

**MEMORANDUM OF COOPERATION IN THE FIELD
OF MAGNETIC CONFINEMENT FUSION BETWEEN
U.S. DEPARTMENT OF ENERGY AND THE
USSR MINISTRY OF ATOMIC POWER AND INDUSTRY**

The U.S. Department of Energy (DOE), and the USSR Ministry of Atomic Power and Industry (MAPI), hereinafter referred to as the "Parties," desiring to continue close and long-term cooperation in the field of magnetic confinement fusion (MCF):

Noting that fruitful cooperation on the magnetic confinement fusion can lead to the development of an economically competitive, environmentally acceptable and essentially inexhaustible energy source for the benefit of both their peoples and of all mankind; and

In accordance with Article 2, paragraph 1.a and Article 4 of the Agreement between the United States of America and the Union of Soviet Socialist Republics on Scientific and Technical Cooperation in the Field of Peaceful Uses of Atomic Energy, signed on June 1, 1990 (hereinafter the "Peaceful Uses Agreement").

Have agreed as follows:

Article I

The purpose of this Memorandum is to establish an arrangement for cooperation in the field of magnetic confinement fusion (MCF) in implementation and furtherance of the Peaceful Uses Agreement in order to advance research toward the development of fusion power.

Cooperation under this Memorandum shall be carried out as agreed on the basis of mutual benefit, equality and full reciprocity between the Parties.

Article II

The forms of cooperation under this Memorandum will be as follows:

1. Establishment of appropriate working groups for planning and execution of joint studies and R&D tasks.
2. Joint theoretical, calculational, experimental, developmental and design work by technical personnel in appropriate research centers of the two countries.
3. Organization of seminars and workshops.

4. Exchanges of appropriate instrumentation, equipment, and materials to carry out projects jointly approved by the Parties.
5. Exchanges of technical specialists.
6. Exchanges of appropriate technical information, documentation, and results of research.
7. Other forms of cooperation may be undertaken by mutual written agreement.

Article III

1. In order to implement this Memorandum, the DOE and the MAFI shall establish a Joint Fusion Power Coordinating Committee (JFPCC).
2. The JFPCC shall consist of sixteen members with an equal number (8) of members from each Party. Each Party shall have one vote. All decisions taken by the JFPCC shall be reached by agreement of the two Parties.
3. The JFPCC will coordinate and review all aspects of this MOC and take such action as is appropriate for its effective implementation.
4. The JFPCC will oversee the development of applicable Implementing Annexes to this Memorandum within the framework of cooperative activities jointly approved by the Parties and present to the US-USSR Joint Committee on Cooperation in the Peaceful Uses of Atomic Energy (hereinafter called the Joint Committee) for review and approval any proposed Implementing Annexes.
5. The JFPCC may develop, establish, review and revise its operational procedures related to the organization and operation of the JFPCC and its activities so that, as far as practical, they reflect current operating practices under this Memorandum.
6. The JFPCC will present to the Joint Committee for review and approval the program directions for the calendar year following the Joint Committee Meeting together with any recommendations for amendments (if needed to add such programs to this Memorandum).
7. The JFPCC may organize, establish and convene working groups and panels for the study of specific areas of research and development in the field of magnetic confinement fusion, review and comment on the reports issued by such working groups and panels.

8. The JFPCC may develop: specific activities and programs to further the development of magnetic confinement fusion; exchanges of technical information, personnel and equipment; procedures for addressing and resolving questions of such matters as the payment of costs under the cooperation; patent/publication rights for joint activities administered under this Memorandum, as called for in the Intellectual Property Annex to the Peaceful Uses Agreement; and, any other operating procedures, in accordance with the laws and regulations of the Parties.

9. The JFPCC may assist in arranging collaboration between or among organizations within or outside this Memorandum, in accordance with national laws and regulations of the Parties.

10. Pursuant to Article I, such other forms of cooperation as the JFPCC recommends may be undertaken by agreement of the Parties.

11. The JFPCC will decide on its meeting schedule. Generally, it will be convened once a year, alternating in the United States and the Soviet Union, unless agreed otherwise. Times and places for meetings will be agreed in advance.

Article IV

1. This cooperation may be conducted according to plans and programs of the following principal establishments and organizations as agreed to by the Parties in writing and provided for in Article 4 of the Peaceful Uses Agreement.

-- In the United States of America:

Lawrence Livermore National Laboratory
Los Alamos National Laboratory
Oak Ridge National Laboratory
Princeton Plasma Physics Laboratory
Argonne National Laboratory
Sandia National Laboratories at Albuquerque and Livermore
General Atomics (La Jolla)
Pacific Northwest Laboratories
Universities such as MIT, Texas, UCLA, Maryland and Wisconsin

-- In the USSR:

Kurchatov Institute of Atomic Energy (Moscow)
Troitsk Institute of Innovative and Thermonuclear Research
(Troitsk)
Physico-Technical Institute of the Ukrainian Academy of Sciences
(Kharkov)
Institute of General Physics of the USSR Academy of Sciences
(Moscow)

Efremov Scientific and Industrial Amalgamation (Association)
Electrofizika (Leningrad) (SIA Electrofizika)
Ioffe Physico-Technology Institute of the USSR Academy of Sciences
(Leningrad)
I.N. Vekua Institute of Physics and Technology (Sukhumi)
Institute of Nuclear Physics of the Siberian Section of the USSR
Academy of Sciences (Novosibirsk)
Scientific Research and Design Institute of Power Technology
(Nikiet, Moscow)
Bochvar All-Union Scientific and Research Institute of Non-
Organic Materials (Moscow)
Baikov Institute of Metallurgy, Academy of Sciences, USSR
University such as Lomonosovo Moscow State University

2. Each Party may unilaterally adjust the list of its establishments and organizations participating in this cooperation, and shall inform the other Party of any such adjustments.

Article V

1. Cooperation under this Memorandum shall be conducted subject to the respective international obligations, national laws and regulations of the Parties, and subject to the availability of appropriated funds. Accordingly such cooperation should be conducted on the basis of the fullest possible reciprocity in terms of equal access to facilities, information and personnel on both sides.

2. Any questions of interpretation and implementation relating to this Memorandum will be decided by agreement of the Parties.

Article VI

1. Provisions for the protection and allocation of intellectual property set forth in the Annex on Intellectual Property to the Peaceful Uses Agreement signed June 1, 1990, by reference herein thus shall apply to all activities conducted pursuant to this Memorandum.

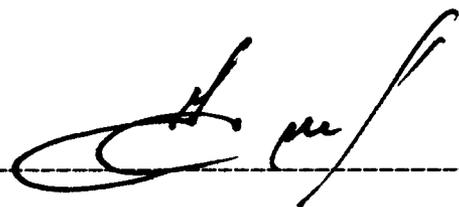
Article VII

1. This Memorandum shall enter into force upon signature, shall remain in force for five years, and may be extended for additional five-year periods by written agreement of the Parties following joint review at the end of each five-year period.

2. All joint activities and experiments being conducted when the effective period of this Memorandum ends will, if agreed, be continued to their conclusion in accordance with the terms of this Memorandum.

3. Each Party may terminate this Memorandum of Cooperation on six months written notice.

DONE, in duplicate, at Moscow, USSR on July 5, 1991, in the English and Russian Languages, both texts being equally authentic.



For the Ministry of Atomic Power
and Industry of the Union of
Soviet Socialist Republics



For the United States
Department of Energy