

*Stephen Gorove**

When the first artificial satellites were successfully placed into orbit carrying their unparalleled potential for the exploration of the moon and other parts of outer space, few people might have anticipated that the very same satellites would soon be used to explore mother Earth. After less than two decades of spacial experiments, scientists tell us about the practical applicability of satellites for surveying and remote sensing the resources of the earth. By employing high resolution television cameras and electronic sensing devices such satellites can scan the surface of the earth and provide information on electromagnetic radiation which is emitted both by hard and fluid substances. In this manner, the satellites may supply resource data on fisheries and monitor the biological productivity of lakes and seas. They may be used for mineral prospecting and surveying the state and distribution of major crops and provide yield estimates. They may furnish information on forest blight and timber volume and the extent of wind and flood damage, air and water pollution, and the growth of cities. All these developments and expectations, as well as many others which time and space do not permit me to dwell upon, seem to give us sufficient basis for the hope that with the use of earth resources survey satellites man will be in a better position to assess, develop and manage his resources and eventually control his own environment.¹

The earth resources satellites, like many other innovations in our time, are the products of scientific and technological progress that led man into outer space. It is incumbent upon the legal technicians and policy makers to attempt to clarify the problem areas and provide a framework within which these new developments can take place with a minimum of friction.²

One of the initial queries which may be raised in connection with the wide spectrum of international legal problems pertaining to earth resources survey satellites is

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⁺This paper is an elaboration of the author's presentation before a regional meeting of the American Society of International Law which he chaired on April 8, 1972, at the University of Mississippi School of Law and of his address before the American Bar Association's Annual Convention on August 13, 1972, in San Francisco.

¹On the technological capabilities and manifold uses of earth resources survey satellites, a wealth of information may be found in NASA as well as congressional publications. See, for instance, NASA, Office of Space Science and Applications, Earth Observations Programs Review, 4 and 5 November 1969 (1969); Earth Resources Satellite System, Report for the Subcommittee on NASA Oversight of the House Committee on Science and Astronautics, 90th Cong., 2nd Sess. (1965); NASA Authorization For Fiscal Year 1972, Hearings before the Committee on Aeronautical and Space Sciences, U. S. Senate, 92nd Cong., 1st Sess. 741, 940 (1971).

²There have been relatively few articles in the literature dealing with the legal implications of earth resources survey satellites. See, for instance, Brital, Survey From Space of Earth Resources, Proc. 13th Colloquium on the Law of Outer Space 197 (1971); Smirnoff, Survey From Space of Earth Resources, Proc. 13th Colloquium on the Law of Outer Space 203 (1971). In general, see also Brooks, New Developments in Earth Satellite Law, 65 Nw. U. L. Rev. 759 (1970).

the question of applicability of the provisions of the Outer Space Treaty.³ In a purely tentative manner, two preliminary but diametrically opposed answers may be given. First, since there seems no indication that the drafters of the Treaty have considered the problem of earth resources survey satellites which came to the fore of international limelight and discussion after the completion of the Outer Space Treaty, it may be suggested that the Treaty provisions are not applicable to such satellites. Second, it may appear safe to assume, because of the broad overall scope of the Treaty that its provisions would be applicable to artificial satellites irrespective of any function which they may perform. The purpose of our inquiry is to scrutinize some of the most relevant Treaty provisions to determine whether or not they are applicable to earth resources survey satellites.

The reference in Article I of the Outer Space Treaty that the "exploration and use" of outer space shall be carried out for the benefit and in the interests of all countries may or may not be interpreted to apply to the use of earth resources survey satellites. From the wording of this provision it is not entirely clear whether "exploration" has to precede "use" or whether "use" must be accompanied by exploration.⁴ Consequently, the use of outer space by such satellite without exploration of outer space and solely for exploration of earth resources may preclude applicability of the quoted provision. For analagous reasons one could also question the applicability of Article III and other articles of the Treaty⁵ which similarly refer to "exploration and use" of outer space. What lends support to such interpretation is the fact that the drafters of the Treaty could easily have used the phrase exploration "or" use instead of the expression exploration "and" use but they have not. At the same time, it could be argued that the phrase "exploration and use" was not meant to be applied literally but should be interpreted to include any activity undertaken in outer space even though use is not accompanied by exploration of outer space but only by exploration of earth resources.

