M09.0D Synchrotrons and Charge Density Analysis

Chair: F.K. Larsen
Co-Chair: H.P. Weber

Attendance: 190

This specific combination of research fields was for the first time put together in a microsymposium at a IUCr meeting. It turned out quite successful judged from the variety and scope of submitted abstracts and also from the attendance at the actual session during the Congress. The room was full to capacity through the entire microsymposium.

Philip Coppens, SUNY at Buffalo, the founding father of this discipline gave an optimistic overview of experimental aspects. Like for other areas of crystallography the full impact of the success of the area detectors is now crystal clear. Tibor Koritsanszky University of Witvatersrand in Johannesburg, South Africa talked about the implications hereof for the refinement procedures. Bo Iversen, University of Aarhus Denmark gave an enthusiastic account of multitemperature studies by showing surprising behaviour in the ordering mechanism in a mixed valence iron compound. Only at a temperature close to 10 K did it become possible to determine reliably the charge density distribution.The other speakers of the session Armin Kirfel, University of Bonn, Germany; Masaki Takata, Shimane University, Japan - whos transparencies were a special colorful artistic treat - Nobuo Ishizawa, Tokyo Institute of Technology, Japan and Victor Streltsov, University of Western Australia also elucidated challenging chemical and physical problems.

Results from three synchrotron radiation installations from widely different parts of the world were presented at the microsymposium, namely from the NSLS, USA, HASYLAB, Germany and the Photon Factory, Japan. The connected poster session showed that this type of research is carried out at other installations too, notably at the ESRF, Grenoble in France. Crystallographers spread all over the world are actively interested in the use of synchrotron radiation for charge density determination.

Finn Krebs Larsen