

## THE CONNECTION BETWEEN THE BROAD EMISSION LINE PROPERTIES AND STELLAR VELOCITY DISPERSION IN SAMPLE OF AGNs TYPE 1

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Active galactic nuclei (AGN) is a compact region in an active galaxy with luminosity up to  $10^4$  times higher than the one of a typical galaxy. This luminosity excess is attributed to gas accretion into the super-massive black hole (SMBH) in the AGN centre. Several methods for estimating the super-massive black hole mass ( $M_{BH}$ ) use AGN emission line spectral properties. Two of the most common are the single-epoch virial method, which uses the continuum luminosity and the width of the broad emission lines. The other is based on  $M_{BH}$ -stellar velocity dispersion ( $\sigma_*$ ) relationship.

Here we investigate the accordance between these two methods for the sample of Type 1 AGN taken from the Sloan Digital Sky Survey (SDSS) for which stellar velocity dispersions are available in the literature. This was done by comparing correlations of SMBH masses estimated using the kinematical parameters of the broad  $H\alpha$  and  $H\beta$  emission lines, with the SMBH masses determined from the  $M_{BH}$ - $\sigma_*$  relationship. Our results indicate that the shape of the broad emission lines may be affected by some non-gravitational kinematics and cause disagreement between these two methods.