STATE AGENCY ON SCIENCE, INNOVATION
AND INFORMATION OF UKRAINE
RESEARCH INSTITUTE "NIKOLAEV ASTRONOMICAL OBSERVATORY"

# ASTRONOMICAL RESEARCH: FROM NEAR-EARTH SPACE TO THE GALAXY

International Conference

**ABSTRACT BOOK**

September 26-29, 2011,
Mykolaiv, Ukraine

## NEW OBSERVATION RESULTS FROM ROTATING-DRIFT-SCAN CCD

***MAO Yindun, LI Yan, YU Yong, TANG Zhenghong***

*Shanghai Astronomical Observatory, Shanghai, China*

After moved to a new site, the 300mm telescope with rotating-drift-scan CCD has observed many space objects. Statistic results of observation are given. The limited magnitude can be fainter than 14 magnitude with ~10 seconds exposure time under drift-scan mode.

## INVESTIGATION OF SELECTED STARS WITH LARGE PROPER MOTIONS AND DETECTION OF Δμ-BINARY SYSTEMS

***M.V. Martynov, N.V. Maigurova***

*RI "Nikolaev Astronomical Observatory", Mykolaiv, Ukraine*

Astrometric investigation of stars with large proper motions yields new data on the nature of low-luminosity objects, searches for stars with invisible companions, analyzes the distribution and kinematics of stars in the solar neighborhood. A catalog of astrometric positions and proper motions of stars $(9\ -16)^m$ in fields of ecliptic zone and around higher proper motion stars was obtained by results of CCD-observations during 2008-2009 years with Axial Meridian Circle (AMC) of RI NAO. Cross-correlation of obtained data with astrometric catalogues, such as TYCHO2, 2MASS, CMC11, CMC14, PPMX, XPM, LSPM and USNOA2.0, was made for investigation of irregular proper motions and detection of Δμ-binaries with probable invisible companions. 147 stars may be considered as Δμ-binaries candidates.

## FROM CREATION OF DIGITAL ARCHIVES TO DATA PROCESSING BY USING VIRTUAL TECHNOLOGIES

***A. Mazhaev, O. Kovylianska, Yu. Protsyuk, S. Protsyuk***

*RI "Nikolaev Astronomical Observatory", Mykolaiv, Ukraine*

We present background and current results in development of digital archives and astronomical databases obtained during 2008-2011