SPring-8

I. Introduction

SPring-8 was stably operated throughout FY2024 achieving a total accelerator complex operation time of 5187.1 h, user beam time of 4416.9 h, and a total downtime of 21.6 h. SPring-8 completed all its operations by mid-February 2025.

Concerning the contract beamlines, there were interim review and extend review conducted for Laser-Electron Photon II (BL31LEP, Research Center for Nuclear Physics, Osaka University), and Macromolecular Assemblies (BL44XU, Institute for Protein Research, Osaka University), respectively. As a result, the projects were authorized to continue. Toyota (BL33XU, Toyota Central R&D Labs., Inc.) also received a review, and their proposal for the next term was approved. Post-evaluations of Hyogo BM (BL08B2, Hyogo Prefecture), Hyogo ID (BL24XU, Hyogo Prefecture), and Advanced Softmaterial (BL03XU, Advanced Softmaterial Beamline Consortium) were also conducted. In addition, concerning Advanced Softmaterial (BL03XU, Advanced Softmaterial Beamline Consortium), its name will change to Analytical Science III (BL03XU, RIKEN BL) due to the expiration of their contract terms on 1st of April.

The Specific Synchrotron Radiation Facility Users Community (SpRUC) was established on March 1, 2025, through the merger of the SPring-8 Users Community (SPRUC) and the NanoTerasu Users Community (NTUC). At present, the number of SPring-8 users is about 13,000, all of whom are members of the SpRUC.

To facilitate dialogue between users and facility staff, it is important for SPring-8 to organize scientific events in collaboration with SPRUC, such as the SPring-8 Symposium. In 2024, the SPring-8 Symposium was held both online and on-site on September 5–6, with 365 participants. SPring-8 also facilitates communication between users and industry. The Joint Conference on Industrial Applications of SPring-8 was held in Hyogo Prefecture on September 10–11, with 216 participants. Moreover, as part of its continuous effort towards fostering human resources in synchrotron sciences, SPring-8 organized the 24th SPring-8 Summer School with 84 graduate students nationwide. Furthermore, SPring-8 and SPRUC organized the 8th SPring-8 Autumn School with 67 participants, which included university students and corporate researchers.

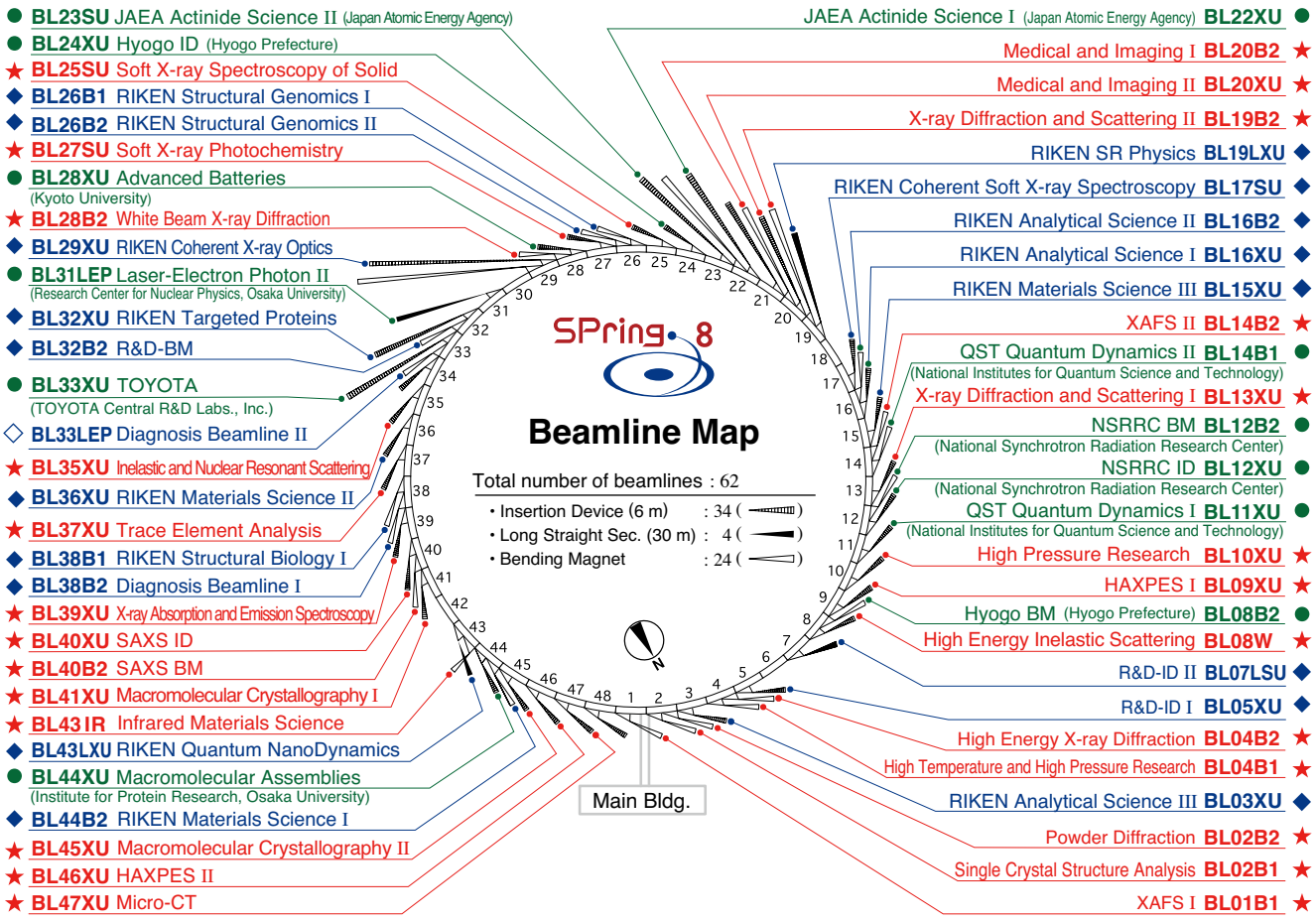
II. Beamlines

The SPring-8 storage ring can accommodate up to 62 beamlines: 34 insertion devices, 4 long undulators, and 24 bending magnets. At present, 56 beamlines are in operation, covering a wide variety of research fields involving synchrotron radiation science and technology. The beamlines are classified into the following three types.

