[포GC-17] Narrow-line region of two radio-quiet quasars

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We investigate the radial properties of the narrow-line region (NLR) in two radio-quiet quasars, PG1012+008 and PG1307+085, using the spectra obtained with the FORS1 at the Very Large Telescope. These high quality spectra with seeing < 0.6” enable us to extract seven two-pixel (0.4″) spectra as a function of the radial distance from the accretion disk. In contrast to [OIII] narrow-band imaging, which can be contaminated by starbursts, shock-ionized gas, and tidal tails, we use emission-line diagnostic to determine the true size of the AGN-excited NLR. In this poster, we present the results based on the radial variance of Hβ to [OIII] λ5007 ratio. For both targets, the [OIII] emission line exhibits a blue wing, suggesting an outflow of gas. In the case of PG1307+085, the blue wing disappears at the distance of 1”. We will discuss the properties of the NLR in detail.

[포GC-18] Polarization of Double Peaked Active Galactic Nuclei

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A small number of active galactic nuclei are known to exhibit prominent double peak emission profiles indicating the presence of a relativistic accretion disk model. Using a Monte Carlo technique, we compute the linear polarization of a double peaked broad emission line.

A Keplerian accretion disk is adopted for the double peak emission line region and the Schwarzschild geometry is assumed in the emission region. Far from the accretion disk where flat Minkowski geometry is appropriate, we place a scattering region in the shape of a spherical shell sliced. We generate a line photon in the accretion disk in an arbitraray

direction in the local rest frame and follow the null geodesic of the photon until it hits the scattering region. The profile of the polarized flux is mainly determined by the relative location of the scattering region with respect to the emission source. When the scattering region is in the polar direction, the linear degree of polarization also shows a double peak structure. Under a favorable condition we show that up to 1% of linear degree of polarization may be obtained.