# Appendix A: 1992 and Subsequent U.S.-U.S.S.R. Space Agreements

A

## APPENDIX A1:

### Agreement Between the United States of America and the Russian Federation Concerning Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes (June 1992)

The United States of America and the Russian Federation, hereinafter referred to as the Parties;

Considering the role of the two states in the exploration and use of outer space for peaceful purposes;

Desiring to make the results of the exploration and use of outer space available for the benefit of the peoples of the two states and of all peoples of the world;

Considering the respective interest of the Parties in the potential for commercial applications of space technologies for the general benefit;

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 other Celestial Bodies, and other multilateral agreements regarding the exploration and use of outer space to which both states are Parties;

Expressing their satisfaction with cooperative accomplishments in the fields of astronomy and astrophysics, earth sciences, space biology and medicine, solar system exploration and solar terrestrial physics, as well as their desire to continue and enhance cooperation in these and other fields;

Have agreed as follows:

#### Article I

The Parties, through their implementing agencies, shall carry out civil space cooperation in the fields of space science, space exploration, space applications and space technology on the basis of equality, reciprocity and mutual benefit.

Cooperation may include human and robotic space flight projects, ground-based operations and experiments and other activities in such areas as:

—Monitoring the global environment from space;
—Space Shuttle and Mir Space Station missions involving the participation of U.S. astronauts and Russian cosmonauts;
—Safety of space flight activities;
—Space biology and medicine; and,
—Examining the possibilities of working together in other areas, such as the exploration of Mars.

## Article II

For purposes of developing and carrying out the cooperation envisaged in Article I of this Agreement, the Parties hereby designate, respectively, as their principal implementing agencies the National Aeronautics and Space Administration for the United States and the Russian Space Agency for the Russian Federation.

The Parties may designate additional implementing agencies as they deem necessary to facilitate the conduct of specific cooperative activities in the fields enumerated in Article I of this Agreement.

Each of the cooperative projects may be the subject of a specific written agreement between the designated implementing agencies that defines the nature and scope of the project, the individual and joint responsibilities of the designated implementing agencies related to the project, financial arrangements, if any, and the protection of intellectual property consistent with the provisions of this Agreement.

## Article III

Cooperative activities under this Agreement shall be conducted in accordance with national laws and regulations of each party, and shall be within the limits of available funds.

## Article IV

The Parties shall hold annual consultations on civil space cooperation in order to provide a mechanism for government-level review of ongoing bilateral cooperation under this Agreement and to exchange views on such various space matters. These consultations could also provide the principal means for presenting proposals for new activities falling within the scope of this Agreement.

## Article V

This Agreement shall be without prejudice to the cooperation of either Party with other states and international organizations.

## Article VI

The Parties shall ensure adequate and effective protection of intellectual property created or furnished under this Agreement and relevant agreements concluded pursuant to Article II of this Agreement. Where allocation of rights to intellectual property is provided for in such agreements, the allocation shall be made in accordance with the Annex attached hereto which is an integral part of this Agreement. To the extent that it is necessary and appropriate, such agreements may contain different provisions for protection and allocation of intellectual property.

## Article VII

This Agreement shall enter into force upon signature by the Parties and shall remain in force for five years. It may be extended for further five-year periods by an exchange of diplomatic notes. This Agreement may be terminated by either Party on six months written notice, through the diplomatic channel, to the other Party.

DONE at Washington, in duplicate, this seventeenth day of June, 1992, in the English and Russian languages, both texts being equally authentic.

FOR THE UNITED STATES OF AMERICA:

George Bush

FOR THE RUSSIAN FEDERATION:

Boris Yeltsin

## ANNEX: INTELLECTUAL PROPERTY

**Pursuant to Article VI of this Agreement:**

The Parties shall ensure adequate and effective protection of intellectual property created or furnished under this Agreement and relevant agreements concluded pursuant to Article II of this Agreement. The Parties agree to notify one another in a timely fashion of any inventions or copyrighted works arising under this Agreement and to seek protection for such intellectual property in a timely fashion. Rights to such intellectual property shall be allocated as provided in this Annex.

### I. Scope

a. This annex is applicable to all cooperative activities undertaken pursuant to this Agreement, except as otherwise specifically agreed by the Parties or their designees.
b. For purposes of this Agreement, "intellectual property" shall have the meaning found in Article 2 of the convention establishing the World Intellectual Property Organization, done at Stockholm, July 14, 1967.
c. This Annex addresses the allocation of rights, interests, and royalties between the Parties. Each Party shall ensure that the other Party can obtain the rights to intellectual property allocated in accordance with the Annex, by obtaining those rights from its own participants through contracts or other legal means, if necessary. This Annex does not otherwise alter or prejudice the allocation between a Party and its participants, which shall be determined by that Party's laws and practices.
d. Disputes concerning intellectual property arising under this Agreement should be resolved through discussions between the concerned participating institutions or, if necessary, the Parties or their designees. Upon mutual agreement of the Parties, a dispute shall be submitted to an arbitral tribunal for binding arbitration in accordance with the applicable rules of international law. Unless the Parties or their designees agree otherwise in writing, the arbitration rules of UNCITRAL shall govern.
e. Termination or expiration of this Agreement shall not affect rights or obligations under this Annex.

