## PHOTOMETRIC VARIABILITY OF THE SELECTED BLAZARS IN THE OPTICAL RANGE BL LACERTAE AND ES 1426 + 428

I.O. Izviekova<sup>1,3</sup>, V.O. Ponomarenko<sup>2</sup>, N.G. Pulatova<sup>3</sup>, V.V. Vasylenko<sup>2,4</sup>, A.O. Simon<sup>2,4</sup>

<sup>1</sup> International Center for Astronomical, Medical and Ecological Research of the National Academy of Sciences of Ukraine (ICAMER), Kiev, Ukraine,

## izviekova@gmail.com

- <sup>2</sup> Kyiv National Taras Shevchenko University, Kiev, Ukraine
- <sup>3</sup> Main Astronomical Observatory of the National Academy of Sciences of Ukraine, Kiev, Ukraine,
- <sup>4</sup> Scientific Center of the Small Academy of Sciences of Ukraine, Kiev, Ukraine

In our paper we present the results of photometric observations of two bright blazars of the northern hemisphere: BL Lacertae and 1ES 1426 + 428 in BVRI filters of the Johnson / Bessel system. For both objects, fluctuations of brightness in 2018-2020 up to 1 m were recorded in BVRI filters with a total error of  $\approx 0.03$  m - 0.1 m/ The intraday variability was revealed (IDV) for BL Lacertae 17/18.11.2018.

During calculations of the color indexes, we found the trend of bluish color with increasing brightness (BWB - bluer-when-brighter) for BL Lacertae in LTV was reliably revealed by using different pairs of filters. Also, the BWB trend with an average correlation (over 0.5) was recorded for 1ES 1426 + 428. The presence of such fluctuations in the color of blazars is due to the synchrotron radiation of the jet. The revealed partial correlation of variations in brightness with low time resolution (more than a week) between the photometric optical observations obtained by us and the data of the Fermi gamma-ray telescope in 2018-2020 requires additional research.