(1) Public Beamlines (26 beamlines operating),
(2) Contract Beamlines (12 beamlines operating), and
(3) RIKEN Beamlines (18 beamlines operating).

There are now 26 public beamlines in full operation. The beamlines that have been proposed and constructed by external organizations, such as universities, research institutes, private companies and consortiums, are called contract beamlines and are used exclusively by the contractors for their own research purposes. At present, 10 contract beamlines are in operation. The beamlines constructed by RIKEN or transferred to RIKEN, except for public beamlines, are called RIKEN beamlines and are mainly used for RIKEN's own research activities, with partial availability for public use. RIKEN is now operating 18 beamlines.

To illustrate the beamline portfolio of SPring-8, a beamline map is shown in Fig. 1 together with the beamline classification. The research fields of each beamline are presented in Table 1.



BL: Beamline
B1, B2: Bending Magnets
XU: X-ray Undulator
SU: Soft X-ray Undulator
W: Wiggler
NSRRC: National Synchrotron Radiation Research Center, Taiwan
IR: Infrared Radiation
LEP: Laser-Electron Photon
LXU: Long-length X-ray Undulator
LSU: Long-length Soft X-ray Undulator

★ : Public Beamlines
● : Contract Beamlines
◆ : RIKEN Beamlines
◇ : Planned or Under Construction

Fig. 1. Beamline map as of April 2025.

Table 1. List of beamlines

BL #	Beamline Name	(Public Use) or (First Beam)	Areas of Research and Available Techniques
★ Public Beamlines as of April 2025			
BL01B1	XAFS I	(Oct. 1997)	Wide energy range (3.8–113 keV), XAFS of dilute systems and thin films, time-resolved XAFS by quick scan (time-resolved QXAFS), depth-resolved XAFS, XAFS at low and high temperatures, simultaneous XAFS and XRD measurements, simultaneous XAFS and IR measurements.
BL02B1	Single Crystal Structural Analysis	(Oct. 1997)	Charge density study using high energy X-ray, *in situ* single crystal experiments, microcrystal structure analysis.
BL02B2	Powder Diffraction	(Sep. 1999)	Charge density study from powder diffraction, structural phase transition, *ab initio* structure determination from powder diffraction, crystal structure refinement by Rietveld method, *in situ* powder diffraction experiment under gas and vapor adsorption/desorption.
BL04B1	High Temperature and High Pressure Research	(Oct. 1997)	X-ray diffraction measurements and radiography under extreme conditions using large-volume press.
BL04B2	High Energy X-ray Diffraction	(Sep. 1999)	Structural analysis of glass, liquid, and amorphous materials.
BL08W	High Energy Inelastic Scattering	(Oct. 1997)	Magnetic Compton scattering, high-resolution Compton scattering, Compton scattering imaging, high-energy X-ray scattering, high-energy X-ray fluorescence analysis (XRF), time-resolved pair distribution function analysis (PDF).
BL09XU	HAXPES I	(Oct. 1997)	Resonant hard X-ray photoelectron spectroscopy (HAXPES), polarization-dependent HAXPES using diamond phase retarder, depth analysis of electron state, materials science, and applied materials science.
BL10XU	High Pressure Research	(Oct. 1997)	Crystal structure analysis under high pressure using diamond-anvil cells, *in situ*/*operando* observation of phase transition and compression behavior under extreme conditions, material sciences under extreme conditions, high pressure Earth and planetary science.
BL13XU	X-ray Diffraction and Scattering I	(Sep. 2001)	X-ray diffraction and reflectivity measurements, atomic-scale structural analysis of crystal surfaces and interfaces, ultrathin films, and nanostructures, residual stress measurement, time-resolved X-ray diffraction, *in situ* process observation using X-ray diffraction, *operando* X-ray diffraction, high-resolution powder X-ray diffraction and X-ray total scattering, structural refinement using Rietveld analysis, *in situ*/*operando* powder X-ray diffraction, time-resolved powder X-ray diffraction, analysis of local structures using nanodiffraction.
BL14B2	XAFS II	(Sep. 2007)	X-ray imaging, XAFS in a wide energy range (3.8–72 keV), XAFS of dilute systems and thin films, time-resolved XAFS by quick scan (time-resolved QXAFS), XAFS at low and high temperatures, simultaneous XAFS and XRD measurements.
BL19B2	X-ray Diffraction and Scattering II	(Nov. 2001)	Residual stress measurement, structural analysis of thin film, surface and interface, powder X-ray diffraction, X-ray topography, ultrasmall-angle X-ray scattering.
BL20B2	Medical and Imaging I	(Sep. 1999)	Micro-radiography, micro-angiography, micro-tomography, and refraction-contrast imaging are the mainly used techniques. BL20B2 is also applicable to small-animal experiments for medical research. Research and development of basic techniques for evaluation of optical devices and X-ray imaging.
BL20XU	Medical and Imaging II	(Sep. 2001)	X-ray micro-/nano-imaging: micro-tomography (micro-CT), nano-CT (15–37.7 keV), refraction/phase contrast imaging, X-ray diffraction tomography (XRD-CT), microbeam/scanning X-ray microscope, research and development of X-ray optics and optical elements, coherent X-ray optics, ultrasmall-angle X-ray scattering (USAXS, 23 keV).
BL25SU	Soft X-ray Spectroscopy of Solid	(Apr. 1998)	Research on electronic structures by soft X-ray core-level photoemission spectroscopy (XPS) and angle-resolved photoemission spectroscopy (ARPES), research on magnetic states by soft X-ray magnetic circular dichroism (MCD) of soft X-ray core-level absorption (XAS), analysis of surface atomic arrangement by photoelectron diffraction (PED), analysis of the nano-scale chemical states using low-energy/photoemission electron microscope (SPELEEM).
BL27SU	Soft X-ray Photochemistry	(May 1998)	Soft X-ray absorption spectroscopy of dilute samples in partial fluorescence yield mode, surface and interface analysis using depth-resolved soft X-ray absorption spectroscopy, soft X-ray absorption spectroscopy under ambient atmospheric pressure, spectroscopy using soft X-ray microbeam, observation of electron state in solids by soft X-ray emission spectroscopy.
BL28B2	White Beam X-ray Diffraction	(Sep. 1999)	White X-ray diffraction: X-ray topography, energy-dispersive strain measurement, high energy (~200 keV) X-ray microtomography, high-speed X-ray imaging.
BL35XU	Inelastic and Nuclear Resonant Scattering	(Sep. 2001)	Phonons in solids and atomic dynamics in disordered materials by inelastic X-ray scattering, atomic and molecular dynamics by nuclear resonant inelastic scattering and quasi-elastic scattering, synchrotron-radiation-based Mössbauer spectroscopy, nuclear excitation.
BL37XU	Trace Element Analysis	(Nov. 2002)	X-ray microbeam/nano-beam spectrochemical analysis, X-ray spectroscopic imaging, ultratrace-element analysis, high-energy X-ray fluorescence analysis. Projection/scanning/imaging XAFS microscopy, high brightness XAFS, coherent diffraction imaging XAFS microscopy.
BL39XU	X-ray Absorption and Emission Spectrosocpy	(Oct. 1997)	X-ray magnetic circular dichroism (XMCD) spectroscopy and element-specific magnetometry (ESM), XAFS and XMCD spectroscopy under extreme conditions (high pressure, high magnetic field, and low/high temperature), XAFS and XMCD spectroscopy using micro/nanobeam and variable X-ray polarization (horizontally/perpendicularly linear or circular), scanning XAFS and XMCD microscopy using micro/nanobeam, X-ray emission spectroscopy (XES) and high-energy resolution fluorescence detected (HERFD) XAFS spectroscopy.
BL40XU	SAXS ID	(Apr. 2000)	Fast time-resolved X-ray diffraction and scattering experiments, X-ray photon correlation spectroscopy, microbeam X-ray diffraction and scattering experiments.
BL40B2	SAXS BM	(Sep. 1999)	Small-angle X-ray scattering (SAXS).
BL41XU	Macromolecular Crystallography I	(Oct. 1997)	Macromolecular crystallography, micro-crystallography, ultrahigh resolution structural analysis.
BL43IR	Infrared Materials Science	(Apr. 2000)	Infrared microspectroscopy.
BL45XU	Macromolecular Crystallography II	(Apr. 2019)	Macromolecular crystallography, micro-crystallography, automation and high throughput data collection for protein crystallography.
BL46XU	HAXPES II	(Nov. 2000)	Hard X-ray photoemission spectroscopy, ambient pressure hard X-ray photoemission spectroscopy.
BL47XU	Micro-CT	(Oct. 1997)	X-ray micro-/nano-imaging including CT (7–15 keV), refraction/phase contrast imaging, high speed X-ray imaging, microbeam/scanning X-ray microscope. User on-demand experiments using their own instruments.