### II. Allocation of Rights

a. Each party shall be entitled to a non-exclusive, irrevocable, royalty-free license in all countries to translate, reproduce, and publicly distribute scientific and technical journal Articles, reports, and books directly arising from cooperation under this Agreement. All publicly distributed copies of a copyrighted work prepared under this provision shall indicate the names of the authors of the work unless an author explicitly declines to be named.
b. Rights to all forms of intellectual property, other than those rights described in Section II(a) above, shall be allocated as follows:
   1. Visiting researchers and scientists visiting primarily in furtherance of their education shall receive intellectual property rights under the policies of the host institution. In addition, each visiting researcher or scientist named as an inventor shall be entitled to share in a portion of any royalties earned by the host institution from the licensing of such intellectual property.
   2. (a) For intellectual property created during joint research with participation from the two Parties, for example, when the Parties, participating institutions, or participating personnel have agreed in advance on the scope of work, each Party shall be entitled to obtain all rights and interests in its own country. Rights and interests in third countries will be determined in agreements concluded pursuant to Article II of this Agreement. The rights to intellectual property shall be allocated with due regard for the economic, scientific and technological contributions from each Party to the creation of intellectual property. If research is not designated as "joint research" in the relevant agreement concluded pursuant to Article II of this Agreement, rights to intel-

lectual property arising from the research shall be allocated in accordance with Paragraph IIb1. In addition, each person named as an inventor shall be entitled to share in a portion of any royalties earned by their institution from the licensing of the property.

(b) Notwithstanding Paragraph IIb2(a), if a type of intellectual property is available under the laws of one Party but not the other Party, the Party whose laws provide for this type of protection shall be entitled to all rights and interests in all countries which provide rights to such intellectual property. Persons named as inventors of the property shall nonetheless be entitled to royalties as provided in Paragraph IIb2(a).

## III. Business-Confidential Information

In the event that information identified in a timely fashion as business-confidential is furnished or created under the Agreement, each Party and its participants shall protect such information in accordance with applicable laws, regulations, and administrative practice. Information may be identified as "business-confidential" if a person having the information may derive an economic benefit from it or may obtain a competitive advantage over those who do not have it, the information is not generally known or publicly available from other sources, and the owner has not previously made the information available without imposing in a timely manner an obligation to keep it confidential.

## APPENDIX A2:

## Protocol to the Implementing Agreement Between the National Aeronautics and Space Administration of the United States of America and the Russian Space Agency of the Russian Federation on Human Space Flight Cooperation of October 5, 1992

### Preamble

The National Aeronautics and Space Administration (hereafter referred to as "NASA"), and the Russian Space Agency (hereafter referred to as "RSA"), jointly referred to as "the Parties;"

Consistent with the Joint Statement on Cooperation in Space issued by Vice President Gore and Prime Minister Chernomyrdin on September 2, 1993; desiring to broaden the scope of the Implementing Agreement of October 5, 1992, on Human Space Flight Cooperation (hereinafter the October 5, 1992 Agreement) to encompass an expanded program of activities for cooperation involving the Russian Mir-1 Space Station and the U.S. Space Shuttle Program;

Having decided that the enhanced cooperative program will consist of a number of inter-related projects in two phases;

Having determined that Phase One will include those activities described in the October 5, 1992, Agreement and known as the Shuttle-Mir Program, including the exchange of the Russian Mir-1 crew and crew member participation in joint mission science, as well as additional astronaut flights, Space Shuttle dockings with Mir-1, and other activities;

Having further determined that Phase Two of the enhanced cooperative program will involve use of a Russian Mir module of the next generation mated with a U.S. laboratory module operated on a human-tended basis in conjunction with the Space Shuttle, operating in a 51.6 degree orbit which is accessible by both U.S. and Russian resources, to perform precursor activities for future space station-related activities of each Party, with launch to occur in 1997; and

Intending that activities in Phase Two would be effected through subsequent specific agreement(s) between the Parties.

Have agreed as follows:

### Article I: Description of Additional Activities

1. This Protocol forms an integral part of the October 5, 1992 Agreement.
2. An additional Russian cosmonaut flight on the Space Shuttle will take place in 1995. The back-up cosmonaut currently in training at NASA's Johnson Space Center will be the primary cosmonaut for that flight, with the STS-60 primary cosmonaut acting as back-up. During this mission, the Shuttle will perform a rendezvous with the Mir-1 Space Station and will approach to a safe distance, as determined by the Flight Operations and Systems Integration Joint Working Group established pursuant to the October 5, 1992 Agreement.
3. The Space Shuttle will rendezvous and dock with Mir-1 in October-November 1995, and, if necessary, the crew will include Russian cosmonauts. Mir-1 equipment, including power supply and life support system elements, will also be carried. The crew will return on the same Space Shuttle mission. This mission will include activities on Mir-1 and possible extravehicular activities to upgrade solar arrays. The extravehicular activities may involve astronauts of other international partners of the Parties.

