

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

**METHODS AND INSTRUMENTS
IN ASTRONOMY: FROM GALILEO
TELESCOPES TO SPACE PROJECTS**

International Workshop

ABSTRACT BOOK

May 17-20, 2010,
Mykolaiv, Ukraine

SEARCH OF NEW ASTEROIDS AND TNO'S USING OBSERVATIONS OF THE SHORT PERIOD OF TIME

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Search of new asteroids and TNO's can be executed from comparison either direct CCD images got in a short interval of time (matching, and then making differences for each pixel) or objects lists containing measured coordinates. The last method as compared to the first one assumes simple automation of search of new objects, and also classification of objects using a reference catalogue.

At short exposures (less than 10 seconds), typical for the modern CCD-observations, the track from a moving asteroid or TNO can be insignificant, and the object looks star-shaped. For the interval of time in one minute between observations, asteroids of the main belt are displaced for $0.2\div 1.3''$, and TNO's less than $0.015''$ in equatorial coordinates. These values can be used as three times bounds for standard errors of measurements and also for the initial identification.

Objects, not present on other images, are chosen for the later analysis. The essence of an algorithm consists in comparison of the measured coordinates of all objects using various ε -distances. The found dependence can be used for identifying both stars and new objects. The problems of search using this algorithm are also discussed.

O.ORLOV AND HISTORY OF PIP IVAN OBSERVATORY (TO THE 130TH ANNIVERSARY OF O.ORLOV)

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The paper gives information on the history of Pip Ivan Observatory in Czornohora (mount 2022 m, Carpathian mountings), which was designed and built by Polish constructors in 1936-1938.

In the end of 1939 academic O.Ya.Orlov visited the mount Pip Ivan and in 1940 he was the head of the Observatory. The dramatic history of Pip Ivan Observatory after the Second World War and its contemporary state are described.