# Chapter 4 User Operations

JASRI announces a call for proposals from users twice a year and accepts an urgent proposal through the year [see Table 4-1 and Figures 4-1～4-4]. Proposals are submitted to JASRI and are reviewed by the Proposal Review Committee (PRC) and referees. According to the research subject, the review process is conducted by the following sections:

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

Based on review, the PRC select some proposals and allocate beam-time to each selected proposal, and then JASRI authorizes the project leaders to perform their research programs. The programs are valid for a single research term (about six months) except for those of long-term proposals. The long-term proposal allows users a program with six research terms (three years) at the longest [see Table 4-5]. Some beamlines accept one-year long proposals. At the regular PRC meeting, some beam-times for Life Science and Industrial Application are reserved for additional calls which will be announced a few times until next regular call.

JASRI assigns the whole of public beam-times to two types of proposals: general proposals and priority research proposals. While the general proposals are open to every research field and every user, the priority research proposals are to some research fields (priority research fields), highly skilled users (power users) [see Table 4-6] and strategic researches that JASRI designated. At present JASRI accepts proposals from users in the following priority research fields:

1. Nanotechnology-related research under the Nanotechnology Researchers Network Project of MEXT [see Table 4-2]
2. Protein 500 subprogram under the Protein 3000 Project of MEXT [see Table 4-3]
3. Industrial applications (Trial Use Program) [see Table 4-4]

Most of the proposals belong to the non-proprietary research, in which the project leader is required to publish the details of experiment, results and all of information obtained by the experiment. As opposed to this, JASRI accepts a proposal for proprietary research. Paying a charge for using the facility, a project leader and his/her institution can own an experiment, i.e. they do not have to publish the experimental results. Ninety five proprietary researches have been carried out by 2003B.