4. NASA-designated astronauts will fly on the Mir-1 space station for an additional 21 months for a Phase One total of two years. This will include at least four astronaut flights. Additional flights will be by mutual agreement.
5. The Space Shuttle will dock with Mir-1 up to ten times. The Shuttle flights will be used for crew exchange, technological experiments, logistics or sample return. Some of those flights will be dedicated to resources and equipment necessary for life extension of Mir-1. For schedule adjustments of less than two weeks, both sides agree to attempt to accommodate such adjustments without impacting the overall schedule of flights. Schedule adjustments of greater than two weeks will be resolved on a case-by-case basis through consultations between NASA and RSA.
6. A specific program of technological and scientific research, including utilization of the Mir-1 Spekter and Priroda modules, equipped with U.S. experiments, to undertake a wide-scale research program, will be developed by the Mission Science Joint Working Group established pursuant to the October 5, 1992 Agreement. The activities carried out in this program will expand ongoing research in biotechnology, materials sciences, biomedical sciences, Earth observations and technology.
7. Technology and engineering demonstrations applicable to future space station activities will be defined. Potential areas include but are not limited to: automated rendezvous and docking, electrical power systems, life support, command and control, microgravity isolation system, and data management and collection. Joint crew operations will be examined as well.
8. The Parties consider it reasonable to initiate in 1993 the joint development of a solar dynamic power system with a test flight on the Space Shuttle and Mir in 1996, the joint development of spacecraft environmental control and life support systems, and the joint development of a common space suit.
9. The Parties will initiate a joint crew medical support program for the benefit of both sides' crew members, including the development of common standards, requirements, procedures, databases, and countermeasures. Supporting ground systems may also be jointly operated, including telemedicine links and other activities.
10. The Space Shuttle will support the above activities, including launch and return transportation of hardware, material, and crew members. The Shuttle may also support extravehicular and other space activities.
11. Consistent with U.S. law, and subject to the availability of appropriated funds, NASA will provide both compensation to the RSA for services to be provided during Phase One in the amount of US $100 million in FY 1994, and additional funding of US $300 million for compensation of Phase One and for mutually-agreed upon Phase Two activities will be provided through 1997. This funding will take place through subsequent NASA-RSA and/or through industry-to-industry arrangements. Reimbursable activities covered by the above arrangements and described in paragraphs 3-8 will proceed after these arrangements are in place and after this Protocol enter into force in accordance with Article III. Specific Phase One activities, schedules and financial plans will be included in separate documents.
12. Implementation decisions on each part of this program will be based on the cost of each part of the program, relative benefits to each Party, and relationship to future space station activities of the Parties.
13. The additional activities will not interfere with or otherwise affect any existing, independent obligations either Party may have to other international partners.

## Article II: Joint Implementation Teams

The coordination and implementation of the activities described herein will be conducted through the Joint Working Groups established pursuant to the October 5, 1992 Agreement or such other joint bodies as may be established by mutual agreement.

## Article III: Entry into Force

This Protocol will enter into force upon an exchange of diplomatic notes between the Governments of the United States of America and the Russian Federation confirming acceptance of its terms and that all necessary legal requirements for entry into force have been fulfilled.

IN WITNESS WHEREOF the undersigned, being duly authorized by their respective Governments, have signed this Protocol.

Done at Moscow, in duplicate, this sixteenth day of December, 1993, in the English and Russian languages, both texts being equally authentic.

| FOR THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION OF THE UNITED STATES OF AMERICA: | FOR THE RUSSIAN SPACE AGENCY OF THE RUSSIAN FEDERATION: |
|---|---|
| Dan Goldin | Yuri Koptev |

## APPENDIX A3:

# Interim Agreement Between the National Aeronautics and Space Administration of the United States of America and the Russian Space Agency for the Conduct of Activities Leading to Russian Partnership in the Detailed Design, Development, Operation and Utilization of the Permanently Manned Civil Space Station

The National Aeronautics and Space Administration of the United States of America (hereinafter referred to as "NASA"), and the Russian Space Agency (hereinafter referred to as "RSA"), hereinafter also referred to as the "Parties",

RECOGNIZING the Agreement between the United States of America and the Russian Federation Concerning Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes of June 17, 1992;

RECOGNIZING the successful cooperation being conducted by NASA and RSA under the Human Space Flight Agreement of October 5, 1992, and the Protocol to that Agreement of December 16, 1993;

RECALLING the Summit Meeting of April 3, 1993, between Presidents Clinton and Yeltsin which established the U.S.-Russian Joint Commission on Energy and Space;

RECALLING the Joint Statement of September 2, 1993, on Cooperation in Space issued by the U.S.-Russian Joint Commission on Energy and Space chaired by Vice President Gore and Prime Minister Chernomyrdin;

RECALLING the Joint Statement of December 16, 1993, on Space Cooperation issued by the U.S.-Russian Joint Commission on Economic and Technological Cooperation chaired by Vice President Gore and Prime Minister Chernomyrdin;

RECOGNIZING the Joint Invitation at the Occasion of the Intergovernmental Meeting of the Space Station Partners in Washington, DC, on December 6, 1993; and further recognizing the acceptance of the invitation by the Government of the Russian Federation on December 17, 1993;

