

§23. Archival Studies on the Nuclear Fusion Research at Universities in Japan (III)
–Presentations at Other Academic Societies–

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The Japan Society of Plasma Science and Nuclear Fusion Research

“Archival study of nuclear fusion research at universities in Japan” (27pA46P) by Namba, C.

We found that the archiving activities attracted the young promising fusion scientists including graduate students. Particularly they got interested in chronological table of fusion research history. If they keep the chronology at their hands, they can look up fusion history in case of need. It is also significant for them to learn the history so that they can identify themselves as fusion scientists for their careers.

KEK-UCLA Joint Workshop on KEK Archives Projects

“Archival studies on the nuclear fusion research at universities in Japan” by Obayashi, H.

This workshop was held on July 2-3, 2003 at KEK in Tsukuba, to discuss a possible future-prospect of the on-going KEK Archives Projects. The topics are including recent technologies on oral history and digital archiving methods developed by UCLA and other groups, together with practical examples of archival program. From the fusion side we gave a report, introducing the outline and structure of ‘NIFS Nuclear Fusion Archives Database.’

It was quite stimulating and impressive for us to realize:

- (1) The importance of archival activities in science.
- (2) Technical development in collecting, depositing and processing documents.
- (3) Possible use of documentary materials, for education or social information.
- (4) Useful collaboration in archival studies between different fields or cultures.
- (5) Practical problems rather commonly existing in Japanese institutions.

UCLA-SOKENDAI Workshop

“Archives of nuclear fusion research in Japan” by Fujita, J.

The Graduate University for Advanced Studies (SOKENDAI) and UCLA held “The 1st

UCLA-SOKENDAI Workshop on Archiving, Oral History and STS (Science, Technology and Society)” at UCLA on 8 through 9, July 2003.

At the workshop, the following topics were discussed: archives of scientific research at national research institutes, strategies and techniques of oral history with some examples, the significance and design of digital archives, the role of INTERNET for archiving. There was also a discussion on the proposed STS courses at Sokendai to give students the background to participate in public debates and policy formation during the course of their future careers as scientists and humanists.

Our works were highly evaluated at the workshop from the viewpoint that we have been carrying out concrete works of constructing database of records and materials on nuclear fusion research. On the other hand, the techniques of oral history as well as digital archiving are what we were behind them and we should pursue in order to further promote our archiving works.

Physical Society of Japan

“A historical study on the fusion researches in France” by Kojima, C., Uematsu, E., Nisio, S., Takeda, T.

We examined the beginning of French Fusion researches based on the articles in French scientific periodicals. French Atomic Energy Agency, so-called CEA, began Fusion researches at the end of the 1950s. Some articles on Fusion researches appeared in *Les Atomes* in the first place in 1956. They only mentioned a brief theory on thermonuclear reaction and its development in USSR, and there was no description on its study in France. It was in 1958, just after the second Geneva Conference, when French Fusion researches were published in *Energie Nucléaire* that we considered as first French Fusion researches. During 1960s, they made some small plasma experimental devices and after 1968, they concentrated on Tokamak devices that led to TFR established in 1973. As for *Rapport d'activité du CEA*, they treated thermonuclear researches for military application from 1961. We found laser fusion researches there from 1967 to early 1970s, and regarded laser fusion as one of the main subject for French fusion researches at that time.

“The nuclear fusion research as a field of interdisciplinary studies” by Uematsu, E., Nisio, S., Takeda, T., Kojima, C.

In the middle of the 1950's basic studies aiming at realization of the controlled nuclear fusion were started by researchers in the various fields of physical sciences and technologies such as nuclear and particle physics, astrophysics, hydrodynamics, statistical physics, electric discharge, welding technology, etc. The fusion research shows a character of an interdisciplinary study. The researchers belonged to not only universities but also national laboratories and industries. From the early stage the fusion research programs were discussed in the Science Council of Japan and the Atomic Energy Commission.