Table 4-1 Number of submitted (Subm.) / 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 | | | 2001A | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Beamline | Subm. | Sel. | Done | Subm. | Sel. | Done | Subm. | Sel. | Done | Subm. | Sel. | Done | Subm. | Sel. | Done | Subm. | Sel. | Done | Subm. | Sel. | non-subm. | Done |
| Public Beamline | BL01B1 | 23 | 16 | 15 | 43 | 27 | 27 | 47 | 34 | 34 | 66 | 23 | 23 | 53 | 46 | 46 | 54 | 33 | 33 | 45 | 37 | | 37 |
| | BL02B1 | 34 | 17 | 16 | 32 | 28 | 28 | 34 | 23 | 22 | 36 | 15 | 15 | 33 | 17 | 16 | 28 | 14 | 14 | 21 | 18 | | 17 |
| | BL02B2 | | | | | | | | | | 6 | 4 | 4 | 29 | 24 | 24 | 47 | 29 | 29 | 45 | 33 | | 33 |
| | BL04B1 | 15 | 15 | 10 | 29 | 28 | 28 | 34 | 22 | 22 | 28 | 17 | 17 | 27 | 22 | 22 | 30 | 18 | 18 | 30 | 24 | 1 | 25 |
| | BL04B2 | | | | | | | | | | 7 | 6 | 6 | 21 | 20 | 20 | 25 | 17 | 17 | 20 | 18 | 1 | 19 |
| | BL08W | 5 | 4 | 3 | 10 | 7 | 7 | 17 | 11 | 11 | 19 | 12 | 10 | 19 | 12 | 11 | 19 | 11 | 11 | 20 | 17 | | 15 |
| | BL09XU | 25 | 23 | 8 | 36 | 19 | 19 | 44 | 19 | 17 | 32 | 10 | 10 | 35 | 17 | 14 | 24 | 12 | 12 | 24 | 17 | 1 | 18 |
| | BL10XU | 16 | 6 | 5 | 25 | 21 | 21 | 37 | 27 | 27 | 38 | 19 | 19 | 26 | 22 | 13 | 38 | 20 | 17 | 29 | 25 | | 25 |
| | BL13XU | | | | | | | | | | | | | | | | | | | | | | |
| | BL19B2 | | | | | | | | | | | | | | | | | | | | | | |
| | BL20B2 | | | | | | | | | | 11 | 9 | 9 | 24 | 20 | 20 | 36 | 26 | 25 | 40 | 27 | | 26 |
| | BL20XU | | | | | | | | | | | | | | | | | | | | | | |
| | BL25SU | 20 | 11 | 0 | 6 | 6 | 14 | 20 | 12 | 12 | 24 | 15 | 15 | 27 | 18 | 18 | 31 | 17 | 17 | 27 | 21 | | 21 |
| | BL27SU | 4 | 2 | 1 | 6 | 5 | 6 | 15 | 9 | 9 | 14 | 10 | 10 | 12 | 12 | 12 | 13 | 12 | 12 | 24 | 17 | | 17 |
| | BL28B2 | | | | | | | | | | 1 | 1 | 1 | 12 | 11 | 11 | 18 | 14 | 14 | 11 | 11 | | 11 |
| | BL35XU | | | | | | | | | | | | | | | | | | | | | | |
| | BL37XU | | | | | | | | | | | | | | | | | | | | | | |
| | BL38B1 | | | | | | | | | | | | | | | | | | | | | | |
| | BL39XU | 16 | 13 | 12 | 25 | 19 | 19 | 36 | 20 | 20 | 31 | 17 | 17 | 39 | 21 | 21 | 41 | 15 | 15 | 31 | 18 | 1 | 19 |
| | BL40B2 | | | | | | | | | | 13 | 10 | 10 | 29 | 28 | 28 | 51 | 47 | 41 | 59 | 58 | | 57 |
| | BL40XU | | | | | | | | | | | | | 13 | 10 | 10 | 11 | 11 | 11 | 13 | 11 | | 11 |
| | BL41XU | 36 | 22 | 20 | 60 | 39 | 39 | 82 | 65 | 64 | 70 | 53 | 52 | 56 | 47 | 45 | 71 | 50 | 47 | 67 | 63 | | 61 |
| | BL43IR | | | | | | | | | | | | | 12 | 12 | 12 | 20 | 18 | 18 | 30 | 25 | | 25 |
| | BL46XU | | | | | | | 1 | 1 | 1 | | | | 1 | 1 | | 3 | 3 | 3 | 8 | 5 | | 5 |
| | BL47XU | 1 | | | 7 | 7 | 7 | 13 | 10 | 9 | 8 | 5 | 4 | 7 | 7 | 7 | 16 | 8 | 8 | 10 | 8 | | 8 |
| | any | 2 | | | | | | | | | | | | | | | | | | | | | |
| | multi | | | | | | | | | | | | | | | | | | | | | | |
| | Sub Total | 197 | 129 | 90 | 279 | 206 | 215 | 380 | 253 | 248 | 404 | 226 | 222 | 475 | 367 | 350 | 576 | 375 | 362 | 554 | 453 | 4 | 450 |
| JAERI and RIKEN BL | BL11XU | | | | | | | | | 1 | | | | | | | 10 | 5 | 5 | 5 | 5 | | 5 |
| | BL14B1 | | | | 3 | 3 | 3 | 9 | 8 | 6 | 6 | 6 | 4 | 5 | 5 | 5 | 6 | 5 | 5 | 6 | 4 | | 4 |
| | BL19LXU | | | | | | | | | | | | | | | | | | | | | | |
| | BL23SU | | | | | | | 2 | 2 | 2 | 4 | 2 | 2 | 4 | 4 | 3 | 1 | 1 | 1 | 0 | 0 | | |
| | BL29XU | | | | | | | | | 1 | | | | | | | | | | | | | |
| | BL44B2 | | | | 10 | 9 | 9 | 4 | 3 | 3 | 6 | 4 | 4 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | | 1 |
| | BL45XU | 10 | 5 | 4 | 9 | 7 | 7 | 22 | 13 | 13 | 15 | 10 | 10 | 6 | 6 | 6 | 10 | 9 | 9 | 14 | 14 | | 14 |
| | Sub Total | 10 | 5 | 4 | 22 | 19 | 19 | 37 | 26 | 26 | 31 | 22 | 20 | 16 | 16 | 15 | 30 | 21 | 21 | 26 | 24 | 0 | 24 |
| | BL15XU | | | | | | | | | | | | | | | | | | | | | | |
| | Total | 207 | 134 | 94 | 301 | 225 | 234 | 417 | 279 | 274 | 435 | 248 | 242 | 491 | 383 | 365 | 606 | 396 | 383 | 580 | 477 | 4 | 474 |

