

## CONTENTS

### **Cosmology, gravitation, astroparticle physics, high energy physics**

Gladush V.D.

|  |   |
|--|---|
| SPHERICALLY SYMMETRIC SYSTEM OF GRAVITATIONAL AND ELECTROMAGNETIC FIELDS<br>AND THE STRUCTURE OF ITS CONFIGURATION SPACE ..... | 4 |
|--|---|

### **Astrophysics (stellar atmospheres, interacting binary systems, variable stars)**

Abdulkarimova A.F., Maryeva O.V., Karpov S.V.

|                                    |    |
|------------------------------------|----|
| DISCOVERY OF A NEW [WR] STAR ..... | 10 |
|------------------------------------|----|

Andrievsky S.M.

|  |    |
|--|----|
| AN ENIGMA OF THE PRZYBYLSKI STAR ..... | 13 |
|--|----|

Doikov D.N.

|  |    |
|--|----|
| THE POSITRONE $\gamma$ -SPECTROSCOPY OF SYMBIOTIC SYSTEMS..... | 18 |
|--|----|

Doikov M.

|  |    |
|--|----|
| DUAL HARD AND OPTICAL RADIATION DETECTORS FOR FAST NUCLEAR PROCESSES ..... | 24 |
|--|----|

Ismailov N.Z., Valiev U.S., Dzhalilov N.S.

|   |    |
|---|----|
| PROTOPLANETARY DISKS AROUND CLASSICAL T TAURI STARS ..... | 30 |
|---|----|

Kudashkina L.S., Andronov I.L.

|   |    |
|---|----|
| RT VIR – A SEMIREGULAR STAR WITH MASER EMISSION: MATHEMATICAL MODELLING<br>OF OPTICAL VARIABILITY ..... | 41 |
|---|----|

Lobodenko M., Pavlenko Ya., Kulyk I., Nahurna A., Solomakha M., Baransky O.

|  |    |
|--|----|
| COMPARATIVE ANALYSIS OF OBSERVATIONS OF THE SELECTED EXOPLANET TRANSITS<br>OBTAINED AT THE KYIV COMET STATION WITH THE DATABASE OF THE ORBITAL<br>TELESCOPES TESS AND KEPLER ..... | 44 |
|--|----|

Mishenina T.

|   |    |
|---|----|
| FROM SPECTROSCOPY TO THE CHEMICAL EVOLUTION OF THE GALAXY. PART 1. .... | 50 |
|---|----|

Nodyarov A.S., Miroshnichenko A.S., Khokhlov S.A., Zharikov S.V., Manset N., Usenko I.A.

|  |    |
|--|----|
| REFINED PHYSICAL PROPERTIES OF THE HD 327083 BINARY SYSTEM ..... | 62 |
|--|----|

Rustamov B.N., Mikailov Kh.M., Alisheva K.I., Mammadova S.O., Aliyeva V.I.

|  |    |
|--|----|
| SPECTRAL OBSERVATIONS OF THE HERBIG Be STAR HD 53367 ..... | 67 |
|--|----|

### **Solar system and space environment**

Gorbanev Yu.M., Kleshchonok V.V., Kimakovskiy S.R.

|   |    |
|---|----|
| OBSERVATION OF AN OCCULTATION OF THE UCAC4 488-082551 STAR BY ASTEROID<br>(76228) 2000 EH 75 ON 31 MAY 2022 ..... | 71 |
|---|----|

Okhotko H., Troianskiy V., Bazyey O.

|   |    |
|---|----|
| PHYSICAL PROPERTIES OF “HOT POPULATION” OBJECTS IN THE KUIPER BELT..... | 74 |
|---|----|

Pomazan A.V., Maigurova N.V., Kozhuhov O.M.

|  |    |
|--|----|
| TIME AND GEOLOCATION UNCERTAINTIES AS COMPONENTS OF THE ACCURACY OF<br>NEAS’ GROUND-BASED OBSERVATIONS ..... | 77 |
|--|----|

Sukhov P.P., Yepishev V.P., Sukhov K.P., Pavlovskiy A.L., Mamrai S.A.

|  |    |
|--|----|
| DETERMINATION DEGRADATION OF SATELLITE SURFACE OPTICAL FEATURES BY<br>PHOTOMETRIC METHOD ..... | 81 |
|--|----|

Sukhov P., Yepishev V., Sukhov K.

|   |    |
|---|----|
| DETERMINATION OF EXTERNAL GSS PAYLOAD FROM LIGHT CURVES ..... | 87 |
|---|----|

### **Radioastronomy**

Vashchishyn R.V., Shepelev V.A., Litvinenko O.A., Podgorny G.S., Derevyagin V.G., Lozonsky A.V.

|  |    |
|--|----|
| ANGULAR STRUCTURE OF THE RADIO GALAXY 3C239 IN THE DECAMETER RANGE ..... | 91 |
|--|----|

### **Sun, solar activity and astrobiology**

Efimenko V.M., Lozitsky V.G.

|   |    |
|---|----|
| PREDICTION OF THE AMPLITUDE OF 25TH SOLAR CYCLE USING THE RATE OF INCREASE<br>OF SOLAR ACTIVITY ..... | 95 |
|---|----|