

§6. A Historical Study on Fusion Research by Oral History Method

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1. The purpose of oral history in NIFS FSA

The purpose of the oral history here is to store the interview records to complement written documents in NIFS FSA. There are over 24,000 written documents of archives registered and stored. These written documents, however, are not enough for future generation to understand the detailed facts of the historical matters or events. It is useful to collect vivid oral histories by interviews with fusion researchers who played important roles in the past. Their individual memories or information on what they concerned help us to learn some backgrounds of the projects or experiments in the past fusion researches. In 2012 the interview with Yoshihiko Ichikawa, Professor Emeritus of Nagoya Univ. and NIFS, was undertaken.

2. Preparation for the interview

In April Prof. Ichikawa who had played an important role in early days in fusion science consented to an interview in autumn. He built an international reputation in his major field of plasma physics and non-linear physics, however, no academic topics were intended to be covered for the interview. As a leader of the theory department and also International Theory Center for Fusion Science in Institute of Plasma Physics, Nagoya University, he implemented diverse international cooperation projects. He carried out his responsibility of planning joint seminars, workshops, collaborative researches with America or Russia (also during the period of Soviet Union). When IPP was transferred to Toki in the 1980's, he played an active role as a member of the steering committee in promoting good relation with the local community. Besides research itself his ability was capable of accomplishing various tasks like not only in displaying leadership in academic societies, the Physical Society of Japan and the Japan Society of Plasma Science and Nuclear Fusion Research, but in having good relations with the local community and accepting donations from the industrial world.

In May, the staffs of NIFS Archives chose N.Sato, Prof. Emeritus of Tohoku University and K.Sato, Prof. Emeritus of Kyushu University as interviewers more than H. Iguchi, C. Namba, and K. Kimura, considering Prof. Ichikawa's intention to ask them to help recall his memory.

In August, the sheets of the questions were sent to Prof. Ichikawa prior to the interview. The rough topics of the quest

- 1) Trigger episodes in his childhood to be a physicist
- 2) Student days in Tohoku University
- 3) Fulbright study abroad to Columbia University
Travel around the world giving speeches
- 4) Research and education in Nihon University

Collaborative researches in Yukawa Institute for Theoretical Physics, Kyoto University and Institute of Plasma Physics, Nagoya University

- 4) International Cooperation
US-Japan Seminar in 1960's
- 5) Period of IPP, Nagoya University
Kihara - Ichikawa dispute
Correlation between research progress and number of papers
- 6) International Conference on Plasma Physics in 1980
- 7) Japan-Soviet Union (Russia) Cooperation
- 8) Transfer Plan of IPP from Nagoya to Toki City
- 9) Establishment of NIFS
- 10) Others

3. Interview and Editing

The interviews were conducted in the afternoons on September 28 and on November 27 at Archives room in NIFS. Prof. Ichikawa talked vividly what he had experienced in his career. Prof. N. Sato's good memory actually contributed to help Prof. Ichikawa to remember the several events in the past.

The transcripts of the interviews from IC Recorder were completed in December, and then they were edited by the interviewers and also by Prof. Ichikawa.

4. Summary

1) In his talk there were valuable contents that we had not heard of before, such as international cooperation of early US-Japan Seminar or Japan-Soviet Union (Russia) relation, so it would be useful archives for NIFS FSA to store an oral history of Prof. Ichikawa.

2) The correlation between research progress and number of papers in the talk of the previous interview with Prof. S. Mori served a trigger for Prof. Ichikawa to finally accept the interview. He gave his views that there was academically trustworthy correlation between them.

3) Regarding the dispute with Prof. T. Kihara, he told that it was natural for the researcher who had once learned and discussed in a free atmosphere of Yukawa study group to express his own opinion to any powerful authority like a professor of the University of Tokyo.

4) He looked back and said that he fulfilled his role as a professor in NIFS, though his major subject was not fusion science but plasma physics. He emphasized that it was essential for the individual researcher to make his effort to the problems to be solved in his own times. He told that what everyone should do his best would depend on the own circumstances and times themselves.

The record of the interview will be published in the near future.

Also in 2012 the records of the two previous interviews were published and stored in NIFS FSA.

(1) The record of the interview with Prof. Chushiro Hayashi
NIFS FSA No. 100-06-01

(2) The record of the interview with Prof. Shigeru Mori
NIFS FSA No. 100-10-01

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