

Poster Presentation

MS74.P03

High Pressure Diffraction for the Geosciences at the Advanced Light Source

C. Beavers^{1,2}, J. Knight¹, B. Kalkan¹, J. Yan^{1,2}, A. MacDowell¹, Q. Williams²

¹Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, CA, USA, ²University of California, Earth and Planetary Sciences, Santa Cruz, CA, USA

The Advanced Light Source, in concert with COMPRES, supports a superconducting bending magnet beamline devoted to extreme conditions diffraction. This facility, beamline 12.2.2, is aimed at the geoscience community, but is available to any who desire high pressures, high temperatures and hard X-rays. The latest development has been integrating single crystal x-ray diffraction for diamond anvil cells into the existing suite of high pressure powder diffraction and amorphous scattering techniques. Multiple heating techniques are available to the user, as well as multiple detectors, which can be chosen to best suit the sample. The current staff are dedicated to improving the user friendliness of the beamline; a difficult experiment need not to be further complicated by a difficult beamline. Beamline infrastructure, including recent advances and improvements, will be discussed.

Keywords: high pressure, extreme conditions, single crystal