NOTING the obligations of the United States of America and NASA pursuant to:

The Agreement Among the Government of the United States of America, Governments of Member States of the European Space Agency, the Government of Japan, and the Government of Canada on Cooperation in the Detailed Design, Development, Operation, and Utilization of the Permanently Manned Civil Space Station of September 29, 1988 (the Agreement is referred to hereinafter as the "IGA"; the Governments of the United States, Japan, Canada, and the European Governments collectively, are hereinafter referred to as the "Partners");

Memoranda of understanding on cooperation in the detailed design, development, operation, and utilization of the permanently manned civil space station between NASA and:

The Ministry of State for Science and Technology of Canada (September 29, 1988), and further noting that upon its establishment on March 1, 1989, the Canadian Space Agency (CSA) assumed responsibility for the execution of the Canadian Space Station Program from MOSST;

The European Space Agency (ESA) (September 29, 1988); and

The Government of Japan (March 14, 1989), and further noting the designation by the Government of Japan of the Science and Technology Agency (STA) as its cooperating agency; (CSA, ESA, and STA are hereinafter collectively referred to as the "Cooperating Agencies of the Space Station Partners");

NOTING the commitments of NASA in the Space Station Program Implementation Plan of September 7, 1993;

RECOGNIZING the Addendum to the Space Station Program Implementation Plan of November 2, 1993, hereinafter referred to as the "Addendum"; and

RECOGNIZING the Joint Statement on Negotiations Related to the Integration of Russia into the Space Station Partnership issued by the Partners and the Government of the Russian Federation at the Intergovernmental Meeting on March 18, 1994, and the adoption of the following papers: "Changes in the Legal Framework to Include Russia as a Partner" and "Modalities for Forthcoming Negotiations on the Space Station Agreements;"

HAVE AGREED AS FOLLOWS:

## Article 1—Objectives

1.1 This Agreement sets out the terms and conditions for NASA and RSA cooperation in activities related to the initial participation in the Space Station Program by organizations or entities of, or related to, the Government of the Russian Federation. This cooperation, an integrated partnership among NASA, RSA and the Cooperating Agencies of the Space Station Partners, will contribute significantly to achieving the goal of a single, integrated international Space Station that will enhance the use of space for the benefit of all participating nations and humanity. The Parties are also cooperating in additional activities pursuant to other agreements, including precursor activities to the cooperation on the Space Station described in this Agreement. These precursor activities, referred to as Phase 1, involve efforts to achieve significant risk reduction in the overall program which are not subject to this Agreement. This Agreement covers later phases of the cooperation: the detailed design, development, operation and utilization of the Space Station.

1.2 This Agreement provides for:

Initial cooperation between NASA and RSA to integrate RSA into the planning process for detailed design, development, operation and utilization of the Space Station pending completion of programmatic steps and entry into force of legal arrangements for a redesigned Space Station with integral Russian participation;

Descriptions of managerial, technical and operational interfaces which are necessary to ensure effective coordination and compatibility between Parties' activities; and

Establishment of specified legal obligations, in connection with Russian participation in the Space Station Program.

1.3 In particular, the purpose of this Agreement is to integrate RSA, to the maximum extent possible, into Space Station management mechanisms under the IGA, and under the memoranda of understanding between NASA and ESA, NASA and the Government of Japan (GOJ), and NASA and MOSST. The IGA, and these memoranda are attached for reference but are not part of this Agreement. Neither the Russian Federation nor RSA is a party to the IGA, or these memoranda.

1.4 The Parties intend to proceed expeditiously to define their respective contributions to the Space Station Program, as well as operation and utilization concepts, preparatory to concluding a NASA-RSA Memorandum of Understanding (MOU) covering their entire cooperation in the program. In addition, the Parties note that the Government of the Russian Federation and the Partners stated on March 18, 1994, their intention to negotiate the following agreements: a Protocol to amend the IGA so that Russia may become a party to it and to provide for Russian participation in the Space Station Program as a partner; and a provisional arrangement concerning application

of the IGA and Protocol pending entry into force of the Protocol. The Parties envision that this Agreement will remain in effect until the NASA-RSA MOU and Protocol have entered into force.

## Article 2—Responsibilities

2.1 While undertaking activities under this Agreement, NASA will provide overall program coordination and direction and perform overall system engineering and integration for the Space Station. Boeing Aerospace is the U.S. prime contractor for system engineering and integration, and as such will assist NASA as required in these activities. RSA will provide overall development, coordination, management, and systems engineering and integration for its Space Station elements. RSA will participate in the management of the program and in the overall Space Station system engineering and integration. NPO Energia is the Russian prime contractor for system engineering and integration, and as such will assist RSA as required in these activities. NASA and RSA each remains ultimately responsible for performance of responsibilities delegated to its respective prime contractor.

2.2 NASA will conduct technical and managerial reviews of the Space Station program with RSA and the Cooperating Agencies of the Space Station Partners, as appropriate. NASA and RSA will develop all necessary joint documentation required for efficient execution of activities under this Agreement. RSA will participate with NASA and the Cooperating Agencies of the Space Station Partners in the management bodies as provided in Article 3.

