

Chapter 4 User Operations

The research projects for public beamlines are divided into two categories: research projects on general proposals under the Proposal Review Committee (PRC) and research projects on the priority research program under JASRI.

Call for general proposals is announced twice a year and an urgent proposal is accepted through the year [see Table 4-2 and Figure 4-1~4-4]. Submitted proposals are reviewed by PRC members and referees in the following sections as for the 2005B research term:

1. Life Science
2. Diffraction and Scattering
3. XAFS
4. Spectroscopy
5. SR Methodology
6. Industrial Application

In addition to the general proposals long-term proposals valid three years are also accepted twice a year and are reviewed by the long-term proposals sub-committee under PRC.

The PRC selects proposals based on the review results and allocate beam time to each selected proposal. Then, JASRI authorizes project leaders to perform their research projects at SPring-8. The projects are valid for a single research term (six months), except for those of long-term proposals. The long-term proposal allows a project with six research terms (three years) [see Table 4-6]. In addition, some beamlines accept one-year long proposals. In the Life Science and Industrial Application sections, some of beam time are reserved for additional calls, which will be announced a few times before next regular call.

Most of the proposals belong to the non-proprietary research, in which the project leaders are required to publish their results. As opposed to this, JASRI accepts a proposal for proprietary research. Paying a charge for using synchrotron radiation beams, the project leaders and their institutes can own the experiment result, i.e. they do not need to publish the experimental results. A total of 188 proposals have been performed as proprietary research by 2005B.

The priority research proposal consists of the following subcategories:

- (1) Priority field proposal
- (2) Power user proposal
- (3) Strategy proposal

JASRI calls for priority field proposals from users, while JASRI designates both users in the subcategory of the power user proposal and projects in the subcategory of the strategy proposal. Regarding the priority field proposal, JASRI invites proposals from the following fields:

1. Nanotechnology-related research under the Nanotechnology Researchers Network Project of MEXT [see Table 4-3]
2. Industrial applications (Trial Use Program) [see Table 4-4]
3. The Program for Strategic Use of Advanced Large-scale Research Facilities [see Table 4-5]
4. Protein 500 subprogram under the Protein 3000 Project of MEXT [see Table 4-7]

Five projects are running under the subcategory of the power user proposal [see Table 4-8], and the following projects are designated under the subcategory of the strategy proposal:

1. Analysis of Nanocomposite Materials
2. Development of New Application Technology for Powder Diffraction Experiments
3. X-ray pinpoint structural measurement

JASRI has also begun to receive Budding Researches Proposals in order to encourage graduate students to come up with innovative ideas. The proposals cover both scientific applications using synchrotron radiation and instrumentation ranging from accelerators to experimental apparatuses for future upgrades of the facility. JASRI financially supports the research program of accepted proposals.

Table 4-1 Proposal category

Public BL	General Proposal (Open Call)	Non-Proprietary	General Proposal (incl. One year proposal, Budding Researchers Proposal and Non-Proprietary Grant-Aid Proposal)
			Long-term Proposal
			Urgent Proposal
		Proprietary	General Proposal
			Time-Designated Proposal
	Priority Research Proposal	Priority Field Proposal (Open Call)	Nanotechnology-related Research under the Nanotechnology Researchers Network Project of MEXT
			Industrial Applications (Trial Use Program)
			The Program for Strategic Use of Advanced Large -scale Research Facilities
			Protein 500 Subprogram under the Protein 3000 Project of MEXT
		Power User Proposal	Designated Power Users (5 groups)
		Strategy Proposal	Analysis of Nanocomposite Materials
			Development of New Application Technology for Powder Diffraction Experiments
			X-ray Pinpoint Structural Measurement
	Beamtime Reserved for JASRI	Training Program	
R&D, Commissioned Research			
Contract BL (Exclusive use of contractors)			
RIKEN BL (Exclusive use of RIKEN)			

Table 4-2 Number of submitted (Sub.) / selected (Sel.) / performed (Done) proposals for public use. The column "non-subm" is for the long-term proposals and power user proposals running on the second term or more.

