CONTENTS

Preface 5

SYNTHETIC LIGHT AND RADIAL VELOCITY CURVES OF A RADIATING ROTATOR WITH HETEROGENEOUS SURFACE (by M. Vetešník)

Abstract 7
Introduction 7
1. The light curves of stars covered with spots 9
2. A model with a single circular spot 11
3. A model with a finite number of circular spots 16
4. A model with annular light distribution in the spots 18
5. The synthetic light curves as computed using the recursion integral formalism developed by Kopal 20
6. Applications of the σ-integrals of higher order for the starspot model 23
7. Application of the starspot model for the radial velocity curves 23
8. Examples of synthetic light and radial velocity curves 27
9. Conclusions 29
References 30
Abstract in Russian 31

THE INTERPRETATION OF THE LIGHT AND RADIAL VELOCITY CHANGES IN THE CARBON STAR UX Dra (by M. Vetešník)

Abstract 49
Introduction 49
1. The nature of the light variations in carbon stars 50
2. The light and radial velocity curves of UX Dra 52
3. The solution of the light and radial velocity curve of UX Dra 53
4. Conclusions 57
References 58
Abstract in Russian 58

THE LIMB DARKENING COEFFICIENT OF YZ Cas (by J. Papoušek)

Abstract 59
1. Introduction 59
2. The system YZ Cas 61
3. The observations 63

4. The minima and period determination 66
5. The light curves 67
6. Orbital solution 92
7. The detemination of the linear limb darkening coefficient 97
8. Conclusions 100
References 100
Abstract in Russian 101
Appendix A 103
Appendix B 107