

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

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Background of the study:

In order to have a correct insight for the future direction of the project, it is always necessary to carry out exact and accurate review and evaluation of the historical materials and data concerning the project. As for the nuclear fusion research in Japan, there has been little effort to collect and preserve the historical materials systematically. Besides, the fact is that some important scientists who played active roles in the early stage of nuclear fusion research have retired or others passed away. Therefore, it is an urgent task to arrange for preservation while the materials are still intact and obtainable. Such a task is one of important roles of the NIFS as a central institute for nuclear fusion research at universities in Japan.

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 its organization and history clear.
- 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.
- 3) To collect possible information from senior scientists who played active roles in the early stage of nuclear fusion research through interviews.

The results of the study:

1) Preservation of the materials

The materials stored in the cardboard boxes at NIFS, which were originally owned by Professor Husimi, K., the late Professor Hayakawa, S., and other retired professors, were sorted, and rough repository sketches were drawn. The

total number of the boxes amounted to about 250, and each box contains some 20 documents in average, giving approximately 5000 items in total.

2) Database format

A database format was designed and applied to them so that keywords might provide the users with valuable clues for access. Some 80% of all the items were identified and registered in computer database this year.

3) Interviews

An informal colloquium was held on August 3, 2000, at NIFS, and asked Prof. T Sekiguchi to deliver a talk on the historical review of the early days on nuclear fusion research in Japanese universities.

Another colloquium was held in December 21, 2000, and invited Prof. Shafranov to deliver a talk with a title of "First Period of Fusion Research in Kurchatov Institute."

4) Presentation and publication

Three papers were presented at the annual meeting of Physical Society of Japan held at Chuo University on March 29, 2001. [1-3]

A paper "History of Nuclear Fusion Research in Japan" by Uematsu and others was published in *Historia Scientiarum*. [4]

Tasks remaining to be completed in the future include:

- 1) To continue the activities by collecting systematically more materials in a nation-wide scale.
- 2) To complement the archives by collecting more materials concerning JSC, Atomic Energy Commission, and personal possessions.
- 3) To further extend the activities by interviewing scientists to record their recollections and commentaries.
- 4) To find appropriate location for depository as well as inspection of archival materials.

References

- [1] Archival studies on the nuclear fusion research at universities in Japan, Fujita, J., Kimura, K., Namba, C., Obayashi, H., Terashima, Y., 29pYW-3, The 56th Annual Meeting of the Physical Society of Japan.
- [2] Project A and establishment of the Institute of Plasma Physics, Uematsu, E., Takeda, T., Nisio, S., 29pYW-4, The 56th Annual Meeting of the Physical Society of Japan.
- [3] On the discussions of the Committees for Nuclear Fusion Research at JSC, Terashima, Y., Obayashi, H., Kimura, K. 29pYW-5, The 56th Annual Meeting of the Physical Society of Japan.
- [4] History of Nuclear Fusion Research in Japan, Uematsu, E., Takeda, T., Nisio, S., 2nd Series, Vol. 10, No. 1 (2000), p.16.