

FOREWORD

A workshop on 'Star Formation in Different Environments' was held at the University of Sydney in October 1991. The workshop was sponsored by the Research Centre for Theoretical Astrophysics, which was set up in 1991 as a Special Research Centre of the Australian Research Council, with the primary objective of fostering theoretical astrophysics in Australia. The major part of the initial organisation of the workshop was carried out by Geoff Bicknell, who was co-opted to the Research Centre for several months from Mount Stromlo and Siding Spring Observatories. About fifty astrophysicists took part, including three distinguished overseas visitors, Leon Mestel, Colin Norman and Joe Silk, who took leading roles in the scientific discussions.

The papers presented at the workshop covered a wide range of topics in which there is active Australian interest. The main areas covered were: star formation in external galaxies, including normal galaxies, galactic nuclei, starburst galaxies and the Magellanic Clouds; the properties of star forming regions, including the physics and chemistry of interstellar clouds, bipolar flows and cooling flows; and the formation of stars from clouds, including observations of star forming regions, the role of magnetic fields during collapse, and simulations of star formation. In addition to the presentation of papers, three sessions were set aside for discussion of specific topics: star formation and galactic nuclei, jets and outflows, and the initial mass function.

All but one of the invited papers presented at the workshop are included in this volume. I am grateful to all the contributors for their cooperation, and particularly grateful to Peter Robertson, Managing Editor of the *Australian Journal of Physics*, for making it possible to publish the proceedings.

Don Melrose

Research Centre for Theoretical Astrophysics,
School of Physics, University of Sydney

