Multiband Approach to AGN

Bonn, September 30 - October 2, 2004

Scientific Organizing Committee

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Sponsorship

A workshop sponsored and organized by the EU Consortium RadioNet together with the Max-Planck-Institut für Radioastronomie, as part of the RadioNet Scientific Workshop Program.

FOREWORD

The workshop “Multiband Approach to AGN” held on September 30 - October 2, 2004 at the Max-Planck-Institut für Radioastronomie in Bonn is the second in the series of scientific workshops organized and sponsored by the EU Consortium RadioNet (www.radionet-eu.org) with the aim of fostering scientific ties and cross-disciplinary collaboration between radio astronomers and astrophysicists working in Europe and across the world.

The topic of active galactic nuclei (AGN) offers itself as one of the best examples of an astrophysical field which has benefited enormously from cross-disciplinary research. In the past two decades, studies of AGN have become a truly synthetic branch of astrophysics that combines observational and theoreticl efforts in the entire electromagnetic spectrum and embraces physical processes on scales that span more than ten orders of magnitude both in space and in time. The emerging synthetic nature of AGN studies dictates the necessity of establishing an efficient and fruitful exchange of ideas and results from various fields of astrophysical research, thus addressing the problem of understanding the AGN phenomenon at large. The workshop in Bonn has provided a stage for such an exchange. The meeting brought together scientists involved in various aspects of AGN studies, setting a forum for discussing nuclear activity in galaxies from different perspectives and in connection with similar processes occurring in galactic objects (X-ray binaries, XRB). Critical aspects of AGN and XRB research were highlighted in a number of invited reviews, and further explored in the contributed talks, posters and discussions. The workshop was focused on three broadly-defined areas in which various fields of AGN research intersect with each other and with studies of XRB. The first part of the workshop was dedicated to presenting and discussing different ”viewpoints” on AGN, ranging from the radio regime to the Gamma-ray band. In the second part, the AGN phenomenon was considered across the entire luminosity range in which it occurres. This included reviewing recent advances in studies of nuclear activity in Seyferts and LINERs and comparing these to the activity observed in powerful AGN, connecting astrophysical accretion to properties of supermassive black holes and formation of relativistic outflows, and searching for a common phenomenology and physics reaching across orders of magnitude in the parameter space. The final part of the workshop addressed the AGN phenomenon in the context of formation and evolution of galaxies and large-scale structure in the Universe.

We hope sincerely that the workshop has helped bringing ideas and knowledge across the traditional lines of research and provided a good starting point for new collaborative efforts in the field of AGN studies. Electronic materials related to the workshop can be found at the meeting website at http://www.mpifr-bonn.mpg.de/bonn04/.

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