

Foreword

The workshop on **Multifrequency Behaviour of High Energy Cosmic Sources** is a classical biennial meeting held in the same historical place for our workshops: the beautiful and wild island of Vulcano. We are completely convinced that a deep discussion on the multifrequency behaviour of high energy cosmic sources, defined mostly by the physical processes rather than the types of objects, is the most powerful way for a better and faster development of our knowledge of the physics governing our Universe. For this purpose, we invited distinguished colleagues representative the most important space- and ground-based experiments of the present generation. They painted the whole panorama on the experimental results and on their interpretation by using current models and/or developing new ideas for a better comprehension of the detected phenomena. During the discussion of a lot of new results, obtained along most of the electromagnetic spectrum, we have learned that the astrophysics of galactic sources is still extremely interesting and unavoidable. Indeed it provides crucial information on the same physical processes occurring also in the extra-galactic sources, with obvious different scale factors. Moreover, new results coming from very high energy γ -ray experiments have shown the richness — and its potential increase — of the sky at those energies having detected more than 40 cosmic sources until few years ago completely unknown, but hopefully to be detected since the cosmic ray spectrum extends up to energies as high as $\geq 10^{20}$ eV. The fluxes of very high energy γ -rays are attenuated because of their interactions with the cosmic radio, microwave, infrared and optical radiation fields. Measurements of the flux attenuation can then provide important information on the distribution of such fields. Then, very high energy γ -ray astronomy is the most powerful tool for solving the problem about the origin of cosmic rays.

Many thanks to the authors, which accepted our reminders recalled at the beginning of the workshop, for keeping to schedule. However, in spite of the accurate respect of the dead line of a number of authors, we still suffer a delay in publishing these proceedings because of the laziness of a considerable part of other authors.

This is the seventh edition of the workshop (eighth if we consider the first historical one, held in Vulcano in 1984), whose proceedings are published, for the third time, by the Chinese Journal of Astronomy and Astrophysics (ChJA&A) in a special volume. The published papers have been submitted to a peer review of referees belong to the international scientific community. This process obviously added a further delay for the publication. However, in spite of this, these proceedings are appearing within one year from the workshop date.

We would like to thank all participants and especially the speakers for their active contributions in rendering this workshop updated with their talks, alive with their discussions, and friendly with their attitudes. Particular thanks to: Mr Massimo Frutti for his excellent technical assistance in Roma and Vulcano, Emanuela Brunetti for her good assistance for informatics during the preparation of the workshop, Francesco Reale for his faultless assistance for informatics in Vulcano.

We are grateful to Mezzo Soprano Sofia Mukhametova and to the pianist Maestra Maria Pinto for their wonderful concert hosted in the *Sables Noires* Hotel in Vulcano.

Many thanks to:

- the director of the *Istituto di Astrofisica Spaziale e Fisica Cosmica, Roma at the Istituto Nazionale di Astrofisica (IASF-INAF)* (Dr Pietro Ubertini);
- the director of the *Departamento de Programas Espaciales y Ciencias del Espacio at the Instituto Nacional de Técnica Aeroespacial (DPECE-INTA)* (Mr José Torres Riera);

- the director of the *Max-Planck Institut für Extraterrestrische Physik* (MPE) (Professor Reinhard Genzel and Professor Günther Hasinger, who succeeded the latter on January 1, 2007);
- the director of the *Centre d'Etude Spatiale de Rayonnements* (CNRS/UPS/OMP) (Professor Giovanni Bignami);
- the director of the *Institute für Astronomie und Astrophysik, Karls Eberhard, Universität SAND 1 (IAAT)* (Professor Dr Willy Kley);
- the Superintendent of the *Space Sciences Division at the Naval Research Laboratory* (SSD-NRL) (Dr. Jill P. Dahlburg);
- and the President of the *St. John's College* (Mr Christopher Nelson),

who facilitated the organization of this workshop.

Particular thanks to the IASF-INAF, DPECE-INTA, and the Group '*Phénomènes cosmiques de hautes énergies*' at the CNRS who partially supported this workshop.

Finally, special thanks the Editors-in-Chief, Professors Cheng Fang and Jingxiu Wang, to the Editorial Board and Editorial Office members (in particular to Mrs Jingzhi Zhao) of the Chinese Journal of Astronomy and Astrophysics for inviting and helping us in publishing our proceedings in their interesting international journal.

Franco Giovannelli and Lola Sabau-Graziati

(Editors)