## [포GC-29] Merging Features and Optical-NIR Color Gradient of Early-type Galaxies

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It has been suggested that merging plays an important role in the formation and the evolution of early-type galaxies. Optical-NIR color gradients of early-type galaxies in high density environments are found to be less steep than those in low density environment, hinting frequent merger activities in early-type galaxies in high density environment. In order to confirm if the flat color gradient is the result of dry merger, we decided to look deeply to find merging features and get their relation with color gradient. We selected samples which show extreme values of optical-NIR color gradients based on the data of previous study, and observed them at Maidanak observatory 1.5m telescope with long exposure. After masking out overlaid sources, our analysis reveals that these galaxies do not have extreme color gradient values. High degree sky flat technique was used during observation to aid discovery of faint, extended features. However, flatness of detector (SNUCAM) was good enough, so we could not see any marked improvement in image quality compared to those using normal sky flats. Additionally we noticed a feature that looks like merging tidal tail in the CFHT archival image, but this does not show up on the image we obtained. This demonstrates that flatness and correct sky estimation is very important when we look for faint merging features. In future we plan to enlarge the number of the sample.

## [포GC-30] Ultraviolet Properties of Dwarf Galaxies in the Ursa Major Cluster

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We present ultraviolet (UV) properties of dwarf galaxies in the Ursa Major cluster comparing with those in the Virgo cluster. We have constructed SDSS DR7/GALEX GR5 matched optical/UV catalog for dwarf galaxies with various morphologies in these two clusters. Membership of galaxies belonging to the Ursa Major cluster was made by hierarchical grouping method using SDSS spectroscopic data. We classified morphologies of dwarf galaxies using the combination of visual inspection of the images and spectral features returned from SDSS data. In contrast to the case of the Virgo cluster, majority of dwarf galaxies in the Ursa Major cluster lies in the blue cloud of the UV color-magnitude relations (CMRs) implying strong recent or on-going star formation. We discuss the cluster environment on the star formation history and evolution of dwarf galaxies.