1st Workshop for the Extreme Conditions Beamline at PETRA III



Contribution ID: 10 Type: not specified

The high pressure diffraction beamline ID09A at the ESRF

Monday 18 May 2009 10:30 (45 minutes)

ID09A uses monochromatic diffraction with large area detectors on single crystals and powdered samples at high pressures in diamond anvil cells.

It provides variable beam sizes down to 10 x 10 micron, to study samples from a few GPa to approximately 200 GPa at ~30 keV and very high photon fluxes of ~ $10^13/\text{sec}$. It offers state of the art optical systems for additional in situ characterisation of the samples at high pressure (Raman, etc.) and a highly developed sample environment.

Recently the MAR345 online image plate reader was replaced by a MAR555 flat panel detector. Advantages of the new detector will be discussed, examples of the use of the detector in powder and single crystal diffraction will be given.

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Session Classification: Existing extreme condition synchtrotron facilities