DUST AND MOLECULES IN EVOLVED STARS

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PREFACE

The Workshop recorded in this volume was held at UMIST in March 1997 and was entitled 'Dust and Molecules in Evolved Stars'. Following the tradition of the UMIST group to organize regular conference series on topics related to the expertise of the group, namely Astrochemistry, the Workshop focused principally on observational and theoretical aspects of the study of chemical species, from molecules to dust grains, in the circumstellar environments of evolved objects. Our aim was to gather together various scientific communities, generally unknown to each other, and working on different types of evolved stars, to address fundamental questions on molecule and dust formation and survival, observational diagnostic tools common to evolved astrophysical environments, and so on. The astrophysical scenarios included late-type stars, novae, Wolf-Rayet stars, LBVs and supernovae, and it was often highlighted that similar chemical entities, dust or molecules, were found in environments characterized by very different physical and chemical parameters. Therefore, there was a real need to bridge the gap between the various communities in order to shed light on these mysteries. At the time of the Workshop new results from the ISO satellite had arrived and the participants were able to benefit from these new data in the context of the conference.

The Workshop was attended by more than 80 scientists coming from 17 different countries, reflecting the fact that the study of evolved stars, both from observation and theory, represents a very active field of Astrophysics and Astrochemistry.

This volume contains all the review papers (denoted R) but one. Unfortunately, Peter Sarre was not able to provide a manuscript. As editors, we would like to express our gratitude to the reviewers who strove hard to restrict themselves to the allocated length for their manuscripts. We have also included the contributed papers (denoted C) and the poster papers (denoted P). Discussions have been inserted at the end of each R and C paper. Unfortunately, the vivid discussions accompanying the poster sessions could not be recorded.

The Workshop was supported financially by various sponsors. We are very grateful to the Collaborative Computational Project No. 7 on 'The Analysis of Astronomical Spectra', the Royal Astronomical Society, the Astrophysics Group in the Department of Physics at UMIST, our publisher, Kluwer, and the European Union. The latter sponsored the attendance of several of our colleagues from Eastern Europe and the new Independent States of the Soviet Union.

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