

Chapter 2 Beamlines

SPring-8 has 49 beamlines in operation for users' experiments as of August 2008. The current beamline lineup is summarized in Tables 2-1 and 2-2, and the details of the beamlines are shown in Appendix A. A beamline map of the SPring-8 storage ring is given in Fig. 2-1.

The SPring-8 beamlines are categorized into three groups according to management: public, contract and RIKEN beamlines. Twenty-six public beamlines are open to general users under JASRI's management, and seven RIKEN beamlines are managed by RIKEN mainly for their own research. Fourteen contract beamlines are funded and managed by other organizations and consortiums: Hyogo Prefecture, Japan Atomic Energy Agency (JAEA), National Synchrotron Radiation Research Center (NSRRC) in Taiwan, National Institute for Materials Science, Osaka University, Industrial Consortium, and Pharmaceutical Consortium for Protein Structure Analysis.

As for new beamlines, three contract beamlines and one RIKEN beamline are being constructed. The three contract beamlines are "BL03XU Frontier Soft Matter" by the Frontier Soft Matter Beamline Consortium, "BL07LSU Univ-of-Tokyo" by the University of Tokyo, and "BL33XU TOYOTA" by TOYOTA Central R&D Labs., Inc. The RIKEN beamline is "BL32XU RIKEN Targeted Proteins."

In addition, two beamlines (BL05SS and BL38B2) are dedicated to the diagnosis of the accelerated beams of the storage ring.

Table 2-1 SPring-8 beamlines (2008A)

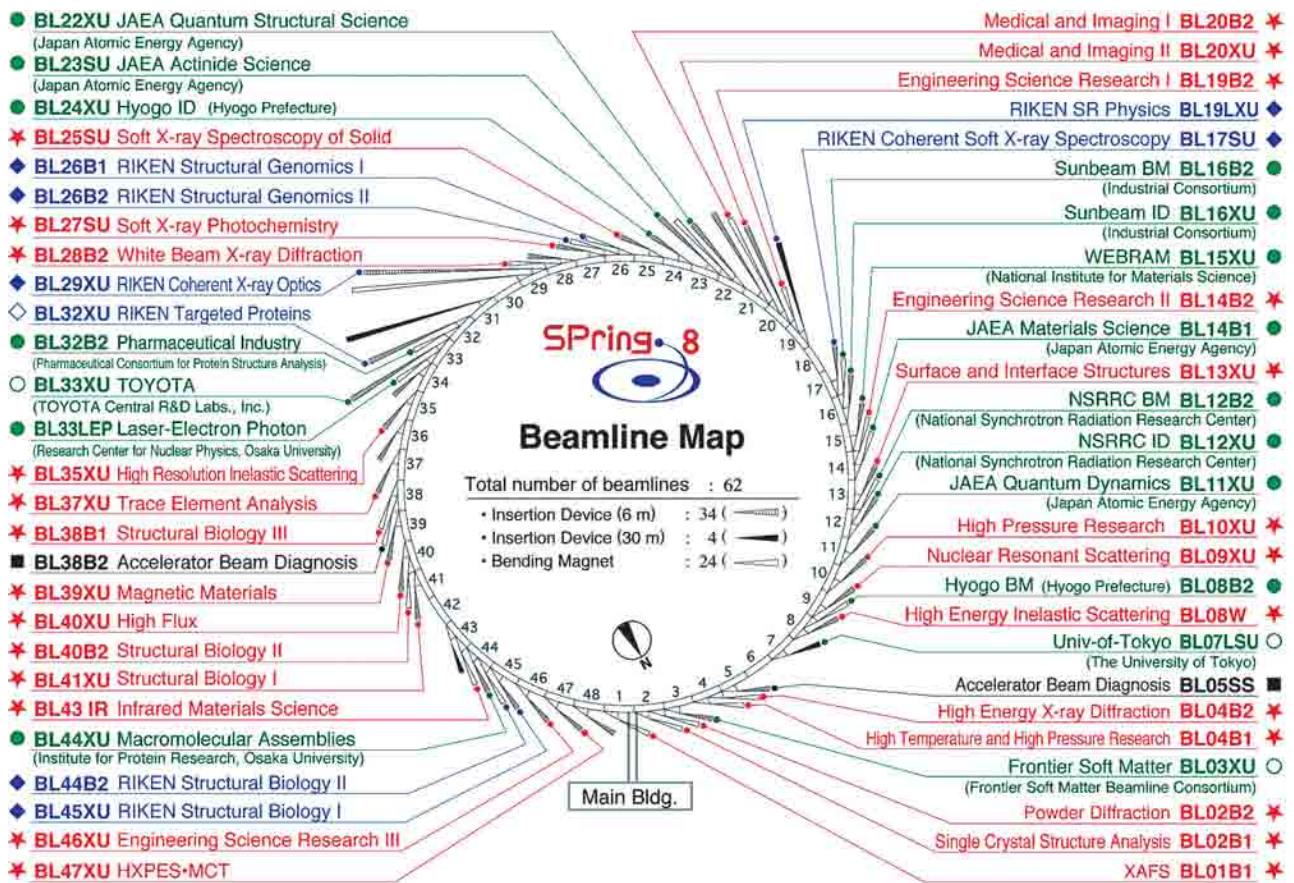
	Beamline*	Beamline Name	Public Use
Public Beamlines	BL01B1	XAFS	October 1997
	BL02B1	Single Crystal Structure Analysis	October 1997
	BL02B2	Powder Diffraction	September 1999
	BL04B1	High Temperature and High Pressure	October 1997
	BL04B2	High Energy X-ray Diffraction	September 1999
	BL08W	High Energy Inelastic Scattering	October 1997
	BL09XU	Nuclear Resonant Scattering	October 1997
	BL10XU	High Pressure Research	October 1997
	BL13XU	Surface and Interface Structures	September 2001
	BL14B2	Engineering Science Research II	September 2007
	BL19B2	Engineering Science Research I	November 2001
	BL20XU	Medical and Imaging II	September 2001
	BL20B2	Medical and Imaging I	September 1999
	BL25SU	Soft X-ray Spectroscopy of Solid	April 1998
	BL27SU	Soft X-ray Photochemistry	May 1998
	BL28B2	White Beam X-ray Diffraction	September 1999
	BL35XU	High Resolution Inelastic Scattering	September 2001
	BL37XU	Trace Element Analysis	November 2002
	BL38B1	Structural Biology III	October 2000
	BL39XU	Magnetic Materials	October 1997
	BL40XU	High Flux	April 2000
	BL40B2	Structural Biology II	September 1999
	BL41XU	Structural Biology I	October 1997
BL43IR	Infrared Materials Science	April 2000	
BL46XU	Engineering Science Research III	November 2000	
BL47XU	HXPES, MCT	October 1997	