| | Research Term | 2001B | | | | 2002A | | | | 2002B | | | | 2003A | | | | 2003B | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 37 | 29 | | 29 | 36 | 30 | | 29 | 52 | 24 | | 23 | 44 | 36 | | 36 | 64 | 31 | | 30 |
| | BL02B1 | 32 | 13 | | 13 | 36 | 21 | | 20 | 37 | 14 | | 14 | 16 | 8 | 10 | 18 | 23 | 12 | 1 | 13 |
| | BL02B2 | 51 | 34 | | 34 | 51 | 39 | | 38 | 50 | 34 | | 34 | 49 | 38 | 1 | 38 | 41 | 32 | 2 | 32 |
| | BL04B1 | 22 | 19 | 1 | 20 | 22 | 19 | | 13 | 25 | 18 | | 18 | 22 | 17 | | 17 | 19 | 15 | | 15 |
| | BL04B2 | 37 | 22 | 1 | 23 | 35 | 27 | 1 | 25 | 35 | 19 | 1 | 17 | 33 | 21 | 1 | 22 | 38 | 20 | | 19 |
| | BL08W | 25 | 18 | | 18 | 22 | 17 | | 17 | 12 | 12 | 1 | 13 | 13 | 11 | 1 | 12 | 13 | 8 | 2 | 10 |
| | BL09XU | 21 | 11 | 1 | 12 | 22 | 15 | 1 | 15 | 17 | 10 | 1 | 11 | 22 | 13 | 1 | 14 | 17 | 11 | 1 | 12 |
| | BL10XU | 26 | 18 | 1 | 19 | 26 | 25 | 1 | 25 | 33 | 19 | 1 | 20 | 27 | 17 | 1 | 17 | 27 | 17 | 2 | 18 |
| | BL13XU | 5 | 5 | | 5 | 13 | 12 | | 11 | 24 | 14 | | 14 | 27 | 20 | | 19 | 29 | 19 | | 19 |
| | BL19B2 | 13 | 8 | | 8 | 68 | 43 | | 40 | 99 | 43 | | 42 | 92 | 38 | | 36 | 62 | 35 | | 32 |
| | BL20B2 | 48 | 33 | | 33 | 39 | 31 | | 30 | 36 | 27 | | 27 | 26 | 23 | | 23 | 42 | 22 | | 22 |
| | BL20XU | 15 | 12 | | 12 | 12 | 11 | | 11 | 8 | 8 | | 8 | 13 | 12 | | 12 | 16 | 11 | | 10 |
| | BL25SU | 28 | 19 | | 18 | 27 | 19 | 1 | 19 | 38 | 17 | 1 | 18 | 33 | 19 | 1 | 20 | 32 | 16 | 1 | 17 |
| | BL27SU | 28 | 19 | | 19 | 30 | 21 | | 20 | 25 | 19 | | 19 | 25 | 22 | | 22 | 31 | 18 | | 18 |
| | BL28B2 | 18 | 15 | | 14 | 22 | 18 | 1 | 18 | 25 | 16 | 1 | 17 | 28 | 22 | 1 | 23 | 26 | 16 | | 16 |
| | BL35XU | 6 | 5 | 1 | 6 | 13 | 10 | 1 | 11 | 18 | 9 | 1 | 10 | 18 | 12 | 1 | 13 | 23 | 13 | | 13 |
| | BL37XU | | | | | 1 | 1 | | 1 | 20 | 13 | 1 | 9 | 26 | 23 | 1 | 24 | 28 | 21 | | 21 |
| | BL38B1 | 16 | 16 | | 16 | 15 | 15 | | 15 | 12 | 9 | | 9 | 9 | 8 | | 8 | 17 | 11 | | 11 |
| | BL39XU | 42 | 21 | 1 | 22 | 37 | 20 | 1 | 21 | 23 | 12 | | 12 | 20 | 14 | | 14 | 22 | 14 | | 14 |
| | BL40B2 | 50 | 43 | | 43 | 46 | 41 | | 40 | 44 | 27 | | 27 | 49 | 36 | | 35 | 69 | 43 | | 37 |
| | BL40XU | 17 | 12 | | 12 | 21 | 18 | | 18 | 20 | 18 | | 18 | 17 | 16 | | 16 | 23 | 21 | 1 | 21 |
| | BL41XU | 50 | 47 | | 47 | 71 | 67 | | 60 | 42 | 27 | | 27 | 58 | 56 | | 54 | 76 | 32 | 1 | 32 |
| | BL43IR | 24 | 24 | | 21 | 23 | 22 | | 0 | 21 | 18 | | 18 | 20 | 20 | | 20 | 20 | 16 | | 16 |
| | BL46XU | 7 | 4 | | 4 | 5 | 4 | | 4 | 7 | 5 | | 5 | 7 | 5 | | 5 | 13 | 7 | | 7 |
| | BL47XU | 9 | 9 | | 9 | 12 | 11 | | 10 | 12 | 12 | | 12 | 13 | 11 | | 10 | 16 | 10 | | 10 |
| | any | | | | | | | | | | | | | | | | | | | | |
| | multi | | | | | 1 | 0 | | | | | | | | | | | | | | |
| | Sub Total | 627 | 456 | 6 | 457 | 706 | 557 | 7 | 511 | 735 | 444 | 8 | 442 | 707 | 518 | 19 | 528 | 787 | 471 | 11 | 465 |
| JAERI and RIKEN BL | BL11XU | 4 | 4 | | 4 | 6 | 6 | | 5 | 1 | 1 | | 1 | 5 | 3 | | 3 | 4 | 4 | | 4 |
| | BL14B1 | 7 | 6 | | 6 | 3 | 3 | | 3 | 6 | 5 | | 5 | 4 | 4 | | 3 | 8 | 7 | 1 | 7 |
| | BL19LXU | 0 | 0 | | | 0 | 0 | | | 0 | 0 | | 0 | 3 | 3 | | 3 | 2 | 2 | | 2 |
| | BL23SU | 5 | 5 | | 5 | 7 | 6 | | 6 | 7 | 5 | | 5 | 5 | 4 | | 4 | 9 | 6 | | 5 |
| | BL29XU | | | | | | | | | | | | | 1 | 1 | | 1 | 0 | 0 | | 0 |
| | BL44B2 | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 3 | 3 | | 2 | 2 | 1 | | 1 |
| | BL45XU | 18 | 15 | | 15 | 20 | 19 | | 19 | 21 | 10 | | 10 | 13 | 10 | | 10 | 14 | 8 | | 8 |
| | Sub Total | 35 | 31 | 0 | 31 | 37 | 35 | 0 | 34 | 36 | 22 | 0 | 22 | 34 | 28 | 0 | 26 | 39 | 28 | 1 | 27 |
| | BL15XU | 0 | 0 | | | 0 | 0 | | | 9 | 7 | | 7 | 9 | 8 | | 8 | 10 | 8 | | 6 |
| | Total | 662 | 487 | 6 | 488 | 743 | 592 | 7 | 545 | 780 | 473 | 8 | 471 | 750 | 554 | 19 | 562 | 836 | 507 | 12 | 498 |