BL #	Beamline Name	(Public Use) or (First Beam)	Areas of Research and Available Techniques
● Contract Beamlines as of April 2025			
BL08B2	**Hyogo BM** (Hyogo Prefecture)	(Jun. 2005)	Small angle X-ray scattering, X-ray imaging, X-ray computed tomography, X-ray topography.
BL11XU	**QST Quantum Dynamics I** (National Institutes for Quantum Science and Technology)	(Oct. 1998)	Mössbauer spectroscopy, resonant inelastic X-ray scattering, X-ray emission spectroscopy, surface X-ray diffraction (*in situ* studies on crystal growth of III-V group semiconductor), coherent X-ray diffraction imaging.
BL12B2	**NSRRC BM** (National Synchrotron Rad. Res. Center)	(Oct. 2000)	X-ray absorption spectroscopy, powder X-ray diffraction.
BL12XU	**NSRRC ID** (National Synchrotron Rad. Res. Center)	(Dec. 2001)	Non-resonant or resonant inelastic X-ray scattering, hard X-ray photoemission spectroscopy.
BL14B1	**QST Quantum Dynamics II** (National Institutes for Quantum Science and Technology)	(Dec. 1997)	High-temperature and high-pressure X-ray diffraction measurements mainly on hydrogen materials, XAFS for dilute samples, time-resolved energy-dispersive XAFS, irradiation research on biomaterials.
BL22XU	**JAEA Actinide Science I** (Japan Atomic Energy Agency)	(May 2002)	HAXPES, microbeam XAFS, residual stress/strain distribution analysis, X-ray imaging, time-resolved X-ray diffraction, surface X-ray diffraction, high-energy X-ray diffraction, high-pressure science.
BL23SU	**JAEA Actinide Science II** (Japan Atomic Energy Agency)	(Feb. 1998)	Surface chemistry with supersonic molecular beam, photoelectron spectroscopy, magnetic circular dichroism, STXM.
BL24XU	**Hyogo ID** (Hyogo Prefecture)	(May 1998)	Imaging microscope, micro-tomography, microbeam X-ray diffraction and bright field X-ray topography for electronic device materials, near-ambient pressure hard X-ray photoelectron spectroscopy.
BL28XU	**Advanced Batteries** (Kyoto University)	(Apr. 2012)	Characterization of rechargeable battery reactions and battery related materials by *operando* X-ray diffraction (XRD), X-ray absorption spectroscopy (XAS), and hard X-ray photoelectron spectroscopy (HAXPES).
BL31LEP	**Laser-Electron Photon II** (RCNP, Osaka University)	(Oct. 2013)	Quark nuclear physics (hadron physics) studied in photon-nucleon and photon-nucleus reactions using high-intensity linearly polarized GeV photon beams from laser-induced Compton scattering; testing detectors using electrons or positrons converted from GeV photons.
BL33XU	**TOYOTA** (Toyota Central R&D Labs., Inc.)	(Apr. 2009)	Time-resolved XAFS. 3DXRD, characterization of industrial materials and devices (e.g., catalysts, lightweight bodies, secondary batteries, fuel cells, and power modules).
BL44XU	**Macromolecular Assemblies** (IPR, Osaka University)	(May 1999)	Crystal structure analysis of biological macromolecular assemblies (e.g., membrane protein complexes, protein complexes, protein-nucleic acid complexes, and viruses).
◆ RIKEN Beamlines as of April 2025			
BL03XU	**Analytical Science III**	(Nov. 2009)	Characterization of materials and products using multiple analytical techniques (e.g., SAXS).
BL05XU	**R&D-ID I**	(Mar. 2004)	R&D of high-energy X-ray optics, instruments, and applications; structural and dynamical research using small and wide angle scattering.
BL07LSU	**R&D-ID II**	(Oct. 2009)	R&D of soft X-ray optics, instruments, and applications.
BL15XU	**RIKEN Materials Science III**	(Oct. 2021)	Advanced diffraction and scattering with high-energy X-rays.
BL16XU	**Analytical Science I**	(Oct. 1998)	Characterization of materials and products using multiple analytical techniques (e.g., multi-axis diffractometer).
BL16B2	**Analytical Science II**	(Oct. 1998)	Characterization of materials and products using multiple analytical techniques (e.g., X-ray digital topography).
BL17SU	**RIKEN Coherent Soft X-ray Spectroscopy**	(Sep. 2003)	High resolution photoemission spectroscopy; soft X-ray emission spectroscopy; soft X-ray diffraction spectroscopy; soft X-ray microspectroscopy.
BL19LXU	**RIKEN SR Physics**	(Oct. 2000)	SR science with highly brilliant X-ray beam.
BL26B1	**RIKEN Structural Genomics I**	(Apr. 2002)	Structural biology research based on single crystal X-ray diffraction.
BL26B2	**RIKEN Structural Genomics II**	(Apr. 2002)	Structural biology research based on single crystal X-ray diffraction.
BL29XU	**RIKEN Coherent X-ray Optics**	(Dec. 1998)	X-ray optics, especially coherent X-ray optics.
BL32XU	**RIKEN Targeted Proteins**	(Oct. 2009)	Protein microcrystallography.
BL32B2	**R&D-BM**	(May 2002)	X-ray computed tomography; X-ray diffraction; X-ray absorption fine structure; R&D of SR instruments.
BL36XU	**RIKEN Materials Science II**	(Mar. 2020)	Time resolved XAFS and X-ray diffraction; 2D/3D scanning XAFS imaging; 3D computed tomography/laminography XAFS imaging; X-ray emission spectroscopy; pink beam experiments.
BL38B1	**RIKEN Structural Biology I**	(Oct. 2000)	Structure study of non-crystalline biological materials using small-angle scattering and diffraction techniques.
BL38B2	**Diagnosis Beamline I**	(Sep. 1999)	Accelerator beam diagnostics.
BL43LXU	**RIKEN Quantum NanoDynamics**	(Oct. 2011)	High resolution inelastic X-ray scattering for investigating atomic and electronic dynamics.
BL44B2	**RIKEN Materials Science I**	(Feb. 1998)	Structural materials science research using powder X-ray diffraction.

