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Recent galaxy simulations suggest several scenarios in which the inner structure of late-type galaxies (LTGs) is linked to global quenching. Exactly what mechanism governs the bulge quenching is, however, still under debate due to the lack of observational clues. In this study, we utilize a sample of ~1,300 LTGs in the local universe ($0.02 < z < 0.2$) from SDSS 7, and classify them into star-forming, AGN-hosting, and composite types and into barred and unbarred galaxies. We also examine each subgroup's specific star forming rate (sSFR), stellar mass and compactness using a data set matched with the advanced sSFR catalog by Chang et al. (2015). We find that while star-forming and composite galaxies show no detectable difference between barred and unbarred galaxies, barred AGNs have much lower sSFR than unbarred AGNs at given stellar mass and compactness, Such tendency is stronger for more massive and/or more concentrated galaxies. The results indicate that most AGN-driven quenching is triggered by growth of the bar structure, consistent with the previous simulations of bars.

[포 GC-02] Disruption time scale of merged halos in a dense cluster environment

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To obtain a reliable estimate of the cold dark matter (CDM) substructure mass function in a dense cluster environment, one needs to understand how long a merged halo can survive within the host halo. Measuring disruption time scale of merged halos in a dense cluster environment, we attempt to construct the realistic CDM mass function that can be compared with stellar mass functions to get a stellar-to-halo mass ratio. For this, we performed a set of high-resolution simulations of cold dark matter halos with properties similar to the Virgo cluster. Field halos outside the main halo are detected using a Friend-of-Friend algorithm with a linking length of 0.02. To trace the sub-halo structures even after the merging with the main halo, we use their core structures that are defined to be the most 10% bound particles.

[포 GC-03] Recent results of a KVN key science program: iMOGABA

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We present recent results of very long baseline interferometry (VLBI) observations of gamma-ray bright active galactic nuclei (AGNs) using Korean VLBI Network (KVN) at 22, 43, 86, and 129~GHz bands, which are part of a KVN key science program; Interferometric Monitoring of Gamma-ray Bright AGNs (iMOGABA). We selected a total of 34 radio-loud AGNs of which 30 sources are gamma-ray bright AGNs, including 24 sources monitored by the Fermi Gamma-ray Space Telescope using the Large Area Telescope on board. The selected sources consist of 24 quasars, 7 BL Lacs, and 3 radio galaxies. In this talk, we summarize recent results of the iMOGABA, including results of single-epoch multi-frequency VLBI observations of the target sources, conducted during a 24-hr session on 2013 November 19 and 20. All observed sources were detected and imaged at all frequency bands with or without a frequency phase transfer technique which enabled to detect and image 12 faint sources at 129 GHz, except for 0218+357 which was detected for only one baseline at all frequency bands.

[포 GC-04] KYDISC program : Galaxy Morphology in the Cluster Environment

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Galaxy morphology involves complex effects from both secular and non-secular evolution of galaxies. Although it is a final product of galaxy evolution, it gives a clue to the processes that the a galaxy has gone through. Galaxy clusters are the sites where the most massive galaxies are found, and thus the most dramatic merger histories are embedded. Our deep imaging program (μ ~ 28 mag arcsec^{-2}), KASI-Yonsei Deep Imaging Survey for Clusters (KYDISC), targets 14 Abell clusters at z = 0.016 - 0.14 using IMACS/Magellan telescope and MegaCam/CFHT to investigate cluster galaxies especially on low surface brightness features related to galaxy interactions. We visually classify