Similarly, it may be noted that freedom of scientific investigation "in" outer space which is guaranteed by the last paragraph of Article I of the Outer Space Treaty would be applicable to a scientific investigation of the earth despite the fact the earth cannot be regarded under the nomenclature used in the Treaty as a part of outer space. This line of reasoning may find support in the clear-cut wording of the Treaty which speaks about scientific investigation "in" outer space rather than scientific investigation "of" outer space. The additional point that must be clarified, however, relates to the place of investigation. Is an orbiting earth resource survey satellite engaged in scientific investigation "in" outer space? This question goes beyond the problem of precise delimitation of

³The Treaty on Principles Governing Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (hereinafter referred to as "Outer Space Treaty" or, simply "Treaty") was signed on January 27, 1967, and entered into force October 10, 1967 (T.I.A.S. No. 6347).

⁴Cf. Gorove, *Freedom of Exploration and Use in the Outer Space Treaty: A Textual Analysis and Interpretation*, 1 *Denver J. Int'l. L. & Pol.* 93 at 97 (1971).

⁵See, for instance, Articles IX, X, XI and XIII of the Treaty.

boundary lines between air space and outer space. It relates to the determination of the location of functional activities performed by satellite instruments. Does the particular phase of activities involving investigation of earth resources by remote sensing devices on an orbiting satellite necessarily and always take place in outer space? Possibly not. If such be the case, under a literal interpretation, the provision pertaining to freedom of scientific investigation would not be applicable to the situation.

If Article III is interpreted to apply to the particular activities performed by earth resources survey satellites, it is still not entirely clear whether any country could legitimately object to the surveying of its natural resources and the collection of other national data pertaining to its geography, hydrology, agriculture, climatic and other conditions. To be sure, international treaty law, including the United Nations' Charter, and international customary law, may prohibit such activities. However, at present there appears to be nothing in international law which could specifically be invoked as a prohibition of the type of activities performed by satellites surveying earth resources. Even if one extends his search to include resolutions of the United Nations General Assembly, the often recalled U.N. Resolution on Permanent Sovereignty Over Natural Resources does not seem to entail any specific limitation on the collection or dissemination of data pertaining to a nation's natural resources acquired by such satellites.⁶

On the other hand the general statement in Article III of the Space Treaty that spacial activities must be in the interest of maintaining international peace and security and promoting international cooperation and understanding, seems to point toward an overall obligation which the parties to the Treaty are required to observe. Undoubtedly, problems of interpretation regarding the meaning of these phrases and their invocation by national decision makers may lead to different conclusions in some cases.

Insofar as Article VII is concerned which provides for international liability for damage by a space object or its component parts, it is unlikely that this provision or the recently negotiated Liability Convention⁷ would apply to damage which results from the use or disclosure of collected by by one state pertaining to the natural resources of another state. Damage, as it is used in Article VII of the Space Treaty, seems to imply direct damage caused by the space object and not damage which resulted from the intentional or negligent act of a party involving the use or dissemination of data.

The same conclusion would have to be drawn from Article I of the Liability Convention which defines damage as "loss of life, personal injury or other impairment of health; or loss of or damage to property of states or persons, natural or juridical, or property of international intergovernmental organizations." This is also made clear by Article II of the Liability Convention which speaks of damage caused "by" a space

⁶G. A. Res. 1803 (XVII) of December 14, 1962.

⁷For a text of the proposed Convention on International Liability for Damage Caused by Space Objects (referred to as Liability Convention), see 8 U. N. Monthly Chron. 19-25 (1971). See also Current Documents section of this Journal, *infra*.

object.⁸ Even if property were construed to mean more than proprietary interest to include economic, political or other national interests, the damage in these cases would not be done by the space object itself but by the activities of some person or organization subsequent to the survey accomplished by a satellite.

