LONG TERM MONITORING ON BROAD LINE AGN

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Active galactic nuclei (AGNs) - are among the most luminous long-lived objects in the universe, which emit a wide range of the electromagnetic spectrum from radio waves to gamma rays. The standard model of AGN assumes that at the centers of galaxies (harboring active nuclei) is a supermassive black hole, which mass-magnitude spanning the range between 10^6 and 10^9 mass of the sun, surrounded by a bright accretion disk. The radiation of the accretion disk ionizes and heats the surrounding gas, producing broad spectral lines. This region is known as broad-line emission region or BLR-region.

We present the program and results of ground-based long-term monitoring of AGNs, conducted by Special Astrophysical Observatory (Russia), Guillermo Haro Observatory (Mexico) and Astronomical Observatory Belgrade (Serbia). The principal aim of this program is to search for changes in the BLR on a dynamical timescale that might be tracked in changes in the emission lines response time or in the emission-line profiles. This program also provides continuum observations, which may provide keys about the origin and variability of the continuum.