

MODELING THE BROAD EMISSION LINE POLARIZATION IN ACTIVE GALACTIC NUCLEI

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Broad emission lines in Active Galactic Nuclei (AGNs) hold important clues to the key parameters that drive nuclear activity. With the current observing technology, it is not possible to directly resolve the central structure of AGNs. Spectropolarimetry of broad emission lines in AGNs allows us to indirectly probe the geometry and kinematics of the central engine as well as independent way of estimating the masses of supermassive black holes. We use 3D radiative transfer code STOKES for modeling scattering induced polarization of Mg II, H β and H α broad emission lines. Several cases of complex motions such as outflows are treated in addition to Keplerian motion.