It is conceivable, of course, that the particular instrument used in the course of a satellite's surveying mission would emit substances (radar or laser beams) which might have harmful effects on health or might cause damage to property. In such case, the instrument used to accomplish the survey or remote sensing would be the cause of damage rather than any subsequent activity relating to the use of information or data acquired by the instrument. The only question which would have to be answered with respect to international liability would be whether to regard the instrument used for the survey as a "space object" since both under the Outer Space Treaty and the Liability Convention the injury or damage must be caused by a space object.⁹ In this connection it may be noted that under the Liability convention the term "space object" includes component parts of a space object as well as its launch vehicle and parts.¹⁰ What the Convention does not clarify is the meaning of a space object and its component parts. In view of this, it could be argued, for instance, that an instrument used in a satellite for gathering information about resources on earth is not a component part of the spacecraft and is not in itself a separate space object. Nonetheless, the preferable position would be to regard any object intended for use in outer space as a space object, and a camera or other instrument intended for such use and used for such purpose as a space object.¹¹

Turning to Article VIII of the Space Treaty, it does not appear to contain any clue regarding the permissibility of the particular functions performed by earth resources survey satellites or the subsequent use or dissemination of the data collected. Jurisdiction and control over such satellites does not make such functions necessarily permissible.¹² Ownership of a gun does not imply permissibility in relation to its use in any situation.

⁸Article II of the Liability Convention reads as follows:

A launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or to aircraft in flight.

⁹Treaty, Art. VII; Liability Convention, Art. II.

¹⁰Liability Convention, Art. I (d).

¹¹See Gorove, *International Protection of Astronautics and Space Objects*, 20 *De Paul L. Rev.* 597 at 607 (1971).

¹²Article VIII of the Treaty reads as follows:

A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such objects, and over any personnel thereof, while in outer space or on a celestial body. Ownership of objects launched into outer space, including objects landed or constructed on a celestial body, and of their component parts, is not affected by their presence in outer space or on a celestial body or by their return to the earth. Such objects or component parts found beyond the limits of the State Party to the Treaty on whose registry they are carried shall be returned to that State, which shall, upon request, furnish identifying data prior to their return.

Another provision, the introductory sentence of Article IX, stipulating that in the exploration and use of outer space the parties shall be guided by the principle of cooperation and mutual assistance and shall conduct all their activities in outer space with due respect to the corresponding interests of all other parties implies that the provision relates to "corresponding" interests in the exploration and use of "outer space" and not of the "earth". This position is also supported by other provisions of the same article which are concerned with "potentially harmful interference" with activities of other parties in the exploration and use of "outer space" and not of the "earth".¹³

More relevant to the use of earth resources survey satellites may be Article XI of the Treaty which stipulates that the parties conducting activities in outer space inform the Secretary General of the United Nations to the greatest extent feasible and practicable, of the nature, conduct, location and results of such activities. In turn, the Secretary General is required to disseminate the information immediately and effectively.¹⁴ As we have noted beforehand, whether or not the earth resources data gathering function involves solely "activities in outer space" or also activities on earth may be an open question in some cases. However, if such function does only entail "activities in outer space", it is difficult to see on what basis a nation could object to the dissemination of data resulting from such activities. One point which may perhaps be argued is that the admitted purpose of Article XI is "to promote international cooperation in the peaceful exploration and use of outer space," and if the dissemination would not promote such purpose because a number of states were objecting to it, then the obligation imposed by Article XI would not be applicable. This, of course, would in no way imply any restriction on the party to disseminate the information.

One of the concluding thoughts which may be drawn from the preceding analysis of the more relevant provisions of the Outer Space Treaty is that the Treaty contains no stipulation prohibiting the use of earth resources survey satellites. More than that—as intimated beforehand—under a strict interpretation it could be argued that some of the Treaty provisions would not be applicable at all to such satellites. The only article which might be invoked to give some limited support to the objection to the use of satellites surveying resources of another state is Article III providing that activities in the exploration and use of outer space must be carried out in such a way as to promote international cooperation and understanding. Therefore, if the activities are objected to by a number of states and create international friction instead of understanding, they may be regarded as violating the spirit if not the letter of the Treaty. Against this argument stands the fact that the exploration relates not to outer space but to the resources of the earth. All in all, it would appear to be a circumspect policy for the United States to continue to explore and utilize whenever possible the bilateral or multilateral avenues of international cooperation.

