

Preface

The end of the century seems to be an appropriate time to make up our accounts and see how much we know in a certain area of research and how much we still have to learn. The book in your hands is such an attempt in the field of **Pulsar Astronomy**, which has developed enormously since the first pulsar, the natural radio beacon in the sky, has been serendipitously discovered. Even since the last IAU colloquium on pulsars in 1996 in Sydney much has happened. The research field is changing all the time.

Radio astronomers certainly have to accept the fact that besides the “classical” radio frequencies used to study pulsars, new spectral ranges have been opened up, giving valuable information. The advent of sensitive X-ray and Gamma-ray satellite observatories is changing the field. By combining all the available data we have learnt so much more than it would be possible from the radio data alone. This ‘whole electromagnetic spectrum’ approach has motivated us to invite the world scientists to review and discuss the latest achievements, describe the instrumental developments and also to look ahead to the future of Pulsar Astronomy.

At the end of August 1999 some 220 scientists followed our invitation to participate in the IAU Colloquium 177, *Pulsar Astronomy — 2000 and Beyond* in Bonn, Germany. In one week of the conference some 60 oral contributions were given and more than 180 posters displayed. A huge range of topics was covered, like pulsar searches, the study of emission properties in the radio, optical, X-ray and Gamma-ray ranges, the evolution of pulsar populations and accurate timing observations. The nature of AXPs and Magnetars was discussed, the interaction of pulsars with the surrounding medium as well as the use of pulsars to study the interstellar medium. Talks dealt with the use of pulsars in astrometry, pulsars as probes of General Relativity and of course a wide range of theoretical interpretations of the pulsar phenomenon. We believe that the conference provided an excellent picture of the current status of pulsar research as well as an insight into the possible developments in the field in the future.

The most important people at any conference are the participants and we would like to thank each one of them for sharing their knowledge and their opinions with us. Conferences cannot be organized without financial assistance. We would like to thank The International Astronomical Union, the Deutsche Forschungsgemeinschaft (DFG), the Max-Planck-Institut für Radioastronomie (MPIfR) in Bonn and the Max-Planck-Institut für extraterrestrische Physik (MPE) in Garching as well as the City of Bonn for their support.

Finally we want to express our deep gratitude to a number of our colleagues in Bonn without whom the conference would never have been possible. First and foremost we thank Gabi Breuer for her enormous and efficient organizational help during all the stages of the conference. We also would like to thank Ute Runkel, Peter Müller and the members of the ‘Pulsar Group’ at the MPIfR who helped to make the conference a success. It is due to these people that you will, we hope, enjoy these proceedings.

Michael Kramer, Norbert Wex, Richard Wielebinski
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