III. User Program and Statistics

SPring-8 calls for public use proposals twice a year, in principle. Since 2022B term, nine public beamlines started to invite proposals six times annually, including the beamlines previously intended for industrial application. The submitted proposals are reviewed by the SPring-8 Proposal Review Committee (SPring-8 PRC). Since 1997, SPring-8 has accepted a variety of proposals. For the promotion of research on industrial applications at SPring-8, currently, Industrial Application Proposals account for approximately 16%–20% of the total number of proposals conducted at various public beamlines. There always exist those companies and research institutes that find it difficult to retain specialized staff and to accommodate the need for quick access to SPring-8. To appropriately respond to this circumstance, the SPring-8 Measurement Service is provided. In this framework of service, JASRI staff members perform measurements on behalf of users. It is up to the users whether to come to SPring-8 and be present during the measurements or to simply send their samples to SPring-8. BL28XU has been added to the Measurement Service BL from 2022B. Currently, JASRI has expanded the purview of the SPring-8 Measurement Service to five measurement methods (XAFS, Powder X-ray Diffraction, Small Angle X-ray Scattering, High energy X-ray CT, Hard X-ray Photoemission Spectroscopy). In addition, JASRI provides the Protein Crystallography Automatic Data Collection at Macromolecular Crystallography beamlines. Therefore, users can choose whether to come to SPring-8 and be present during the measurements or to simply send their samples to SPring-8. Since 2022A term, JASRI has started calling for Hour-based use at most public beamlines as part of proprietary time-designated proposals. According to this change, the Feasibility Study Proposals for Industrial Application has been integrated into this proposal program. SPring-8 is developing a remote-operation system that allows users to control experimental instruments from outside to promote remote access. The number of experiments conducted, and the number of user visits at the public and contract beamlines are summarized in Fig. 2. Part of the proposals are for proprietary use, for which refereed reports are not required. Figures 3 to 12 show the information on user programs.