## Article 3—Management

3.1 RSA is responsible for management of its activities in accordance with this Agreement, and NASA is responsible for management of its activities in accordance with this Agreement, the IGA and the memoranda of understanding between NASA and the Cooperating Agencies of the Space Station Partners, and implementing arrangements under the IGA and the memoranda of understanding. Program management activities during the initial cooperation under this Agreement will be consistent with the Addendum.

3.2 The NASA Space Station Program Director at NASA Headquarters and the RSA Deputy General Director in Moscow will be responsible for their respective activities.

3.3 The NASA Space Station Program Manager at the Johnson Space Center and the RSA Deputy Division Chief in Moscow will implement their respective activities under the direction of their respective Agencies.

3.4 For initial cooperation under this Agreement, in accordance with Article 1, this Article establishes the management mechanisms to coordinate the respective design and development activities of NASA and RSA, to establish applicable requirements, to assure appropriate technical, operational, utilization, safety, and other activities, to establish interfaces between the Space Station elements, to review decisions, to establish schedules, to review the status of the activities, to report progress and to resolve issues and disputes as they may arise.

3.5 The NASA-RSA Program Coordination Committee (PCC), co-chaired by the NASA Space Station Program Director and the RSA Deputy General Director, will meet periodically or at the request of either Party to review the Parties' respective activities. The Co-Chairmen will together take those decisions necessary to assure implementation of the cooperative activities related to Space Station flight elements and to Space Station-unique ground elements provided by the Parties. In taking decisions regarding design and development, the NASA-RSA PCC will consider operation and utilization impacts, and will also consider design and development recommendations from the Multilateral Coordination Board (MCB) described below. However, decisions re-

garding operation and utilization activities will be taken by the MCB. The NASA-RSA PCC Co-Chairmen will decide on the location and timing of the meetings. If the Co-Chairmen agree that a specific issue or decision requires consideration by a Cooperating Agency of the Space Station Partners at the PCC level, the NASA-RSA PCC may meet jointly with the NASA-ESA PCC, the NASA-GOJ PCC, and/or the NASA-CSA PCC.

3.6 Space Station requirements, configuration, housekeeping resource allocations for design purposes, and element interfaces; Space Station activities through the completion of assembly and initial operational verification and other Space Station configuration control activities will be controlled by the Space Station Control Board (SSCB) chaired by NASA. RSA will participate on an equal basis with members of the SSCB and on such subordinate boards thereof as may be agreed, attending and participating when these boards consider items which affect the RSA-provided elements, interfaces between the NASA-provided and the RSA-provided elements, and interfaces between the RSA-provided elements and elements provided by the Cooperating Agencies of Space Station Partners. Decisions by the SSCB Chairman may be appealed to the NASA-RSA PCC, although it is the duty of the SSCB Chairman to make every effort to reach consensus with RSA rather than have RSA refer issues to the NASA-RSA PCC. Such appeals will be made and processed expeditiously. Pending resolution of appeals, RSA need not proceed with the implementation of a SSCB decision as far as its provided elements are concerned; NASA may, however, proceed with a SSCB decision as far as its provided elements are concerned. NASA will participate on RSA Space Station control boards, and on such subordinate boards thereof as may be agreed, attending as appropriate.

3.7 The Space Station System Specification and any modifications thereto, signed by the NASA Space Station Program Manager, the RSA Deputy General Director, and their counterparts in the Cooperating Agencies of the Space Station Partners, and approved by the SSCB, contain the requirements related to elements provided by the Parties, and the Cooperating Agencies of the Space Station Partners.

3.8 The Parties will work through the above management mechanisms to seek agreement on a case-by-case basis with the intention to use interchangeable hardware and software to the maximum extent possible in order to promote efficient and effective Space Station operations, including reducing the burden on the Space Station logistics system.

3.9 The NASA Space Station Program Office and the RSA Division for Manned Space Flight are responsible for NASA-RSA technical liaison activities. In order to facilitate the working relationships between the NASA Program Office in Houston and RSA, RSA will provide, and NASA will accommodate, the RSA liaison to the NASA Space Station Program Office. Similarly, NASA will provide and RSA will provide support for accommodation of the NASA liaison to the RSA in Moscow. RSA may also provide additional representative(s) to NASA Headquarters in Washington, DC, to further facilitate the program working relationships. Arrangements specifying conditions relating to the liaison relationships will be agreed to by the Co-Chairmen of the NASA-RSA PCC.

3.10 RSA will participate in selected NASA reviews on Space Station requirements, architecture and interfaces. Similarly, NASA will participate in selected RSA reviews; the Cooperating Agencies of the Space Station Partners will participate as appropriate.

3.11 Party has responsibilities regarding the management of its respective operations and utilization activities and the overall Space Station operations and utilization activities, in accordance with the provisions of this Agreement. Activities under this agreement will comprise long-range planning and top-level direction and coordination which will be performed by the strategic-level organizations, and which will be consistent with the Addendum. Operations plans will be developed

by the Parties. These plans will include any necessary contingency plans for the safe and efficient operation of the Space Station while on-orbit. They will also outline the division of responsibilities of the Parties, taking into account RSA's particular operations capabilities during Phase 2, in the framework of a unified command and control center concept as outlined in the Addendum.

