

BM5 Characteristics

Source :

Bending magnet
Magnetic field: 0.82 Tesla
Radius of curvature: 24.593 m
Critical energy: 19.87 keV

X-ray source characteristics (at 8 mrad)

H. (FWHM) size: 270 μm
V. (FWHM) size: 80 μm
H. (FWHM) divergence: 2.4 mrad
V. (FWHM) divergence: 180 μrad

Power: 120 W/mrad, 1.35 W/mm²
Max. flux: $2.7 \cdot 10^{13}$ ph./s/mrad²/0.1 %BW

Optics :

Double crystal Si(111) monochromator

Energy range 6-60 keV

Energy resolution : $\Delta E/E \sim 2.1 \cdot 10^{-4}$

Distance from source : 27.22 m

Flux at 25 keV and 200 mA:

- With flat crystals: $1.6 \cdot 10^{10}$ ph/s in 1 mm x 1 mm
- Using sagittal crystal: $2.2 \cdot 10^{12}$ ph/s in 1 mm x 0.3 mm

Double-multilayer monochromator (6 keV- 30 keV)

Energy range 6-30 keV

Energy resolution: $\Delta E/E \sim 3.7 \cdot 10^{-2}$

Distance from source: 28.4 m

Detectors :

Scintillators, ionization chamber, Si-PIN diode, FReLoN camera

Beamline control :

VME electronics, UNIX workstations, SPEC