¹³For a discussion of Article IX of the Treaty, see Gorove, *Pollution and Outer Space: A Legal Analysis and Appraisal*, 5 N.Y.U.J. Int'l. L. & Pol. 53 (1972).

¹⁴Article XI of the Treaty.

Another conclusion that emerges is that not only does the use of such resources survey satellites seem permissible with no indication that any sovereign rights are violated but there equally appears no stipulation prohibiting the use and dissemination of the data collected. In fact, dissemination seems mandatory within the general conditions set forth in the Treaty, and it may be added that the policy of the United States, as enunciated in 1969 by President Nixon in a speech to the U.N. General Assembly pledging to share the data from the program and welcoming international cooperation in such space endeavor, has been in line with the conclusions arrived at.¹⁵

As a final concluding remark it may be pointed out that the eventual utilization of earth resources data collected by one state or its nationals through satellite observation does not appear to be such an act that may give rise to a legitimate claim for damages under the provisions of the Treaty or the Liability Convention.

¹⁵For text of President Nixon's address on September 18, 1969, see 61 Dept. St. Bull. 297 (1969).

I.

*Draft Convention on International Liability for Damage
Caused by Space Objects**

The States Parties to this Convention,

Recognizing the common interest of all mankind in furthering the exploration and use of outer space for peaceful purposes,

Recalling the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies,

Taking into consideration that, notwithstanding the precautionary measures to be taken by States and international intergovernmental organizations involved in the launching of space objects, damage may on occasion be caused by such objects,

Recognizing the need to elaborate effective international rules and procedures concerning liability for damage caused by space objects and to ensure, in particular, the prompt payment under the terms of this Convention of a full and equitable measure of compensation to victims of such damage,

Believing that the establishment of such rules and procedures will contribute to the strengthening of international cooperation in the field of the exploration and use of outer space for peaceful purposes,

Have agreed on the following:

Article I

For the purposes of this Convention:

(a) The term "damage" means loss of life, personal injury, or other impairment of health; or loss of or damage to property of States or of persons, natural or juridical, or property of international intergovernmental organizations;

(b) The term "launching" includes attempted launching;

(c) The term "launching State" means:

*Taken from 8 U.N. Monthly Chron. 19-25 (1971).

third State to seek the entire compensation due under this Convention from any or all of the launching States which are jointly and severally liable.

Article V

1. Whenever two or more States jointly launch a space object, they shall be jointly and severally liable for any damage caused.
2. A launching State which has paid compensation for damage shall have the right to present a claim for indemnification to other participants in the joint launching. The participants in a joint launching may conclude agreements regarding the apportioning among themselves of the financial obligation in respect of which they are jointly and severally liable. Such agreements shall be without prejudice to the right of a State sustaining damage to seek the entire compensation due under this Convention from any or all of the launching States which are jointly and severally liable.
3. A State from whose territory or facility a space object is launched shall be regarded as a participant in a joint launching.

Article VI

Subject to the provisions of paragraph 2, exoneration from absolute liability shall be granted to the extent that a launching State establishes that the damage has resulted either wholly or partially from gross negligence or from an act or omission done with intent to cause damage on the part of a claimant State or of natural or juridical persons it represents.

2. No exoneration whatever shall be granted in cases where the damage has resulted from activities conducted by a launching State which are not in conformity with international law including, in particular, the Charter of the United Nations and the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

Article VII

The provisions of this Convention shall not apply to damage caused by a space object of a launching State to:

- (a) nationals of that launching State;

(b) foreign nationals during such time as they are participating in the operation of that space object from the time of its launching or at any stage thereafter until its descent, or during such time as they are in the immediate vicinity of a planned launching or recovery area as the result of an invitation by that launching State.

Article VIII

1. A State which suffers damage, or whose natural or judicial persons suffer damage, may present to a launching State a claim for compensation for such damage.
2. If the State of nationality has not presented a claim, another State may, in respect of damage sustained in its territory by any natural or juridical person, present a claim to a launching State.
3. If neither the State of nationality nor the State in whose territory the damage was sustained has presented a claim or notified its intention of presenting a claim, another State may, in respect of damage sustained by its permanent residents, present a claim to a launching State.

