

SPECTRO-POLAROMETRIC VARIABILITY OF RADIO-LOUD AGN 3C390.3

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Here we present results of four year (2010-2014) spectro-polarometric monitoring of radio-loud active galaxy 3C390.3. The galaxy has been observed with 6-m telescope of SAO observatory using SCORPIO-2 instrument with spectral resolution of 7-10 Å in the spectral range between 4000 Å and 7500 Å. The interstellar polarization has been corrected using a number of stars projected nearby 3C390.3. We found a lag of 6 ± 2 days between the polarized and non-polarized continuum at 5100 Å. This lag is significantly smaller than one we found for H β (60 ± 7 days) and H α (138 ± 40 days).

The received result specifies that observed polarization is defined possibly by transfer of radiation in an accretion disk and jet synchrotron radiation. In the H α line spectral region there is a depolarization about 0.5% in the continuum.

The polarized H α broad profile shows a blue shift around -1200 km/s. The lag of polarized light in the H α line is 89 ± 7 days, that indicates emission of a component of gas in the BLR, which is moving toward an observer from the accretion disk. The dimension of this (additional to disk emission region) is around 1.5 smaller than the disk dimension. The obtained results from spectro-polarimetric observations are in a good agreement with results obtained from the long term spectral monitoring of 3C390.3.