

Expanding Industrial Use at SPring-8

A great strength of SPring-8 is the fact that this facility is highly focused on increasing the number of users from industry. In fact, SPring-8 has a good track record of developing industrial applications in various fields, such as electronics, materials, energy, chemical, and environment-related industries, and was used by more than 170 companies in 2007, as shown in Fig. 1. The most important factor contributing to our success in attracting a wide range of industries is the implementation of various utilization propulsion programs at public beamlines, which have been continuously improved. In particular, the dramatic increase in the number of research experiments by industrial users in 2005 was clearly due to the Strategic Use of Advanced Large-scale Research Facilities (SUALRF) program (FY2005-FY2006), supported by the Ministry of Education, Culture, Sports, Science and Technology, as shown in Fig. 2. The system for industrial use needs more flexibility regarding the carrying out of experiments, such as allowing the immediate use of a beamline after the submission of a proposal and regular use at short intervals. Thus, JASRI implemented a new utilization propulsion program from FY2007 at public beamlines: the Priority Research Proposal (priority field: industrial application). In this program, for example,

applications can be submitted 4 times a year for the use of some public beamlines dedicated to industrial research, in order to match their development cycles. As of January 2009, SPring-8 operates three public beamlines dedicated to industrial use. The first is the Engineering Science Research I (BL19B2) beamline, a standard bending magnet beamline, for grazing-incidence X-ray scattering, X-ray reflectivity measurements, powder X-ray diffraction, and X-ray imaging experiments. The second is the Engineering Science Research II (BL14B2) beamline, a standard bending magnet beamline dedicated to XAFS measurements. The third is the Engineering Science Research III (BL46XU) beamline, a standard in-vacuum undulator beamline, where a multi-axis X-ray diffractometer and a hard X-ray photoemission spectroscopy system have been installed for user experiments. In addition to these three public beamlines, there are three contract beamlines under corporate operation in SPring-8: Sunbeam ID (BL16XU), Sunbeam BM (BL16B2), and Pharmaceutical Industry (BL32B2). In addition, Hyogo BM (BL08B2) and Hyogo ID (BL24XU), contract beamlines under the local government, are operated for independent programs for industrial use.

