

## [7GC-17] A Study of AGN Population in Compact Groups of Galaxies

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We present a result of a statistical studies on nuclear activities of compact group galaxies. It is suggested that the galaxy interaction can trigger the nuclear activity by producing the gas inflow to the center of galaxies. To understand the connection between galaxy interaction and nuclear activity, we study the fraction of Active Galactic Nuclei (AGN) host galaxies in compact groups, known as the most favored environment for galaxy interaction. We select 59 spectroscopically confirmed compact groups in the SDSS DR6. Using the emission line ratio, we determine the spectral types of compact group galaxies and obtain the fraction of AGN-host galaxies. We compare this fraction with those in other galaxy environments. For the early type galaxies, we find that the AGN fraction of compact group galaxies are lower than field galaxies, but higher than cluster galaxies. On the other hand, the AGN fraction of compact group galaxies is similar to those for field and cluster environment for the late type galaxies. Implications of this result will be discussed.

## [7GC-18] GALAXY LUMINOSITY FUNCTION OF THE ABELL 119 CLUSTER

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We present the galaxy luminosity function (LF) of the Abell 119 cluster. Deep images in u, g, r bands were taken using MOSAIC 2 CCD on a Blanco 4-m telescope at CTIO. Based on scaling relations at faint magnitudes and spectroscopy at bright magnitudes, accurate membership of galaxies is determined. The LF is fitted by a single Schechter function and a two components (Gauss + Schechter) function. Blue galaxies are well fitted by a single Schechter function with steep slope ( $\alpha \sim -1.55$ ). Red galaxies in the inner, high density region are fitted by single Schechter function with shallow slope ( $\alpha \sim -1.30$ ), while red galaxies in the outer, low density region are well fitted by a two components function. The different slope of LFs between the inner and outer seems to stem from the luminosity segregation of A119 indicating larger number ratio of luminous to faint ratio towards the cluster center. The different shape of LFs seems to be resulted from the different composition of luminous and faint galaxies among main-cluster, sub-cluster, and infall region.