[구GC-22] Gas outflow in BLR of low-redshift AGNs.

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AGN feedback has been believed as playing an important role in the galaxy-super massive black hole (SMBH) co-evolution. AGN gas outflow can lead to AGN feedback. We investigate gas outflow of low-redshift AGNs by using blue shift/asymmetric index (BAI), and velocity offset of CIV line. By comparing these gas outflow indicators (BAI and velocity offset) to AGN properties (i.e., SMBH mass, bolometric luminosity, and Eddington ratio) and BLR gas metallicity, we find positive correlations among outflow, Eddington ratio, and metallicity. These relations are consistent with those observed at high-redshift. We discuss the possibility of the connection between previous star formation with current AGN accretion and outflow.

[구GC-23] The environment dependences of quasar properties in the Sloan Digital Sky Survey

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We study the environmental dependences of various quasar properties using the Sloan Digital Sky Survey (SDSS). For an environmental indicator, we construct the galaxy number density field from the latest data (Data Release 12) of Constant MASS (CMASS) galaxies of SDSS in the redshift range $0.46<=z<=0.59$. The galaxy number density field is determined by searching the 20 nearest galaxies from each grid point. For quasars, we use the fifth edition of the SDSS Quasar Catalog made by Schneider et al. (2010) and the catalog of properties for the quasars by Shen et al. (2011). We find environmental dependences of quasar properties as a function of the galaxy number density. This will help us to understand the evolution of quasars with their environment, which will be useful to improve modeling Active Galactic Nuclei feedback in cosmological hydrodynamic simulations.