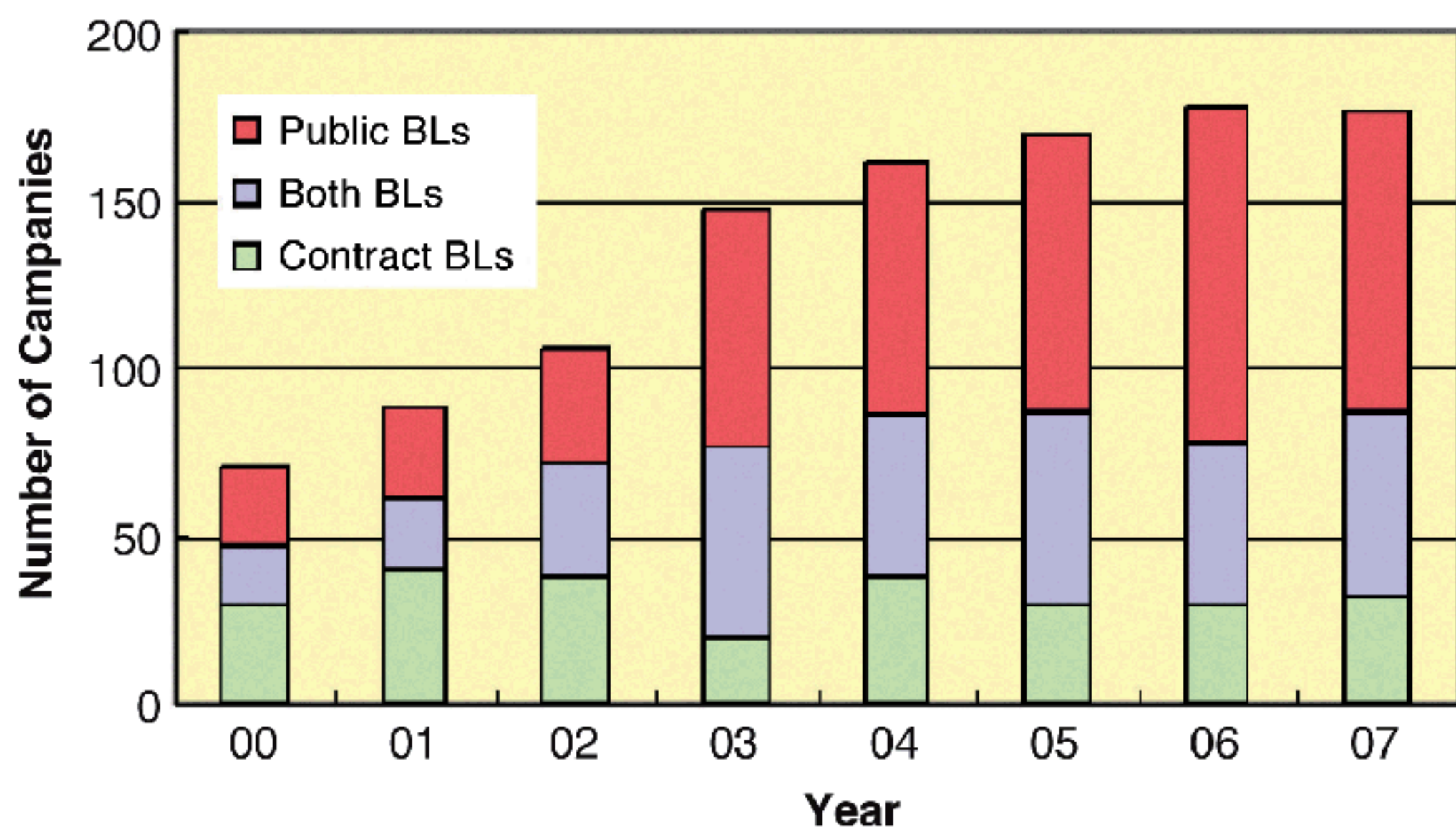


Fig. 1 Annual trends of number of companies using SPring-8

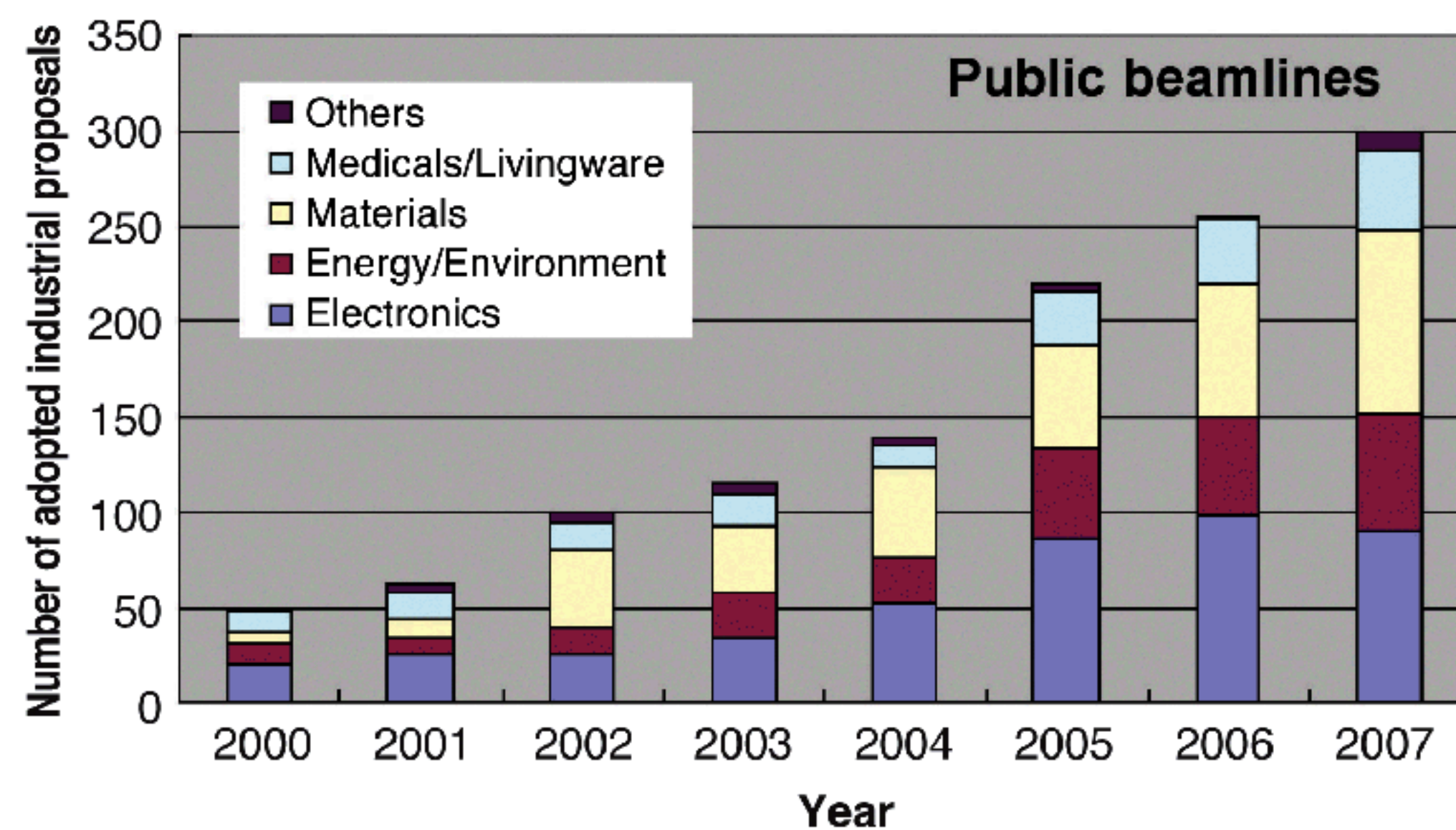


Fig. 2 Annual trend of number of adopted proposals from companies at public beamlines

ICALEPCS2009

The 12th International Conference on Accelerator and Large Experimental Physics Control Systems (ICALEPCS2009) will be held at Kobe International Conference Center, Kobe, Japan, from October 12 to 16, 2009.

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