

# Proceedings of the Sagamore X Conference on Charge, Spin and Momentum Densities

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## Preface

Sagamore X, held at the Universität Konstanz from September 1 to 7, 1991, was the tenth in the series of the interdisciplinary Sagamore Conferences on Charge, Spin and Momentum Densities. The previous nine were held at Sagamore/New York (1964 and 1967), Aussois/France (1970), Minsk/U.S.S.R. (1973), Kiljava/Finland (1976), Mont Tremblant/Canada (1979), Nikko/Japan (1982), Sönga Söby/Sweden (1985) and Luso Buçaco/Portugal (1988).

The general subjects behind the title of the Sagamore Conferences are experimental and theoretical studies of the electronic structure of matter in all of its aspects by considering the wealth of information contained in multi-dimensional distribution functions (particle, charge, spin) in position and momentum space. The extension of the scope to nuclear coordinates in both spaces is natural. As a consequence of the interdisciplinary nature of the general themes, the Conferences have always been open to contributions from physics, chemistry, crystallography, mineralogy, etc., and have benefited from the resulting exchange of ideas.

Prior to the Conference, the Sagamore community lost two of its members. Moving memorial lectures were given in honour of Stephan Berko and Fred Hirshfeld by A. T. Stewart and P. Coppens, respectively. Since these lectures have been published elsewhere (Proc. 9th Int. Conf. Positron Annihilation, Materials Sci. Forum **105–110**, 3 (1992) and Trans. Amer. Crystallogr. Assoc. **26**, 91 (1990), resp.), they are not included here.

Twenty of the 45 invited talks and 50 of the 99 poster papers are now collected in the present volume. The papers cover almost all areas presented at the Conference in a well-balanced way and are arranged under the following headings:

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This structure of the Proceedings and the order of the papers within each of the ten sections reflect an attempt to find a continuous path through the multi-dimensional space of subjects and aspects. I hope that I have succeeded to the extent that the reader will feel the continuity and will be sufficiently curious to follow that path.

Organising the Sagamore X Conference as well as editing the Proceedings have been very interesting experiences for me. I thank all participants, all authors, and all those who have helped me in many ways. I am particularly grateful for the critical and very constructive support that I have received from the referees. Their efforts have contributed substantially to the quality of our Proceedings. The beautiful layout is the work of the Managing Editor, Mrs. T. Littmann, in cooperation with the very experienced printing-house K. Triltsch/Würzburg. Finally, I want to express my gratitude to Professor A. Klemm, who has been a very cooperative Editor and was very patient with an unsteady flow of manuscripts. It is his standards that I have tried to meet with the Proceedings.

Wolf Weyrich