galaxy surveys, THINGS and LITTLE THINGS. Compared to the previous approach which aligns all the spectra of a cube using their central velocities derived from either moment analysis, single Gaussian or hermite h3 polynomial fitting, the new method makes a profile decomposition of the profiles from which an optimal number of single Gaussian components is derived for each profile. The so-called superprofile which is derived by co-adding all the aligned profiles from which the other Gaussian models are subtracted is found to have weaker wings compared to the ones constructed in a typical manner. This could be due to the reduced number of asymmetric profiles in the new method. A practical test made on the HI data cubes of the THINGS and LITTLE THINGS galaxies shows that our new method can extract more mass of kinematically cold HI components in the galaxies than the previous results. Additionally, we fit a double Gaussian model to the superprofiles whose S/N is boosted, and quantify not only their profile shapes but derive the ratio of the Gaussian model parameters, such as the intensity ratio and velocity dispersion ratio of the narrower and broader Gaussian components. We discuss how the superprofile properties of the sample galaxies are correlated with their other physical properties, including star formation rate, stellar mass, metallicity, and gas mass.

[포 GC-06] HI gas properties of BAT-BASS AGN host galaxies

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We present preliminary results of the○ VLA archival HI data of local AGN hosts. The sample consists of the galaxies selected from the Swift-BAT hard X-ray survey. The main goal is to probe the gas environment of the sample in order to verify the role of gas accretion as one of the major AGN triggering mechanisms. HI, as a mostly diffuse and extended gas component in many galaxies, is a sensitive tracer to explore the impact of the surroundings on galaxies. In this work, we therefore probe the HI imaging data of a subsample of BAT-BASS AGN hosts, starting with the cases for which relatively high HI fluxes have been reported from the past single-dish observations. Based on their resolved HI properties, we will discuss the possibility of gas accretion and its role in powering AGNs in these examples.

[포 GC-07] Compact Elliptical Galaxies Hosting Active Galactic Nuclei in Isolated Environments

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We present the discovery of rare active galactic nuclei (AGNs) in nearby (z<0.05) compact elliptical galaxies (cEs) located in isolated environments. Using spectroscopic data from the Sloan Digital Sky Survey (SDSS) Data Release 12, four AGNs were identified based on the optical emission-line diagnostic diagram. SDSS optical spectra of AGNs show the presence of distinct narrow-line emissions. Utilizing the black hole (BH) mass-stellar velocity dispersion scaling relation and the correlation between the narrow $L([OIII])/L(H\beta)$ line ratio and the width of the broad $H\alpha$ emission line, we estimated the BH masses of the cEs to be in the range of 7×10^5-8×10^7 solar mass. The observed surface brightness profiles of the cEs were fitted with a double Sérsic function using the Dark Energy Camera Legacy Survey r-band imaging data. Assuming the inner component as the bulge, the K-band bulge luminosity was also estimated from the corresponding Two Micron All Sky Survey images. We found that our cEs follow the observed BH mass-stellar velocity dispersion and BH mass-bulge luminosity scaling relations, albeit there was a large uncertainty in the derived BH mass of one cE. In view of the observational properties of BHs and those of the stellar populations of cEs, we discuss the proposition that cEs in isolated environments are bona fide low-mass early-type galaxies (i.e., a nature origin).

[포 GC-08] Star-forming Dwarf Galaxies in Filamentary Structures around the Virgo Cluster

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We present the chemical properties of star-forming dwarf galaxies (SFDGs) in five filamentary structures (Leo II A, Leo II B, Leo