

4 International Collaboration

4-1 Overview

The Photon Factory is collaborating internationally in various aspects. The Australian National beamline BL-20B was constructed by the Australian Nuclear Science and Technology Organization (ANSTO) in 1992, and finally ceased operation in March 2013. The Indian beamline BL-18B started operation in 2009. The Photon Factory is also collaborating with international synchrotron radiation communities through meetings, workshops, and schools.

4-2 Australian Beamline

The Australian beamline BL-20B was constructed by ANSTO in 1992, and finally ceased operation at the end of this fiscal year (March 2013). The beamline has been extremely productive, with more than 1,000 papers published from about 900 experimental projects. In FY2012, 33 experiments were carried out at BL-20B. Many of them used the XAFS technique, especially the fluorescent XAFS technique which is applied to environmental and biological systems. 8 papers based on BL-20B experiments were published in FY2012. The closing ceremony of the Australian beamline BL-20B took place at the PF symposium on March 15, 2013, and Dr. Richard Garrett (ANSTO) gave a memorial lecture at the ceremony (Fig. 1).



Figure 1: Dr. Richard Garret giving a memorial lecture at the PF symposium.

4-3 Indian Beamline

The DST, Government of India and KEK agreed to set up an Indian beamline at the Photon Factory in 2008 with the Saha Institute of Nuclear Physics (SINP) as a nodal institute of India. Beamline 18B is leased to DST, and SINP set up two diffractometers and related detection systems. 24 experiments were carried out at BL-18B, and 1 paper based on BL-18B experiments were published in FY2012. The beamline will be fully operational shortly, and will be open not only for Indian scientists but also general users in the near future.

4-4 Cooperation with the SESAME Project

SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East) is a synchrotron radiation facility under construction in Amman, Jordan as a collaborative project of the countries in the Middle East under the auspices of UNESCO. SESAME is expected to be operational in 2015, and KEK is continuously supporting the construction and potential user community at SESAME in various ways. As one of the activities, SESAME staff and students from SESAME-related countries were invited to Japan for one to two months in FY2012, and learned various synchrotron-related subjects (accelerator, radiation safety, structural biology, etc.) at PF, SPring-8, UVSOR and other universities in Japan. The travel and living expenses of the participants were fully supported by the JSPS Asia-Africa Science Platform Program (Fig. 2).



Figure 2: SESAME staff and students from Jordan, Egypt and Iran joined the SESAME-JSPS Program in FY2012.