FOREWORD

The present volume 13 of the "Odessa Astronomical Publications" contains five catalogues made by the employees of the Department of Astronomy and Astronomical Observatory of the Odessa National University named after I.I.Mechnikov on based materials of observations — own and published in other sources.

The first catalogue «Photographic Researches in the Selected Kapteyn Areas» is based on the results of works carried out in Odessa since 1967 within a campaign initiated by academician E.K.Kharadze. The has an aim to obtain more information on stars from the Kapteyn Areas and to study interstellar extinction of light. The observational data are received in 1981-1988 years using the Schmidt camera of the Abastumani observatory. BV photographic stellar magnitudes of 4437 stars in 6 Kapteyn Areas are determined . The catalogue is accompanied by 54 cards of vicinities of stars in the areas.

The second catalogue «Hyperbolic Orbits of Meteors» contains the information on elements of orbits of 136 meteors, which show hyperbolic velocities of movement. The catalogue is based on the results of photographic patrol observations which has been carried out in 1957-1983 years in the Odessa Astronomical Observatory. It contains the exacts elements of orbits and some physical parameters, their distribution, and also the dependencies, which can be used for study of sources of an origin of this class of meteoric particles, probably, the part from which has an interstellar origin.

In the third catalogue «The Catalogue of Fundamental Characteristics of Cool Giant Stars» for 975 stars such fundamental characteristics are given, as magnitudes, spectral classes, effective temperatures, gravitational acceleration, metallic abundance, distance to stars, absolute magnitudes, brightness, radiuses and masses. Thus the effective temperatures T_{ef}, gravitational acceleration log g, and metallic abundance [Fe/H] for approximately 1000 stars are determined in the Geneva Observatory, and for approximately 600 stars, in the Gildenkern system for a ranges of spectral classes from G0 up to K5.

The «Catalogue of Main Characteristics of Individual Pulsational Cycles of 35 Mira-type stars» was published in 1998 in Odessa Astronomical Publications, (vol. 11). In this volume it has been continued by the same authors who processed observations of 18 other stars well observed by the members of AFOEV and VSOLJ. The listed characteristics are the times and brightness at minima and maxima, as well as the inverse slopes of the ascending and descending branches. These characteristics will be used in further classification of long-period stars according to correlations between the parameters of the individual cycles.

The last but not least «Catalogue of Main Characteristics of Pulsations of 173 Semi-regular Stars» by L.L.Chinarova and I.L.Andronov presents 5 tables of results of detailed time series analysis of these stars based on 531,256 original photometric observations from the international AFOEV and VSOLJ databases. The model parameters derived from the periodogram, scalegram and wavelet analysis are presented, as well as the characteristics of the 6509 extrema of 147 stars. This catalogue will be a base for a future additional classification of semi-regular stars according to the number and stability of their pulsations.

The electronic version is available via Internet at the volume 13 site http://oap13.webjump.com

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