

# 13. Fusion Science Archives (FSA)

The Fusion Science Archives were established in 2005 to learn lessons from preserved past fusion science archives and to maintain collections of historical documents and materials that are related to fusion research in Japan. These activities are important from the viewpoint of the historical evaluation of fusion research, its social accountability, and making references for seeking future directions. Since then, historical materials on fusion research and/or organizations related to it have been collected and preserved at the FSA. They are stored in acid-free folders and boxes. Catalogs of registered items are available to the public through the Internet in a hierarchical structure. The cataloged database of about 33,800 items is stored in the form of FileMaker for internal use. Among them, the catalogs of about 2,000 items are available through the web page from outside NIFS.

The following are summaries of selected collaborative works performed this fiscal year.

- **Analysis of the dawn of fusion research based on historical documents**

T. Amemiya (CST Nihon Univ.) *et al.*

The purpose of this collaborative research is to find the new historical interpretations of fusion research in Japan between the 1950s and 60s utilizing the historical documents in NIFS FSA and other archives. The subjects specifically investigated in fiscal year 2024 are as follows: 1) on the struggle for leadership in the establishment of a “researcher community” at the dawn of fusion research, 2) comparison of members of “researchers’ organizations” established during the 1950s and 3) history of the establishment of the Japan Research-Group of Electrical Discharge (JRED) based on the Journal of JRED.

- **Collection of oral history on plasma and fusion research**

T. Amemiya (CST Nihon Univ.) *et al.*

It is the purpose of this collaborative research to collect “materials of oral history” through interviews with fusion researchers who have played important roles in the past. We have started preparatory work for an interview with Dr. Atsuo Iiyoshi, the first Director General of NIFS. At present, questions from collaborators (interviewers) are gathered and summarized. The contents of the current questionnaire are 1) plasma confinement studies in the quadrupole magnetic field by Iiyoshi’s group at Keio University, 2) the Third Project (started around 1975) at the Institute of Plasma Physics, Nagoya University and 3) the background of the establishment of NIFS.

- **Historical Study of Nuclear Energy Development and Utilization Policies in Japan**

S. Kobori (Kyoto University) *et al.*

This study seeks to illuminate the history of nuclear power development policy in Japan through the organization and analysis of historical materials housed in the Fusion Science Archives. During fiscal year 2024, we cataloged over 400 documents from the Kazuhisa Mori Papers and conducted an analysis centered on three key themes: (1) the origin and development of the subsidy system under the Three Power Source Development Laws during the 1970s; (2) the development of new reactor types in the 1970s; and (3) the formulation of energy and global environmental policies in the 1980s.

- **Investigation on the trend of light source for plasma spectroscopic research in Japan from the chronicle of collaborative research meeting on plasma spectroscopy**

N. Yamaguchi (Comprehensive Research Organization for Science and Society (CROSS)) *et al.*

A collaborative meeting on plasma spectroscopy has been hosted by the Institute of Plasma Physics, Nagoya University (IPPI) and NIFS over half of a century from 1969. Keywords relevant to light sources for spectroscopic research have been extracted from about 1300 papers were presented at the meeting from 1969 to 2017. The light sources identified have been classified into five categories: laboratory scale discharge plasma, laser-plasma, tokamak, LHD, and others (including heliotron, GAMMA10 and other confinement devices, synchrotron radiation (SR) sources, solar or astronomical plasma, ion-trap and so on). All the categories appear constantly for about 50 years after the 1970s (except LHD after the 1999 completion of its facility). This shows that a diversity of plasma spectroscopic research has been kept in Japan.

- **Analysis of materials related to the early days development of nuclear power development in Japan preserved in the Fushimi Koji archives**

Y. Narushima (NIFS) *et al.*

One famous episode in the history of the early days of nuclear development in Japan is the so-called “Nakasone’s Satsutaba (wad of cash) remark.” In March 1954, Yasuhiro Nakasone, the future Prime Minister of Japan and others submitted a nuclear budget to the Diet, which was passed. At the time, Nakasone was said to have said, “The scholars were hesitating, so I slapped them across the face with a wad of cash.” However, Nakasone himself denied making this statement. While analyzing the Fushimi documents on this matter, a new discovery was made. The Osaka Teachers’ Union’s journal, “Osaka Education” (ID:503-03-12), published immediately after the budget was submitted, recorded Kawasaki Shuji making the above-mentioned remarks in a radio program. This appears to be the truth behind the episode known as Nakasone’s Satsutaba remark.

- **Organization, registration and analysis of historical documents and materials of Tihiro Ohkawa**

S. Kubo (Chubu Univ.)

Dr. Tihiro Ohkawa’s materials, which had been left in his study after his death, were transferred to the NIFS Fusion Science Archives (FSA) in 2016. These materials include notes, manuscripts, memos, papers, and his book collections on a wide range of fields. The main progress of this fiscal year consists of sorting and categorizing handwritten memos and notes to identify their relation to the preprint and publication, and ultimately to clarify the research process of Tihiro Ohkawa. In this process, materials are categorized into 1. handwritten notes, 2. handwritten manuscripts, 3. typed manuscript with handwritten memo, 4. proofreading manuscript with handwritten memo, 5. preprint and so on. Books are taken out of the stored box and arranged on separate shelves.