this is impossible, U.S. scientist may be designated to represent originator, working on project in consultation with him. Or in last resort, originator might prepare experiment abroad, supplying launching group with one final piece equipment, or (black box), for installation. However, last approach may not be practical in most cases. In case of complete payloads, U.S. also will support COSPAR; as first step, delegate of U.S. Academy is authorized to state that NASA will undertake launch entire payload to be recommended by COSPAR. Payload may weigh 100 to 300 pounds and can be placed in orbit ranging 200 to 2000 miles altitude. Expected that the choice of the experiments and the preparation of the payload may require period of one and one-half to two years. NASA prepared to advise on feasibility of proposed experiments, design and construction payload package, and necessary preflight environmental testing. U.S. delegate will be pleased to receive COSPAR's recommendations for proposed payload when readied. In further support COSPAR, U.S. delegate would like to call attention to availability of resident research associateships at NASA in theoretical and experimental research. These provide stipends dollar 8000 per annum and up.

/s/ Porter, Frutkin

Mr. Dobrynin 19 March 1959

Some Observations on the UN Committee on Outer Space

It seems clear that any conclusions reached by the Committee will be subject to challenge as reflecting only a limited, not to say one-sided, part of the available experience. It is a hard fact that the Committee (in the absence of the USSR) will to some extent be engaged in soliloquy rather than conversation since American experience will be the principal foundation of its work. This applies *a fortiori* to the Committee's suggestions for action which are likely to be challenged as politically *ultra vires*. Thus whatever the intrinsic merits of the Committee's work, its results are little likely to get a hearing on those merits because of the political controversy concerning the legitimacy of the Committee.

The Committee's task will, initially, be one of exploring the existing situation. Before the completion of this canvass, it is hardly likely that the Committee can consider what role the United Nations can play, whether in the areas of regulation or operation. There is some evidence of recognition that this survey will have to be entrusted to a body like the Secretariat. If this should come about, it holds some hope of alleviating the difficulty presented by the controversy over the Committee.

On the assumption that this task will be entrusted to the Secretariat, two questions arise for consideration. The first concerns the scope of the task. The second concerns the Secretariat's resources and methods for accomplishing it.

To be meaningful, it is necessary that the proposed census be much more than a mere descriptive enumeration, however detailed; it is much more important that it include exploration of the nature of outer space activities, of the vast complex of relations between scientific and other programmes in outer space, possibly of the organisational relations between non-military and military organisations in developing the uses of outer space, and of the machinery for co-operation, co-ordination and the resolution of difficulties. It is evident that the Secretariat will need help in carrying out such a task over and above what it can obtain by addressing inquiries to Members of the United Nations. The organisation which appears best suited for this purpose is the ICSU and its Committee on Space Research (COSPAR). It is not necessary to dwell on the standing of this organisation, which represents the scientific community of the world, is the sponsor and co-ordinator of the IGY, and is, in a sense, the scientific arm of the United Nations through an agreement with UNESCO of long-standing. It is in relations with WMO and ITU as well, both of which facilitated its work in connexion with the IGY.

Much the most important fact about ICSU and COSPAR from the point of view of the problem dealt with here is that the Academy of Sciences of the Soviet Union participates in both, as does the National Academy of Sciences of the United States. Utilization of COSPAR thus offers some possibility of getting the Soviet Union and the United States to participate together in the necessary preliminary canvass of the field.

The Secretary General has already had an offer of co-operation from COSPAR and, in an earlier note, I reported the suggestion of Dr. Lloyd V. Berkner that it would be useful if the Secretary General were to talk with a small group from COSPAR. Dr. Berkner made it clear that COSPAR was ready to offer scientific advice and help to what he called "international working parties".

Given the political difficulties which attend the UN Committee's functioning, it would appear better that, at this stage, it should be the Secretary General, rather than the Committee, who should enlist the aid of COSPAR. I think of two reasons: (1) Soviet participation might be more easily arranged (a matter which the Secretary General could discuss in Moscow), and (2) collaboration with the Secretary General would be less trammelled and its results could be given an independent standing which would exonerate them from the political controversy with which the Committee's labors will be burdened. Obviously, this is a matter which the Secretary General would have to explore with members of the Committee.

The interval needed to complete the work is likely to be long and could be so scheduled in relation to the next General Assembly meeting as to permit reconsideration of the controversial aspects of the General Assembly resolution, if not of the decision as a whole on the basis of the Secretary General's report alone, without the hazards of discussion of a vulnerable Committee report.

In view of the general lack of enthusiasm for the Committee in its present state, it might be possible to preserve the appearance of activity after the Committee had asked the Secretary General to undertake the "survey of resources", etc., by having the Committee call on its members to submit papers setting forth their estimates of the various kinds of problems to be examined and their views on ways of dealing with them.

Without seeking to specify the range of matters which the Secretary General might cover through collaboration with COSPAR, it is clear that COSPAR could contribute descriptions and informed judgements of the areas of felt need for United Nations action, of the functioning of existing arrangements for international collaboration and of their possible adaptability to and improvement for purposes of international organisation. Without trespassing on areas reserved for political judgement, COSPAR could shed light on the problems of allocation of functions of regulation, coordination, communication, planning and operation of activities in outer space as between national and international, and between private and governmental organisations. COSPAR's description of difficulties already experienced and of problems anticipated in the conduct of scientific activities connected with outer space should shed light as well on the problems likely to confront the non-scientific uses of outer space which lie ahead.

When problems had been defined with a certain precision, the stage might have been set for the Secretary General to undertake consultation with the best qualified Governments with a view to obtaining their help in carrying his task to completion.

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