3.12 The Multilateral Coordination Board (MCB), an established Space Station management body, meets periodically or promptly at the request of the Parties or a Cooperating Agency of the Space Station Partners with the task to ensure coordination of activities related to the operation and utilization of the Space Station. The Parties to this Agreement and the Cooperating Agencies of the Space Station Partners will plan and coordinate activities affecting the safe, efficient and effective operation and utilization of the Space Station through the MCB, except as otherwise specifically provided in this Agreement. The MCB will comprise the NASA Space Station Program Director; the RSA Deputy General Director; the STA Director-General of the Research and Development Bureau; the ESA Columbus Programme Department Head; and the CSA Vice President for Human Spaceflight. The NASA Space Station Program Director will chair the MCB. The Parties agree that all MCB decisions should be made by consensus. However, where consensus cannot be achieved on any specific issue within the purview of the MCB within the time required, the issue will be resolved on the basis of the principles which govern the MCB.

3.13 The MCB has established Panels responsible for the long-range strategic coordination of the operation and utilization of the Space Station, called the System Operations Panel (SOP) and the User Operations Panel (UOP) respectively. The MCB approves, on an annual basis, a Consolidated Operations and Utilization Plan (COUP) for the Space Station based on the annual Composite Operations Plan and the annual Composite Utilization Plan developed by the Panels. In doing so, the MCB will be responsible for resolving any conflicts between the Composite Operations Plan and the Composite Utilization Plan which cannot be resolved by the Panels. The COUP will be prepared by the User Operations Panel and agreed to by the System Operations Panel. The COUP will be implemented by the appropriate tactical and execution-level organizations. Any portions of a COUP which cover activities prior to Assembly Complete plus one year of initial operational verification will be subject to adjustments by the SSCB that are required to assemble, verify, operate and maintain the Space Station.

3.14 The Parties will use their best efforts, in consultation with the Cooperating Agencies of the Space Station Partners, to incorporate any necessary changes in management operation within the framework of the management structure to reflect the expanded number of partners in the Space Station program.

## Article 4—Safety and Mission Assurance

4.1 In order to assure safety, NASA has the responsibility, working with the RSA and the Cooperating Agencies of the Space Station Partners, to establish overall Space Station safety and mission assurance requirements and plans.

4.2 RSA will develop detailed safety and mission assurance requirements and plans, using its own requirements for its Space Station hardware and software. Such requirements and plans must meet or exceed the overall Space Station safety requirements and plans. Requirements for which meet or exceed criteria are not appropriate will be determined by agreement of the Parties. RSA will have the responsibility to implement Space Station safety and mission assurance requirements and plans with respect to the elements and payloads it provides throughout the lifetime of the program, and to certify that such requirements and plans have been met. NASA will have the overall responsibility to certify that all Space Station elements and payloads are safe.

4.3 The Parties will exchange information necessary in order to conduct system safety reviews. The Parties will also conduct safety reviews of the elements and payloads they provide.

## Article 5—Cross-Waiver of Liability

5.1 The objective of this Article is to establish a cross-waiver of liability by the Parties to this Agreement and related entities in the interest of encouraging participation in space exploration, use and investment through the Space Station. In addition, in light of the liability requirements in Article 16 of the IGA, a second purpose of this article is to fulfill the obligation of the United States of America, as a Partner State, to extend the cross-waiver to related entities of the United States Government in the Space Station Program. Thus, pursuant to this Article, RSA, as a related entity of NASA and the Government of the United States of America, for purposes of this article, is protected by application of the Cross-Waiver of Liability agreed to by the Partner States in the IGA. The cross-waiver of liability shall be broadly construed to achieve the objective of encouraging participation in space activities.

5.2 For the Purposes of this Article:

(a) The term "damage" means:

(1) bodily injury to, or other impairment of health of, or death of, any person;

(2) damage to, loss of, or loss of use of any property;

(3) loss of revenue or profits; or

(4) other direct, indirect, or consequential damage.

(b) The term "launch vehicle" means an object (or any part thereof) intended for launch, launched from Earth, or returning to Earth which carries payloads or persons, or both.

(c) "Partner State" means a signatory to the IGA. A "Partner State" includes its Cooperating Agency. It also includes any entity specified in the Memorandum of Understanding between NASA and the Government of Japan to assist the Government of Japan's Cooperating Agency in the implementation of that Agreement.

(d) The term "payload" means all property to be flown or used on or in a launch vehicle or the Space Station.

(e) The term "Protected Space Operations" means all launch vehicle activities, Space Station activities, and payload activities on Earth, in outer space, or in transit between Earth and outer space done in implementation of this Agreement, the IGA, the memoranda of understanding between NASA and the Cooperating Agencies of the Space Station Partners, or implementing arrangements under the IGA and the memoranda of understanding. It includes, but is not limited to:

(1) Research, design, development, test, manufacture, assembly, integration, operation, or use of launch or transfer vehicles (for example, the orbital maneuvering vehicle), the Space Station, or a payload, as well as related support equipment and facilities and services;

(2) All activities related to ground support, test, training, simulation, or guidance and control equipment, and related facilities or services.