Article IX

A claim for compensation for damage shall be presented to a launching State through diplomatic channels. If a State does not maintain diplomatic relations with the launching State concerned, it may request another State to present its claim to that launching State or otherwise represent its interests under this Convention. It may also present its claim through the Secretary-General of the United Nations, provided the claimant State and the launching State are both Members of the United Nations.

Article X

1. A claim for compensation for damage may be presented to a launching State not later than one year following the date of the occurrence of the damage or the identification of the launching State which is liable.
2. If, however, a State does not know of the occurrence of the damage or has not been able to identify the launching State which is liable, it may present a claim within one year following the date on which it learned of the aforementioned facts; however, this period shall in no event exceed one year following the date on which the State could reasonably be expected to have learned of the facts through the exercise of due diligence.

3. The time-limits specified in paragraphs 1 and 2 shall apply even if the full extent of the damage may not be known. In this event, however, the claimant State shall be entitled to revise the claim and submit additional documentation after the expiration of such time-limits until one year after the full extent of the damage is known.

Article XI

1. Presentation of a claim to a launching State for compensation for damage under this Convention shall not require the prior exhaustion of any local remedies which may be available to a claimant State or to natural or juridical persons it represents.
2. Nothing in this Convention shall prevent a State, or natural or juridical persons it might represent, from pursuing a claim in the courts or administrative tribunals or agencies of a launching State. A State shall not, however, be entitled to present a claim under this Convention in respect of the same damage for which a claim is being pursued in the courts or administrative tribunals or agencies of a launching State or under another international agreement which is binding on the States concerned.

Article XII

The compensation which the launching State shall be liable to pay for damage under this Convention shall be determined in accordance with international law, and the principles of justice and equity, in order to provide such reparation in respect of the damage as will restore the person, natural or juridical, State or international organization on whose behalf the claim is presented to the condition which would have existed if the damage had not occurred.

Article XIII

Unless the claimant State, and the State from which compensation is due under this Convention agree on another form of compensation, the compensation shall be paid in the currency of the claimant State or, if that State so requests, in the currency of the State from which compensation is due.

Article XIV

If no settlement of a claim is arrived at through diplomatic negotiations as provided for in Article IX, within one year from the date on which the claimant State notifies the launching State that it has submitted the documentation of its claim, the parties concerned shall establish a Claims Commission at the request of either party.

Article XV

1. The Claims Commission shall be composed of three members: one appointed by the Claimant State, one appointed by the launching State and the third member, the Chairman, to be chosen by both parties jointly. Each party shall make its appointment within two months of the request for the establishment of the Claims Commission.
2. If no agreement is reached on the choice of the Chairman within four months of the request for the establishment of the Claims Commission, either party may request the Secretary-General of the United Nations to appoint the Chairman within a further period of two months.

Article XVI

1. If one of the parties does not make its appointment within the stipulated period, the Chairman shall, at the request of the other party, constitute a single-member Claims Commission.
2. Any vacancy which may arise in the Claims Commission for whatever reason shall be filled by the same procedure adopted for the original appointment.
3. The Claims Commission shall determine its own procedure.
4. The Claims Commission shall determine the place or places where it shall sit and all other administrative matters.
5. Except in the case of decisions and awards by a single-member Commission, all decisions and awards of the Claims Commission shall be by majority vote.

Article XVII

No increase in the membership of the Claims Commission shall take place by reason of two or more claimant States or launching States being joined in any one proceeding before the Commission.

The claimant States so joined shall collectively appoint one member of the Commission in the same manner and subject to the same conditions as would be the case for a single claimant State. When two or more launching States are so joined, they shall collectively appoint one member of the Commission in the same way. If the claimant States or the launching States do not make the appointment within the stipulated period, the Chairman shall constitute a single-member Commission.

Article XVIII

The Claims Commission shall decide the merits of the claim for compensation and determine the amount of compensation payable, if any.

