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Experimental Proposals

1-1 Scientific Proposals

The Photon Factory accepts experimental proposals submitted by researchers mainly at universities and research institutes inside and outside Japan. The proposals are reviewed by the PF Program Advisory Committee (PF-PAC). The favorably recommended proposals are accepted and formally approved by the Advisory

Committee for Institute of Materials Structure Science. The number of accepted proposals over the period 1996-2007 is shown in Table 1, where S1/S2, U, G, and P denote Special, Urgent, General and Preliminary proposals. The number of current G-type proposals at any time has been over 600 for the past few years and was 791 in FY2007. Every proposal is effective for two years. A full list of the proposals effective in FY2007 and

Table 1 Number of proposals accepted for the period 1996-2007.

FY	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
S1		3	1	0	0	0	0	1	1	0	1	0
S2	2	1	3	3	2	2	3	2	0	3	6	1
U	2	1	4	2	0	5	3	2	4	0	1	7
G	260	303	333	323	308	339	321	318	382	310	388	403
P	10	6	14	22	17	18	16	9	13	10	22	14

Table 2 List of S-type proposals effective in FY2007.

Proposal No.	Spokesperson	Title
2004S1-001	S. Koshihara Tokyo Inst. of Tech	Construction and utilization of sub-nanosecond resolved diffraction beamlines to search for strongly correlated materials in the non-equilibrium states
2005S2-001	T. Takeda Univ. of Tsukuba	<i>In vivo</i> observation of live objects by phase-contrast imaging using separate X-ray interferometer-part III-
2005S2-002	M. Oshima Univ. of Tokyo	<i>In-situ</i> analysis of semiconductor/magnetic nanostructures by combinatorial high-resolution photoelectron spectroscopy
2005S2-003	T. Arima Tohoku Univ.	Synchrotron X-ray diffraction study of structural phase transitions induced by magnetic field
2006S1-001	M. Fujinami Chiba Univ.	Development of positron microscope
2006S2-001	A. Fujimori Univ. of Tokyo	High resolution angle-resolved photoemission study of strongly correlated transition metal oxides
2006S2-002	K. Mase KEK-PF	Study of core-excitations, Auger decay, and ion desorption using coincidence spectroscopy
2006S2-003	K. Akimoto Nagoya Univ.	X-ray diffraction studies on structural analysis and controls of semiconductor surfaces and interfaces
2006S2-004	H. Sawa KEK-PF	Direct observation of electron density of molecular orbital using synchrotron radiation X-ray MEM analysis
2006S2-005	R. Kumai AIST	Structure analysis for the physical property study of the correlated electron system
2006S2-006	E. Ohtani Tohoku Univ.	In situ X-ray imaging of melts at high pressure, and its applications to the earth and planetary interior

their scientific output can be found in PART-B of this volume.

S-type proposals are divided into two categories, S1 and S2. S1 proposals are self-contained projects of excellent scientific quality, and include projects such as the construction and improvement of beamlines and experimental stations which will be available for general users after the completion of the project. S2 proposals are superior-grade projects that require the full use of synchrotron radiation or a large amount of beam time. After passing strict refereeing procedures, S-type

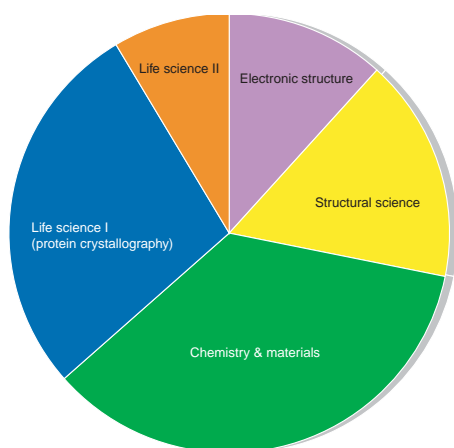


Figure 1
Distribution by scientific field of experimental proposals accepted in FY2007.

Table 3 List of C-type and Y-type proposals accepted in FY2007.

