

AGREEMENT BETWEEN THE  
DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA  
AND THE  
COMMISSARIAT A L'ENERGIE OF FRANCE  
FOR COOPERATION IN  
HIGH ENERGY LASER-MATTER INTERACTION PHYSICS  
RESEARCH AND DEVELOPMENT

WHEREAS:

The Department of Energy of the United States of America (DOE) and the Commissariat a l'Energie Atomique of France (CEA) (hereinafter referred to as the "Parties") are jointly interested in increasing the effectiveness of their programs of research and development in the utilization of high energy and high power solid state lasers for laser-plasma interaction physics, laser and plasma diagnostics (hereinafter referred to as "R&D") and in cooperation between their two countries in these areas; and

WHEREAS:

The Parties believe that sharing tasks, facilities, scientific and technical information, costs and human resources could result in accomplishment of their objectives more efficiently, including achieving greater results at existing levels of expenditure. They recognize that coordination of activities could lead to more effective use of limited resources;

IT IS THEREFORE AGREED AS FOLLOWS:

ARTICLE I

OBJECTIVE

This Agreement shall establish and cover a program of scientific cooperation between the Parties to engage in and be specifically limited to the unclassified utilization of high power lasers in laser-matter interaction physics, diagnostics and associated technical development. Such cooperation, which normally does not aim at developing industrial and/or commercial information, shall be on the basis of mutual scientific benefit and reciprocity. The DOE shall use the expertise of the Lawrence Livermore National Laboratory (LLNL) and the CEA shall use the expertise of the Centre de Limeil-Valenton (CEL-V).

## ARTICLE II

### SCOPE

The areas of cooperation shall include the following:

1. Laser/Plasma Interaction Physics - emphasizing the interaction of high intensity, short wave-length laser radiation with matter and including atomic physics, x-ray conversion, parametric processes, energy transport processes in plasmas, hydrodynamics of the plasma corona with unclassified targets, and the influence of the characteristics of laser pulses on laser plasma coupling.
2. Laser/Plasma Diagnostics - developing diagnostics and associated computational techniques to define and interpret experiments.
3. Other areas of cooperation may be added by written agreement of the Parties.

The Parties agree that no classified information of any nature shall be exchanged under this Agreement. (Specifically excluded from this Agreement is the physics of indirectly driven inertial fusion target implosion and their design.)

## ARTICLE III

### FORMS OF COOPERATION

Cooperation in accordance with this Agreement may include:

1. Exchange of information and data on scientific and technical activities, development, practices and results including exchange of proprietary information in accordance with the terms and conditions of Article VI - Protection and Distribution of Intellectual Property Rights.
2. Exchange of scientist, engineers and other specialists for agreed periods of time in order to participate in experiments, analysis, design and other R&D activities conducted in research centers, laboratories, universities, and other facilities and enterprises of each of the Parties, or its associated organizations or contractors in accordance with Article V - Assignment of Personnel.
3. Exchange of equipment, instruments and components in accordance with Article VII - Exchange of Equipment.
4. Exchange and provision of samples and materials for experiments, testing and evaluation in accordance with Article VIII - Materials and Samples.

5. Organization of technical seminars and meetings.
6. Other forms of cooperation mutually agreed to in writing.

#### ARTICLE IV

##### MANAGEMENT

1. The Parties shall establish a Coordinating Committee to supervise the execution of this Agreement. The Coordinating Committee shall consist of two (2) members, one from each Party. These appointees (hereinafter referred to as Co-Chairmen) shall each designate a person, selected from the Parties' participating laboratories, who shall attend coordinating meetings as an advisor.
2. The Coordinating Committee shall meet twice (2) each year, alternately in the United States and France, or at a place and time mutually agreed upon. The Coordinating Committee shall have the general objective of maintenance and improvement of the joint effort of the Parties with a commitment to resolving any outstanding scientific and technological problem in the Areas of Cooperation listed in Article II. This shall be accomplished by reviewing previous as well as proposed future activities, including the objectives and scope of work, and by identifying and/or approving appropriate activities.
3. All decisions of the Coordinating Committee shall be by unanimity. For making such decisions, each Party shall have one vote, to be cast by its Co-Chairman, or the designated alternate. The Coordinating Committee may, where appropriate, make decisions by exchanging correspondence between the Co-Chairmen.

#### ARTICLE V

##### ASSIGNMENT OF PERSONNEL

1. Whenever a personnel assignment is contemplated under this Agreement, each Party shall ensure that qualified staff is selected and is acceptable to the other Party and its contractors.
2. Each assignment shall be the subject of a separate written personnel assignment agreement between the Parties.
3. Each Party shall be responsible for the salaries, insurance, and allowances to be paid its staff.