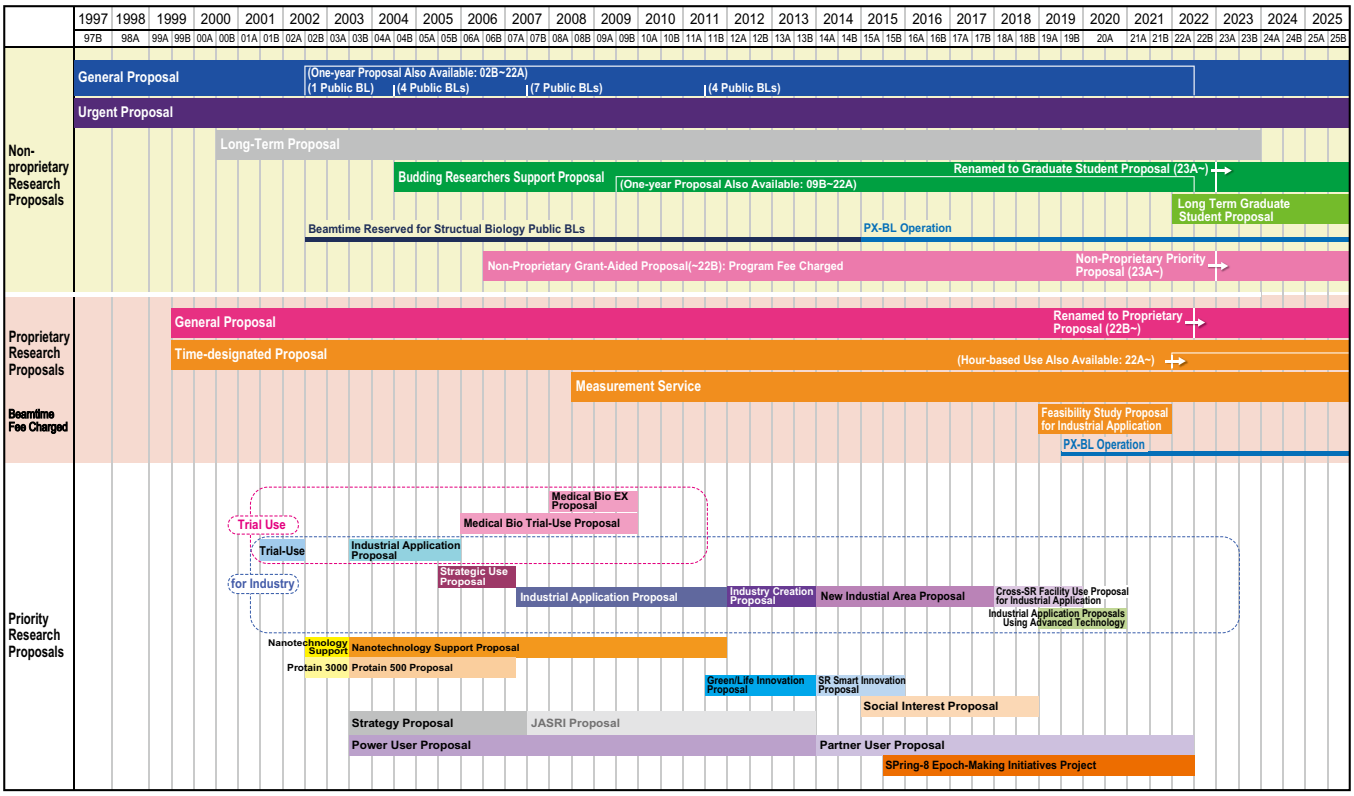


Fig. 2. Categories of proposals for the public beamlines.

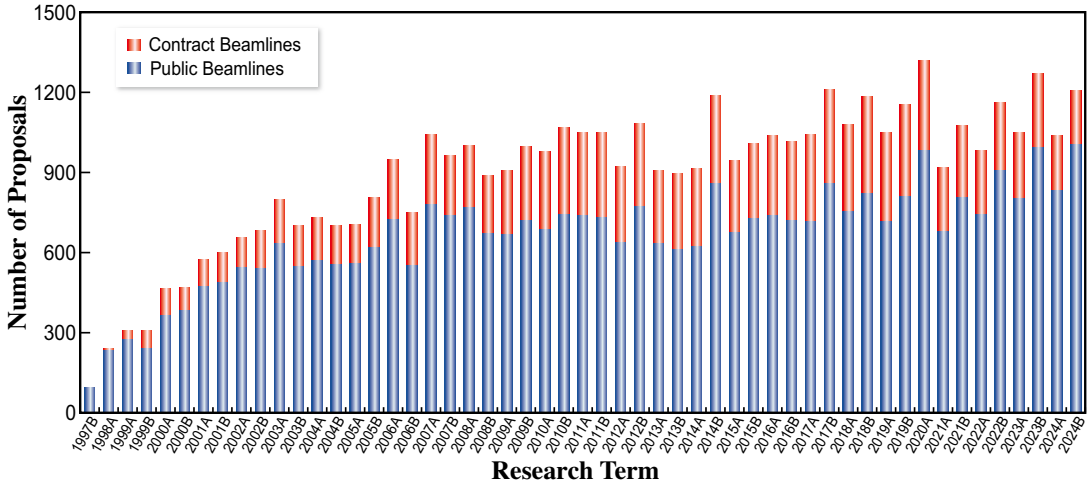


Fig. 3. Numbers of conducted experiments.

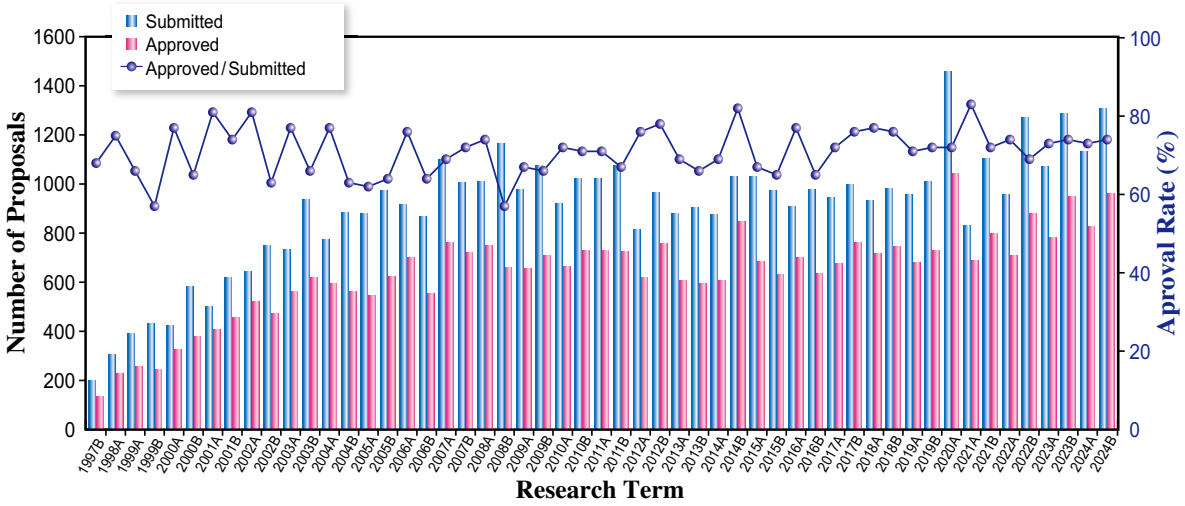


Fig. 4. Numbers of submitted proposals and approved proposals by research term (public beamlines).

