

Invited lecture

INVESTIGATION OF SUB-PC AGN POLARIZATION REGIONS AND GRAVITATIONAL LENSES WITH OPTICAL SPECTROPOLARIMETRIC METHOD

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Here we present our recent investigation of spectropolarimetric observations of several AGNs with broad emission lines. We found that polarization can be used for investigation of kinematics of the emission gas in the Broad Line Region (BLR) that is connected with the super-massive black hole in the center. This provide us to propose a new method for the super-massive black hole measurements (Afanasiev and Popović, 2015). Also, we present the results obtained from the long-term spectropolarimetric monitoring of two AGNs: Mrk 6 (Afanasiev et al., 2014) and 3C390.3 (Afanasiev et al., 2015). At the end we are going to present preliminarily results obtained from observations and modeling of the spectral polarization in several gravitational lensed objects.

References

- Afanasiev, V. L., Popović, L. Č.: 2015, *ApJ*, **800L**, 35.
Afanasiev, V. L., Popović, L. Č., Shapovalova, A. I., Borisov, N. V., Ilić, D.: 2014, *MNRAS*, **440**, 519.
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