

§ 28. Archival Studies on the Nuclear Fusion Research at Universities in Japan (II)  
—Analysis of Nuclear Fusion Archives Database—

Nisio, S., Uematsu, E. (Nihon Univ., College of Science & Technology),  
Kawakami, I. (Nihon Univ., Professor Emeritus),  
Kojima, C. (Nihon Univ., College of Commerce),  
Takaiwa, Y. (KEK, IPNS),  
Takeda, T. (The University of Electro-Communications),  
Sato, N. (Tohoku Univ., Professor Emeritus),  
Sato, K.N. (Kyushu Univ., RIAM),  
Wakatani, M.\* (Kyoto Univ., School of Energy Science),  
Terashima, Y. (Nagoya Univ., Professor Emeritus),  
Obayashi, H. (NIFS, Professor Emeritus),  
Fujita, J. (Daido Institute of Technology),  
Namba, C., Kimura, K.

\*Passed away on January 9, 2003.

*Statistics with the NIFS Nuclear Fusion Archives Database*

The main part of archival documents now kept at NIFS has been taken over from IPP (Institute of Plasma Physics, Nagoya University, 1961~89). Though attached to Nagoya University, IPP was characterized as an inter-university collaborating institute supported by the fusion community.

(i) Contributors or source of documents

The original contributors to the present archival stack range over individuals, administrations, institutional staff members, organizations, libraries, publications, on-line public releases, and so on. In particular, materials from pioneering scientists, Professor Husimi Kodi, the late Professor Hayakawa Satio, Professor Sekiguchi Tadashi, and others, are included. Source distribution of the documents for database is shown in Fig. 1, where the portion labeled by OTHERS includes materials offered by various individuals, organizations and institutions (foreign or domestic), etc. On-line sources are still in minor part here, but will become much important in near future.

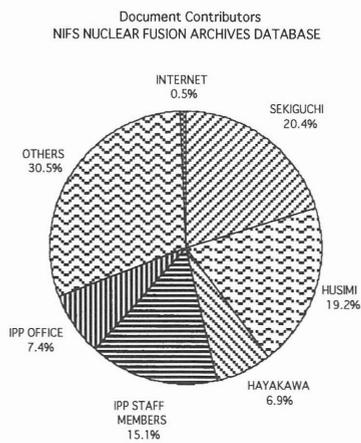


Fig. 1. Source of documents for nuclear fusion archives database

(ii) Chronological distribution

Chronological plots of approximately ten thousand items are shown in Fig. 2, which reflect the historical aspects of Japanese nuclear fusion research activities with political background. Various peaks shown here can be attributed to the following movements. In 1955, atomic energy researches in Japan first started under JAEC with the Fundamental Law for Atomic Energy. Then followed establishment of IPP (1961), starting of plasma confinement study and promoting institutions under STA (1966-1970), setting up of Nuclear Fusion Council (NFC) in JAEC and promotion plan of big sciences at universities by Monbusho (1975), etc. In 1980 – 1985, JT-60 construction was finished by JAERI, while the possibility of reacting plasma approach was investigated at IPP. Intensive discussions on the next stage plans at the university side were given in the later half of 1980's, and finally IPP and two other institutions were reorganized into a newly established center of inter-university collaboration, NIFS (1989).

Annual numbers of the JSC(Science Council of Japan)-related records included in the database (with more than two thousand items) are also plotted in Fig. 2. Apparent similarity in pattern to the variation of total number implies the important role played by JSC in giving the way of fusion research. In the course of editing the chronological table of IPP activities, a similar plot for IPP-related events has been tentatively made for use of historical analysis, though not given here.

*Development of the Database*

The present database should undergo further development in the following points:

- To explore and include other resources than those due to IPP
- To collect contemporary documents, from last decade to currently on-going activities
- To strengthen the inter-university and/or inter-institution collaboration in the archival program
- To prepare a better system of management and arrangement, including the on-line accessibility

Chronological distribution of the records

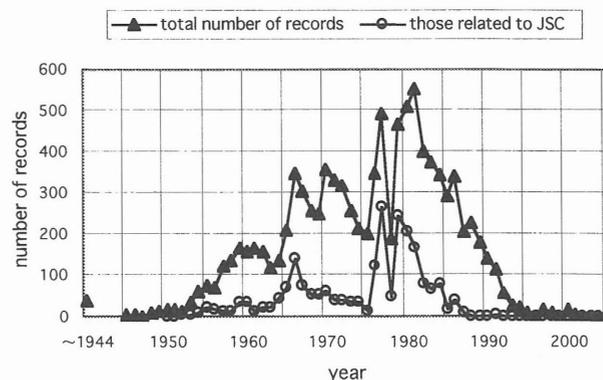


Fig. 2. Chronological distribution of the records  
▲:total number of the records, ○: those related to JSC