MULTIWAVELENGTH APPROACH TO UNIDENTIFIED GAMMA-RAY SOURCES

A Second Workshop on the Nature of the High-Energy Unidentified Sources

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A Second Workshop on the Nature of the High-Energy Unidentified Sources

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PREFACE

After a tremendous development during the 1990s, gamma-ray astronomy appears now as a field plenty of sources. Unfortunately, most of these sources, especially those detected in the MeV–GeV range, remain unidentified. Large error boxes in their location and the plurality of potential counterparts have prevented, up till now, unequivocal and positive identification in most cases.

Since gamma-rays are produced by relativistic particles V through interaction with matter or electromagnetic fields – which can also produce additional radiation at lower energies – multiwavelength studies of unidentified gamma-ray sources and their environments seem to be the most powerful tool at our disposal to elucidate the nature of these objects.

This volume contains the contributing papers to the first meeting completely devoted solely to the multiwavelength approach for the identification of high-energy sources. The conference was held in the Department of Physics of the University of Hong Kong, from 1 to 4 June 2004. All contributions are full-length papers that were subject to the usual peer reviewing process. Hence, this issue of *Astrophysics and Space Science* can be considered as a thematic volume providing the most updated information currently available on the topic.

While working on this project, from the organization of the meeting to the editorial work on this volume, we benefited from the support of the following organizations: K.C. Wong Education Foundation, Lee Hysan Foundation Ltd., The Astrophysical Society of Hong Kong, The University of Hong Kong, the Agencia Nacional para la Promoción de la Ciencia y la Tecnología (Argentina) and the Fundación Antorchas.

We are very grateful to the other members of the Scientific Organizing Committee (Felix Aharonian, Alberto Carramiñana, O. de Jager, Isabelle Grenier, Dick Manchester, Sandro Mereghetti, Dave Thompson and Heinz Voelk) for their valuable suggestions and also to the other members of the Local Organizing Committee (H.F. Chau, Jason Pun, K.L. Chan and M.C. Chu), as well as to the staff of the Physics Department of the University of Hong Kong, for their help and support.

Finally, we wish to specially thank Ms. Anisia Tang for her excellent work on most of the aspects of the organization of the meeting and for her invaluable assistance with the editorial work.

This volume represents a step forward in our understanding of the physical processes of cosmic gamma-ray sources. Hopefully, very soon, new instruments

will provide us with a fuller view of the depths we can now glimpse through the papers presented here.

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