Research Term	1997B			1998A				1999A			1999B			2000A			2000B		
	Subm.	Sel.	Done	Subm.	Sel.	non-subm	Done	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done
BL01B1	23	16	15	43	27		27	47	34	34	66	23	23	53	46	46	54	33	33
BL02B1	34	17	16	32	28		28	34	23	22	36	15	15	33	17	16	28	14	14
BL02B2											6	4	4	29	24	24	47	29	29
BL04B1	15	15	10	29	28		28	34	22	22	28	17	17	27	22	22	30	18	18
BL04B2											7	6	6	21	20	20	25	17	17
BL08W	5	4	3	10	7		7	17	11	11	19	12	10	19	12	11	19	11	11
BL09XU	25	23	8	37	20		19	44	19	17	32	10	10	35	17	14	24	12	12
BL10XU	16	6	5	25	21		21	37	27	27	38	19	19	26	22	13	38	20	17
BL13XU																			
BL19B2																			
BL20B2											11	9	9	24	20	20	36	26	25
BL20XU																			
BL25SU	12	11	0	6	6	8	14	20	12	12	24	15	15	27	18	18	31	17	17
BL27SU	3	2	1	6	5	1	6	15	9	9	14	10	10	12	12	12	13	12	12
BL28B2											1	1	1	12	11	11	18	14	14
BL35XU																			
BL37XU																			
BL38B1																			
BL39XU	16	13	12	25	19		19	36	20	20	31	17	17	39	21	21	41	15	15
BL40B2											13	10	10	29	28	28	51	47	41
BL40XU														13	10	10	11	11	11
BL41XU	36	22	20	60	39		39	82	65	64	70	53	52	56	47	45	71	50	47
BL43IR														12	12	12	20	18	18
BL46XU								1	1	1				1	1		3	3	3
BL47XU	1			7	7		7	13	10	9	8	5	4	7	7	7	16	8	8
any	2																		
multi																			
Sub total	188	129	90	280	207	9	215	380	253	248	404	226	222	475	367	350	576	375	362
BL11XU										1							10	5	5
BL14B1				4	4		3	9	8	6	6	6	4	5	5	5	6	5	5
BL15XU																			
BL17SU																			
BL19LXU																			
BL22XU																			
BL23SU				2	2			2	2	2	4	2	2	4	4	3	1	1	1
BL26B2																			
BL29XU										1									
BL44B2				10	9		9	4	3	3	6	4	4	1	1	1	3	1	1
BL45XU	10	5	4	9	7		7	22	13	13	15	10	10	6	6	6	10	9	9
Sub total	10	5	4	25	22	0	19	37	26	26	31	22	20	16	16	15	30	21	21
SUM all	198	134	94	305	229	9	234	417	279	274	435	248	242	491	383	365	606	396	383

