

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.

PECULIARITIES OF ENRICHMENTS WITH CHEMICAL ELEMENTS OF METALS-POOR STARS

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Metal-poor stars allow us to establish the early history of the Milky Way (MW), the nucleosynthesis yields from early mergers of neutron stars (NSM) and massive supernovae (SN), and also the chemical evolution and structure of the MW in general. On the base of spectra obtained using echelle-spectrograph fibre-fed HRS by Southern African Large Telescope (SALT, 11 m) in 2018-2020, the atmospheric parameters and elemental abundances of four metal-poor star HD 6268, HD 121135, HD 195636 and TYC 5594-576-1 ($[Fe/H] \sim -1.5 \text{ -- } -3.0$) have been studied. The abundances of C, O, Na, Mg, Al, Ca, Sr, Ba, Eu and Th, which are important in the analysis of enrichment sources of early Galaxy were calculated using the synthetic spectrum method, taken into account the hyperfine structure (HFS) for the Ba, Eu II lines. The iron abundance was determined based on the equivalent widths of lines. The carbon abundance was obtained by the molecular synthesis fitting for the region of CH (4300-4330 Å). For several elements the NLTE abundance corrections have been applied. The relationship between the chemical enrichment of stars and their belonging to the populations of the early Galaxy was considered.