

Operation of Beamline X-28C: A Resource Dedicated to Time-Resolved X-ray Footprinting

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Beamline(s): **X28C**

To provide dedicated access to footprinting technology, Beamline X28C at the National Synchrotron Light Source is maintained along with a dedicated stopped flow instrument to allow footprinting studies for our expanded group of investigators. The beamline accepts up to 5 milliradians of white beam, with a flux density of 10^9 photons/s/mm²/0.07% bandwidth over an effective energy range of 3-30 keV. A dedicated beamline is necessary for high productivity of the core and collaborative research project. Our Resource is the world leader in this technology and the availability of a dedicated beamline will continue our leadership in this area. We are now routinely conducting footprinting studies on 5-10 msec and longer timescales with our stopped flow device. Major advances in understanding RNA folding have been accomplished and studies of protein-DNA complex formation have been initiated. The dedicated footprinting beamline was moved to this new station (X28C) in early 2000 to make way for the new crystallography program at X9A. The resource has been given access to this new beamline by the NSLS.