Public Beamline

Public use at RIKEN BL/Contract BL

Research Term	2001A				2001B				2002A				2002B				2003A			
	Subm.	Sel.	non-subm.	Done	Subm.	Sel.	non-subm.	Done	Subm.	Sel.	non-subm.	Done	Subm.	Sel.	non-subm.	Done	Subm.	Sel.	non-subm.	Done
BL01B1	45	37		37	37	29		29	36	30		29	52	24		23	44	36		36
BL02B1	21	18		17	32	13		13	36	21		20	37	14		14	16	8	10	18
BL02B2	45	33		33	51	34		34	51	39		38	50	34		34	49	38	1	38
BL04B1	30	24	1	25	22	19	1	20	22	19		13	25	18		18	22	17		17
BL04B2	20	18	1	19	37	22	1	23	35	27	1	25	35	19	1	17	33	21	1	22
BL08W	20	17		15	25	18		18	22	17		17	12	12	1	13	13	11	1	12
BL09XU	24	17	1	18	21	11	1	12	22	15	1	15	17	10	1	11	22	13	1	14
BL10XU	29	25		25	26	18	1	19	26	25	1	25	33	19	1	20	27	17	1	17
BL13XU					5	5		5	13	12		11	24	14		14	27	20		19
BL19B2					13	8		8	68	43		40	99	43		42	92	38		36
BL20B2	40	27		26	48	33		33	39	31		30	36	27		27	26	23		23
BL20XU					15	12		12	12	11		11	8	8		8	13	12		12
BL25SU	27	21		21	28	19		18	27	19	1	19	38	17	1	18	33	19	1	20
BL27SU	24	17		17	28	19		19	30	21		20	25	19		19	25	22		22
BL28B2	11	11		11	18	15		14	22	18	1	18	25	16	1	17	28	22	1	23
BL35XU					6	5	1	6	13	10	1	11	18	9	1	10	18	12	1	13
BL37XU									1	1		1	20	13	1	9	26	23	1	24
BL38B1					16	16		16	15	15		15	12	9		9	9	8		8
BL39XU	31	18	1	19	42	21	1	22	37	20	1	21	23	12		12	20	14		14
BL40B2	59	58		57	50	43		43	46	41		40	44	27		27	49	36		35
BL40XU	13	11		11	17	12		12	21	18		18	20	18		18	17	16		16
BL41XU	67	63		61	50	47		47	71	67		60	42	27		27	58	56		54
BL43IR	30	25		25	24	24		21	23	22		0	21	18		18	20	20		20
BL46XU	8	5		5	7	4		4	5	4		4	7	5		5	7	5		5
BL47XU	10	8		8	9	9		9	12	11		10	12	12		12	13	11		10
any																				
multi									1	0										
Sub total	554	453	4	450	627	456	6	457	706	557	7	511	735	444	8	442	707	518	19	528

BL11XU	5	5		5	4	4		4	6	6		5	1	1		1	5	3		3
BL14B1	6	4		4	7	6		6	3	3		3	6	5		5	4	4		3
BL15XU					0	0			0	0			9	7		7	9	8		8
BL17SU																				
BL19LXU					0	0			0	0			0	0		0	3	3		3
BL22XU																				
BL23SU	0	0			5	5		5	7	6		6	7	5		5	5	4		4
BL26B2																				
BL29XU																	1	1		1
BL44B2	1	1		1	1	1		1	1	1		1	1	1		1	3	3		2
BL45XU	14	14		14	18	15		15	20	19		19	21	10		10	13	10		10
Sub total	26	24	0	24	35	31	0	31	37	35	0	34	45	29	0	29	43	36	0	34

SUM all	580	477	4	474	662	487	6	488	743	592	7	545	780	473	8	471	750	554	19	562
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Public Beamline