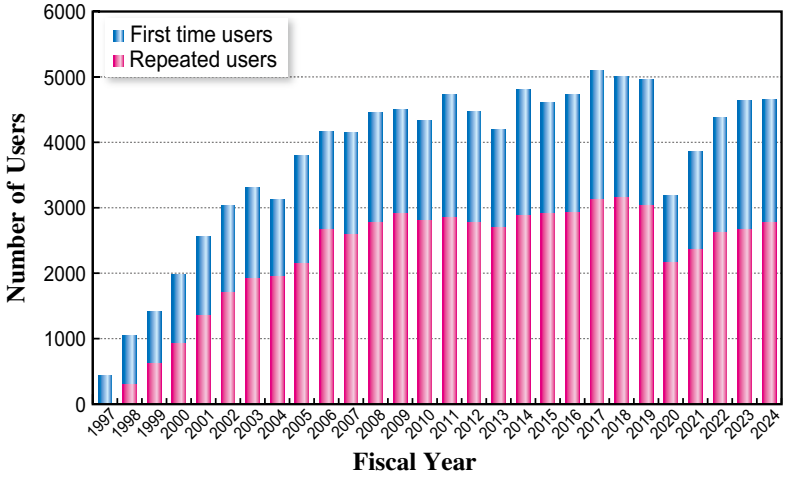


Fig. 5. Numbers of users by fiscal year.

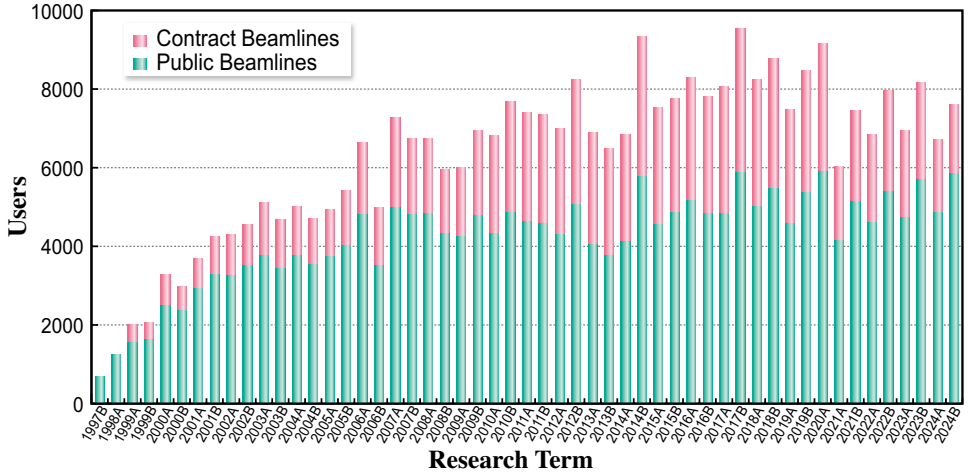


Fig. 6. Numbers of users visits by research term.

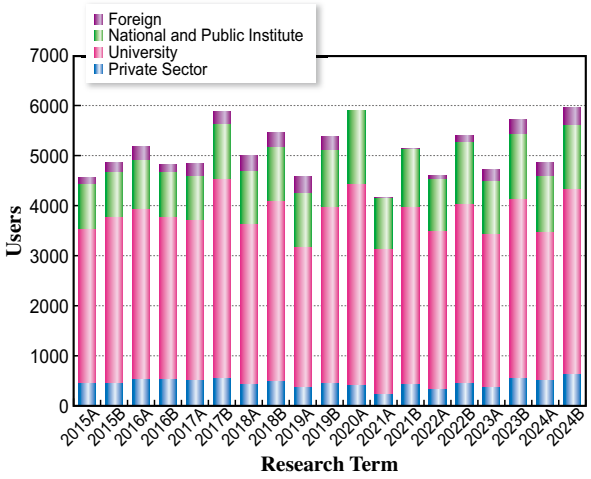


Fig. 7. Numbers of users by affiliation categories (public beamlines).

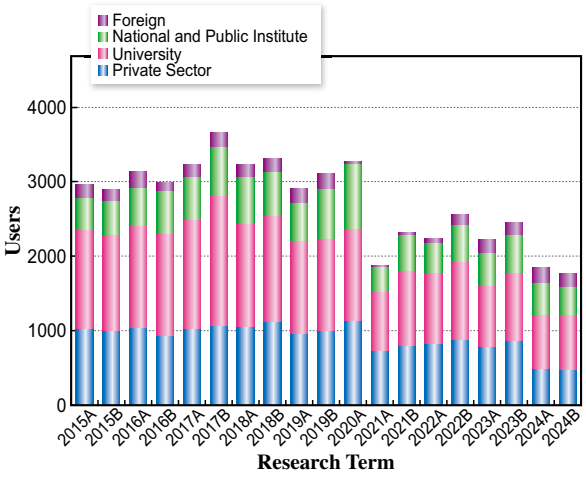


Fig. 8. Numbers of users by affiliation categories (contract beamlines).

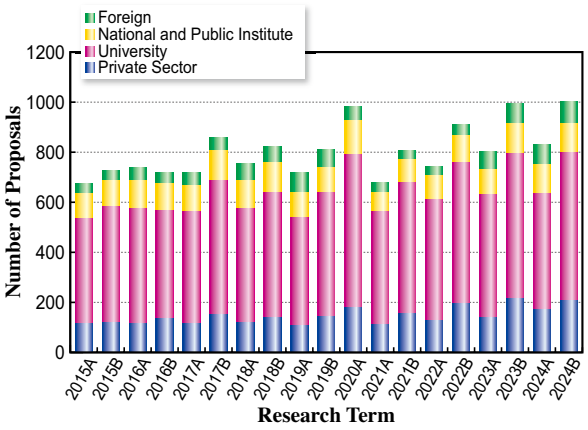


Fig. 9. Numbers of conducted proposals by affiliation categories (public beamlines).

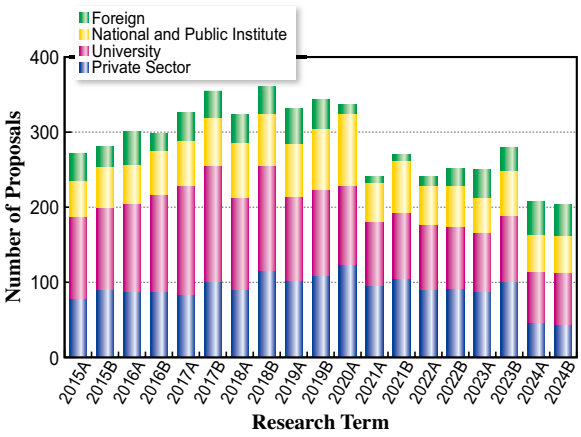


Fig. 10. Numbers of conducted proposals by affiliation categories (contract beamlines).

