

VARIABLE STARS IN GLOBULAR CLUSTERS  
AND IN RELATED SYSTEMS

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VOLUME 36

# VARIABLE STARS IN GLOBULAR CLUSTERS AND IN RELATED SYSTEMS

PROCEEDINGS OF THE IAU COLLOQUIUM No. 21 HELD AT  
THE UNIVERSITY OF TORONTO, TORONTO, CANADA  
AUGUST 29-31, 1972

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## TABLE OF CONTENTS

FOREWORD	VII
EDITOR'S NOTE	IX

### PART I/GENERAL PROBLEMS OF VARIABLES IN POPULATION II SYSTEMS

H. S. HOGG / Variables in Globular Clusters, the Common and the Rare (Review Paper)	3
B. V. KUKARKIN (read by M. W. Feast) / Some Problems in the Study of Variable Stars in Globular Clusters	8
L. ROSINO AND G. PINTO / Observations of Faint Globular Clusters	21
S. VAN DEN BERGH / Planetary Nebulae, Globular Clusters and the Galactic Halo	26
R. J. DICKENS and A. L. T. POWELL / An Abundance Analysis of Fehrenbach's Star (HD 116745) in Omega Centauri	29
L. DETRE and B. SZEIDL (read by J. Graham) / On the Nature of the 41-Day Cycle of RR Lyrae	31
S. VAN AGT / Variable Stars in Dwarf Spheroidal Galaxies (Review Paper)	35

### PART II/RR LYRAE VARIABLES IN POPULATION II SYSTEMS

L. ROSINO / Observational Aspects of RR Lyrae Variables in Globular Clusters (Review Paper)	51
A. TERZAN and B. RUTILY / New Variable Stars in the Globular Cluster NGC 6401	68
A. TERZAN, B. RUTILY, and CH. OUNNAS / Variable Stars in NGC 4590	76
R. J. DICKENS and ROSALIND FLINN / Two-Colour Photometry of RR Lyrae Variables in NGC 6981	82
D. H. P. JONES / Intermediate Band Photometry of RR Lyrae Variables in $\omega$ Cen and 47 Tuc	84
E. H. GEYER (read by J. D. Fernie) / UBV Magnitudes and Colours of 62 RR Lyrae Stars in $\omega$ Centauri (NGC 5139)	88
A. WEHLAU and NICHOLAS POTTS / Two-Color Observations of RR Lyrae Stars in M14	95
V. P. GORANSKIJ, B. V. KUKARKIN, and N. N. SAMUS' (read by R. J. Dickens) / On the Changes of Periods of RR Lyrae Variables in the Globular Clusters M5, M53 and NGC 5053	101

A. J. WESSELINK / Period and Period Changes of RR Lyrae Variables in M15	104
E. P. BELSERENE / Period Changes as Evidence for Evolution in $\omega$ Cen	105
M. V. NORRIS / Short Period Variables in the Magellanic Cloud Cluster NGC 1466	113
J. A. GRAHAM / The RR Lyrae Stars in the Magellanic Clouds	120

### PART III/SLOW VARIABLES IN POPULATION II SYSTEMS

M. W. FEAST / Observational Aspects of Slow Variables in Globular Clusters (Review Paper)	131
C. M. COUTTS / A Preliminary Investigation of Period Changes for W Virginis Stars in Globular Clusters	145
S. DEMERS / Mean Magnitudes and Colours of Six Cepheids in Three Red Globular Clusters of the Large Magellanic Cloud	150
T. LLOYD EVANS and J. W. MENZIES / Red Variable Stars in Metal Rich Globular Clusters	151
R. F. WING / Narrow-Band Photometry of Red Variables in Globular Clusters	164
J. MENZIES / The Variable Stars in NGC 6723	178
B. V. KUKARKIN and A. S. RASTORGOUEV (read by L. Rosino) / The Period-Luminosity Relation for Cepheids in Globular Clusters	180

### PART IV/THEORETICAL CONSIDERATIONS OF POPULATION II VARIABLES

P. DEMARQUE / Variable Stars and Evolution in Globular Clusters (Review Paper)	187
T. S. VAN ALBADA and N. BAKER / On the Two Oosterhoff Groups of Globular Clusters	196
V. CASTELLANI, P. GIANNONE, and A. RENZINI / On the Interpretation of RR Lyrae Properties in Globular Clusters and in Other Population II Systems	197
V. P. GORANSKIJ (read by S. van den Bergh) / Possible Evolutionary Interpretation of the Dependences on the Diagrams for RR Lyrae Variables	207
J. G. MENGEL / The Evolutionary Status of Population II Cepheids	214
A. V. SWEIGART and P. DEMARQUE / Semiconvection and the RR Lyrae Variables	221
A. V. MIRONOV (read by L. Woltjer) / The Helium Abundance in the Envelopes of the Bluest RR Lyrae Stars in Globular Clusters and Dependence of Globular Cluster Variable Star Properties on Chemical Composition	229

## FOREWORD

This volume contains the papers and discussions at IAU Colloquium No. 21 on Variable Stars in Globular Clusters and in Related Systems held in Toronto on the 29th, 30th and 31st August 1972. It was the intention of the organizers that this meeting should honour the life long work in this field of Professor Helen Sawyer Hogg. She has been continuously active in observational research on variables in globular clusters for 46 years and her catalogues and bibliographies as well as her research papers, review articles and IAU reports as chairman of the committee on variable stars in clusters are of fundamental importance to all workers in this field.

The scope of the colloquium covered both observational and theoretical aspects of the problem, including the relationship of variables to non-variable cluster members, the position of the variables in the HR diagram and their importance for problems of stellar evolution, empirical data on the variables, periods and period changes, and the relevant parts of pulsation theory. The meeting was particularly successful in bringing together observers and theorists. It will have achieved its object if it has shown both observers and theorists which are the problems most suitable for attack at the present time. The meeting clearly demonstrated the great importance of research on variables in globular clusters and related systems for our understanding both of stellar evolution and stellar pulsation.

The colloquium was organized by a scientific organizing committee consisting of: L. Rosino, B. V. Kukarkin, H. S. Hogg, L. Detre, N. Baker, S. van Agt and M. W. Feast (chairman) and a local organizing committee consisting of: S. P. S. Anand, D. A. MacRae and J. D. Fernie (chairman). Inevitably most of the work fell on this local organizing committee, especially on Professor Fernie, the chairman. We are most grateful to them for all their work behind the scenes. Professor Fernie has in addition undertaken the task of editing this volume. The meetings were held in the University of Toronto and we are much indebted to the authorities of the University, the astronomy department and the David Dunlap Observatory for inviting us to hold the meetings there and for making so many fine facilities available. Financial support from the National Research Council of Canada, the National Science Foundation (U.S.A.) and the International Astronomical Union are gratefully acknowledged.

M. W. FEAST

*Radcliffe Observatory, Pretoria  
September, 1972*

## EDITOR'S NOTE

There were two papers given at the Colloquium which are not included in this book: a review paper by N. Baker entitled *Pulsation Theory Relevant to Variable Stars in Globular Clusters*, and another by K. von Sangbusch and N. Baker entitled *Stability of Non-Linear Periodic Pulsations of RR Lyrae Stars*. Regrettably, circumstances prevented Norman Baker from preparing written versions in time for inclusion in this volume.

I should like to take this opportunity to thank the following persons: Jennie Fabian for her extensive retyping of manuscripts, Gretchen Hagen for organizing and collating the discussion records, and Sheila Smolkin for assisting in the checking of references.

J. D. FERNIE

*Toronto, September 1972*