

BEAMLINES

At SPring-8, several new beamlines are currently under construction and additional beamlines are also being considered for construction.

The beamlines at the SPring-8 Facility are categorized into three types:

- Public beamlines, constructed by SPring-8, open for public use. This category includes the R&D beamlines.
- JAERI/RIKEN beamlines, constructed by JAERI/RIKEN for their exclusive use.
- Contract beamlines, constructed by universities, institutions or industries for their exclusive use.

By the end of 2000, twenty-one public beamlines were operational and available for public use:

BL01B1	XAFS
BL02B1	Crystal Structure Analysis
BL02B2	Powder Diffraction
BL04B1	High-Temperature Research
BL04B2	High Energy Monochromatic X-ray Studies
BL08W	High Energy Inelastic Scattering
BL09XU	Nuclear Resonant Scattering
BL10XU	Extremely Dense State Research
BL20B2	Medical and Imaging Application I
BL25SU	Soft X-ray Spectroscopy of Solids
BL27SU	Soft X-ray Photochemistry
BL28B2	White Beam Topography
BL35XU	High-Energy Resolution Inelastic Scattering
BL38B1	R&D(3) (bending magnet beamline)
BL39XU	Magnetic Materials
BL40XU	High Flux
BL40B2	Structural Biology II
BL41XU	Structural Biology I
BL43IR	Infrared Materials Science
BL46XU	R&D (2) (short period in-vacuum type undulator)
BL47XU	R&D (1) (standard in-vacuum type undulator)

As of 2000, the following beamlines are nearly completed and will soon be ready for public use:

BL13XU	Surface and Interface Structures
BL19B2	Engineering Science Research
BL20XU	Medical and Imaging Application II
BL37XU	Trace Element Analysis

Of these, BL13XU, BL19B2 and BL20XU will be commissioned in April, 2001, including some public use trial. The BL37XU beamline will follow shortly after the commission of these three beamlines.

Ten beamlines have been constructed/are under construction by JAERI and RIKEN for the exclusive use of JAERI and RIKEN scientists:

BL11XU	Materials Science II (JAERI)
BL14B1	Materials Science I (JAERI)
BL19LXU	Synchrotron Radiation Physics Studies (RIKEN)
BL22XU	Materials Science III (JAERI)
BL23SU	Actinide Studies by Soft X-rays (JAERI)
BL26B1	Structural Genomics I (RIKEN)
BL26B2	Structural Genomics II (RIKEN)
BL29XU	Coherent X-ray Optics (RIKEN)
BL44B2	Structural Biology II (RIKEN)
BL45XU	Structural Biology I (RIKEN)

BL19LXU is a 30 m-long straight section beamline and the long undulator was installed after the rearrangement of the magnets in the storage ring during the summer of 2000. BL22XU is a beamline for actinide studies utilizing hard X-rays. BL26B1 and BL26B2 are beamlines that will be used for “high throughput” protein crystallography following the human genome project in 2001. BL29XU has two experimental stations, one at the standard length of 80 m, and the other located at 1,000 m from the undulator source.

Eight contract beamlines at SPring-8 are either in operation or under construction.

BL12IN	APCST ID beamline (Taiwan)
BL12B2	APCST BM beamline (Taiwan)
BL15IN	Materials Science (National Institute for Research in Inorganic Materials)
BL16XU	Materials Science (Industrial Consortium)
BL16B2	Materials Science (Industrial Consortium)
BL24XU	Multi-purpose (Hyogo Prefecture)
BL33LEP	Laser Electron Photon Studies (Osaka University)
BL44XU	Macromolecular Assemblies (Osaka University)

All beamlines are shown in the Beamline Map. We have two beamlines, a contract beamline (BL32B2) for Pharmaceutical Consortium, to be completed by the end of 2001, and a RIKEN beamline (BL17SU) for soft X-ray spectroscopy, the construction of which will begin in FY2001. The latter is positioned as an R&D beamline for ultra-high brilliance soft X-ray spectroscopy. These two beamlines are not included in the Map. Including the two accelerator diagnosis beamlines, we have forty seven beamlines, *i.e.*, more than 3/4 beamlines of sixty-two beamlines possible at SPring-8.

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