4. Each Party shall pay for the travel and living expenses of its staff, unless otherwise agreed in writing.
5. The host establishment shall do its best to arrange for suitable accommodations for the assigned staff and their families on a mutually agreeable, reciprocal basis.
6. Each Party shall provide all necessary assistance to the assigned staff (and their families) as regards administrative formalities, such as travel arrangements and immigration services.
7. The assigned staff of each Party shall conform to the general and special rules of work and safety regulations in force at the host establishment, or as agreed in a separate personnel assignment agreement.

## ARTICLE VI

### PROTECTION AND DISTRIBUTION OF INTELLECTUAL PROPERTY RIGHTS

1. Business-Confidential Information
  - A. For the purposes of this Agreement, "business-confidential information" means any know-how, technical data, or technical, commercial, or financial information, that is not developed in the performance of this Agreement and that meets all of the following conditions:
    - i) It is a type customarily held in confidence for commercial reasons;
    - ii) It is not generally known or publicly available from other sources;
    - iii) It has not been previously made available by the owner to others without an obligation concerning its confidentiality; and
    - iv) It is not already in the possession of the recipient without an obligation concerning its confidentiality.
  - B. Any business-confidential information shall be furnished or transferred only by mutual written agreement of the Parties to the cooperative activity concerned and shall be given full protection in accordance with the laws and regulations of their respective countries.

- C. Any business-confidential information shall be appropriately identified before it is furnished in the course of the cooperative activities under this Agreement. Responsibility for identifying such information shall fall on the Party which furnishes it. Unidentified information will be assumed not to be information to be protected, except that a Party to the cooperative activity may notify the other Party in writing, within a reasonable period of time after furnishing or transferring such information, that such information is business-confidential information under the laws and regulations of its country. Such information shall thereafter be protected in accordance with subparagraph B above.

2. Ownership of Intellectual Property Rights

Between each Party and nationals of its country, the ownership of intellectual property rights shall be determined in accordance with its national laws, regulations and practices.

3. Inventions

- A. For the purpose of this Agreement, the "Invention" means any invention made in the course of the cooperative activities under this Agreement which is or may be patentable or otherwise protectable under the laws of the Parties or any third country.
- B. As to the Invention, the Parties to the cooperative activity concerned shall take appropriate steps, in accordance with the national laws and regulations of the respective countries, to realize the following:
- i) If an Invention is made as a result of a cooperative activity under this Agreement that involves only transfer or exchange of information between the Parties, such as by joint meetings, seminars, or the exchange of technical reports or papers, unless otherwise provided in an applicable implementing arrangement:
    - a) the Party whose personnel make the Invention (hereinafter referred to as the "Inventing Party") or the personnel who make the Invention (hereinafter referred to as the "Inventor") have the right to obtain all rights and interests in the Invention in all countries, and

- b) in any country where the Inventing Party or the Inventor decides not to obtain such rights and interests, the other Party has the right to do so.
- ii) If the Invention is made by an Inventor of a Party, (the "Assigning Party") while assigned to the other Party, (the "Receiving Party") in the course of programs of a cooperative activity that involve only the visit or exchange of scientists and engineers, and:
- a) in the case where the Receiving Party is expected to make a major and substantial contribution to the programs of the cooperative activity:
    - i. the Receiving Party has the right to obtain all rights and interests in the Invention in all countries, and
    - ii. in any country where the Receiving Party decides not to obtain such rights and interests, the Assigning Party or the Inventor has the right to do so;
  - b) in the case where the provision in subparagraph (a) above is not satisfied:
    - i. the Receiving Party has the right to obtain all rights and interests in the Invention in its own country and in third countries.
    - ii. the Assigning Party or the Inventor has the rights to obtain all rights and interests in the Invention in its own country, and
    - iii. in any country where the Receiving Party decides not to obtain such rights and interests, the Assigning Party or the Inventor has the right to do so.
- iii) Specific arrangements involving other forms of cooperative activities, such as joint research projects with an agreed research work scope, shall provide for the mutually agreed upon disposition, on an equitable basis, of rights to the Inventions made as a result of such activities.

- iv) The Inventing Party shall disclose promptly the Invention to the other Party and furnish any documentation or information necessary to enable the other Party to establish rights to which it may be entitled. The inventing Party may ask the other Party in writing to delay publication or public disclosure of such documentation or information for the purpose of protecting its rights or the rights of the Inventor related to the Invention. Unless otherwise agreed in writing, such restrictions shall not exceed a period of six months from the date of communication of such documentation or information.

#### 4. Copyrights

Disposition of rights to copyright-protected works created in the course of the cooperative activities under this Agreement shall be determined on a case-by-case basis as necessary or in the relevant implementing arrangements. The Parties to the cooperative activities concerned may take appropriate steps to secure copyright to works created in the course of the cooperative activities under this Agreement in accordance with the national laws and regulations of the respective countries.

#### 5. Other Forms of Intellectual Property

For those other forms of intellectual property created in the course of the cooperative activities under this Agreement which are protected under the laws of either country, disposition of rights shall be determined on an equitable basis, in accordance with the laws and regulation of the respective countries.