Proposal Number	Company
2007C001	Nippon Steel Corp.
2007C002	Toray Research Center, Inc.
2007C003	Astellas Pharma Inc.
2007C004	Fuji Photo Film Co., Ltd.
2007C005	JT
2007C006	Hitachi, Ltd.
2007C007	Fujitsu Laboratories Ltd.
2007C008	Nippon Oil Corp.
2007C009	Nippon Oil Corp.
2007C010	Sankyo Co., Ltd.
2007C011	Canon Inc.
2007C012	Center Res. Inst. Electric Power Industry
2007C013	Mitsubishi Chemical Co.
2007C014	Mitsui Chemical Analysis & Consulting Service Inc.
2007C015	JFE Steel Corp.
2007C016	Toray Research Center, Inc.
2007C017	Nikon Corp.
2007C018	Toyota Central R&D Labs. Inc.
2007C019	Ohyo Koken Kogyo Co., Ltd.
2007C020	Protein Wave Co.
2007C021	ERATO, JST
2007C022	Sumitomo Chemical
2007C023	SOSHO, Inc.
2007C024	Nikkyo Technos Co., Ltd

proposals are supported financially by the PF. Table 2 shows a list of the S-type projects effective in FY2007. The current status and results to date of S1 and S2 proposals must be reported at the poster session of the PF Symposium held at the end of every Japanese fiscal year. The scientific output of S1 and S2 proposals is presented in the Highlights of PART-A and in the Users' Reports of PART-B of this volume.

Proposals are categorized into five scientific disciplines, and reviewed by the five subcommittees of PF-PAC: 1) electronic structure, 2) structural science, 3) chemistry and new materials, 4) life science I (protein crystallography), and 5) life science II. Figure 1 shows a distribution chart by research field of the proposals accepted by the subcommittees in FY2007.

1-2 Industrial Proposals

In addition to the S, U, G, and P-type proposals, two proposal categories are open for researchers from private companies, who can join collaborative (C-type) proposals with PF staff or submit their own proposals to the Y-type proposals. As listed in Table 3, 24 C-type and 20 Y-type proposals were accepted in FY 2007.

A MEXT project, the Open Advanced Facilities Initiative for Innovation (Strategic Use by Industry), started in 2007 to promote industrial applications of advanced facilities. A proposal from Photon Factory, Strategic Industrial Application of the Photon Factory, is adopted and seven industrial programs were initiated in FY2007.

Proposal Number	Company	BL
2007Y001	Sankyo Co., Ltd.	5A, 17A, NW12A
2007Y002	Kyowa Hakko Kogyo Co. Ltd.	5A, 17A, NW12A
2007Y003	Astellas Pharma Inc.	5A, 17A, NW12A
2007Y004	Eisai Co. Ltd.	5A, 17A, NW12A
2007Y005	Daiichi-Sankyo Co. Ltd.	5A, 17A, NW12A
2007Y006	Chugai Pharmaceutical Co., Ltd.	5A, 17A, NW12A
2007Y007	Mitsubishi Chemical Co.	5A, 17A, NW12A
2007Y008	Sumitomo Chemical Co., Ltd.	9A, 12C NW10A
2007Y009	NIMS	15C
2007Y010	Banyu Pharmaceutical Co., Ltd.	5A, 17A, NW12A
2007Y011	Sharp Co.	12C
2007Y012	PCProt	5A, 17A, NW12A
2007Y013	AJINOMOTO Co., Inc.	5A, 17A, NW12A
2007Y014	Sony Co.	11B
2007Y015	Nippon Steel Corp.	NW10A
2007Y016	Nagoya Inst. Tech.	4B2
2007Y017	Sumitomo Chemical Co., Ltd.	9A, 12C NW10A
2007Y018	Sony Co.	11B
2007Y019	Sharp Co.	12C
2007Y020	Sony Co.	11A, 11B

1-3 Statistics of the Proposals

Figure 2 shows the change in the number of registered users over the period 1990-2007. The total number increased gradually until 1995, reached a constant number of about 2,400 users, and increased again after 2000. The number of registered users exceeded 3,000 in FY2006 and FY2007. The temporary decrease in 1997 and 2005 was due to the long shut down for the high-brilliance renovation of the PF storage ring and for the straight-section upgrade project, respectively.

The number of scientific proposals over the period 1991-2007 is shown in Fig. 3. The number of proposals gradually increased until 1995, and reached a constant number of about 600 to 700 proposals per year. It should be mentioned that we accept over 20 proposals per year (29 proposals in FY2007) from overseas, amounting to about 6.5% of the total number of proposals (817 proposals in FY2007), as shown in Fig. 4. Most of these proposals are carried out in cooperation with Japanese researchers, and are considered as international collaborations.

