

## §26. Archival Studies on the Nuclear Fusion Research at Universities in Japan

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### Background of the study:

Concerning the nuclear fusion research at universities in Japan, Institute of Plasma Physics was established in 1961 as an inter-university collaborating institute attached to Nagoya University. Since then, scientific research in nuclear fusion was carried out at universities or institutions, though there have been differences in their research methods, scale of work and research phase. After an evaluation to determine the direction to take for the next phase, these institutions were integrated into the National Institute for Fusion Science in 1989 under the Ministry of Education, Science, and Culture. In Europe and America, archival study on nuclear fusion has already been underway for the past decade. On the other hand, in Japan, nuclear fusion scientists have been so involved in research itself that they did not pay attention to historical aspects. The fact is, however, that some important scientists who played active roles in the early stage of nuclear fusion research have retired or others passed away. The time has come to arrange for preservation while materials are still intact and obtainable. Thus in its role as the central institute for nuclear fusion research at universities in Japan, NIFS is expected to take responsibility for preserving these historical materials.

### The objectives of the study include:

1) To comprehensively and systematically collect and preserve historical materials concerning nuclear fusion research at universities in Japan to make clear its organization and history.

2) To establish a practical database for providing researchers with historical materials to analyze how the research developed, how the study groups were organized and funded, how the research aimed to address the social needs of the times.

### The results of the study:

A lot of materials owned by Professor Husimi, K., the late Professor Hayakawa, S., and other retired professors,

which fortunately had been preserved at IPP, are now stored at NIFS. They are documentary materials concerning the Science Council of Japan (JSC), Ministry of Education, Science and Culture, individual universities or institutions, international exchange of information or research collaboration. Some meeting records, reports, and photographs kept at administrative office in IPP are also stored there.

First, arranging for preservation was carried out, materials in the cardboard boxes were sorted, and rough repository sketches were drawn. The total number of the boxes amounted to about 250, in which about 5000 items are contained. Secondly, a database format was designed and applied to them so that keywords might provide the users with valuable clues for access. (Table 1.)

Some 30% of all the items were identified and registered in computer database this year.

### Tasks remaining to be completed in the future include:

1) To complement the archives by collecting more materials concerning JSC, Atomic Energy Commission, and personal possessions, and by interviewing scientists to record their recollections and commentaries.

2) To find appropriate location for depository as well as inspection of archival materials.

(Table 1.) Nuclear Fusion Archives Database

No	Item	Description
1	Registered on	Date material is registered in the database
2	identified date	Date material in the box is identified
3	ID Number	5-digit number for each item; first three figures for the boxnumber and the rest for item identification
4	Pigeonholed on	Date material is put in the box
5	Owned by	Person who offered the material
6	Title of the material	As remained on original material
7	Subtitle	As necessary
8	Period the material covers	19xx, 19xx ~ 19xx
9	Contents of the material	Materials in detail
10	Written or edited by	Document writer, letter sender, publisher
11	Date of issue	Date the material is issued, written
12	Appearance or style of the document	Book, pamphlet, envelope, file, notebook, album
13	Depository location,	Box number in three figures Bxxx
14	Linked reference ID No.	As necessary
15	Keyword 1 Issued by	Author, publisher
16	Keyword 2 Character of the material	Scientific paper, meeting record, comment, news comment, letter, proposal, recommendation
17	Keyword 3 Committee or meeting	Name of committee, conference, study group
18	Keyword 4 Information for	Research system, international collaboration, education, administration
19	Keyword 5 Research field of interest	Plasma physics, reactor engineering, heating etc.
20	Keyword 6 Other information	As necessary
21	Notes	