

1. US-Japan (Universities) Fusion Cooperation Program

The 29th U.S.-Japan Executive Secretary Meeting (ESM) was held on February 22, 2011 via televideo conference system. It was noted that both sides have developed a significant and mutually valuable collaboration involving all technical elements of the fusion energy sciences program, and also discussed about bilateral programs, multi-lateral activities. Thus, the both sides agreed the usefulness and necessity of the continuation of the Joint Activity. It was announced that the Joint Report for the 30th Anniversary of the U.S.-Japan Joint Activity is being completed, and further it was agreed to publish the Report simultaneously in web sites of the base organizations of Japan and U.S. Now it is available, for example, at: http://www.nifs.ac.jp/collaboration/Japan-US/JPN_US_30th_Report_E.pdf. Both sides agreed to prepare for the upcoming CCFE Meeting and present high-level technical highlights and a comprehensive report on bilateral collaborations.

NIFS as a member of "Inter-University Research Institute, National Institutes of Natural Sciences" conducted successfully the LHD experiments as well as theory, simulation and fusion technology together with collaborators from universities, JAEA and the international institutions.

One of the main activities of the Japanese university researchers participating in the US-Japan collaboration is the research in the major experimental facilities in US, while many US researchers participated in the LHD experiments especially in the field of diagnostics, and in the fields of theory, simulation and technology both at NIFS and universities in Japan. The US-Japan joint project: TITAN (Tritium, Irradiation and Thermostat for America and Nippon) project is now in the fourth year.

Fusion Physics Planning Committee (FPPC)

In the area of fusion physics, 2 committees, 7 workshops, and 23 personal exchanges were completed. The five proposals were not conducted partly due to the lack of funding. The workshops were successfully held, and the exchanges continue to be productive and beneficial to both sides. The annual meeting of the FPPC was held by an electrical communication during February 9 - 14, 2011. The participants were from Universities, NIFS, JAEA, and DOE to summarize the

2010 activities and formulate the 2011 activities. As a result, the proposed plan of 2 committees, 8 workshops, and 25 personal exchanges was agreed. The FPPC exchanges continue to contribute to scientific advances in both Japan and the U.S.

Joint Institute for Fusion Theory (JIFT)

Almost all of the activities in the two categories – workshops and personal exchanges were carried out during the past year.

Three workshops were successfully held, in addition to the JIFT Steering Committee meeting, while one workshop was deferred to next year's JIFT program due to the earthquake disaster in Japan. In the category of personal exchanges, two Visiting Professors and three Visiting Scientists made exchange visits. The JIFT Steering Committee reviewed the status of JIFT activities for 2010-2011 and made the recommendation plans for 2011-2012 on November 8, 2011. The information of the JIFT program is released at both of the US and Japanese JIFT web sites.

Fusion Technology Planning Committee (FTPC)

The TITAN project is being successfully conducted. The results will give a firm basis for comprehensive understanding on overall performance of DEMO-grade system including tritium transport, thermost fluid and irradiation synergism. Of the planned cooperative items related to the TITAN, were completed in this fiscal year as follows: committee meeting, personnel exchanges, and workshops/technical meetings.

Personal exchange programs are continued in 6 research fields, namely, superconducting magnets, low-activation structure materials, plasma-heating technology, blanket engineering, high-heat flux components, reactor design & others. Of the 11 planned cooperative items related to the general technology joint planning categories, 10 were completed as follows: 4 workshops/technical meetings and 6 personnel exchanges.

General Secretary for US-Japan
Collaboration Planning Committee
Shigeru Sudo

STATISTICAL REVIEW OF FUY 2010 EXCHANGE PROGRAM (NIFS)

Grand Total

		US → J	J → US	Total
Proposed	Man	76	84	160
	Item	34	48	82
Performed	Man	58	74	132
	Item	21	38	59

Personnal Exchange Program

(Including Overall Planning)

		US → J	J → US	Total
Proposed	Man	0	10	10
	Item	0	3	3
Performed	Man	0	12	12
	Item	0	3	3

Fusion Technology

(1) Superconducting Magnets

		US → J	J → US	Total
Proposed	Man	0	0	0
	Item	0	0	0
Performed	Man	0	0	0
	Item	0	0	0

(2) Structural Materials

		US → J	J → US	Total
Proposed	Man	0	0	0
	Item	0	0	0
Performed	Man	0	0	0
	Item	0	0	0

(3) Plasma Heating Related Technologies

		US → J	J → US	Total
Proposed	Man	1	1	2
	Item	1	1	2
Performed	Man	1	1	2
	Item	1	1	2

(4) Blankets

		US → J	J → US	Total
Proposed	Man	0	0	0
	Item	0	0	0
Performed	Man	0	0	0
	Item	0	0	0

(5) In-Vessel/High Flux Materials and Components

		US → J	J → US	Total
Proposed	Man	5	1	6
	Item	2	1	3
Performed	Man	4	1	5
	Item	1	1	2

(6) Others

		US → J	J → US	Total
Proposed	Man	6	1	7
	Item	1	1	2
Performed	Man	5	1	6
	Item	1	1	2

Fusion Physics

(1) Planning

		US → J	J → US	Total
Proposed	Man	4	0	4
	Item	1	0	1
Performed	Man	4	0	4
	Item	1	0	1

(2) Steady-state Operation

		US → J	J → US	Total
Proposed	Man	6	2	8
	Item	2	2	4
Performed	Man	6	1	7
	Item	2	1	3

(3) MHD and High Beta

		US → J	J → US	Total
Proposed	Man	7	6	13
	Item	3	2	5
Performed	Man	5	4	9
	Item	1	1	2

(4) Confinement

		US → J	J → US	Total
Proposed	Man	1	1	2
	Item	1	1	2
Performed	Man	0	1	1
	Item	0	1	1

(5) Diagnostics

		US → J	J → US	Total
Proposed	Man	10	9	19
	Item	6	9	15
Performed	Man	7	7	14
	Item	3	7	10

(5) High Energy of Fusion Science

		US → J	J → US	Total
Proposed	Man	5	10	15
	Item	1	6	7
Performed	Man	5	6	11
	Item	1	3	4

Joint Institute of Fusion Theory

		US → J	J → US	Total
Proposed	Man	13	14	27
	Item	5	6	11
Performed	Man	6	13	19
	Item	2	5	7

DOE/MEXT MATERIALS (ANNEX I , TITAN Project)

		US → J	J → US	Total
Proposed	Man	18	29	47
	Item	11	16	27
Performed	Man	15	27	42
	Item	8	14	22