Article XIX

1. The Commission shall act in accordance with the provisions of Article XII.
2. The decision of the Commission shall be final and binding if the parties have so agreed; otherwise, the Commission shall render a final and recommendatory award, which the parties shall consider in good faith. The Commission shall state the reasons for its decision or award.
3. The Commission shall give its decision or award as promptly as possible and no later than one year from the date of its establishment, unless an extension of this period is found necessary by the Commission.
4. The Commission shall make its decision or award public. It shall deliver a certified copy of its decision or award to each of the parties and to the Secretary-General of the United Nations.

Article XX

The expense in regard to the Claims Commission shall be borne equally by the parties, unless otherwise decided by the Commission.

Article XXI

If the damage caused by a space object presents a large-scale danger to human life or seriously interferes with the living conditions of the population or the functioning of vital centres, the States parties, and in particular the launching State, shall examine the possibility of rendering appropriate and rapid assistance to the State which has suffered the damage, when it so requires. However, nothing in this provision shall affect the rights or obligations of the States parties under this Convention.

Article XXII

1. In this Convention, with the exception of Articles XXIV to XXVII, references to States shall be deemed to apply to any international intergovernmental organization

which conducts space activities if the organization declares its acceptance of the rights and obligations provided for in this Convention and if a majority of the States members of the organization are States parties to this Convention and to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

2. States members of any organization which are States parties to this Convention shall take all appropriate steps to ensure that the organization makes a declaration in accordance with the preceding paragraph.

3. If an international intergovernmental organization is liable for damage by virtue of the provisions of this Convention, that organization and those of its members which are States parties to this Convention shall be jointly and severally liable; provided, however, that:

(a) any claim for compensation in respect of such damage shall be first presented to the organization; and

(b) only where the organization has not paid, within a period of six months, any sum agreed or determined to be due as compensation for such damage, may the claimant State invoke the liability of the members which are States parties to this Convention for the payment of that sum.

4. any claim, pursuant to the provisions of this Convention, for compensation in respect of damage caused to an organization which has made a declaration in accordance with paragraph 1 of this Article shall be presented by a State member of the organization which is a State party to this Convention.

Article XXIII

1. The provisions of this Convention shall not affect other international agreements in force in so far as relations between the States parties to such agreements are concerned.

2. No provision of this Convention shall prevent States from concluding international agreements reaffirming, supplementing or extending its provisions.

Article XXIV

1. This Convention shall be open to all States for signature. Any State which does not sign this Convention before its entry into force in accordance with paragraph 3 of this Article may accede to it at any time.

2. This Convention shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Governments of the United Kingdom of Great Britain and Northern Ireland, the Union of Soviet Socialist Republics and the United States of America, which are hereby designated the Depositary Governments.
3. This Convention shall enter into force on the deposit of the fifth instrument of ratification.
4. For States whose instruments of ratification or accession are deposited subsequent to the entry into force of this Convention, it shall enter into force on the date of the deposit of their instruments of ratification or accession.
5. The Depositary Governments shall promptly inform all signatory and acceding States of the date of each signature, the date of each instrument of ratification of and accession to this Convention, the date of its entry into force and other notices.
6. This Convention shall be registered by the Depositary Governments pursuant to Article 102 of the Charter of the United Nations.

Article XXV

Any State party to this Convention may propose amendments to this Convention. Amendments shall enter into force for each State party to the Convention accepting the amendments upon their acceptance by a majority of the States parties to the Convention and thereafter for each remaining State party to the Convention on the date of acceptance by it.

Article XXVI

Ten years after the entry into force of this Convention, the question of the review of this Convention shall be included in the provisional agenda of the United Nations General Assembly in order to consider, in the light of past application of the Convention, whether it requires revision. However, at any time after the Convention has been in force for five years, and at the request of one-third of the States parties to the Convention, and with the concurrence of the majority of the States parties, a conference of the States parties shall be convened to review this Convention.

Article XXVII

Any State party to this Convention may give notice of its withdrawal from the Conven-

tion one year after its entry into force by written notification to the Depositary Governments. Such withdrawal shall take effect one year from the date of receipt of this notification.

