

§25. Archival Studies on the Nuclear Fusion Research at Universities in Japan — Inter-University Collaboration System in Early Days of Fusion Science —

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Based on the documents included in NIFS Nuclear Fusion Archives Database, we observed some characteristic features of the Institute of Plasma Physics (IPP, 1961-1989), Nagoya University, particularly in early days of fusion research in Japan.

As is given in earlier report ¹⁾, IPP was established after the intensive discussions of so-called “AB-dispute”, which resulted in A-plan, to start with the basic research of plasma science, in 1959. Kakuyuugo-Kondankai (Nuclear Fusion Research Group, researchers’ forum founded in 1958) requested Science Council of Japan (SCJ) to organize the Special Committee for Nuclear Fusion (SCNF), where the institution for A-plan (eventually IPP) was discussed in detail. In 1959 SCJ made a Recommendation to the Government for establishing IPP as a university-attached collaborative institute. As the host university, Nagoya University accepted, and IPP was established in 1961.

According to the discussions summarized at SCNF, IPP should have the following characters:

- to promote the general studies of plasma physics and technology for fusion research
- to give a center of nation-wide collaborative work
- to be operated under researchers’ autonomy
- to behave as a university-attached organization adjusted to inter-university nature
- to set up a system fit for official management
- to get cooperative understandings of the host university, including future possibility for the institute to leave the university

These conditions were well fulfilled between IPP and Nagoya University.

One of the most important agreements was so-called “Mutual Respect and Mutual Independence”, by which the Institute and University recognized the autonomy of each other side. Although belonging to Nagoya University, IPP did not participate University Council. The IPP members did not use the right to vote at the election of University President. On the other hand, the operation of IPP was decided by the Steering Committee, more than half members of which were elected from Kakuyuugou-Kondankai and the rest from the IPP staff. The Steering Committee was in a sense acted for the Faculty Meeting of the Institute. This gave the autonomy of fusion research community in Japan. The research program plans of IPP were discussed and proposed by the Scientific Committees, whose members were also based on Kakuyuugou-Kondankai. IPP budget was treated separately from University. Just on education side IPP staff and facilities contributed for the graduate school course of the University.

Generally speaking, these systems functioned effectively and successfully until the final period of IPP, though the schemes of Kakuyuugou-Kondankai and SCJ had largely changed in the middle of 1980’s. It should also be taken into consideration that the growth in fusion research fields to include high temperature plasma physics and reactor technology and engineering. IPP itself should grow into a larger system. In 1989 the main part of Institute of Plasma Physics, Nagoya University was together with two other institutions (Plasma Physics Laboratory, Kyoto University, and Institute for Fusion Theory, Hiroshima University) reorganized to give a new institute NIFS. In this way IPP left Nagoya University the rest part as Plasma Science Center.

The present study was carried out as a part of “The Archival Studies on Establishments of Inter-University Collaborative Institutes in Japan” organized by Sokendai (The Graduate University for Advanced Studies). Comparing with similar collaborating institutes, for instance KEK, IPP had kept quite unique relations with the host university in the agreement of Mutual Respect and Mutual Independence, and this might be further investigated through archives.

Reference:

- ¹⁾ Terashima, Y., et al. Annual Report of NIFS 1999-2000, 398(2000)