forms stars and stars release gas through mass-loss. In this process, their angular momentum is conserved. Therefore, kinematic decoupling between stars and gas can occur due to external gas inflow or perturbation of components. There are some possible origins of misalignment: cold gas from filaments, hot gas from outer halo, interaction or merging events with galaxies and environmental effects.

Misalignment, the black box from mixture of internal and external gas, can be an important keyword for understanding further about galaxies' kinematics and external processes. Using both SAMI IFS data(Sydney-AAO Multi-object Integral field spectrograph Galaxy Survey, Croom+12) and Horizon-AGN simulation(Dubois+14), we examined misaligned galaxies properties and distribution. Because the simulation has lots of galaxies at various z, we were able to study history of formation, evolution and extinction of misalignment, which was hard to be done with observation only.

[포 GC-08] The Infrared Medium-deep Survey. VII. Optimal selection for faint quasars at z ~ 5 and preliminary results

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The universe has been ionized in the post-reionization by several photon contributors. The dominant source to produce the hydrogen ionizing photons is not revealed so far. Faint quasars have been expected to generate UV photon budgets required to maintain ionization state of universe. Observational limits, however, hinder to discover them despite their higher number density than bright one. Consequently, the influence of faint quasars on post-reionization are not considered sufficiently. Therefore, a survey to find faint quasars at z ~ 5 is crucial to determine the main ionizing source in the post-reionization era. Deep images from the Hyper Suprime-Cam Subaru Strategic Program (HSC SSP) allow us to search for quasar swith low luminosities in the ELAIS-N1 field. J band information are obtained by the Infrared Medium-deep Survey (IMS) and the UKIRT Infrared Deep Sky Survey (UKIDSS) - Deep ExtragalacticSurvey (DXS). Faint quasar candidates were selected from several multi-band color cut criteria based on simulated quasars on color-color diagram. To choose the reliable candidates with possible Lyman break, we have performed medium-bands observations. Whether a candidate is a quasar or a dwarf star contamination was decided by results from chi-square minimization of quasar/dwarf model fitting. Spectroscopic follow-up observations confirm three quasars at z ~ 5. 100% spectral confirmation success rate implies that the medium-band observations effectively select faint quasars with strong Lyman alpha emission.

[포 GC-09] Searching for LSB Dwarf Satellite Galaxies Around Nearby Galaxies in IMSNG Data

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Low surface brightness (LSB) dwarf galaxies hold a key to resolve the small-scale problems of Lambda Cold Dark Matter (LCDM) paradigm such as missing satellites problem. Many recent studies found LSB dwarf galaxies around massive galaxies beyond Local Group up to 10Mpc. Motivated by this, we can increase the number of them by searching for LSB dwarf galaxies around galaxies up to 40Mpc. We use stacked deep (μ_R~26.2 mag arcsec^{-2}) optical *B*, *R*-band images taken from Maidanak 1.5m telescope, one of facilities of Intensive Monitoring Survey of Nearby Galaxies (IMSNG) which monitored nearby galaxies in a day cadence from 2014 to 2016. Extended LSB sources in ambient regions of 16 nearby galaxies are selected using central surface brightness and total *R* magnitude criteria. After that, 24 LSB dwarf candidates are selected with visual inspection. To identify if the candidates are satellites or not, we are trying to compare the number density of LSB dwarf candidates around massive galaxies with those in Canada-France-Hawaii-Telescope Legacy Survey (CFHTLS) wide fields which have no dominant massive galaxies for control sample.

[포 GC-11] Examining the star formation properties of Virgo galaxies undergoing ram pressure stripping

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