The spokesperson of each proposal is requested to notify the PF of published papers and reviews which are based on experiments carried out at the PF. These publications, together with publications by PF staff, are compiled in a database which can be accessed through <http://pfwww.kek.jp/>. A list of recent publications is found

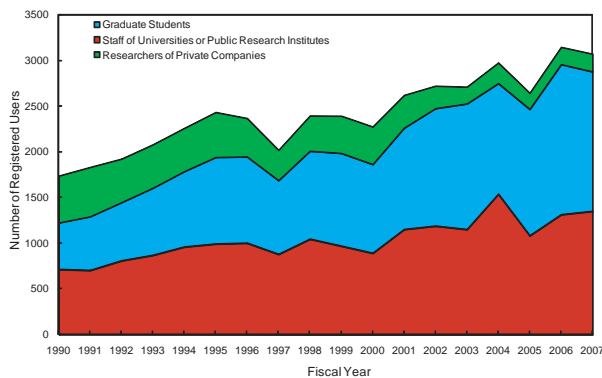


Figure 2
Number of registered PF users over the period 1991-2007.

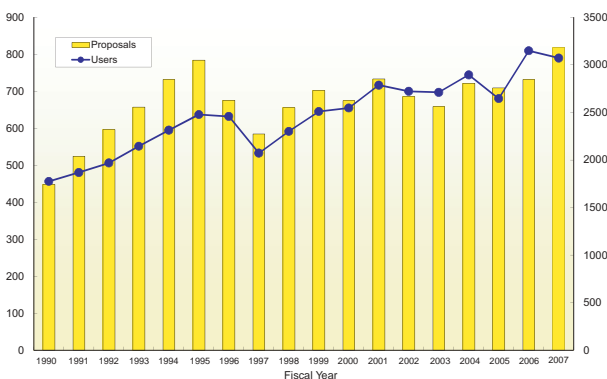


Figure 3
Number of registered PF users and proposals over the period 1991-2007.

in PART-B. Figure 4 shows the distribution by scientific field of publications during 1997-2007.

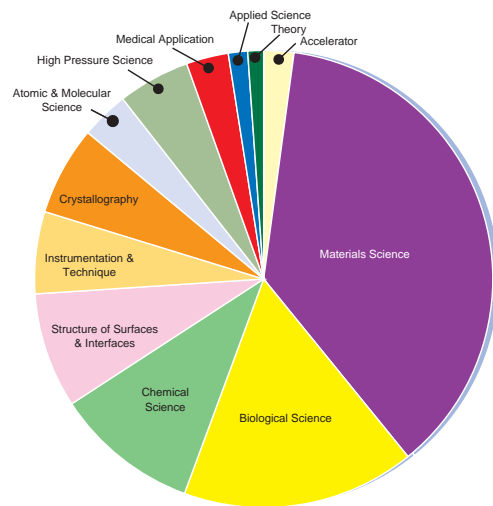


Figure 4
Distribution of publications by scientific fields over the period 1997-2007.

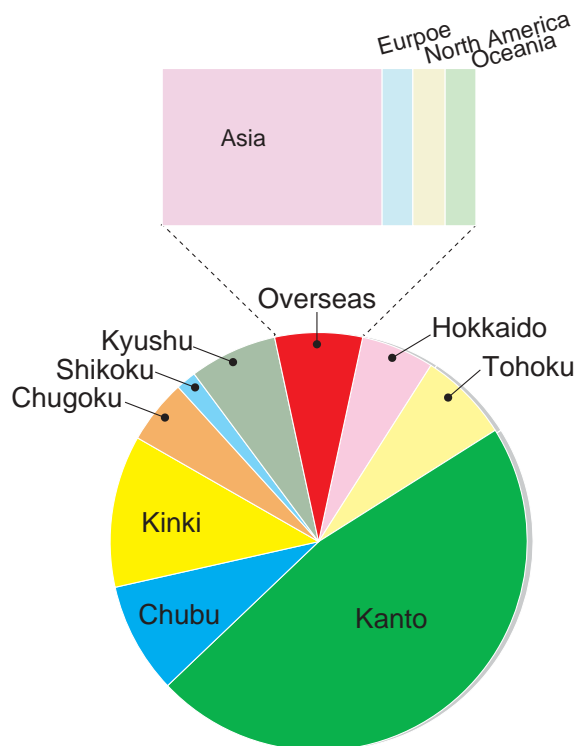


Figure 5
Regional distribution of the spokespersons of proposals accepted in FY2007. Note that proposals for BL-20B of the ANBF are not included in this figure.