BOOK OF ABSTRACTS

Actual Questions of Ground-based Observational Astronomy

MAO - 195

Mykolaiv, September 26-29, 2016

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

ACTUAL QUESTIONS OF GROUND-BASED OBSERVATIONAL ASTRONOMY

International Conference

ABSTRACT BOOK

September 26-29, 2016,
Mykolaiv, Ukraine

Organizers:

Ministry of Education and Science of Ukraine
Research Institute "Mykolaiv Astronomical Observatory"
Ukrainian Astronomical Association

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A 19 **Actual Questions of Ground-based Observational Astronomy.**
International Conference. Abstract Book. — Mykolaiv: 2016. — 40 p.

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 26-29, 2016. Methods and technical means of ground-based observations, IVOA role in modern research and actual problems of ground-based astronomy are presented.

GENERAL INFORMATION

The International Conference "Actual Questions of Ground-based Observational Astronomy" (MAO195) will be held in Research Institute "Mykolaiv Astronomical Observatory", Mykolaiv, Ukraine on September 26-29, 2016.

The conference is organized to discuss methods and technical means of ground-based observations, IVOA role in modern research, actual problems of ground-based astronomy as well as history of astronomical research. Working languages are English, Ukrainian and Russian.

Main Topics of the Workshop:

- Methods, technical means and software for ground-based observations and data processing.
- Use of IVOA technologies for solution of modern astronomical problems.
- Results of data processing for ground-based observations.
- History of astronomical research.

Information about Participants:

- General number of registered participants – 48;
- General number of represented organizations – 22;
- Number of submitted papers – 38;
- Number of authors of submitted papers – 84.

architecture to share and use astronomical data and metadata. The IVOA technical architecture consists of three main layers, namely user layer, VO core layer, resource layer. The VO core as the middle layer provides quick and easy access to the resources wherever they are located. The AWS allow users to obtain access to the resources, distributed across five continents, thanks to the interoperability between different astronomical archives and data centers. Simple cone search is one of many data access protocols, which provides the interoperability.

The AWS of UkrVO have successfully passed 30 regular checks out of 36 since November 2012. Most failures were caused by communication errors between servers in Ukraine and the USA.

The UkrVO image servers in Mykolaiv and Kyiv allow the user to get access to databases of observations, conducted with photo plates and CCD, via a web browser or a desktop application by using different graphical user interfaces.

PHOTOMETRIC OBSERVATIONS OF SELECTED ASTEROIDS ON TELESCOPE KT-50 OF MOBITEL COMPLEX OF RI NAO

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The results of asteroid observations performed on the telescope KT-50 (Mobitel, RI NAO) during 2014-2016 were presented. Asteroids were selected from the infrared survey NEOWISE, moving objects catalog SDSS MOC-3 and MPC database. Selected asteroids have a relatively high albedo (pV > 0.2) and are located in the outer part of the Main Belt (semi-major axis $a > 0.28$). The moments of opposition of the selected asteroids were obtained from HORIZONS service. The program of observations evenly covers the entire range of possible phase angles. The observations were made with filter close to the R standard band of Johnson-Cousins system. More than 1000 images were received. The instrumental magnitude of the selected asteroids and reference stars were computed. The standard deviations (RMS) of the measurements of instrumental magnitude for a 12-15.5^m reference stars are in range of 0.01-0.03^m. The lightcurves and phase dependencies were obtained for some asteroids.