Table 4-2 Number of nanotechnology-related research proposals under the nanotechnology researchers network project of MEXT. Subm.: Submitted; Sel.: Selected; Done: Performed.

| Research Term | 2002B | | | 2003A | | | 2003B | | |
|---|---|---|---|---|---|---|---|---|---|
| Beamline | 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 |
| BL04B2 | | | | 2 | | | 1 | | |
| BL08W | 1 | | | | | | | | |
| BL10XU | | | | 2 | 1 | 1 | 1 | | |
| BL11XU | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 2 |
| BL13XU | 8 | 7 | 7 | 8 | 5 | 5 | 14 | 5 | 5 |
| BL14B1 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 5 | 4 |
| BL15XU | 9 | 7 | 7 | 7 | 7 | 7 | 10 | 7 | 6 |
| BL20XU | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | |
| BL23SU | 4 | 3 | 3 | 3 | 3 | 3 | 5 | 4 | 3 |
| BL25SU | 16 | 8 | 8 | 13 | 9 | 9 | 15 | 6 | 6 |
| BL27SU | 6 | 5 | 5 | 5 | 4 | 4 | 13 | 5 | 5 |
| BL28B2 | | | | 1 | | | | | |
| BL37XU | 6 | 4 | 1 | 10 | 8 | 8 | 11 | 6 | 6 |
| BL38B1 | 1 | | | 1 | | | | | |
| BL39XU | 8 | 5 | 5 | 7 | 5 | 5 | 9 | 3 | 3 |
| BL40B2 | | | | | | | 1 | | |
| BL43IR | | | | 1 | | | 2 | | |
| BL46XU | | | | 2 | | | | | |
| BL47XU | 5 | 3 | 3 | 4 | 2 | 2 | 4 | 3 | 3 |
| Total | 91 | 60 | 57 | 92 | 60 | 60 | 114 | 54 | 51 |