Public use at RIKEN BL/Contract BL

Research Term	2003B				2004A				2004B				2005A				2005B					
	Beamline	Subm.	Sel.	non-subm.	Done	Subm.	Sel.	non-subm.	Done	Subm.	Sel.	non-subm.	Done	Subm.	Sel.	non-subm.	Done	Subm.	Sel.	non-subm.	Done	
Public Beamline	BL01B1	64	31		30	46	31		30	71	31		31	64	37		37	87	34		1	35
	BL02B1	23	12	1	13	9	8	8	16	22	14	1	15	9	7	5	12	14	11		1	12
	BL02B2	41	32	2	32	40	34	2	36	47	37	2	39	54	39	2	41	53	42		1	43
	BL04B1	19	15		15	19	17		17	27	18		18	20	12	5	17	30	17			17
	BL04B2	38	20		19	33	21		21	41	21		21	38	20		20	30	22			22
	BL08W	13	8	2	10	15	8	2	9	18	9	2	10	15	8	1	9	19	12		1	13
	BL09XU	17	11	1	12	14	10	2	12	14	9	2	11	6	6	2	8	12	9		2	11
	BL10XU	27	17	2	18	30	19	2	21	27	17	2	19	16	11	5	16	22	16		2	18
	BL13XU	29	19		19	30	18		17	31	17		17	42	22	1	23	45	27			27
	BL19B2	62	35		32	56	36		36	60	36		36	65	37	2	39	62	51			51
	BL20B2	42	22		22	37	24		24	29	19	1	20	28	16	1	17	33	15		1	15
	BL20XU	16	11		10	13	13		13	25	14		14	19	14		14	25	15			15
	BL25SU	32	16	1	17	27	16	1	17	53	22		20	46	18		18	53	19			19
	BL27SU	31	18		18	25	19		19	33	14		14	28	13	4	17	32	18			18
	BL28B2	26	16		16	25	16		16	23	15		15	25	18		18	27	18			18
	BL35XU	23	13		13	12	8		8	14	12		11	17	12		12	17	15			15
	BL37XU	28	21		21	25	23		23	27	18		17	32	18		18	33	23			23
	BL38B1	17	11		11	12	8		8	25	24		24	26	17		17	15	11			11
	BL39XU	22	14		14	22	16		16	18	12		12	19	14		14	26	18			18
	BL40B2	69	43		37	53	34		34	44	21		20	48	27	2	27	61	31			31
	BL40XU	23	21	1	21	25	18	1	19	22	13	1	14	25	15	1	16	33	13		1	14
	BL41XU	76	32	1	32	41	29	1	29	45	23	1	23	50	27	1	28	40	27		1	28
	BL43IR	20	16		16	16	16		16	21	15		15	16	14		14	16	14			14
	BL46XU	13	7		7	10	8		8	17	9		9	21	8		7	20	16		1	17
	BL47XU	16	10		10	16	11		11	18	10		10	38	11	1	12	43	27		1	27
	any																					
multi																						
Sub total	787	471	11	465	651	461	19	476	772	450	12	455	767	441	33	471	848	521	13		532	

Public use at RIKEN BL/Contract BL

BL11XU	4	4		4	3	3		3	6	5		5	5	4		4	3	3			3
BL14B1	8	7	1	7	5	5		5	9	7		7	6	5		5	6	6			6
BL15XU	10	8		6	7	7		7	16	9		9	13	8		8	13	6			6
BL17SU																	4	3			3
BL19LXU	2	2		2	2	2		2	1	1		1	3	3		3	1	1			1
BL22XU					3	3		3	5	5		5	3	3		3	3	3			3
BL23SU	9	6		5	8	7		7	7	7		6	11	6		5	10	4			3
BL26B2																	1	1			1
BL29XU	0	0		0	0	0		0	2	2		2	2	2		2	5	3			3
BL44B2	2	1		1	2	1		1	1	1		1	1	1		1	2	2			2
BL45XU	14	8		8	9	8		8	16	10		10	12	7		7	13	7			7
Sub total	49	36	1	33	39	36	0	36	63	47	0	46	56	39	0	38	61	39	0		38

SUM all	836	507	12	498	690	497	19	512	835	497	12	501	823	480	33	509	909	560	13		570
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Table 4-3 Number of nanotechnology-related research proposals under the nanotechnology researchers network project of MEXT.

Research Term	2002B			2003A			2003B			2004A			2004B			2005A			2005B		
	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done
BL01B1				1																	
BL02B1	1			2			1														
BL02B2	22	14	14	19	12	12	14	8	8	10	8	8	12	9	9	12	10	10	16	10	10
BL04B2				2			1														
BL08W	1																				
BL10XU				2	1	1	1														
BL11XU	1	1	1	1	1	1	3	2	2	3	3	3	4	4	4	2	2	2	2	2	2
BL13XU	8	7	7	8	5	5	14	5	5	8	4	4	13	5	5	10	4	4	12	5	5
BL14B1	2	2	2	2	2	2	8	5	4	4	3	3	5	5	5	2	2	2	3	3	3
BL15XU	9	7	7	7	7	7	10	7	6	7	7	7	15	6	6	7	5	5	11	4	4
BL17SU																			1	1	1
BL19B2																			2		
BL20XU	1	1	1	1	1	1	2												1		
BL22XU												1	1	1							
BL23SU	4	3	3	3	3	3	5	4	3	5	5	5	6	6	5	6	6	5	8	4	3
BL25SU	16	8	8	13	9	9	15	6	6	7	4	4	15	5	5	9	4	4	13	3	3
BL27SU	6	5	5	5	4	4	13	5	5	6	4	4	11	4	4	6	5	5	9	2	2
BL28B2				1																	
BL29XU																			2	2	2
BL37XU	6	4	1	10	8	8	11	6	6	7	4	4	3	2	2	8	6	6	9	5	5
BL38B1	1			1																	
BL39XU	8	5	5	7	5	5	9	3	3	5	3	3	6	3	3	4	4	4	7	3	3
BL40B2							1														
BL43IR				1			2			1											
BL46XU				2																	
BL47XU	5	3	3	4	2	2	4	3	3	9	5	5	8	5	5	6	4	4	9	3	3
Total	91	60	57	92	60	60	114	54	51	72	50	50	99	55	54	72	52	51	105	47	46

