

## [7GC-05] Two Populations in Young Radio Galaxies

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We investigate the disk-jet connection of Young Radio Galaxies (YRGs) by comparing emission-line properties with radio luminosity and jet size. By combining new optical spectra for 21 objects with SDSS archival data for 15 objects, we selected a sample of 36 low-redshift YRGs at  $z < 0.4$ . We find that YRGs are classified in high- and low-excitation galaxies based on the relative strength of high-to-low excitation line strengths, suggesting that there are two populations in YRGs as similarly found in large radio galaxies, i.e., FRIs and FRIIs. High-excitation galaxies (HEGs) have higher emission line luminosities than low-excitation galaxies (LEGs) at fixed black hole mass and radio luminosity, suggesting that the Eddington ratio is higher in HEGs than in LEGs and that for given radio activity HEGs have higher accretion activity than LEGs. The difference between HEGs and LEGs is probably due to either mass accretion rate or radiative efficiency.

## [7GC-06] On the Radial Velocity Offset for [OIII] Emission Line of LINER Galaxies

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Low-ionization nuclear emission-line region (LINER) galaxies constitute a major fraction of low-luminosity AGN population in the local Universe. In contrast to Seyfert galaxies, it is theoretically expected that LINERs would not have an outflow due to their low Eddington ratio. Using Keck/LRIS spectroscopy on a nearby LINER galaxy SDSS J091628.05+420818.7, we find a significant radial velocity offset for [OIII] $\lambda$ 5007 emission line as  $\sim 50 \text{ km s}^{-1}$  blueshifted compared to systemic velocity of the galaxy, while other emission lines exhibit no or little offset. The observed [OIII] velocity offset possibly indicates an outflow of gas in the LINER galaxy, and it is probable that we only detected the [OIII] velocity offset because [OIII] ionization region is closer to the accretion disk, hence, more affected by an outflow. We further investigate the [OIII] velocity offset of  $\sim 4000$  SDSS AGN-host galaxies to compare the strength of AGN outflow. We find that a number of both LINER and Seyfert galaxies show [OIII] velocity offset, but the fraction of LINER galaxies with velocity offset is smaller than that of Seyfert galaxies. The preliminary results imply the presence of gas outflow in LINER galaxies, although outflow strength is probably weaker compared to Seyfert galaxies.