#### MEMORANDUM

on cooperation in the peaceful uses of atomic energy between the U.S. Atomic Energy Commission and the USSR State Committee for the Utilization of Atomic Energy pursuant to the Agreement between the United States of America and the Union of Soviet Socialist Republics on exchanges in the scientific, technical, educational, cultural, and other fields in 1972-1973.

The U.S. Atomic Energy Commission and the USSR State Committee for the Utilization of Atomic Energy;

Bearing in mind the cooperation implemented to date in the field of peaceful uses of atomic energy;

Recalling Section II (1) (c.) of the Agreement between the USA and the USSR on exchanges in the scientific, technical, educational, cultural, and other fields in 1972-1973, signed at Moscow on April 11, 1972;

Have agreed upon the following arrangements and procedures for carrying out reciprocal exchanges in the course of 1972-1973;

### I. Exchange of Delegations

For the purpose of studying scientific and technical achievements in the peaceful uses of atomic energy in the USA and the USSR, the Parties agree to conduct exchanges of delegations to visit scientific establishments in the USA and the USSR on an agreed and reciprocal basis in the following fields:

1. Nuclear reactors and atomic power stations, including fast reactors.

2. Controlled thermonuclear reactions and plasma physics.

3. Low, medium and high energy physics, including design and utilization of charged - particle accelerators.

4. Radioactive waste disposal.

5. Radiation chemistry.

6. Thermionic reactors and energy conversion.

The delegation exchanges indicated above, as well as additional exchanges of delegations which may be agreed upon in these and other fields of peaceful uses of atomic energy pursuant to Section IX of this Memorandum, shall be carried out in accordance with the following procedures:

a. The specific dates and durations of visits, composition of delegations, list of facilities to be visited, as well as the scope of each exchange, shall be agreed upon between the Parties. Each delegation may consist of up to ten (10) persons and the length of each visit will be from 10 to 20 days.

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b. The sending Party shall provide the names and positions of its delegation members as well as the scope of its scientific and technical interests not later than thirty days before the delegation's arrival.

c. This Memorandum should not be construed to cover principles and conditions governing the participation of scientists and specialists of both countries in conferences (symposia) organized in the USA and the USSR outside the framework of this Memorandum.

#### II. Exchange of Specialist Visits

For the purpose of more intensive study of achievements in areas of specialized interest, the Parties agree to conduct exchanges of visits by small groups of specialists (not more than three persons) on an agreed and reciprocal basis in fields listed in Section I of this Memorandum.

Each Party may propose specific reciprocal exchanges for periods from 10 to 20 days; in each case such a proposal shall be made at least three months prior to the contemplated date of the visit. Each proposal shall identify the subject of the exchange, the names and places of work of the members of the group, the proposed date of arrival, and the installations of the proposing Party where visiting scientists from the other Party could be received in return. The receiving Party shall reply within six weeks of receipt of a proposal. If the receiving Party accepts the proposal, it shall confirm the proposed date of arrival or suggest an alternate date. The receiving Party shall also

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name the installations to be visited in the receiving country, the members and places of work of the return group, and the date for the return visit. The proposing Party will confirm acceptance of this reply within three weeks so that visas may be applied for 20 days in advance of the departure of the scientists concerned.

## III. Exchange of Research Specialists

The Parties agree to exchange 2-3 research specialists for terms of not more than one year in the field of elementary particle physics and nuclear physics, including low and medium energy physics.

The dates and durations of visits under this section shall be determined by agreement of the Parties.

## IV. Visits by Invitation

The Parties agree to the exchange of specialists in the field of high energy physics under arrangements whereby a director of one of the below-named institutions conducting research in this field in one country may invite scientists from the other country to visit his institution without a formal exchange of letters between the Parties and without the need to identify specific reciprocity in advance. However, the Parties agree that over the next several years comparable opportunities will be provided in order to balance the visits made by scientists of each country.