Table 4-4 Number of trial use program proposals. At 2001B and 2002A, these proposals were selected from general proposals

Research Term	2001B	2002A	2003A			2003B			2004A			2004B			2005A			2005B			
	designate	designate	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done	Subm.	Sel.	Done	
BL01B1	1	1				4	4	4	5	4	4	8	3	3	1						
BL02B1		1							3												
BL02B2		2																			
BL09XU		1																			
BL13XU															3	3	3				
BL19B2	2	14	17	14	14	37	17	15	30	18	18	35	15	15	18	16	16	3	3	3	
BL20XU						1															
BL28B2						1	1	1													
BL37XU									2	2	2	1									
BL40B2																		1			
BL46XU						5	3	3	5	5	5	4	3	3	2	2	2				
BL47XU																		2	1	1	
Total	3	19	17	14	14	48	25	23	45	29	29	48	21	21	24	21	21	6	4	4	

Table 4-5 Number of the Program for Strategic Use of Advanced Large-scale Research Facilities

Research Term	2005B			
	BL	Subm.	Sel.	Done
BL01B1	21	8	8	
BL02B1	3	2	2	
BL02B2	14	10	10	
BL04B2	7	5	5	
BL08W	1			
BL09XU	1	1	1	
BL10XU	5	4	4	
BL13XU	15	7	7	
BL17SU	1	1	1	
BL19B2	39	36	36	
BL20B2	5	4	4	
BL20XU	6	5	5	
BL25SU	7	4	4	
BL26B2	1	1	1	
BL27SU	4	2	2	
BL28B2	2	2	2	
BL37XU	6	3	3	
BL39XU	7	7	7	
BL40B2	11	6	6	
BL40XU	8	5	5	
BL41XU	1	1	1	
BL43IR	5	5	5	
BL46XU	6	6	6	
BL47XU	14	10	9	
Total	190	135	134	

Table 4-6 Performed proposals for the protein 500 subprogram under the protein 3000 project of MEXT.

Research Term	2002B	2003A	2003B	2004A	2004B	2005A	2005B
BL38B1	18	34	24	27	26	28	28
BL40B2	21	18	10	11	7		
BL41XU	30	20	17	19	21	23	22
Total	69	72	51	57	54	51	50

Table 4-7 Number of long-term proposals

Research Term	2000B	2001A	2001B	2002A	2002B	2003A	2003B	2004A	2004B	2005A	2005B
Submit	9	2	4	3	4	4	3	3	3	4	3
Select	3	1	1	1	1	1	2	1	0	1	0
Running proposals	3	4	5	6	7	8	7	7	7	6	9

Table 4-8 Power user proposals

Designated Power Users (Leader)	Research Term	2003A	2003B	2004A	2004B	2005A	2005B
	beamline	shifts	shifts	shifts	shifts	shifts	shifts
K. Toriumi	BL02B1	0	51	54	48	48	42
Y. Kuroiwa	BL02B2	0	36	36	33	36	30
A. Koizumi	BL08W	0	24	27	24	48	42
M. Seto	BL09XU	0	42	54	48	54	42
Y. Tatsumi	BL10XU	0	0	15	24	24	21