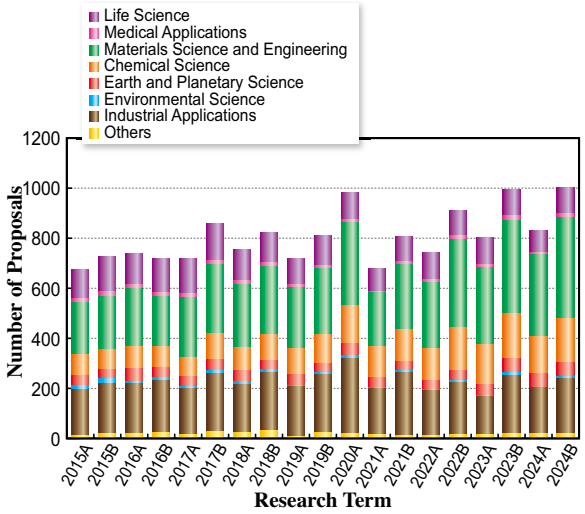


Fig. 11. Numbers of conducted proposals by research area (public beamlines).

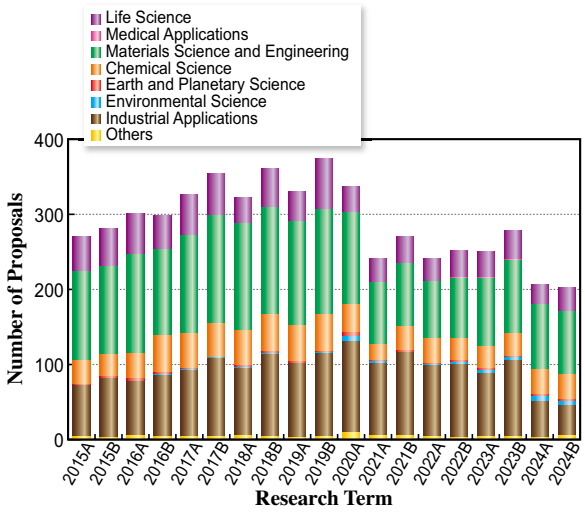


Fig. 12. Numbers of conducted proposals by research area (contract beamlines).

IV. Research Outcome

As of March 2025, the total number of registered refereed papers from SPring-8 and SACLA is 23,474. Figure 13 shows the annual statistics of refereed papers.

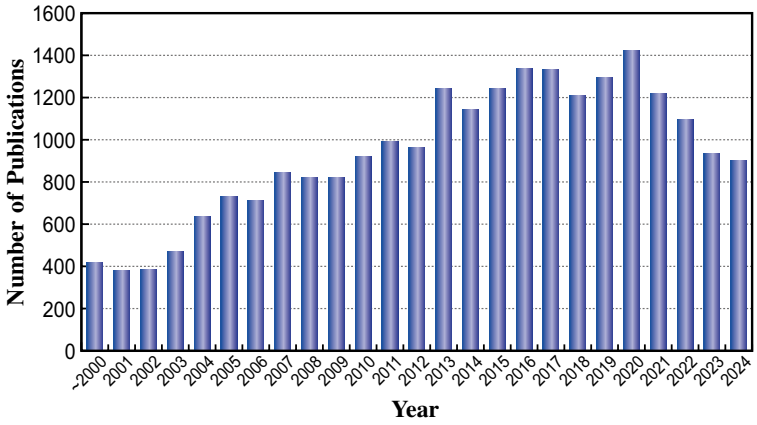


Fig. 13. Number of refereed publications.

V. Research Complex

The facilities of SPring-8, SACLA, and NewSUBARU form the Center of Excellence (COE) on the SPring-8 campus where JASRI, public beamline users, contractors of contract beamlines, RIKEN, and the University of Hyogo work in close cooperation. Thus, a research complex has been formed, where each member has their own role in achieving high-quality results in the field of synchrotron radiation science and technology. The organizational charts of RIKEN and JASRI, which are at the center of this research complex, are shown in Fig. 14 and Fig. 15, respectively.

Fig. 14. RIKEN Harima Campus chart as of April 2025.

