5 International Collaboration

The PF has maintained an international collaboration program with the Australian Nuclear Science and Technology Organization (ANSTO) since 1991. They constructed their own station (Australian National Beamline Facility; ANBF) at BL-20B in 1992 to perform X-ray diffraction and absorption experiments (Fig. 1). There are about 50 proposals every year for this beamline, under which 120-130 Australian scientists carry out their experiments. Their experience at the PF will prove useful for the operation of the Australian Synchrotron Facility currently under construction.

Figure 1
Metta Setyabudi, a Ph.D student at Monash University, sets up a polymer sample for a small and wide-angle X-ray scattering experiment in the ANBF diffractometer.

A major collaboration program between Japan and China started in 2000 with the support of the Japan Society for Promotion of Sciences (JSPS). This program covers not only synchrotron radiation science but also high-energy physics and accelerator technology. Ten Japanese organizations including KEK and six Chinese institutes collaborate on many subjects in various ways. KEK and the Institute of High Energy Physics (IHEP) are the "core universities" in Japan and China, respectively. Based on this program, the exchange of scientists and cooperative research are being undertaken with the Beijing Synchrotron Radiation Facility (BSRF) of IHEP, Shanghai Synchrotron Radiation Center (SSRC) and the National Synchrotron Radiation Laboratory (NSRL) of Hefei. In FY2003, three PF staff visited the Chinese Laboratory, and 18 Chinese researchers (six from IHEP, eight from SSRC, four from NSRL) stayed for several weeks at the PF (Fig. 2).

Figure 2
Visiting Chinese researcher, Dr. Fan Rong and the PF staff members.

The PF and the Stanford Synchrotron Radiation Laboratory (SSRL) division of Stanford Linear Accelerator Center (SLAC) in USA agreed to collaborate in areas of mutual interest. A signing ceremony was held on April 14, 2003 at KEK inviting Dr. Keith Hodgson, a director of SSRL (Fig. 3). An annex of the signed Memorandum of Understanding (MOU) provides the opportunity for scientific users of the SSRL and the PF to receive beam time at either facility in certain areas and under certain circumstances (such as the shutdown of one or the other facility for a major upgrade). Based on this agreement, seven SSRL researchers and three SSRL users (Lousiana State Univ.) came to PF and worked in the area of small angle X-ray scattering in FY2003. It will be expected that more expanding scientific and technical interactions between the PF and SSRL by this MOU.

Figure 3
Colleagues from KEK and SLAC at Tsukuba for the joint collaboration signing ceremony. Left to right: Y. Totsuka (Director General, KEK), A. Koma (Director, IMSS), K. Hodgson (Director, SSRL) and T. Matsushita (Deputy Director, IMSS).

It should be mentioned that we accept about 20 proposals per year from overseas, making up about 7% of the total number of proposals. Most of these proposals are carried out with Japanese collaborations, and considered as international collaborations. Furthermore, it is noted that there are always a few foreign scientists staying at the PF for 3-12 month with support of the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT) and the JSPS. Prof. A. Golovine (Petersburg State Univ.) was invited as visiting professor of MEXT in FY2003.