

BL19LXU RIKEN SR Physics

BL19LXU is equipped with a 27-m-long undulator as the brightest X-ray source. The optics hutch contains a Si (111) double-crystal monochromator with cryogenic cooling and a double mirror with the SPring-8 standard mechanism. EH3 is an open hutch, where users can bring in their own apparatus. We will welcome researches in any field, just requiring the highly brilliant X-ray beam.

Area of research

This beamline is open for any research field requiring the highly brilliant X-ray beam

Keywords

Scientific field

Science with brilliant X-rays

Equipment

Open hutch, Precision goniometers and stages, Standard X-ray detectors and electronics, Trigger signal synchronized with RF of the storage ring

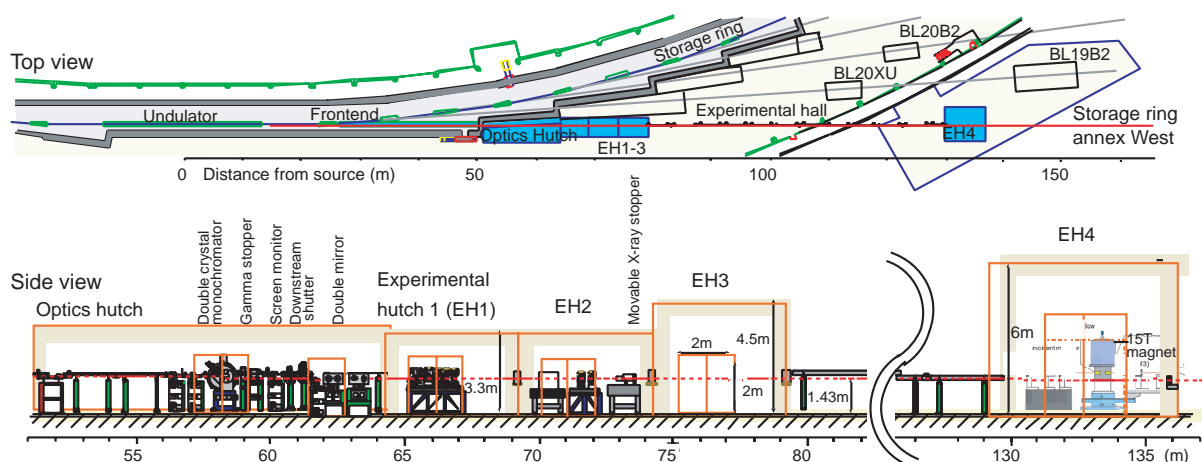
Source and optics

X-rays at sample

Energy range: 7.2-18 keV (1st), 22-51 keV (3rd)

Photon flux: $\approx 2 \times 10^{14}$ photons/s @ 14 keV

Beam size: $\approx 0.8 \text{ mm} \times 1.5 \text{ mm}$ @EH2 (without focusing mirrors)



Schematic view of beamline

Experimental stations

EH3

The EH3, where public users can set up their instrumentation, has a comparably large size of 5 (W) \times 3.4 (D) \times 4.5 (H) m³, and is located at about 77 m distant from the undulator source. The room temperature in the hutch can precisely be controlled by an air conditioner. A manually operated chain hoist could help to install apparatus in the hutch.

EH1, 2, and 4

Although these experimental hutches (EH1, 2, and 4) are occupied by equipments of high precision goniometers, an intense laser system, and a superconducting magnet for the RIKEN project, small components are still able to be mounted in the hutches by public users. (As for the hutch size and the distance from source, see *schematic view of beamline*.)

Available equipments for public users are listed below:

Optical bench

APD, PIN photodiode, Scintillation counter, Ionization chamber

Stepping motor drivers and controllers

NIM Bin power supply, Counter/timer, MCA, Current amp., etc.

Timing circuit supplying a trigger signal synchronized with the frequency of the storage ring.

Contact information

Yoshihito TANAKA

SPring-8 / RIKEN

1-1-1 Kouto, Mikazuki-cho, Sayo-gun, Hyogo 679-5148

Phone : +81-(0)791-58-2809

Fax : +81-(0)791-58-2807

e-mail : yotanaka@riken.jp

Makina YABASHI

SPring-8 / JASRI

1-1-1 Kouto, Mikazuki-cho, Sayo-gun, Hyogo 679-5198

Phone : +81-(0)791-58-0831

Fax : +81-(0)791-58-0830

e-mail : yabashi@spring8.or.jp

Tetsuya ISHIKAWA

SPring-8 / RIKEN

1-1-1 Kouto, Mikazuki-cho, Sayo-gun, Hyogo 679-5148

Phone : +81-(0)791-58-2809

Fax : +81-(0)791-58-2807

e-mail : ishikawa@spring8.or.jp