

PREFACE

In July 1992 International Astronomical Union (IAU) Colloquium 139, "New Perspectives on Stellar Pulsation and Pulsating Variable Stars", was held at the Victoria Conference Centre in Victoria, British Columbia, Canada. The four-day colloquium was attended by approximately 150 astronomers from over 20 countries. The proceedings of the conference are contained in this book. The five chapters reflect the main topics that were discussed: variable stars as distance indicators, stellar seismology, variable stars beyond the classical Cepheid instability strip, theoretical breakthroughs, and new windows on the instability strip. Each of these research areas has undergone dramatic changes in the last decade. The approximately 30 review papers and 100 shorter contributions describe the most recent developments, and give a preview of some of the advances expected in the decade to come.

The scientific organizing committee consisted of M. Breger (Austria), A. Cox (USA), M. Feast (South Africa), W. Gieren (Chile), M. Jerzykiewics (Poland), J. Lub (Netherlands), J. Nemec (USA, co-chair), A. Renzini (Italy), H. Shibahashi (Japan), P. Smeyers (Belgium), A. Walker (Chile), D. Welch (Canada, co-chair) and P. Wood (Australia). The local organizing committee consisted of A.F. Linnell Nemec (Canada), J. Nemec (USA, co-chair), C. Pritchett (Canada), R. Sreenivasan (Canada, co-chair) and G. Wallerstein (USA).

The meeting was co-sponsored by five IAU commissions: No.27 (Variable Stars); No.30 (Radial Velocities); No.35 (Stellar Constitution); No.36 (Stellar Atmospheres); No.37 (Star Clusters & Associations). We gratefully acknowledge this financial support and thank J. Bergeron (IAU General Secretary) and the respective commission presidents (at the time) for their help: M. Breger, D.W. Latham, A. Maeder, D.F. Gray and G.L.H. Harris. We also thank several organizations that were instrumental in providing financial and other support: the Department of Physics, University of Calgary (Calgary, Alberta); the Canadian Institute for Theoretical Astrophysics (CITA); the Dominion Astrophysical Observatory of the Herzberg Institute of Astrophysics, National Research Council of Canada; International Statistics & Research Corporation (Brentwood Bay, British Columbia); the Department of Physics & Astronomy, McMaster University; the Natural Sciences & Engineering Research Council (NSERC); the Department of Physics & Astronomy, University of Victoria (Victoria, British Columbia); the Department of Astronomy, University of Toronto (Toronto, Ontario); the Program in Astronomy of the Department of Mathematics, Washington State University (Pullman, Washington); and the Department of Astronomy, University of Washington (Seattle, Washington). We also acknowledge the volunteered time and talents of M. Chapin, C. Koenig (University of British Columbia), E. Chapin and other individuals and organizations who helped with the meeting.

Invited talks were given by L. Balona, E. Böhm-Vitense, G. Bowen, M. Breger, C. Cacciari, J. Caldwell, C. Chiosi, A. Cox, N. Evans, W. Freedman, W. Gieren, J. Guzik, S. Hughes, Y.-W. Lee, A. Longmore, J. Matthews, J. Nemec, M. Pierce,

F. Rogers, A. Saha, A. Sandage, M. Seaton, N. Simon, H. Smith, R. Stellingwerf, C. Sterken, T. Teays, A. Walker and D. Welch. The chairs of the various sessions were: R. Buchler, C. Cacciari, G. Clayton, A. Cox, J. Cuypers, W. Freedman, T. Kreidl, J. Mould and J. Nemeč. Poster papers were on display throughout the meeting, and were discussed in a special session chaired by J. Matthews.

On Tuesday (July 14) a welcoming reception was held at the Victoria Conference Center, with a delightful concert of light classical musical provided by the Juan de Fuca Chamber Orchestra. A banquet was held on Thursday evening at the Chantrel restaurant in Royal Oak, the highlight of which was an entertaining speech by D. Fernie. On Friday night a tour of the Dominion Astrophysical Observatory was given by C. Aikman, followed by a visit to the Butchart Gardens on the Saanich Peninsula.

As the editing of these proceedings was near an end we learned of the death of Helen Sawyer Hogg, a pioneer in the study of globular cluster variable stars. This book is dedicated to her memory.

J.M. Nemeč (Seattle, Washington, USA)

J.M. Matthews (Vancouver, British Columbia, Canada)

March 1993