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In this exchange the following United States institutions will participate:

Argonne National Laboratory

Brookhaven National Laboratory

Lawrence Berkeley Laboratory

Stanford Linear Accelerator Center

Cambridge Electron Accelerator

National Accelerator Laboratory

In this exchange the following Soviet institutions will participate:

Institute of Theoretical and Experimental Physics (Moscow)

Institute of High Energy Physics (Serpukhov)

Physico-Technical Institute of the Ukrainian Academy of Sciences (Kharkov)

- Yerevan Institute of Physics of the USSR State Committee for the Utilization of Atomic Energy (Yerevan)
- Institute for Nuclear Physics of the Siberian Section of the USSR Academy of Sciences (Novosibirsk)

Each Party, by specific designation, may enlarge the list of its institutions participating in this program.

The dates and durations of visits shall be determined by the terms of the invitations.

## V. Exchange of Information

The Parties agree to exchange scientific information on a reciprocal basis by means of sending unclassified documents (technical reports, books, monographs, preprints, doctoral dissertations and dissertations for the degree of candidate of science) on current work in the fields designated in Section I of this Memorandum and of previous Memorandums. Each Party will provide the other with ten (10) new documents (two copies each) each month and may, by agreement, increase the number of documents to be exchanged.

Each Party agrees to provide additional unclassified documents in the fields indicated in the paragraph above, upon the request of the other Party. Each Party may request up to five documents per month. Should a requested document be out of print, a microfilm or facsimile copy will be provided.

In order that the International Atomic Energy Agency and its members may fully benefit from this cooperation, the reports and other documents which the Parties to this agreement will exchange will also be transmitted to the Agency.

# VI. Joint Projects in High Energy Physics

The Parties shall carry out joint projects in the field of high energy physics at installations of the Parties under the terms of the Protocol on carrying out joint projects of November 30, 1970 and of all the Annexes and Amendments to this Protocol.

#### VII. Joint Programs in Controlled Thermonuclear Fusion Research

The Parties agree to carry out joint theoretical and computer studies in the field of controlled thermonuclear fusion research, joint projects for the development of fusion reactor technology, and joint experimental work at installations of the Parties. This cooperation will be aimed at demonstrating the scientific feasibility

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of thermonuclear power production. Frograms, forms, sites, and conditions of scientific and technical studies, responsibilities, and relationships of the Parties will be determined in a separate longterm protocol, which shall be concluded between the U.S. Atomic Energy Commission and the USSR State Committee for the Utilization of Atomic Energy during 1973.

To prepare the protocol, the Parties agree to hold meetings of their experts in 1973. The dates and locations of these meetings will be agreed upon in the near future.

#### VIII. Joint Working Sessions

The Parties agree to hold two working sessions of specialists of both countries on the subject of fast reactors (one in the US and one in the USSR). Dates, locations, number of participants and topics for these sessions shall be agreed upon by the Parties later.

## IX. General

The U.S. Atomic Energy Commission and the USSR State Committee on the Utilization of Atomic Energy may, from time to time, come to agreement on additional proposals.

Representatives of one Party will visit the other country approximately one year after the signing of this Memorandum to meet with representatives of the other Party in order to review the progress of exchanges during the first year and to arrange the program of exchanges for the second year of the Memorandum.

#### X. Administrative

In exchanges pursuant to this Memorandum, the sending Party will pay the subsistence, lodging, transportation and other expenses of its participants. The receiving Party will arrange lodging and transportation. The receiving Party will provide free local transportation, necessary interpreters, and emergency medical assistance for visitors under Sections I and II. The receiving Party may, by specific agreement, provide free lodging for visitors under Sections III and IV. The terms and conditions of activities under Sections VI and VII will be governed by the agreement of the Parties in each case.

This Memorandum shall enter into force on the date of its signature and shall continue in force for the years 1972-1973.

Done at Moscow in duplicate, in the English and Russian languages, both equally authentic, this 28th day of September one thousand nine hundred seventy-two.

FOR THE U.S. ATOMIC ENERGY COMMISSION:

Jaims & Lohleringe

FOR THE USSR STATE COMMITTEE ON THE UTILIZATION OF ATOMIC ENERGY:

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