Table 4-3 Performed proposals for the protein 500 subprogram under the protein 3000 project of MEXT.

| Research Term | 2002B | 2003A | 2003B |
|---|---|---|---|
| BL38B1 | 18 | 34 | 24 |
| BL40B2 | 21 | 18 | 10 |
| BL41XU | 30 | 20 | 17 |
| Total | 69 | 72 | 51 |

Table 4-4 Number of trial use program proposals. At 2001B and 2002A, these proposals were selected from general proposals. Subm.: Submitted; Sel.: Selected; Done: Performed.

| Research Term | 2001B | 2002A | 2003A | | | 2003B | | |
|---|---|---|---|---|---|---|---|---|
| Beamline | designate | designate | Subm. | Sel. | Done | Subm. | Sel. | Done |
| BL01B1 | 1 | 1 | | | | 4 | 4 | 4 |
| BL02B1 | | 1 | | | | | | |
| BL02B2 | | 2 | | | | | | |
| BL09XU | | 1 | | | | | | |
| BL19B2 | 2 | 14 | 17 | 14 | 14 | 37 | 17 | 15 |
| BL20XU | | | | | | 1 | | |
| BL28B2 | | | | | | 1 | 1 | 1 |
| BL46XU | | | | | | 5 | 3 | 3 |
| Total | 3 | 19 | 17 | 14 | 14 | 48 | 25 | 23 |

Table 4-5 Number of long-term proposals.

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

Table 4-6 Power user proposals.

| Designated Power Users (Leader) | Research Term | 2003A | 2003B |
|---|---|---|---|
| | beamline | beamtime | beamtime(shifts) |
| K. Toriumi | BL02B1 | 0 | 51 |
| Y. Kuroiwa | BL02B2 | 0 | 36 |
| A. Koizumi | BL08W | 0 | 24 |
| M. Seto | BL09XU | 0 | 42 |
| Y. Tatsumi | BL10XU | 0 | 0 |

*All power users did not allocated beamtime at 2003A, however, they supported other users.*

