

PROJECT ARRANGEMENT  
UNDER THE IMPLEMENTING ARRANGEMENT  
BETWEEN  
THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA  
AND  
THE MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND  
TECHNOLOGY OF JAPAN  
CONCERNING COOPERATION IN RESEARCH AND DEVELOPMENT  
IN ENERGY AND RELATED FIELDS

CONCERNING COOPERATION IN THE FIELD OF  
HIGH POWER SPALLATION NEUTRON SCIENCE  
AND RELATED TECHNOLOGIES

The Department of Energy of the United States of America (DOE), and the Japan Atomic Energy Agency (JAEA) and the High Energy Accelerator Research Organization (KEK), authorized as the implementing agencies of the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT), hereinafter referred to individually as a "Participant" and collectively as the "Participants":

DESIRING to establish a framework for cooperation among the Participants which will contribute to making remarkable progress on their respective projects on research and development of neutron science and technology;

ACTING under Section 4 of the Implementing Arrangement Between the Department of Energy of the United States of America and the Ministry of Education, Culture, Sports, Science and Technology of Japan Concerning Cooperation in Research and Development in Energy and Related Fields of April 30, 2013 (hereinafter referred to as the "Implementing Arrangement"); and

CONSIDERING that the JAEA and KEK cooperated and worked together to construct the Japan Proton Accelerator Research Complex (hereinafter referred to as "J-PARC") since April 1, 2001 and jointly established the J-PARC Center on February 1, 2006 for operation of J-PARC,

Have decided as follows:

## **Section 1-Objective**

1. The objective of this Project Arrangement is for the Participants to jointly pursue a collaborative research program which focuses on research and development of high power spallation neutron science and related technologies using the Spallation Neutron Source (SNS) at Oak Ridge National Laboratory (ORNL) and the Materials and Life Science Experimental Facility (MLF) at Japan Proton Accelerator Research Complex (J-PARC), which are research facilities that provide the most intense pulsed neutron beams in the world for scientific research and industrial development (hereinafter referred to as the "Collaborative Research Program").
2. This Project Arrangement is under the Implementing Arrangement, which is, in turn, subject to and governed by the Agreement Between the Government of the United States of America and the Government of Japan on Cooperation in Research and Development in Science and Technology signed on June 20, 1988, as amended and extended (hereinafter referred to as the "Agreement"). In the event of any conflict between the contents of the Agreement or the Implementing Arrangement on the one hand and the contents of this Project Arrangement on the other hand, the contents of the Agreement or the Implementing Arrangement will govern.

## **Section 2-Technical Scope**

1. The Collaborative Research Program under this Project Arrangement supports the advancement of high power spallation neutron science and related technologies.

Specific areas of cooperation may include:

- a. High power acceleration technology for neutron production, including design, fabrication, evaluation, and analysis of beam transport lines;
- b. Neutron source development, including tests and analysis of spallation target systems, moderators, cryogenic systems, remote handling systems, shielding and related materials;
- c. Neutron instrument development, including design, analysis and testing of diffractometers and spectrometers;
- d. Neutron beam optics, choppers, polarizers, detectors and sample environment;

- e. Simulation techniques and data analysis methods; and
  - f. Other related activities which may be mutually decided upon by the Participants in writing.
2. The Collaborative Research Program under this Project Arrangement includes the exchange of information, personnel and equipment which are required for its implementation, and meetings and workshops to exchange information and discuss implementation.

Collaborative activities may include, but are not limited to, the following forms:

- a. Exchange of scientists, engineers, other specialists and students for determined periods of time for participation in experiments, analysis, design, manufacturing, and research and development activities;
- b. Exchange and provision of samples, materials, instruments, components and software for experiments, testing, manufacturing and evaluation;
- c. Exchange of information and data on scientific and technical activities, including results and methods of research and development;
- d. Organization of, and participation in, seminars, workshops and other meetings on research and development; and
- e. Use of the facilities of the other Participant(s) or its participating organizations, in accordance with separate written arrangements between the relevant Participants or participating organizations as necessary.

### **Section 3-Participating Organizations**

Each Participant may invite other government agencies and organizations and private organizations in its country to participate in cooperative activities under this Project Arrangement, at the participating organizations' own expense and in accordance with such terms and conditions as the Participants may specify. For DOE, such participating organizations include DOE national laboratories, universities and other DOE-funded institutions. For JAEA and KEK, such participating organizations include Japanese national laboratories, universities and other MEXT-funded institutions.

