

## PREFACE

Recently observations in radio and high energy bands have revealed the existence of cosmic rays and magnetic fields in clusters of galaxies and large scale structure of the Universe. The importance of these nonthermal processes has been demonstrated firmly in the intracluster medium. That is likely to be extended to the intergalactic medium in filaments and sheets of large scale structure. To us such developments seem only natural, considering that cosmic rays and magnetic fields play significant roles in dynamics and evolution of the interstellar medium of our Galaxy.

We recognized a pressing need to recapitulate recent progresses in studies of the origin and roles of non-thermal components in LSS by experts in the related fields in order to guide ourselves to the right directions for further progresses. This conference was timely organized with resounding interests and generous supports by the Scientific Organization Committees: P. L. Biermann, S. Bowyer, L. O'C. Drury, J. R. Jokipii, T. W. Jones, H. Kang, P. P. Kronberg, J. P. Ostriker, L. Rudnick, D. Ryu, C. L. Sarazin, and E. T. Vishniac. In the conference over 60 researchers from more than 10 countries presented 50 oral and 10 poster papers on the following topics: observations of clusters from radio, EUV, X-ray to gamma-ray, the origin of CRs and magnetic fields, substructures and merging activities in clusters, the origin and observations of ultrahigh energy CRs, and nonthermal components from AGNs.

The Local Organizing Committee, H.B. Ann, H. Kang, Y.W. Kang, J. Kim, C.-H. Lee, H. K. Lee, H. M. Lee, S. J. Park, D. Ryu and H. Sung, would like to thank the following institutions for their financial contributions to make this conference a success: *Astrophysical Research Center for the Structure and Evolution of Cosmos, Korean Astronomical Society, Korean Astronomy Observatory, Korea Research Foundation, Asia Pacific Center for the Theoretical Physics and Pusan National University*. Finally the LOC would like to thank Prof. J. P. Ostriker for delivering a public lecture "Hart of Darkness", and Drs. T. Clarke, L. Feretti, M. Johnston-Hollitt, H. Kang, and A. Olinto for participating in "Dialogues with Women in Astronomy" for female students.

Dongsu Ryu  
Hyesung Kang

*Editors*