Table 4-9 Strategy proposals

Theme	Research Term	2004B	2005A	2005B
	Beamline	Shifts	Shifts	Shifts
Analysis of Nanocomposite Materials	BL19B2	9	12	
	BL13XU		6	
	BL40B2	24	6	
	BL46XU			6
	BL47XU		12	6
Development of New Application Technology for Powder Diffraction Experiments	BL19B2		9	
	BL40B2	24		
X-ray pinpoint structural measurement	BL40XU		72	63

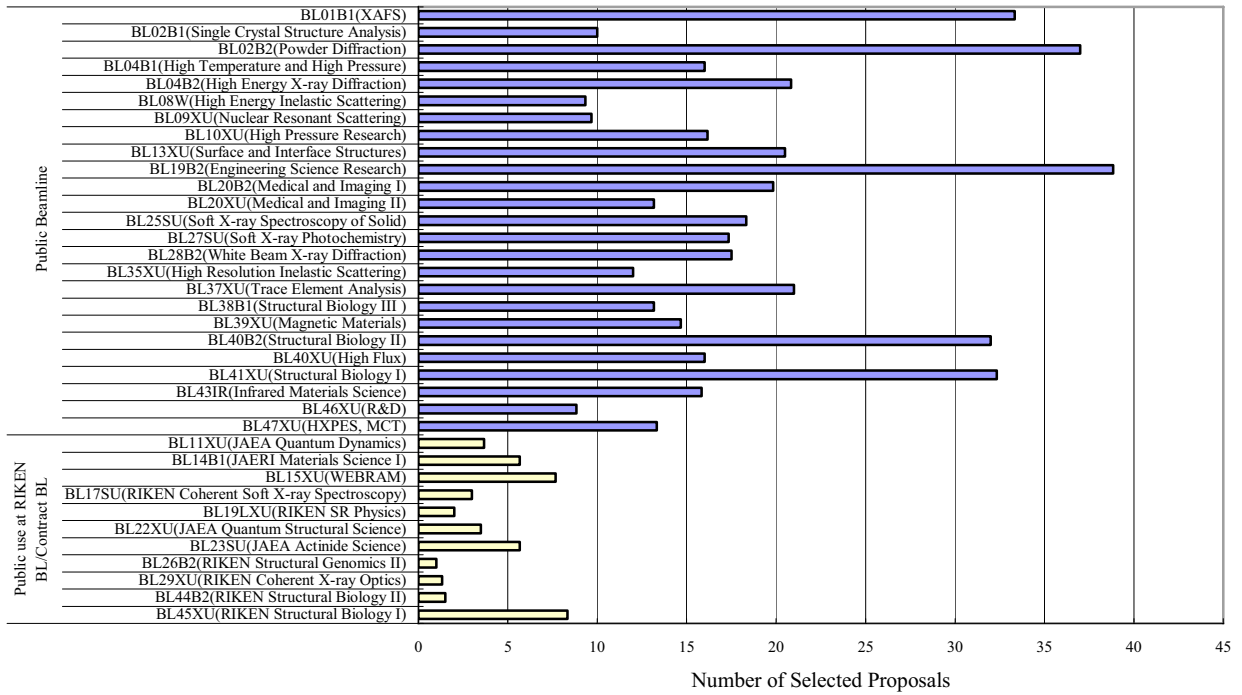


Figure 4-1 Average number of selected proposals (2003A-2005B). Three R&D beamline (BL38B1, BL46XU, BL47XU) provide ~30% of SR available beam time to public users.