#### 6. Cooperation

Each Party to the cooperative activity concerned shall take all necessary and appropriate steps, in accordance with the laws and regulations of its country, to provide for the cooperation of its authors and inventors which are required to carry out the provision of this Article. Each Party to the cooperative activity concerned assumes the sole responsibility for any award or compensation that may be due its personnel in accordance with the laws and regulations of its country, provided, however, that this Agreement creates no entitlement to any such award or compensation.

## ARTICLE VII

### EXCHANGE OF EQUIPMENT

Each Party agrees that, unless otherwise agreed in writing, in the event equipment, instruments or components (hereinafter referred to as "equipment") is to be exchanged or supplied by one Party to the other Party, under this Agreement, the following provisions shall apply covering the shipment and use of the equipment:

1. The sending Party shall supply as soon as possible a detailed list of the equipment to be provided together with the necessary specifications and technical information documentation.
2. The equipment, spare parts, and documentation supplied by the sending Party shall remain the property of the sending Party and shall be returned to the sending Party upon completion of the mutually agreed upon activity unless otherwise agreed.
3. The host establishment shall provide the necessary premises, shelter, and safekeeping for the equipment, and shall provide electric power, water, gas, etc., in accordance with technical requirements which shall be mutually agreed upon.
4. Responsibility for expenses, safekeeping and insurance during the transport of the equipment from the original location in the country of the sending Party to the place of entry in the country of the receiving Party shall rest with the sending Party. Responsibility for expenses, safekeeping, and insurance during the transport of the equipment from the place of entry in the country of the receiving Party to the final destination in the country of the receiving Party shall rest with the receiving Party.
5. Upon return of the equipment, the receiving Party shall be responsible for expenses, safekeeping, and insurance during the return of the equipment to the final destination in the country of the sending Party.
6. The equipment provided by the sending Party for carrying out mutually agreed upon activities shall be considered to be scientific, not having a commercial character.



## ARTICLE VIII

### MATERIALS AND SAMPLES

The Parties agree that, unless otherwise agreed in writing, in the event materials or samples are provided by one Party to the other Party, the following provisions shall apply with respect to the transportation and use of such materials or samples:

1. All materials or samples provided by the sending Party to the receiving Party shall become the property of the receiving Party upon delivery, and shall not be returned to the sending Party.
2. Where one Party requests that materials or samples be provided by the other Party, the Party making the request shall bear all costs and expenses associated with the transportation of the material or samples from the location of the sending Party to the final destination.
3. Each Party shall promptly disclose to the other Party all information arising from the examination or testing of materials or samples exchanged under this Agreement.

## ARTICLE IX

### GENERAL PROVISIONS

1. Cooperation under this Agreement shall be in accordance with the laws and regulation of the respective countries. All questions related to this Agreement during its term shall be settled by the Parties by mutual agreement.
2. The Parties shall use all reasonable skill and care in carrying out their duties under this Agreement in accordance with all applicable laws and regulations.
3. Compensation for damages incurred during the implementation of this Agreement shall be in accordance with the applicable laws of the countries of the Parties.
4. Nothing in this Agreement is intended to affect arrangements for cooperation or collaboration between the Parties or any other arrangements of the Parties in existence on the date this Agreement comes into force.

## ARTICLE X

### FUNDING

Except when otherwise agreed in writing, all costs resulting from this Agreement shall be borne by the Party that incurs them. It is understood that the ability of each Party to carry out its obligations under this Agreement is subject to the availability of appropriated funds.


## ARTICLE XI

### EFFECTIVE DATE, DURATION AND TERMINATION

1. This Agreement shall enter into force upon the latter date of signature and shall remain in force until September 19, 1994, which is renewable. It may be amended or extended by mutual written agreement of both Parties.
2. This Agreement may be terminated at any time at the discretion of either Party upon three (3) months advance notification in writing to the other Party. Such termination shall be without prejudice to the rights which may have accrued under this Agreement to either Party up to the date of such termination.

DONE in duplicate in both the English and French languages each being equally authentic.

FOR THE DEPARTMENT OF ENERGY  
OF THE UNITED STATES OF AMERICA:

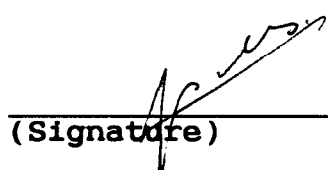
  
(Signature)

EVERET H. BECKNER  
(Printed Name)

Acting Assistant Secretary  
for Defense Programs  
(Title)

July 9, 1993  
(Date)

FOR THE COMMISSARIAT A  
L'ENERGIE ATOMIQUE OF FRANCE:

  
(Signature)

B. A. LERAS  
(Printed Name)

Directeur des Relations B. Beckner  
(Title)

21/7/93  
(Date)