### **Section 4-Management**

1. Each Participant should designate a General Coordinator to facilitate the detailed implementation of the Collaborative Research Program under this Project Arrangement.
2. The General Coordinators may, at their discretion, invite appropriate technical staff for each specific area listed in Section 2 to attend meetings and to serve in an advisory capacity.
3. Each General Coordinator will be responsible for the following:
  - a. To maintain liaison with their counterparts; and
  - b. To carry out the general coordination of the cooperation under this Project Arrangement, including technical progress reviews and discussions of future cooperative activities.
4. The General Coordinators should meet annually or as required on such dates and at such locations as are mutually decided.

#### **Section 5-Funding**

Funding for the cooperative activities conducted under this Project Arrangement will be in accordance with Section 9 of the Implementing Arrangement.

#### **Section 6-Exchange of Personnel**

Each Participant may assign its staff to the other Participant. Such exchange of personnel will be on the basis of Section 6 of the Implementing Arrangement.

#### **Section 7-Exchange of Equipment**

The Participants may exchange equipment needed for the Collaborative Research Program under this Project Arrangement. Unless the Participants decide otherwise in writing, such exchange of equipment will be on the basis of Section 7 of the Implementing Arrangement.

#### **Section 8-Information Use and Disclosure**

Information use and disclosure under this Project Arrangement will be on the basis of Section 8 of the Implementing Arrangement.



## **Section 9-Intellectual Property Rights**

With respect to the protection and distribution of intellectual property rights and other rights of a proprietary nature created or furnished in the course of the cooperative activities under this Project Arrangement and the protection of business-confidential information exchanged under this Project Arrangement, the following paragraphs will apply in addition to the provisions set forth in Annex IV to the Agreement.

### **1. Inventions:**

For the purpose of this Project Arrangement, "Invention" means any invention made in the course of the cooperative activities under this Project Arrangement which is or may be patentable or otherwise protectable under the laws of the United States of America, Japan, or any third country.

On the basis of paragraph 3.B.(iii) of Annex IV to the Agreement, rights to an Invention made as a result of joint research conducted under this Project Arrangement, and allocation of benefits derived therefrom, are provided as follows:

- a. If an Invention is made solely by a Participant or its contractor, the Participant will obtain all right, title and interest in and to such Invention in all countries.
- b. If an Invention is made jointly by two Participants or all of the Participants, or their respective contractors, each Participant concerned will obtain all right, title and interest in and to such Invention in its own country. Allocation of the right, title and interest between JAEA and KEK will be settled by consultation between them as necessary. In third countries where two or more Participants intend to obtain the right to the Invention, the Participants concerned will be joint owners of such rights. The Participants concerned may jointly apply to obtain and/or maintain the relevant rights. The Participants concerned should decide on appropriate cost sharing associated with obtaining and/or maintaining such rights.
- c. In any country where the Participant which is entitled to obtain the rights therein decides not to obtain such rights and interests, the other Participants have the right to do so.

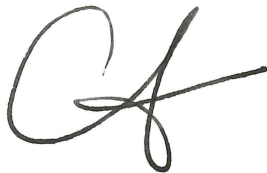
- d. Each Participant will have, for its own research and development activities in the area envisaged under this Project Arrangement in its own country during the term of this Project Arrangement, a free right of use of Inventions, whether protected or not by intellectual property rights, owned by the other Participant or two Participants and resulting from the joint research performed under this Project Arrangement.
2. Copyright:  
Allocation of rights to an Invention and benefits derived therefrom specified in paragraph 1 above will be applied *mutatis mutandis* to disposition of rights to copyrighted works created in the course of the cooperative activities conducted under this Project Arrangement.

#### **Section 10-Commencement, Modification and Discontinuation**

1. Cooperative activities under this Project Arrangement may commence upon signature by the Participants and, unless discontinued under the procedures described in paragraph 3 of this Section, may continue for a five (5) year period, so long as the Implementing Arrangement remains in operation.
2. This Project Arrangement may be extended or modified by mutual written consent of the Participants, so long as the Implementing Arrangement remains in operation.
3. Cooperative activities under this Project Arrangement may be discontinued at any time by the Participants' mutual consent in writing, or at the discretion of any Participant, which should provide at least 60 days advance notification in writing to the other Participants.

Signed at Tokyo this 7<sup>th</sup> day of August 2019 in two originals.

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

A stylized handwritten signature in black ink, consisting of a large 'C' followed by a series of loops and a long horizontal stroke.

Christopher Fall  
Director, Office of Science

FOR THE JAPAN ATOMIC ENERGY  
AGENCY AND THE HIGH ENERGY  
ACCELERATOR RESEARCH  
ORGANIZATION:

A stylized handwritten signature in black ink, featuring a large 'N' followed by a series of loops and a long horizontal stroke.

Naohito Saito  
Director, J-PARC Center