	Beamline*	Beamline Name	First Beam
RIKEN Beamlines	BL17SU	RIKEN Coherent Soft X-ray Spectroscopy	September 2003
	BL19LXU	RIKEN SR Physics	October 2000
	BL26B1	RIKEN Structural Genomics I	April 2002
	BL26B2	RIKEN Structural Genomics II	April 2002
	BL29XU	RIKEN Coherent X-ray Optics	December 1998
	BL44B2	RIKEN Structural Biology II	February 1998
	BL45XU	RIKEN Structural Biology I	July 1997
Contract Beamlines	BL08B2	Hyogo BM (Hyogo Prefecture)	June 2005
	BL11XU	JAEA Quantum Dynamics (Japan Atomic Energy Agency)	October 1998
	BL12XU	NSRRC ID (National Synchrotron Radiation Research Center, Taiwan)	December 2001
	BL12B2	NSRRC BM (National Synchrotron Radiation Research Center, Taiwan)	October 2000
	BL14B1	JAEA Materials Science (Japan Atomic Energy Agency)	December 1997
	BL15XU	WEBRAM (National Institute for Materials Science)	January 2000
	BL16XU	Sunbeam ID (Industrial Consortium)	October 1998
	BL16B2	Sunbeam BM (Industrial Consortium)	October 1998
	BL22XU	JAEA Quantum Structural Science (Japan Atomic Energy Agency)	May 2002
	BL23SU	JAEA Actinide Science (Japan Atomic Energy Agency)	February 1998
	BL24XU	Hyogo ID (Hyogo Prefecture)	May 1998
	BL32B2	Pharmaceutical Industry (Pharmaceutical Consortium for Protein Structure Analysis)	April 2002
	BL33LEP	Laser-Electron Photon (Research Center for Nuclear Physics, Osaka University)	June 1999
	BL44XU	Macromolecular Assemblies (Institute for Protein Research, Osaka University)	May 1999
Accelerator Beamlines	BL05SS	Accelerator Beam Diagnosis	March 2004
	BL38B2	Accelerator Beam Diagnosis	September 1999

* BL: Beamline B1, B2:Bending Magnets XU:X-ray Undulator SU:Soft X-ray Undulator W:Wiggler IR:Infrared Radiation LEP:Laser-Electron Photon LXU:Long-length Undulator SS:Straight Section

Table 2-2 Status of SPring-8 beamlines (2008A)

Beamline	Status		Total
	In Operation	Planned or Under Construction	
Public Beamlines	26	0	26
Contract Beamlines	14	3	17
RIKEN Beamlines	7	1	8
Accelerator Beamlines	2	0	2
Total	49	4	53



BL: Beamline
 B1, B2: Bending Magnets
 XU: X-ray Undulator
 SU: Soft X-ray Undulator
 W: Wiggler

IR: Infrared Radiation
 LEP: Laser-Electron Photon
 LXU: Long-length X-ray Undulator
 LSU: Long-length Soft X-ray Undulator
 SS: Straight Section

WEBRAM: Wide Energy Range Beamline for Research in Advanced Materials
 NSRRC: National Synchrotron Radiation Research Center, Taiwan

Status	Beamlines				Total
	Public Beamlines	Contract Beamlines	RIKEN Beamlines	Accelerator Beam Diagnostic Lines	
Operational	26	14	7	2	49
Planned or Under Construction	0	3	1	0	4
Total	26	17	8	2	53

August 28, 2008

Figure 2-1 SPRING-8 beamline map