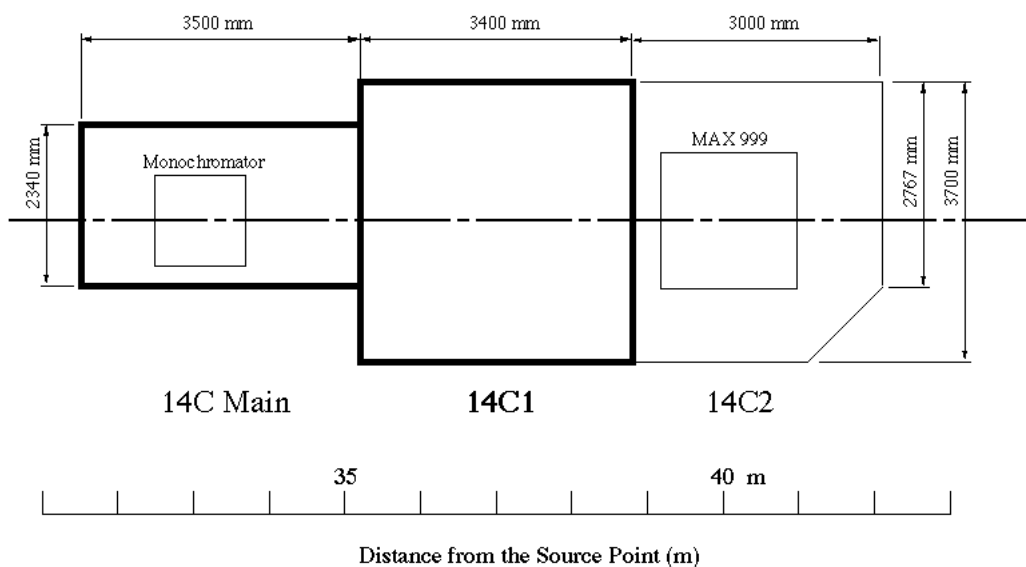


BL14C1 White and Monochromatic X-rays station

This station provides vertically polarized hard X-rays from the super-conducting vertical wiggler magnet. The BL-14C experimental hutch is separated into two experimental hutches in tandem; the upstream hutch is BL-14C1 for general experiments including the phase-contrast imaging using an X-ray interferometer and the downstream hutch is BL-14C2 for high-temperature and high-pressure experiments. White X-rays or monochromatic X-rays using a double-crystal monochromator are available in both hutches.



SCHEMATIC VIEW OF THE BEAMLINE

Area of Research

- Medical applications
phase-contrast imaging, angiography, micro-angiography, monochromatic CT, diffraction imaging, fluorescent X-ray imaging
- X-ray Topography
- X-ray dose measurements

Light Source

Super-conducting vertical wiggler magnet

Optics

Reflecting planes: Si(220) or Si(111) or Si(311)
Crystal size: first 100 mm (H) × 60 mm (V) × 10mm
second 280 mm (H) × 60 mm (V) × 20 mm

Photons at sample

Energy range: 8 keV - 90 keV
Energy resolution: 10^{-4}
Beam size: white beam
35 mm (H) by 6 mm (V)
monochromatic beam
35 mm (H) × 6 mm (V)
Photon flux: 10^{8-9} photons/mm²/sec at 33 keV

Facilities in Experimental Station

- NaI detectors and PIN detectors for X-ray intensity measurement
- Experimental stage (table size: 2200 mm by 1800 mm) for general purpose

Remarks

A vacuum pipe is installed in the center of BL-14C1 in the case of introducing the white or monochromatic X-rays to BL-14C2 through BL-14C1.

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