"Protected Space Operations" also includes all activities related to evolution of the Space Station, as provided for in Article 14 of the IGA. "Protected Space Operations" excludes activities on Earth which are conducted on return from the Space Station to develop further a payload's product or

process for use other than for Space Station-related activities in implementation of this Agreement or the IGA.

(f) The term "related entity" means:

(1) A contractor or subcontractor of a Party or a Partner State at any tier;

(2) A user or customer of a Party or a Partner State at any tier; or

(3) A contractor or subcontractor of a user or customer of a Party or a Partner State at any tier.

"Contractors" and "subcontractors" include suppliers of any kind.

5.3 (a) Each Party agrees to a cross-waiver of liability pursuant to which each Party waives all claims against any of the entities or persons listed in paragraphs 5.3(a)(1) through 5.3(a)(4) below based on damage arising out of Protected Space Operations. This cross-waiver shall apply only if the person, entity, or property causing the damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The cross-waiver shall apply to any claims for damage, whatever the legal basis for such claims, including but not limited to delict and tort (including negligence of every degree and kind) and contract, against:

(1) the other Party;

(2) a Partner State other than the United States of America;

(3) a related entity of any entity identified in subparagraphs 5.3(1)(1) or 5.3(a)(2) above; or

(4) the employees of any of the entities identified in subparagraphs 5.3(a)(1) through 5.3(a)(3) above.

(b) In addition, each Party shall extend the cross-waiver of liability as set forth in paragraph 5.3(a) above to its own related entities by requiring them, by contract or otherwise, to agree to waive all claims against the entities or persons identified in subparagraphs 5.3(a)(1) through 5.3(a)(4) above.

(c) For avoidance of doubt, this cross-waiver of liability includes a cross-waiver of liability arising from the Convention on International Liability for Damage Caused by Space Objects, of March 29, 1972, where the person, entity, or property causing the damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.

(d) Notwithstanding the other provisions of this Article, this cross-waiver of liability shall not be applicable to:

(1) claims between NASA and RSA arising out of activities conducted under any contract between NASA and RSA;

(2) claims between a Party and its other related entities or between its own related entities;

(3) claims made by a natural person, his/her estate, survivors, or subrogees for injury or death of such natural person;

(4) claims for damage caused by willful misconduct;

(5) intellectual property claims.

(e) Nothing in this Article shall be construed to create the basis for a claim or suit where none would otherwise exist.

## Article 6—Exchange of Technical Data and Goods

6.1 Except as otherwise provided in this Article, each Party will transfer all technical data and goods considered to be necessary (by both parties to any transfer) to fulfill its respective responsibilities under this Agreement. In addition, NASA may request a Cooperating Agency of a Space Station Partner to transfer directly to RSA technical data and goods necessary to fulfill NASA's responsibilities under this Agreement. NASA may also request RSA to transfer directly to a Cooperating Agency of a Space Station Partner technical data and goods necessary to fulfill RSA's responsibilities under this Agreement. Each Party undertakes to handle expeditiously any request for technical data or goods presented by the other Party for the purposes of this cooperation. This paragraph will not require either Party to transfer any technical data and goods in contravention of its national laws or regulations.

6.2 The transfers of technical data and goods under this Agreement will be subject to the restrictions set forth in this paragraph. Technical data and goods not covered by these restrictions will be transferred without restrictions, except as otherwise restricted by national laws and regulations.

(a) The furnishing Party or a Cooperating Agency of a Space Station Partner will mark with a notice, or otherwise specifically identify, the technical data or goods that are to be protected for export control purposes. Such notice or identification will indicate any specific conditions regarding how such technical data or goods may be used by the receiving Party and its contractors and subcontractors, and by the Cooperating Agency of a Space Station Partner and its contractors and subcontractors. These conditions will include: (1) that such technical data or goods will be used only for the international Space Station program to fulfill responsibilities of the Parties or of a Cooperating Agency of a Space Station Partner, and (2) that such technical data or goods will not be used by persons or entities other than the receiving Party, its contractors or subcontractors, and by the Cooperating Agency of a Space Station Partner, its contractors or subcontractors, or for any other purpose without the prior written permission of the furnishing Party.

(b) The furnishing Party or a Cooperating Agency of a Space Station Partner will mark with a notice the technical data that are to be protected for proprietary rights purposes. Such notice will indicate any specific conditions regarding how such technical data may be used by the receiving Party and its contractors and subcontractors, and by the Cooperating Agency of a Space Station Partner and its contractors and subcontractors, including (1) that such technical data will be used, duplicated, or disclosed only for the international Space Station program to fulfill responsibilities of the Parties or of a Cooperating Agency of the Space Station Partner, and (2) that such technical data will not be used by persons or entities other than the receiving Party, its contractors or subcontractors, the Cooperating Agency of a Space Station Partner, its contractors or subcontractors, or for any other purpose without the prior written permission of the furnishing Party.

