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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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.

LOW-TECHNOLOGY HIGH-EFFICIENCY RADIO-TECHNICAL SOLUTIONS FOR METEORS AND SATELLITE OBSERVATIONS

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The Solar system is inhabited with large number of celestial bodies. Some of them are well studied, such as planets and vast majority of big asteroids and comets. There is one group of objects which has received little attention. That is meteoroids and related to them meteors. Nowadays enough low-technology high-efficiency radio-technical solutions are appeared which allow to observe meteors round-the-clock. At RI "MAO" three methodologies for meteor observation are developed: single-station method using FM-receiver, correlation method using FM-receiver and Internet resources, and single-station method using low-cost SDR-receiver. Also SDR-receivers are well suitable for observation active artificial Earth's satellites on solar-synchronous orbits by measuring Doppler shift of the frequency of the signals they radiate. Two weeks of regular observational data were obtained for satellite 27844 (CUTE-1). The standard deviation of (O-C) of the satellite radial velocity is 4 m/s.

MULTICOLOR PHOTOMETRY OF GEOSYNCHRONOUS SATELLITES AND APPLICATION ON FEATURE RECOGNITION

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Multicolor photometric observations of Geosynchronous Earth Orbit (GEO) cluster have been performed experimentally using the Schmidt telescope at Xing-long Observatory of National Astronomical Observatories, Chinese Academy of Sciences. The data are reduced and the results are analyzed. Compared the 4 satellites, it is concluded that there are significant differences between the intensity curves