5 International Collaboration

Based on an agreement between the Photon Factory and the Australian Nuclear Science and Technology Organization (ANSTO), the Australian National Beamline Facility (ANBF) was constructed at BL-20B in 1992. In FY2008 more than 50 experiments were carried out at BL-20B, 70% of which used the XAFS technique, and 20% of which used powder diffraction. With the opening of the Australian Synchrotron facility the Australian partner of the agreement changed from ANSTO to the Australian Synchrotron, but the beamline at the PF will continue to function in order support the above described activities.

KEK and the Department of Science and Technology of the government of India (DST) have signed a memorandum of understanding (MOU) on scientific and technological cooperation between the two parties in order to further strengthen cooperation between the two countries. Setting up an Indian beamline at the Photon Factory is included in this MOU. Beamline 18B is to be used by Indian researchers, and the DST will set up X-ray diffractometers and 2D-detectors for structure analysis of samples such as nano-materials, solid and liquid surfaces, and thin films. The idea was proposed in March, 2007 at the India-Japan science council meeting held by the Japan Society for the Promotion of Science (JSPS). After discussions between KEK and DST, a letter of intent (LOI) was signed in July 2007. The LOI was welcomed by the prime ministers of both countries in a joint statement made in August 2007, when former Japanese prime minister Abe visited India. After detailed technical discussions and formal procedures, KEK and DST signed the MOU during the visit to Japan of Indian prime minister Dr. Singh. The commissioning of the experimental systems will begin in FY2009.

The “core university” program supported by JSPS began in FY2000. The initial partner country of this program was China, with Korea and India joining subsequently. The Photon Factory has been supporting the development of micro-channel crystals for high heat-load X-ray beamlines, the design of soft X-ray and protein crystallography beamlines, and hosted researchers from the partner countries.

KEK co-organized the second AOFSRR summer school ”Cheiron School“ held between September 29 and October 8, 2008, at SPring-8. Sixty-six students attended the school from many Asia and Oceania countries, including Australia, Korea, China, Singapore, Taiwan, Thailand, India, New Zealand and Japan.

An India-Japan workshop on quantum beam science was held between March 7 and 12, 2008, at Saha Institute of Nuclear Physics, Kolkata. Basic lectures on the production of synchrotron radiation, synchrotron radiation, neutron and muon experiments, and on scientific topics using quantum beams were made by both Japanese and Indian lecturers. More than 100 students attended the school.

The Photon Factory supported the SESAME/JSPS School for Synchrotron Radiation held between November 17 and 22, 2008, at Cairo University. Structural biology, electronic structure, material science, archaeology and XAFS were the thematic areas. As well as lectures, training in data analysis was provided, and more than 200 students attended the school.

Figure 1
Prof. O. Shimomura, President of IMSS (left), and Mr. H. K. Singh, Ambassador of India to Japan (right), were exchanging the MOU