

[구GC-03] The Impact of the Virgo Cluster on the AGN Activity

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By probing nuclear regions and overall properties of AGN hosts as a function of their environments, we aim to observationally examine how AGN activities are related to their surroundings.

We have selected eight representative AGN hosts in the Virgo cluster, including seven cluster members (M49, M60, M84, M87, NGC 4435, NGC 4526, NGC 4636) and one galaxy that is likely to be background (NGC 4261) but still close enough to be studied in high resolution. The selected galaxies are located in a range of density regions showing various morphology in 1.4 GHz continuum.

High resolution observations with the KVN allow us to access the inner region of the AGN without suffering from dust extinction and synchrotron self-absorption.

Since half of our targets are weak to be detected at K-band within its coherence time, we applied phase referencing (fast antenna position switching) to calibrate fast atmospheric phase fluctuations.

We successfully detected relatively bright AGNs, such as M87, M84 and NGC4261, but no detection signature was found to the other members of the sample.

In this talk, we will present our first results from our KVN observations, while we will discuss in detail the applied technique and our immediate future plans.

[구GC-04] Relative merits of different types of multi-wavelength observations to constrain galaxy physical parameter

Camilla Pacifici
Yonsei University Observatory

I will present a new approach to constrain galaxy physical parameters from the combined interpretation of stellar and nebular emission in wide ranges of observations. This approach relies on a comprehensive library of synthetic spectra, assembled using state-of-the-art models of star formation and chemical enrichment histories, stellar population synthesis, nebular emission and attenuation by dust. We focus on the constraints set by 5-band photometry and low- and medium-resolution spectroscopy at optical rest wavelengths on a few physical parameters characterizing the stars and interstellar medium. Since these parameters cannot be known a priori for any galaxy sample, we assess the accuracy to which they can be retrieved by simulating 'pseudo-observations' using models with known parameters. We find that the combined analysis of stellar and nebular emission in low-resolution (50Å FWHM) galaxy spectra provides valuable constraints on all physical parameters. The approach can be extended to the analysis of any type of observation and during this talk i will present some applications to observed galaxies up to redshift 1.5.