

Six-BoMB: COMPRES Multi-Anvil Facility at Beamline 6-BM-B of the Advanced Photon Source

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Beamline 6-BM-B is a bending magnet beamline at Sector 6 of APS. Installed at this beamline is a 250-ton hydraulic press (SAM85) equipped with a D-DIA module. This module can be swapped out for a T-10 module (Kawai geometry), and the entire press moved off of its pedestal to allow for use of a Rotational Drickamer Apparatus. 6-BM-B operates in white beam mode with an effective energy range of 20-100 keV. The white X-ray beam is used to collect both energy dispersive X-ray diffraction data and X-radiographic imaging. We have a 10-element array of solid-state energy dispersive Ge detectors arranged in a circular geometry to allow for the assessment of stress and strain in our diffraction data. We also have a Prosilica CCD camera focused on a scintillating YAG crystal that gives us direct imaging of the samples in our experiments. Other installed hardware and specialized software controls allows for both steady state and dynamic deformation experiments, thermal diffusivity measurements, acoustic wave velocity measurements using ultrasonic interferometry, and more. Beamline 6-BM-B is fully commissioned and operational. Submit your proposal today!