Recent upgrades to beamline ID06LVP, the ESRF's large-volume press station.

W. A. Crichton¹, A. R. Thomson², A. Rosenthal^{3,4}

¹ ESRF – The European Synchrotron, 71 avenue des Martyrs, Grenoble, France,
² Dept. of Earth Sciences, University College London, London WC1E 6BT, UK,
³ Laboratoire Magmas et Volcans, Université Clermont Auvergne, Clermont-Ferrand, France,
⁴ RSES, Australian National University, Canberra, Australia.
crichton@esrf.fr

We highlight recent advances in large-volume operation at ID06LVP and will cover testing and development of new technologies that have allow:

i./ full autonomous sampling of ultrasonic data at diffraction-competitive rates, and its on-going development,

ii./ the extension of 6/8 compression to pressures above 30 GPa, at high temperature and their further combination with ultrasonic studies,

iii./ the extension of deformation to pressures exceeding 16 GPa, at high temperature, and,

iv./ an opposed-anvil setup (Drickamer) for radial diffraction measurements that easily exceeds 30 GPa.

Other ancillary changes to the setup that are required by these measurements will be mentioned. These will be highlighted from examples from user experiments, and on-going collaborations.

Further time will also be allocated to the development of a recently-ordered Pilatus-based detection system.

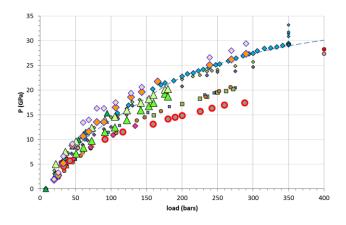


Figure 1: Calibration of higher pressure regimes with a variety of anvil types.