

# BROAD LINE POLARIZATION IN ACTIVE GALACTIC NUCLEI: MODELS AND OBSERVATIONS

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Spectropolarimetry of broad emission lines allows us to probe the geometry and dynamics of the innermost region of active galactic nuclei (AGNs). A key information about the kinematics is obtained from the polarization plane position angle and it can be used for measuring the mass of the supermassive black holes (SMBHs) which reside in the center of AGNs (Afanasiev, Popovic 2015). This method has been successfully applied to around thirty AGNs and it is in a good agreement with other methods. However, this method has only been applied to H $\alpha$  emission line, but never applied to other broad lines such as Mg II, C III] and C IV.

In this work, we present the simulated profiles of the polarization angle for Mg II line using the radiative transfer code STOKES (Goosman, Gaskell 2007, Marin *et al.* 2012). We compare the results of our simulations with the observations.

## References

- Afanasiev, V. L., Popović, L. Č. 2015, *ApJ*, **800**, L35  
Goosmann, R. W., Gaskell, C. M. 2007, *A&A*, **465**, 129