

## §26. Archival Studies on the Committees for Nuclear Fusion Research at the Science Council in Japan

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As a part of the collaboration program for the archival studies on the nuclear fusion research at universities in Japan, we have retraced the activities of the committees for nuclear fusion research at the Science Council of Japan (SCJ). Among others here we take up two critical periods of SCJ-based activities.

(1) From the dawn period of nuclear fusion research to the establishment of the Institute of Plasma Physics. Systematic study for nuclear fusion researches in Japan began in 1956, following the workshops on nuclear phenomena in astrophysics in October 1955, and also on ultra-high temperature phenomena in April 1956. Both were held at Research Institute for Fundamental Physics (RIFP) of Kyoto University, headed by Nobel laureate professor Yukawa Hideki. In 1957, the Japanese Atomic Energy Commission (JAEC) called on the Assembly for Nuclear Fusion Reactions to discuss the research programs. Yukawa Hideki was nominated chairman of the Assembly.

One of the most outstanding events of this period was the establishment of Nuclear Fusion Research Group (Kakuyugo-Kondankai in Japanese) in February 1958, with Yukawa Hideki as chairman. The group is a researcher-initiated nation-wide organization. We have found the letters which Yukawa sent, helped by Hayakawa Satio, Professor of RIFP, to many scientists in various disciplines, asking for their participation into nuclear fusion research, or their advice of it. Yukawa also sent letters to government officials on funding problem of fusion research. These letters are noteworthy historical records.

JAEC proceeded to set up the Special Panel on Nuclear Fusion Research with Yukawa Hideki as chairman, in April 1958. Special Panel of JAEC proposed the future plan which consists of A-plan for basic research and of B-plan including the construction of a mirror device and a stellarator device. The proposal induced the famous "AB dispute", a difficult discussion at that time.

By request of Kakuyugo-Kondankai, JSC organized the Special Committee for Nuclear Fusion (SCNF) in May 1959, as a forum for discussions on the science policy for nuclear fusion research. SCNF thus joined "AB dispute".

After intensive discussions, a final decision was made by

Yukawa Hideki, chairman of the Special Panel, with Kikuchi Seishi, director of the Institute for Nuclear Study, the University of Tokyo, Sagane Ryoukichi, vice-director of the Japan Atomic Energy Research Institute (JAERI), and Husimi Kodi, professor of physics at Osaka University. The answer was that basic study for fusion research should be conducted along the A-plan, and the B-plan be postponed. SCNF followed this decision, and continued discussions on the research program of basic studies for nuclear fusion research. SCNF worked intensively from May 1959 to June 1969, which was chaired by Husimi Kodi in the first half of this period, and subsequently by Sagane Ryoukichi. SCNF engaged mostly in establishing the Institute of Plasma Physics (IPPJ) which was affiliated at Nagoya University in April 1961. Husimi Kodi was nominated its director. We have compiled the SCNF's proceedings.

(2) Reorganization of SCNF and effort for project oriented fusion research after mid-1960's.

At SCJ, SCNF was dissolved and reorganized as the Fusion Research Panel under the Special Committee for Atomic Energy in June 1966. We hereafter call it Fusion Research Panel of SCJ. Sagane Ryoukichi chaired this reorganized committee, who thought that Panel's task was planning of project oriented research programs, besides the future plan of the basic studies under way. At that time, MOE (Ministry of Education, Science and Culture) funding covered JPPJ and university researches, while STA (Science and Technology Agency) supported JAERI, Electrotechnical Laboratory, the Institute of Physical Chemical Research, and related civil researches.

Fusion Research Panel of SCJ organized some sub-committees, in June 1966. Among them, the most important one was the sub-committee for future plan of plasma fusion research, chaired by Sekiguchi Tadashi, professor of the University of Tokyo.

A tentative future plan was discussed in October 1966, which included the research programs for STA funding and also for MOE funding. On the basis of these discussions at Fusion Research Panel of SCJ, chairman Sagane published, in December 1966, a memorandum requesting re-setting up of the Special Panel on Nuclear Fusion Research at JAEC. This request was accepted by JAEC in May 1967, and discussions for launching nuclear fusion research project began.

In the course of present study we had the opportunity of interview with Sekiguchi Tadashi, Professor Emeritus at the University of Tokyo. Its record is under compilation, which will be published elsewhere.