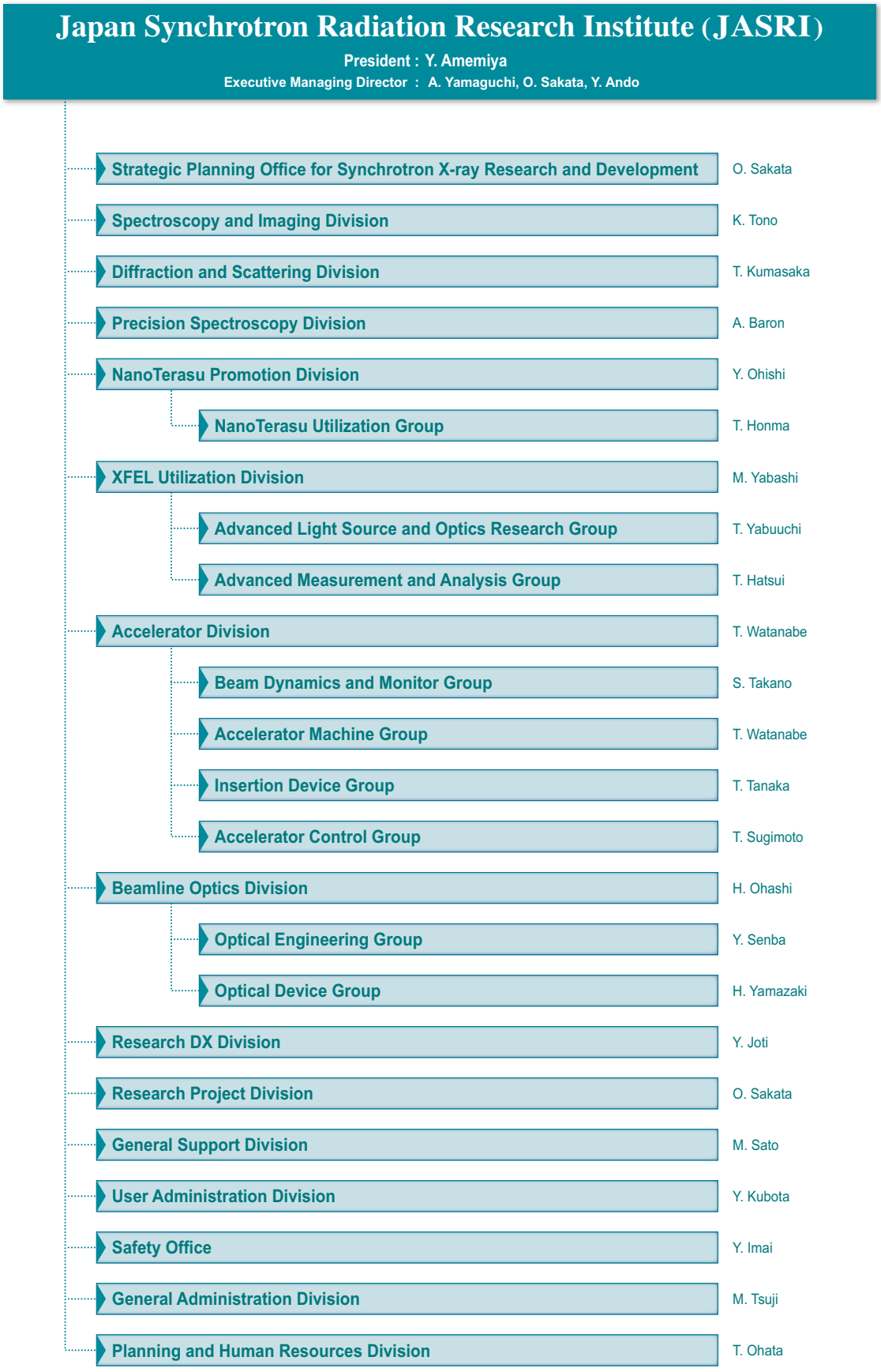


Fig. 15. JASRI chart as of April 2025.

VI. Specific Synchrotron Radiation Facility Users Community (SpRUC)

Chair Akihiko Fujiwara
Kwansei Gakuin University
Editorial Secretary Hiroyuki Asakura
Kindai University

The Specific Synchrotron Radiation Facility Users Community (SpRUC) was established on March 1, 2025, through the merger of the SPring-8 Users Community (SPRUC) and the NanoTerasu Users Community (NTUC). SpRUC comprises all users of SPring-8, SACLA, and NanoTerasu, and includes not only individual members but also representative organizations from 25 institutions, including major universities, national and international research institutes, industrial entities, and beamline consortiums. These members collaborate to discuss strategic directions and future perspectives for advancing the utilization of these facilities.

The SPring-8 Symposium is a significant annual event originally organized by SPRUC. The 2024 symposium was co-hosted by Kyushu University, RIKEN, and JASRI and took place on September 5–6 at Centennial Hall, Kyushu University School of Medicine, with additional live streaming online. The event saw 61 in-person attendees and 143 participants online. The theme of the symposium, "Synchrotron Radiation and FEL for SDGs," aimed to envision the future of next-generation synchrotron radiation and free electron laser science in the context of the Sustainable Development Goals (SDGs). Presentations focused on multi-scale advanced analysis of cutting-edge materials and devices, including semiconductors, catalysts for a hydrogen-based society, and recyclable plastics.

The symposium also featured the 13th SPRUC Young Scientist Award ceremony. This year's recipients were Dr. Kiyofumi Takaba from the University of Vienna, Dr. Yoshifumi Hashikawa from Kyoto University, and Dr. Takumi Nishikubo from the Kanagawa Institute of Industrial Science and Technology. The next SpRUC Symposium is scheduled to be held in Sendai in 2025.

SPRUC supported the "SPring-8 Summer School," held from July 7 to 10, to enhance users' research competencies, and co-hosted the "SPring-8 Autumn School," held from September 1 to 4, in collaboration with JASRI. The SPring-8 Summer School is centered around the practical use of SPring-8 and comprises lectures and hands-on training primarily aimed at master's course graduate students. In contrast, the SPring-8 Autumn School targets a broader audience, including third- and fourth-year undergraduate students, graduate students, and corporate researchers. Notably, it is open to participants who are not registered as radiation workers. SPRUC research groups contributed to the planning and organization of

The 13th SPRUC Young Scientist Award
Prof. A. Nakagawa, Dr. K. Takaba, Dr. Y. Hashikawa, Dr. T. Nishikubo, and Prof. A. Fujiwara

SPring-8 Symposium 2024

lectures for the Autumn School. This year, 67 participants attended the program and engaged in simulated practical training at SPring-8.

SpRUC also hosted the 7th Workshop on Beamlines Upgrade on March 1–2, in collaboration with RIKEN, QST, and JASRI, as in previous years. During the workshop, the teams responsible for beamlines BL04B2, BL39XU, and BL40XU—recently upgraded—shared their current status and presented feedback on their progress. This was followed by in-depth discussions regarding the upcoming SPring-8-II upgrade, focusing on the conceptual design, construction schedule, and the beamline portfolio, including soft and hard X-ray spectroscopy as well as high-energy scattering/diffraction beamlines. The latest developments in ongoing beamline upgrades, equipment innovations, and methodological advances were also shared. Additionally, the current status of NanoTerasu was presented, alongside discussions on its utilization and future prospects.

The seventh-term SPRUC research groups were self-organized within individual research fields, comprising a total of 37 groups. These groups actively convened to exchange ideas and assess the specific needs for beamline upgrades in their respective areas. Notably, most meetings this year were conducted in person rather than online.

Joint general assembly of SPring-8 Users Community (SPRUC) and NanoTerasu Users Community (NTUC)

VII. Outreach Activities

To reach new users in unexplored application fields, SPring-8 holds various serialized seminars named "Workshop on Advanced Techniques and Applications at SPring-8." Representative examples are as follows:

- 105th: Current Status and Future of Protein Structural Biology Research at SPring-8
  September 9, 2024 • Osaka University
- 11th: Joint Workshop for Collaborative Use of Synchrotron Radiation and Neutron Beam
  November 19, 2024 • SPring-8 / February 2, 2025 • J-PARC MLF
- 103rd: Current Status of Silicon Semiconductor Devices and Materials Supporting Their Production and the Use of Synchrotron Radiation
  November 20, 2024 • Meeting Space AP Shinagawa