6.3 Each Party will take all necessary steps to ensure that technical data and goods received by it under subparagraph 6.2(a) or 6.2(b) above will be treated by the Receiving Party, and other persons and entities (including Cooperating Agencies of the Space Station Partners, contractors and subcontractors) to which the data and goods are subsequently transferred in accordance with the terms and conditions of the notice. (The Cooperating Agencies of the Space Station Partners and their respective Governments have obligations under the IGA to protect data and goods transferred by RSA under this Agreement.) Each Party will take all reasonably necessary steps, including ensur-

ing appropriate contractual conditions in their contracts and subcontracts, to prevent unauthorized use, disclosure, or retransfer of, or unauthorized access to, such technical data and goods.

6.4 It is not the intent of the Parties to grant, through this Agreement, any rights to a recipient beyond the right to use, disclose, or retransfer received technical data or goods consistent with conditions imposed under this Article.

6.5 For purposes of this cooperation, interface, integration, safety and testing data (excluding detailed design, manufacturing and processing data, and associated software) shall be exchanged by the Parties without restrictions as to use or disclosure, except as specifically required by national laws and regulations relating to export controls.

## Article 7—Intellectual Property

7.1 With the exception of the intellectual property rights referred to in Article 6, Exchange of Technical Data and Goods, and subject to national laws and regulations, provisions for the protection and allocation of intellectual property rights created during the course of cooperation between the Parties to this Agreement are set forth in Annex 1 of the June 17, 1992, Agreement between the United States of America and the Russian Federation Concerning Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes.

7.2 Except as set forth in paragraph 7.1, nothing in this Agreement will be construed as granting or implying any rights to, or interest in, patents or inventions of the Parties or their contractors or subcontractors.

## Article 8—Public Information

Each Party will coordinate, as appropriate, with the other in advance concerning its own or joint public information activities related to subjects covered by this Agreement.

## Article 9—Customs and Immigration

9.1 Each Party will use its best efforts to facilitate the movement of persons and goods necessary to implement this Agreement, into and out of its territory, subject to laws and regulations of its respective country.

9.2 Subject to its respective countries' laws and regulations, each Party will use its best efforts to facilitate provision of the appropriate entry and residence documentation for the other Party's nationals and their families, or for the nationals and their families of Space Station Partner States who enter, exit or reside within its territory in order to carry out activities described herein.

9.3 The Parties will use their best efforts to arrange in their respective countries for free customs clearance, to include no payment of import and export duties and no payment for the conduct of customs procedures, for entrance to, and exit from, their respective countries, for goods required for implementation of the activities described herein.

9.4 RSA will take steps to facilitate the movement of persons and goods and clearances to and from launch facilities RSA will utilize to fulfill its obligations under this Agreement.

## Article 10—Financial Arrangements

10.1 Each Party will bear the costs of fulfilling its responsibilities, including but not limited to costs of compensation, travel and subsistence of its own personnel and transportation of all equipment and other items for which it is responsible under this Agreement, except as provided for in contractual or other arrangements between the Parties.

10.2 The financial obligations of each Party pursuant to this Agreement are subject to its funding procedures and the availability of appropriated funds. Recognizing the importance of Space Station cooperation, each Party undertakes to make its best efforts to obtain approval for the funds to meet those obligations, consistent with its respective funding procedures.

10.3 In the event that funding problems arise that may affect a Party's ability to fulfill its responsibilities under this Agreement, that Party will promptly notify and consult with the other Party.

10.4 The Parties will seek to minimize the exchange of funds while carrying out their respective responsibilities in this cooperative program, including, if they agree, through the use of barter, that is, the provision of goods or services.

## Article 11—Termination

11.1 This Agreement may be terminated at any time by giving at least three months prior notice by diplomatic note. Upon notice of termination for any reason, NASA and RSA will expeditiously negotiate an agreement concerning the terms and conditions of termination. To the extent that termination affects specific rights or obligations of a Cooperating Agency of a Space Station Partner under the IGA or the MOU between NASA and that Cooperating Agency, NASA will consult with the affected Cooperating Agency before concluding any such agreement.

11.2 Termination by either Party will not affect that Party's continuing rights and obligations under this Agreement with regard to liability and the protection of technical data and goods unless otherwise agreed in a termination agreement pursuant to Article 11.1.

## Article 12—Amendment

This Agreement may be amended by written agreement of the Parties.

## Article 13—Language

The working language for activities under this Agreement will be the English language and data and information generated or provided under this Agreement will be in the English language.

## Article 14—Entry into Force

This Agreement will enter into force upon the exchange of diplomatic notes confirming its terms by the Government of the United States of America and the Government of the Russian Federation. Unless this Agreement is terminated pursuant to Article 11, it will remain in effect consistent with Article 1.4, until otherwise agreed by the Parties.

Done at Washington, in duplicate, this twenty-third day of June, 1994, in the English and Russian languages, each text being equally authentic.

FOR THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION OF THE UNITED STATES OF AMERICA:

Dan Goldin

FOR THE RUSSIAN SPACE AGENCY:

Yuri Koptev