Article XXVIII

This Convention, of which the English, Russian, French, Spanish and Chinese texts are equally authentic, shall be deposited in the archives of the Depositary Governments. Duly certified copies of this Convention shall be transmitted by the Depositary Governments to the Governments of the signatory and acceding States.

In witness whereof the undersigned, duly authorized, have signed this Convention.

Done in _____, at the cities of London, Moscow and Washington, the

_____ day of _____, one thousand nine hundred and

_____.

II.

AGREEMENT ON COOPERATION IN SPACE*

*Agreement Between the United States of America and the Union
of Soviet Socialist Republics Concerning Cooperation in the
Exploration and Use of Outer Space for Peaceful Purposes*

The United States of America and the Union of Soviet Socialist Republics;

Considering the role which the U.S.A. and the U.S.S.R. play in the exploration and use of outer space for peaceful purposes;

Striving for a further expansion of cooperation between the U.S.A. and the U.S.S.R. in the exploration and use of outer space for peaceful purposes;

Noting the positive cooperation which the parties have already experienced in this area;

Desiring to make the results of scientific research gained from the exploration and use of outer space for peaceful purposes available for the benefit of the peoples of the two countries and of all peoples of the world;

Taking into consideration the provisions of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and

*Republished from 66 State Dept. Bull. 924-5 (June 26, 1972).

Other Celestial Bodies, as well as the Agreement on the Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Launched into Outer Space;

In accordance with the Agreement between the United States of America and the Union of Soviet Socialist Republics on Exchanges and Cooperation in Scientific, Technical, Educational, Cultural, and Other Fields, signed April 11, 1972, and in order to develop further the principles of mutually beneficial cooperation between the two countries;

Article 1

The Parties will develop cooperation in the fields of space meteorology; study of the natural environment; exploration of near earth space, the moon and the planets; and space biology and medicine; and, in particular, will cooperate to take all appropriate measures to encourage and achieve the fulfillment of the Summary of Results of Discussion on Space Cooperation Between the U.S. National Aeronautics and Space Administration and the Academy of Sciences of the U.S.S.R. dated January 21, 1971.

Article 2

The Parties will carry out such cooperation by means of mutual exchanges of scientific information and delegations, through meetings of scientists and specialists of both countries, and also in such other ways as may be mutually agreed. Joint working groups may be created for the development and implementation of appropriate programs of cooperation.

Article 3

The Parties have agreed to carry out projects for developing compatible rendezvous and docking systems of United States and Soviet manned spacecraft and stations in order to enhance the safety of manned flight in space and to provide the opportunity for conducting joint scientific experiments in the future. It is planned that the first experimental flight to test these systems be conducted during 1975, envisaging the docking of a United States Apollo-type spacecraft and a Soviet Soyuz-type spacecraft with visits of astronauts in each other's spacecraft. The implementation of these projects will be carried out on the basis of principles and procedures which will be developed in accordance with the Summary of Results of the Meeting Between Representatives of the U.S. National Aeronautics and Space Administration and the U.S.S.R. Academy of Sciences on the Question of Developing Compatible Systems for Rendezvous and Docking of Manned Spacecraft and Space Stations of the U.S.A. and the U.S.S.R. dated April 6, 1972.

Article 4

The Parties will encourage international efforts to resolve problems of international law in the exploration and use of outer space for peaceful purposes with the aim of strengthening the legal order in space and further developing international space law and will cooperate in this field.

Article 5

The Parties may by mutual agreement determine other areas of cooperation in the exploration and use of outer space for peaceful purposes.

Article 6

This Agreement shall enter into force upon signature and shall remain in force for five years. It may be modified or extended by mutual agreement of the Parties.

Done at Moscow this 24th day of May 1972 in duplicate, in the English and Russian languages, both equally authentic.

For the United States of America

RICHARD NIXON

President of the United States of America

For the Union of Soviet Social Republics

A. N. Kosygin

Chairman of the Council of Ministers in the USSR

There were several meetings of interest during the early part of 1972. There was a regional meeting of the American Society of International Law on "Earth Resource Satellites in International Law" on February 4-5 at the University of Santa Clara School of Law. The papers presented included the following: "The Technological Potential of Earth Resource Satellites" by Glenn Goodwin; "Legal Problems Created by Earth Resource Satellites in Overfly of the U. S." by George J. Alexander; "The Role of the United Nations in Earth Resource Satellites" by Mrs. Eilene Galloway; "International Problems of Earth Resource Satellites Data Concerning Resources in Foreign Countries" by Houston S. Lay.

