

BOOK OF ABSTRACTS



Actual Questions of Ground-based Observational Astronomy

MAO-200

September 27-30, 2021, Mykolaiv, Ukraine

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

**ACTUAL QUESTIONS OF GROUND-BASED
OBSERVATIONAL ASTRONOMY**

International Conference

ABSTRACT BOOK

September 27-30, 2021,
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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 27-30, 2021. Methods and technical means of ground-based observations, a role of the International Virtual Observatory Alliance (IVOA) in modern research and actual problems of ground-based astronomy are presented.

**SIX YEARS (2015 -2020) OF CONTINUOUS RADIAL
VELOCITY OBSERVATIONS OF POLARIS (α UMI)
SYSTEM**

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265 spectra of the Polaris system obtained during 2015 - 2020 six observational years at the 0.81m telescope of the Three College Observatory (TCO, North Carolina, USA) were used to determine the radial velocities (RV) and effective temperature of the Cepheid Polaris Aa. These new data have been added to the entire Polaris system RV data collection (over 2,500 measurements) to compute a new orbit of the Polaris Aa companion. Furthermore we have used our eight observational datasets taken in 2015–2020 and eight datasets taken in 2011–2018 by Anderson (2019) to check for possible influence of the orbital motion of Polaris Ab on the Polaris Aa pulsational activity. It was found that the mean pulsational period in 2015–2020 was quite stable (3.976 ± 0.012 days), while the pulsational amplitude showed evident changes: a growth before HJD 2457350 with a following decrease. This fact could be due to the Polaris Ab passing through the periastron.