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

Scientific Organizing Committee:

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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.

CATALOGUE OF POSITION AND PROPER MOTIONS OF STARS IN THE VICINITY OF OPEN CLUSTERS

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In the Research Institute - Nikolaev Astronomical Observatory (NAO) catalogue of position and proper motions of stars in the areas around the Galactic open clusters was created by using photographic and CCD observations obtained with different telescopes in the 20-21 century.

Near 290 plates (20x20cm, 5єx5є) obtained with the Zonal Astrograph of NAO (D = 116 mm, F = 2040 mm, scale =101"/mm) in 1962-1993. More than 20 thousands CCD frames obtainet with KT-50 telescope (D = 500 mm, F = 3000 mm, 43rx43r, scale = 0.8"/pix) in 2011-2015. Also we downloaded more than 270 thousands FITS files from MAVO image archives with observational epoch from 1953 to 2010.

Catalogue of position and proper motions of about 2.7 million stars $(7\text{-}16)^m$ in Tycho-2 system (NAO2015pm) was obtained. The accuracy of positions on both coordinates is ranged from 0.02-0.04" for the stars of $(7\text{-}12)^m$ to 0.08-0.11" for the stars of $(14\text{-}16)^m$. Inner accuracy of proper motions is near 0.04"/year. Systematic difference between common stars of NAO2015pm and XPM catalogues less than 0.005"/year on both coordinates.

AUTOMATION OF OBSERVATIONS ON UTR-2 AND GURT RADIO TELESCOPES

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Ukraine is one of the leading radio astronomical countries due to developing and exploitation of the world largest and most efficient radio telescopes UTR-2 and URAN operating at decameter wavelengths. For more than 40 years they have been the main tools for exploration of cosmic radio emission at the lowest frequency range of below 33 MHz.