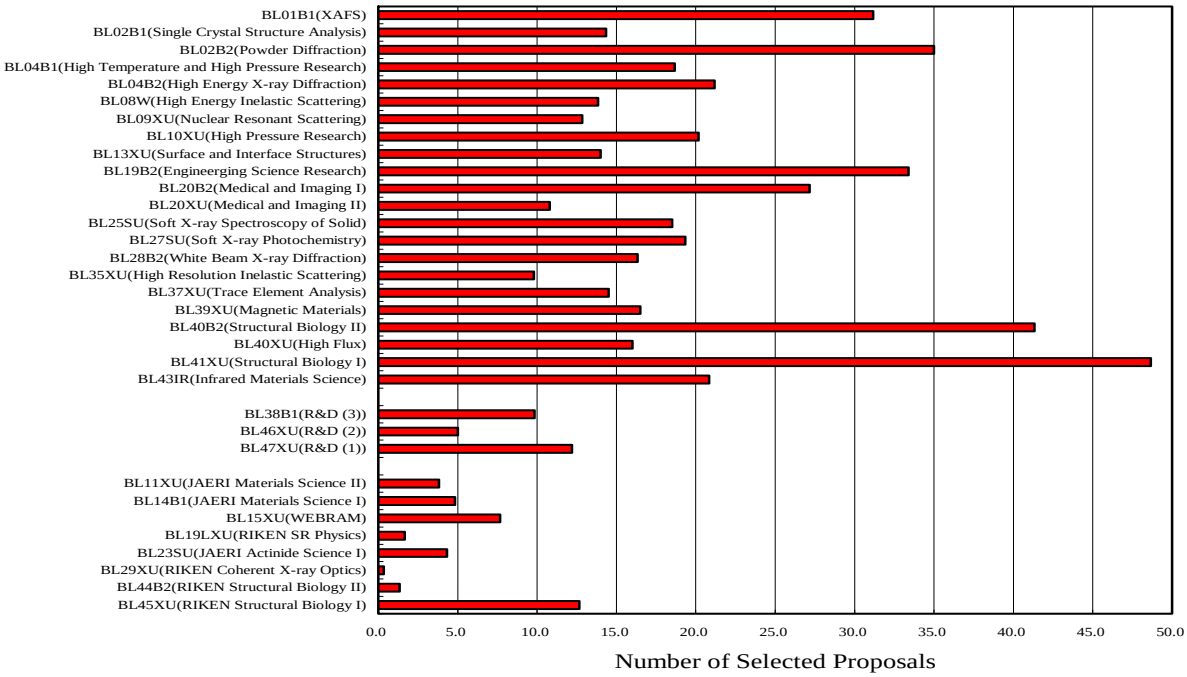


Figure 4-1 Average number of selected proposals (2001A-2003B). Three R&D beamlines (BL38B1, BL46XU, BL47XU) provide ～30% of SR available beamtime to public users.

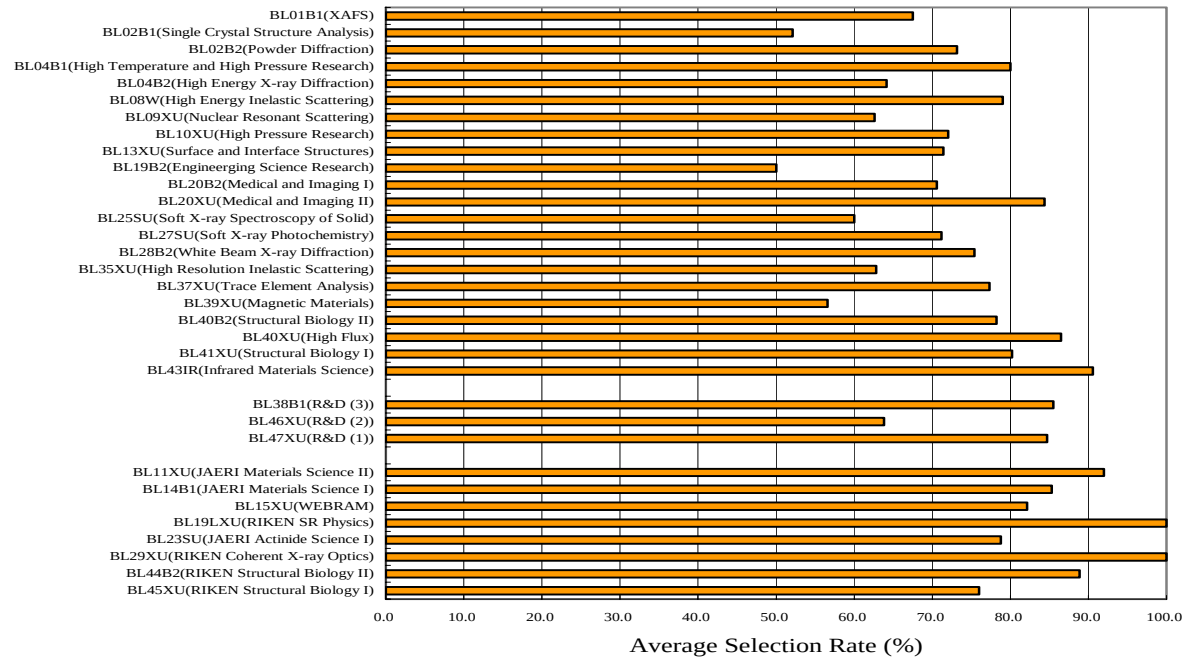


Figure 4-2 Selection rate for each beamline (2001A-2003B).