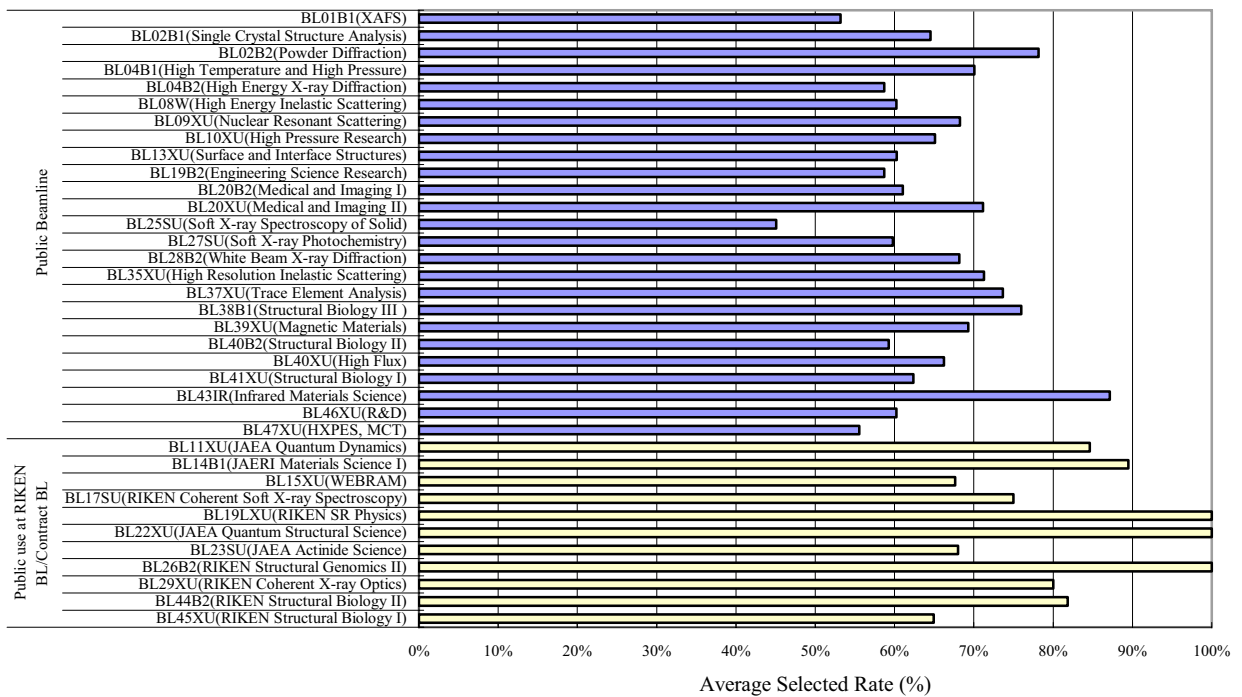


Figure 4-2 Selected ratio for each beamline (2003A-2005B)

