

Bio-Crystallography

Beamline: **BL41XU**
Person in Charge: Nobuo Kamiya
Tel: 07915-8-1841
Fax: 07915-8-0830
e-mail: nkamiya@postman.riken.go.jp

Subgroups : Macromolecular crystallography,
X-ray structural biology

Scientific Applications: Bio-crystallography

Source Characteristics: In-vacuum-type undulator
 $\lambda_u=3.2\text{cm}$, $N=140$
Tunable range: $>9\text{keV}$
Peak brilliance: $2 \times 10^{19}\text{ph/s/mrad}^2/\text{mm}^2/0.1\% \text{b.w.}$ ($I=100\text{mA}$)
Total power: 5kW
Power density: 300kW/mrad²

Optics:

Distance from source	Optical element	Function
35.9m	rotated-inclined double crystal monochromator	monochromatization, elimination of heat load
49.5m	vertical focusing mirror	3:1 demagnification
44m	horizontal focusing mirror	5:1 demagnification

X-rays at Sample: Energy range: 9~38keV
Energy resolution: $\Delta E/E=2 \times 10^{-4}$ ($<10^{-3}$ over 20keV)
Photon flux: 10^{14}ph/s
Beam divergence: 100 μrad
Beam size: 100 μm

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