Another regional meeting of the American Society of International Law was held on April 7-8, 1972, at the University of Mississippi School of Law. The subject of discussion was centered around "Earth Resources Survey Satellites and International Law." Among the topics discussed were: "The NASA Earth Observations Problem" by Robert O. Piland; "International Implications of Earth Resources Surveys by Satellites" by Dr. Franco Fiorio; "Should the United Nations Draft an Earth Resources Satellites Treaty?" by Mrs. Eilene Galloway; "An International Agency for Earth Resources Experiments" by George A. Coddling, Jr.; "Technical and Legal Aspects of Environmental Monitoring" by Eugene Brooks; "The Space Shuttle: Investigation of Earth Resources by Manned Observatories" by John R. Tamm; and "Earth Resources Survey Satellites and the Outer Space Treaty" by Stephen Gorove. The presentations at this regional meeting, which were submitted in a written form, constitute the articles included in this issue of the *Journal of Space Law*.

In addition to the above mentioned regional meetings of the American Society of International Law the Inter-American Bar Association's XVIIth Conference held on April 24-28, 1972 in Quito, Ecuador, discussed in its "Committee on Space Communications" various comparative legal aspects of international legislation in America effecting terrestrial and space communications.

On August 13, 1972, during the annual meeting of the American Bar Association in San Francisco, its International Law Section's Committee on Aerospace Law and its standing Committee on Aeronautical Law co-sponsored a program under the joint chairmanship of John E. Cavanaugh and Martin Menter on "Satellite Surveys of the Earth's Resources—the Legal View." Professor Robert N. Collwell of the University of California discussed the scientific, Bernard H. White of the General Electric Company the legal aspects while Edward R. Finch, Jr. of New York City elaborated on the role of the United Nations. In addition, Robert T. Jensen of El Segundo touched upon the general implications, Dean George J. Alexander of the University of Santa Clara Law School on the domestic aspects and Professor Stephen Gorove of the University of Mississippi School of Law on the international legal implications of earth resources satellites.

Also, the Federal Bar Association, in cooperation with the U. S. Membership of the International Institute of Space Law, jointly sponsored the twelfth annual International

Symposium on Aerospace Law which was held on September 15, 1972, in Washington, D. C. The discussions at this meeting were devoted to current developments and problems in the field of space law. Discussants included Harold Berger, Mrs. Eilene Galloway, Mrs. Katherine Drew Hallgarten, Spencer M. Beresford and Brig. Gen. Martin Menter (USAF, Ret.).

The XVth Colloquium of Space Law was held on October 12-13 in Vienna. The topics of discussion in the program included:

1. Legal problems of earth resources survey by satellites;
2. Recent trends in the law of space telecommunications;
3. Legal problems arising from the interpretation and application of the Convention on Liability;
4. Next developments of space law and doctrine: new subjects in the law-making for outer space; development of the principle of responsibility for space activity; development of earth and space law; and divergencies and convergencies.

The 1973 Annual Meeting of the American Astronautical Society will be held from June 21 to June 23, 1973, in Dallas, Texas, as the "International Congress of Space Benefits." The overall theme of the meeting will be to show worldwide benefits, both current and projected, occurring from the application of space technology to human problems on earth.

The Sixteenth Colloquium on the Law of Outer Space is scheduled to be held from October 8 to October 15, 1973 during the next annual meeting of the International Astronautical Federation in Baku, U.S.S.R., on the Caspian Sea. The following subject matters are on the agenda: (1) Impact of Space Law on General International Law, (2) Legal Aspects of Direct Broadcast Satellites, (3) Legal Aspects of Earth Resources and Environment, (4) Legal Problems Concerning the Moon and Other Celestial Bodies, (5) Legal Regime of Earth Orbital Stations. Also during the meeting a Symposium is to take place on Space Law Teaching.

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