

## PREFACE

It has become a tradition in the Union to publish the Invited Discourses and the Proceedings of the Joint Discussions held at a General Assembly in a separate volume entitled HIGHLIGHTS OF ASTRONOMY. This is the fourth volume of its kind and it contains some of the scientific highlights of the Grenoble General Assembly.

In order to reduce its size it was decided to publish its content in two separate parts. The part (I) contains the full texts of the Invited Discourses given by Prof. J.-C. Pecker and by Dr. C. Sagan, and an abstract of Dr. P. Morrison's paper, thus complying with his wish to forego publication of the full text of his Discourse. Furthermore it collects the proceedings of three Joint Discussions and one Joint Meeting all of which are related essentially to observations from space, to external galaxies and to cosmology. Part (II) contains the proceedings of the four Joint Discussions and one Joint Meeting related essentially to stars and the structure of our Galaxy.

Clearly Volume 4 (parts I and II) of the Highlights reflects only a part of the scientific activities which took place at the Grenoble General Assembly. Many more important papers and discussions were held during Commission meetings and joint meetings. They may be found in the Commissions' reports published in the Transactions Vol. XVI B, 1977. Furthermore, the proceedings of three joint Commission meetings on the topics "CNO Isotopes", "Supernovae", and "Topics in Interstellar Matter" are being published in separate volumes by the D. Reidel Publishing Company, and the discussion of Commission 10 on "How can solar flares be understood?" will be published in an issue of Solar Physics.

The new publication policy of the IAU to use for its publications the method of offset printing from camera-ready manuscripts requires a special effort from all authors and from the editors of the individual Joint Discussions and Joint Meetings. My sincere thanks are due to all those who made this special effort. I also wish to thank Mme. R. Bertschi and Mme. R. Läubli for their fine and most helpful cooperation in editing this volume.

Edith A. Müller  
*General Secretary*