

Preface

Astronomy may well be the most appealing science to students and the general public. It therefore plays an important role in promoting public interest, appreciation, and understanding of science in general. There is widespread interest in such exciting topics as cosmology, black holes, and the exploration of the solar system. There is also a deep appreciation of the practical, aesthetic and philosophical aspects of astronomy, including the ever-changing beauty of the night sky. Astronomy is taught to some extent in schools, colleges, and universities. Interested members of the public also learn about astronomy from newspaper and magazine articles, from very occasional television programs, and from visits to planetariums. Amateur astronomers are an especially receptive audience for astronomical information, and a valuable ally in passing this information on to the public.

From July 26 to 30, 1988, 162 astronomers from 31 countries gathered at Williams College in Williamstown, Massachusetts, to discuss *The Teaching of Astronomy*. Although they came from many levels of very diverse educational systems in vastly different countries, they found much in common, and many ideas to share. They compared problems in teaching, and solutions that have been attempted. They became more aware of the diversity of astronomy education, and made new contacts and friendships with “kindred spirits” from many parts of the world. This book is not only a record of the meeting but also an independent and lasting work in its field. We hope that it will be found interesting and useful by teachers everywhere, and will stimulate the further development of all aspects of astronomy education.

The program of the meeting consisted of invited papers and many contributed oral and poster papers, almost all of which are included in these proceedings. We have also included, as best we could, the comments and questions from the audience after each oral paper. We thank Bill Luzader, Deborah Pasachoff, and Eloise Pasachoff for their help in recording these. We also thank Andrew Fraknoi for organizing an extensive display of books and other teaching material.

This was the first international conference on the specific topic of astronomy education. The idea of the meeting was planted in 1984 by Robert Dukes and Joseph Meyer of the American Association of Physics Teachers, and developed in 1985 through informal discussions between Robert Dukes and John Percy. It was enthusiastically endorsed by the International Astronomical Union (IAU) Commission 46: *The Teaching of Astronomy*, at the 1985 General Assembly of the IAU in New Delhi, and was approved as IAU Colloquium 105 by the IAU Executive Committee in 1986. As the U.S. and Canadian National Representatives to IAU Commission 46, it was natural that we would play major roles in the meeting. The meeting was also endorsed by the American Association of Physics Teachers, the American Astronomical Society, the Astronomical Society of the Pacific, the Royal Astronomical Society (UK) and the Royal Astronomical Society of Canada. The support of these organizations is much appreciated.

The Scientific Organizing Committee was chaired by one of us (JRP), who is

deeply grateful to the SOC for advice and assistance with the planning of the meeting: Lucienne Gouguenheim (France), Syuzo Isobe (Japan), Cecylia Iwaniszewska (Poland), Josip Kleczek (Czechoslovakia), Derek McNally (UK), Mazlan Othman (Malaysia), Jay Pasachoff (USA), Aage Sandqvist (Sweden), and Silvia Torres-Peimbert (Mexico). JRP also thanks Erindale College and the Department of Astronomy, University of Toronto (especially Esther Oostdyk, Joan Tryggve, and Maria Wong) for their assistance and support.

The Local Organizing Committee was chaired by the other of us (JMP), who thanks, for local support, the Conference Office of Williams College, especially Judith Grinnell and Lynn Chick; the Office of Public Information of Williams College, especially Ellen Berek, James Kolesar, Tom Bleezarde, and Ann-Rita Congello; the staff who worked on the colloquium, especially Darrel Hoff and Ardith Hoff, Diane Gordon, Bradford Behr, Amy Steele, Alex Steele, and Susan Kaufman; Williams College staff members Barbara Madden and Alice Seeley; and Mike Martys and Brian Quinn of the Williams College Computer Center. Darrel Hoff, in particular, devoted many weeks to the planning of the meeting, and to seeing that it ran smoothly. We also thank George R. Clarkson and Nancy P. Kutner of the Rensselaer Polytechnic Institute, and Kevin Reardon of Williams College for digitizing and labelling the group photograph for use in this book. JMP thanks Jean Audouze and the Institut d'Astrophysique, Paris, for their hospitality during the editing of these Proceedings.

The meeting was financially supported by the Perkin-Elmer Corporation, the International Astronomical Union, the Royal Astronomical Society (U.K.), the Royal Astronomical Society of Canada, the American Association of Physics Teachers, the National Science Foundation (U.S.A.), and the international currency program administered by the Smithsonian Institution. We especially thank Professor William A. Fowler of the California Institute of Technology, whose enthusiasm and support for the meeting was instrumental in attracting some of this support.

We thank Simon Mitton of Cambridge University Press for his encouragement and support. It has been a pleasure to work with him and his staff. The manuscripts submitted by the authors have been edited, and word-processed in LaTeX. We especially thank Marie Glendenning for her excellent typing and LaTeXing of a difficult manuscript.

Jay M. Pasachoff
Williams College

John R. Percy
University of Toronto

July 1989