High Pressure Single Crystal Studies using Neutrons

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Over the past two decades there has been considerable progress in both the pressure range and the complexity of structures studied by high-pressure neutron diffraction. However, this development has been almost exclusively confined to powder diffraction techniques. Recently, the availability of large gem anvils has opened up the possibility of carrying out single crystal neutron diffraction studies at pressures of 10 GPa or more with samples grown in-situ in the high-pressure cell. In this talk I will describe progress to date using the new Vx Paris-Edinburgh cell on the SXD single crystal diffractometer at the ISIS pulsed neutron source.

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