

Invited lecture

KINEMATICS AND STRUCTURE OF THE BROAD LINE REGION IN AGN

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We will present some results of selected AGN observed with the 10m Hobby-Eberly Telescope. Based on spectral variability campaigns we calculate the distance of the line emitting regions from the center, the structure in the broad-line region for different emission lines, as well as the mass of the central black hole. In a few cases we got information on the structure and velocity field of the broad-line region based on line segment variations - the so called 2D-reverberation mapping method.

We will introduce a newly detected trend of emission line width with respect to the emission line shape in the spectra of active galaxies. We demonstrate that broad-line active galactic nuclei rotate faster than narrow-line ones.