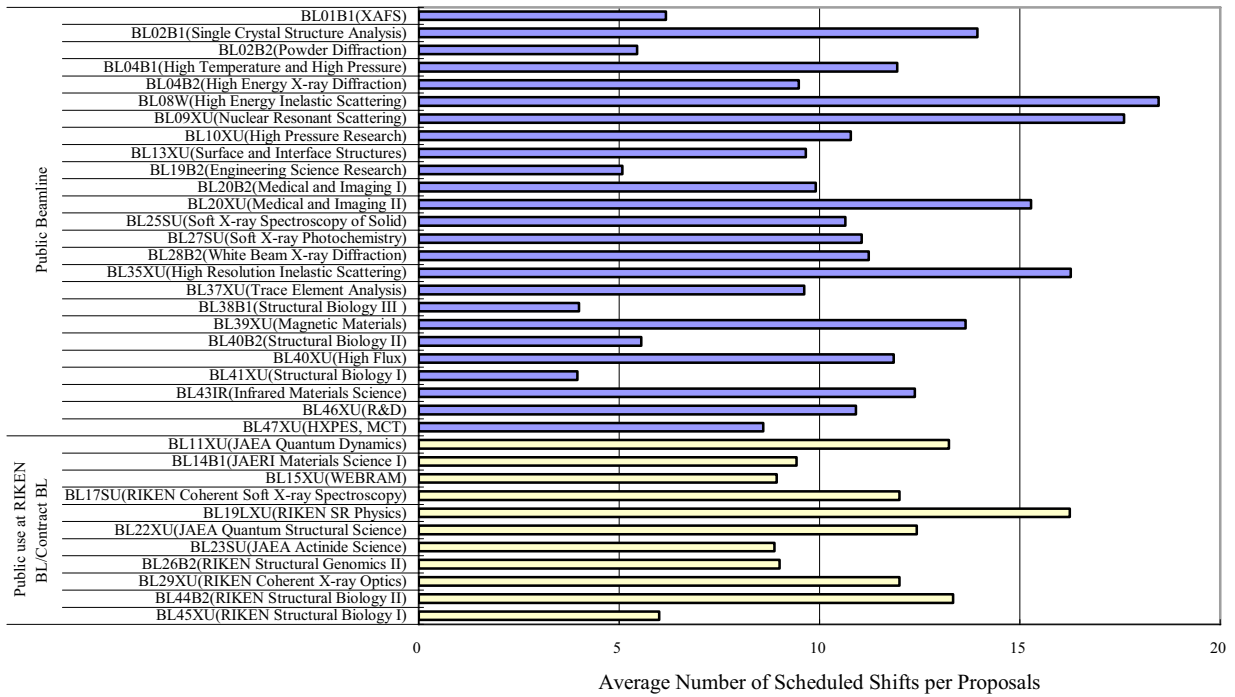


Figure 4-3 Average of scheduled shifts per proposal (2003A-2005B)

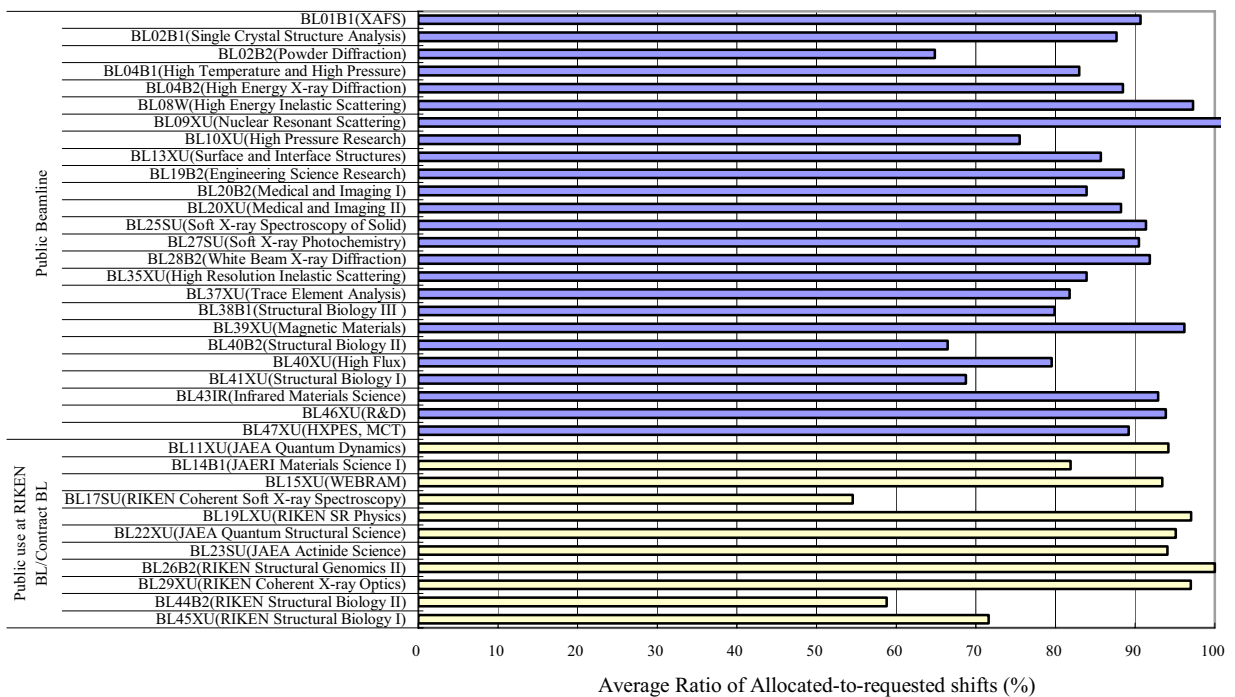


Figure 4-4 Average ratio of allocated-to-requested shifts (2003A-2005B)