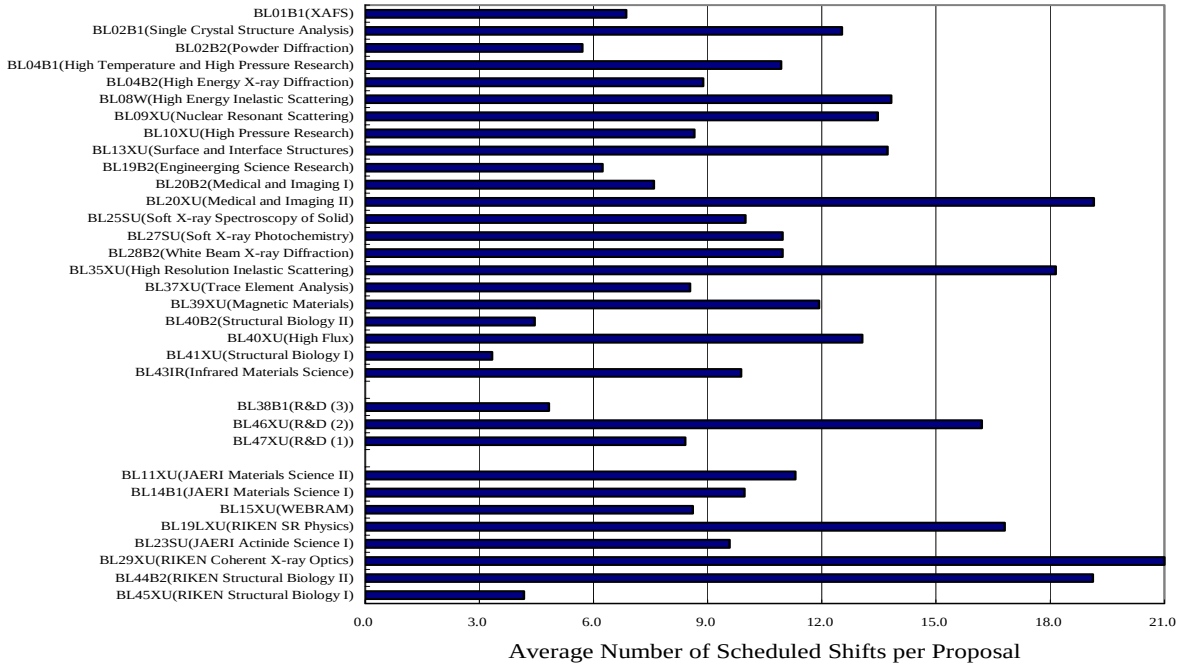


Figure 4-3 Average of scheduled shifts per proposal (2001A-2003B).

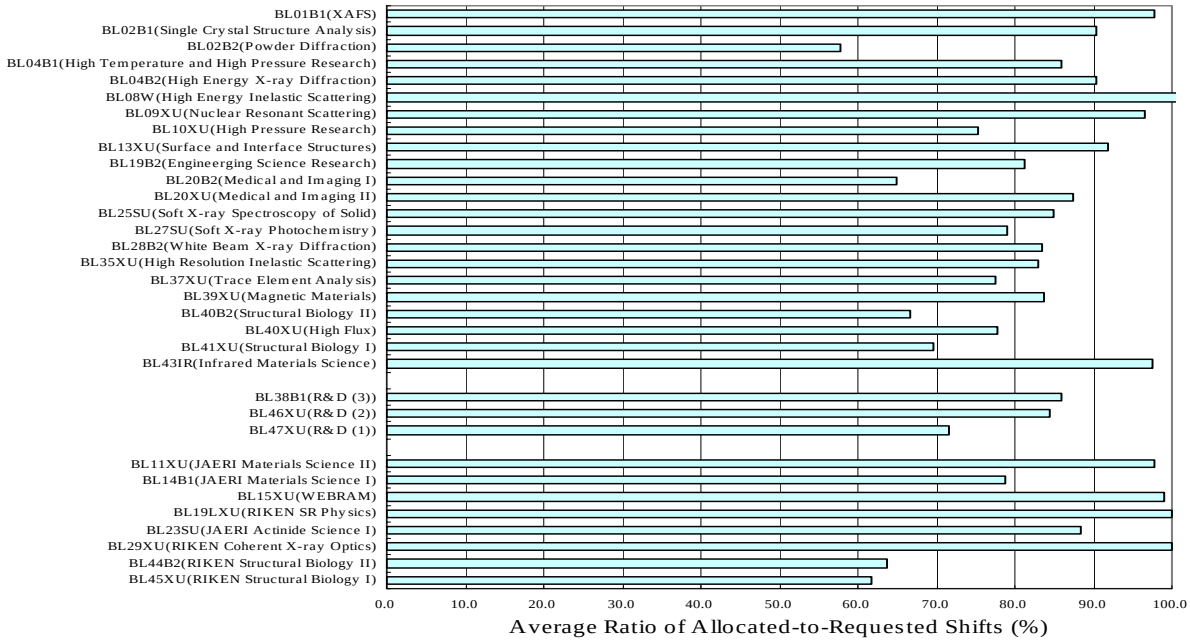


Figure 4-4 Average ratio of allocated-to-requested shifts (2001A-2003B).