

BOOK OF ABSTRACTS



Actual Questions of Ground-based Observational Astronomy

MAO-200

September 27-30, 2021, Mykolaiv, Ukraine

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
RESEARCH INSTITUTE “MYKOLAIV ASTRONOMICAL OBSERVATORY”

**ACTUAL QUESTIONS OF GROUND-BASED
OBSERVATIONAL ASTRONOMY**

International Conference

ABSTRACT BOOK

September 27-30, 2021,
Mykolaiv, Ukraine

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The Book of Abstracts contains abstracts of presentations to the International Conference “Actual Questions of Ground-based Observational Astronomy” to be held in Mykolaiv, Ukraine, on September 27-30, 2021. Methods and technical means of ground-based observations, a role of the International Virtual Observatory Alliance (IVOA) in modern research and actual problems of ground-based astronomy are presented.

RESULTS OF NEA OBSERVATIONS IN RI MAO

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The problem of asteroid-cometary hazard is one of the priority tasks all over the world. The near earth objects (NEO) can be a threat for both existing artificial space satellites and for the population of the Earth as a whole. Currently, many scientific projects are devoted to monitoring well-known and search for new NEOs. Since 2010 RI MAO carry out regular observations of the selected near earth asteroids (NEAs). The results of high-precision astrometric follow-up observations of the selected NEAs with usage the KT-50 telescope of Mobitel Complex are presented. Main feature of the NEAs during close approach to the Earth is the fast moving in the field of view. That circumstance makes impossible to get NEAs images as point sources and to obtain their precise coordinates for the next stage of performing astrometric reductions by the classical methods. The modified Rotating-drift-scan CCD mode for obtaining target objects images and classical mode – for obtaining fields with reference stars to carry out astrometric reductions were used in RI MAO. The combination of classical and modified observational modes allows us to recover objects up to 17.5 V^{mag} with high astrometric precision. For a now more than 10,000 positions for about 500 NEAs were obtained. The comparative statistics of Mykolaiv observations of NEOs and analysis of positional accuracy are presented.