



## HIGH PRESSURE WORKSHOP

*H*igh-pressure studies in science, more particularly in the physical and geophysical sciences, have greatly benefited from the development of new techniques at synchrotron radiation sources in the last 15 years. The availability of very high-brilliance radiation at the ESRF since 1993 has largely contributed to this development, and to the popularization of the use of the pressure parameter in many fields, especially in those of structural studies and crystallography in extreme conditions of pressure and temperature. With the setting up of the High-Pressure Commission of the International Union of Crystallography (IUCr) at the Seattle congress in 1996, the success of the ESRF high-pressure program, and the first high-pressure experiments at Spring-8 and APS in 1997, the time was right to organize the first workshop of the new commission. It was held at the ESRF from 21 to 23 November 1997. 27 scientists representing the main research groups active in these fields across the globe accepted to give very interesting presentations on the latest results and developments at synchrotron radiation facilities and in associated fields. The program was divided into ten sessions. The first two were concerned with non-structural techniques. They provided an overview of the latest developments and results in magnetic dichroism studies, Mössbauer spectroscopy, inelastic scattering, x-ray absorption, EXAFS of single crystals, and diffraction combined with spectroscopy. This was followed by two sessions on extreme conditions covering laser and resistive heating in angle- (ADX) and energy-dispersive (EDX) diffraction, extreme pressures, and structural studies of low-Z materials in these conditions. After talks on liquids and large-volume presses, attention was given to solving and refining structures with a comparison between neutron and x-ray techniques, a report of the work done recently at the ESRF on nitrogen, and a provocative comparison of the respective powers of ADX and



EDX. After an exciting session on strength, elasticity and kinetics, all hot topics at the moment as the animated accompanying discussions showed, the last two sessions concentrated on 2-D data and detectors, and 3rd generation sources. The former covered 2-D data analysis, the «Fastscan» detector (see articles on pages 27 and 30) and pixel detectors. The latter included a review of the ESRF highlights, a presentation of the Spring-8 high pressure facilities, and an overview of the main technical and scientific projects in high pressure at APS, this including a proposal for a new 'multi-techniques' sector dedicated to high pressure research. To round things off, an exciting forward looking view of the new science and techniques pointing over the horizon left much of the audience with even bolder expectations. The program also contained several very interesting discussion sessions which contributed greatly to the success of the workshop. Over 90 participants attended the meeting, including eleven young scientists who benefited from travel awards provided by the IUCr. The organizers and HP Commission members thank the IUCr for this financial support. Finally, I thank all those who contributed to making this a great event, and an important step in the development and success of the field of high pressure research. I cannot name them all here, but special thanks are due to the HP Commission, and more particularly to its chairman, Prof. R. Nelmes, for his invaluable help with the program.

**D. Häusermann**