

## §6. Archival Studies on History of IAEA Fusion Energy Conference

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### 1. Background and Purpose

Fusion Energy Conference is known as the most important conference in the field of nuclear fusion research. The name of the nuclear fusion would be known by the speech of Chairperson Homi J. Bhabha in the first United Nations Conference on the Peaceful Uses of Atomic Energy in 1955. In the second United Nations Conference in 1958, the session of nuclear fusion was established, and researchers from many countries announced their result of the nuclear fusion research. Consequently, the International Atomic Energy Agency (IAEA) established in 1957 would hold Conference on Plasma Physics and Controlled Nuclear Fusion Research. This conference was renamed Fusion Energy Conference in 1996.

After the second United Nations Conference, the research of the nuclear fusion in the world has reached the 50<sup>th</sup> year in 2008. Therefore, we started the cooperative research on archival studies on the history of Fusion Energy Conference. In this fiscal year, we investigated historical documents for Fusion Energy Conference and studied a history of Fusion Energy Conference and a history of international exchange of nuclear fusion research in Japan. In addition to it, we had an interview with nuclear fusion researchers.

### 2. Content and result of this research (present status)

#### 2-1 Investigation of historical documents for Fusion Energy Conference and international exchange of nuclear fusion research in Japan

We investigated historical documents for Fusion Energy Conference and international exchange in Japan. These documents kept in are as follows: i) NIFS Fusion Science Archives, ii) NIFS Research Information Office, iii) NIFS Library, iv) Kenzo Yamamoto's historical documents which are kept in Japan Atomic Energy Agency (JAEA) in Naka site, v) JAEA Central Library and vi) the National Diet Library.

#### 2-2 Historical Studies of Fusion Energy Conference

Based on these documents, we studied about "History on nuclear fusion research of Electrotechnical Laboratory at the dawn stage", "Studies on history of international Exchange of Nuclear Fusion in Japan -Japanese activity for

an invitation of the fifth Conference on Plasma Physics and Controlled Nuclear Fusion Research to Japan-", "Tihiro Ohkawa's history of nuclear fusion research in the 1960s" and "Studies on history of Fusion Energy Conference -Survey of conference report about Second Conference on Plasma Physics and Controlled Nuclear Fusion Research-" etc. The results of our research were presented at the meeting of the Physical Society of Japan, at the annual meeting of Japanese Society for the History of Science and Technology and at the annual conference of College of Science and Technology, Nihon University.

#### 2-3 Interview research to nuclear fusion researchers

In this fiscal year, we started an interview to nuclear fusion researcher about history of nuclear fusion research.

i) Dr. Tihiro Ohkawa (the former Vice Chairman of General Atomics)

a. Date: 18/11/2009-19/11/2009

b. Place: Tihiro Ohkawa's residence (San Diego, USA)

c. Interviewer: Takahisa Amemiya, Keisuke Matsuoka, Chusei Namba and Kazue Kimura

d. Topics: (1) Tihiro Ohkawa's history. (2) History of nuclear fusion research in General Atomics (GA). (3) International exchange of nuclear fusion research in Japan etc.

ii) Dr. Yoshinosuke Terashima (Professor Emeritus of Nagoya University)

a. Date: 9/2/2010

b. Place: National Institute for Fusion Science (NIFS), Fusion Science Archives

c. Interviewer: Takahisa Amemiya, Chusei Namba, Kazue Kimura, Haruo Obayashi and Harukazu Iguchi

d. Topics: (1) Yoshinosuke Terashima's history. (2) A-B plan and C plan. (3) International exchange of nuclear fusion research in IPP. (4) A history of the conference on Plasma Physics and Controlled Nuclear Fusion Research etc.

### 3. Conclusion and future planning

We investigated historical documents for Fusion Energy Conference efficiently by this collaborative research. Furthermore, we were able to know historical facts on Fusion Energy Conference and international exchange of nuclear fusion in Japan by interviews and historical documents.

By the next fiscal year, we would like to make the detailed chronology of Fusion Energy Conference.

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