

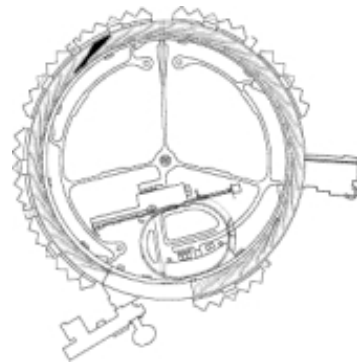
Beamline 13-ID-C,D: Sector 13 - Insertion Device Beamline

GSECARS

GeoScience, Environmental Science

Description

Undulator beamline specialized for earth and environmental science research.



Supported Techniques

- Inelastic x-ray scattering
- Micro X-ray absorption fine structure
- Microdiffraction
- X-ray absorption fine structure
- Microfluorescence (hard x-ray)
- High-pressure diamond anvil cell
- High-pressure multi-anvil press

Beamline Controls and Data Acquisition

Windows workstations running EPICS with VME.

SPEC, IDL, marCCD, mar345. Princeton Instruments WinView and WinSpec.

Detectors

- Canberra 16-element Ge detectors (2)
- Vortex single-element and 4-element SDD detectors (2)
- MAR-165 CCD (2)
- MAR-345 online image plate (2)
- Dectris Pilatus 100K pixel array detector (2)
- Princeton Instruments visible light CCDs (6)

Additional Equipment

- Newport general purpose diffractometer (13-ID-C)
- Diamond-anvil cell with double-sided laser heating
- Two 100-watt fiber lasers, 200-watt CO2 laser
- Laser Raman system in support laboratory
- 1000 ton multi-anvil press with DIA and T-cup tooling

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Beamline Specs

Source	3.5 Undulator
Monochromator Type	Si 111 with large mirror
Energy Range	4-45 keV
Resolution ($\Delta E/E$)	1×10^{-4}
Flux (photons/sec)	1×10^{13} @10 keV
Beam Size (HxV)	
Focused	60 μ m x 20 μ m
Monochromator Type	Si 111
Energy Range	4-45 keV
Resolution ($\Delta E/E$)	1×10^{-4}
Flux (photons/sec)	1×10^{13} @10 keV
Beam Size (HxV)	
Unfocused	3mm x 1mm
Monochromator Type	Si 111 with small mirror

Energy Range	4-45 keV
Resolution ($\Delta E/E$)	1×10^{-4}
Flux (photons/sec)	1×10^{11} @10 keV
Beam Size (HxV)	
Focused	2 μ m x 2 μ m

For additional information see:

http://www.gsecars.org/id_beamline_info.htm

Current Status: Operational/Accepting General Users

Access Mode: On-site