the properties of the optical emission lines for submm galaxies which could be used as a proxy for future optical/NIR identification and follow up of the SMGs.

[포 GC-11] The Kennicutt-Schmidt relation of the ram pressure stripped gas

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Ram pressure due to the intracluster medium (ICM) is known to play a crucial role in removing the cool gas content of a galaxy on a short timescale, potentially driving a star forming galaxy to evolve into a red passive population. Although many HI imaging studies find clear evidence of diffuse atomic gas stripping from cluster galaxies, it is still debatable whether the ram pressure can also strip dense molecular gas. NGC 4522, a Virgo spiral, undergoing strong ram pressure stripping, is one of the few cases where extraplanar CO emission together with stripped HI gas and Hα knots has been identified, providing an ideal laboratory to study the molecular gas stripping event and the extraplanar star formation activity. The aim of this work is to investigate the origin of extraplanar molecular clouds near NGC 4522 (e.g. stripped or forming in situ), and to probe a relation between the molecular gas surface density and the star formation rate (i.e. the Kennicutt-Schmidt law) at sub-kpc scale, especially in the extraplanar space, using ALMA Cycle 3 CO data and Hα data of NGC 4522. We present the results from our ALMA observations, and discuss possible scenarios for the origin of extraplanar molecular clouds and to characterize the star formation activity associated with stripped gas outside the galactic disk.

[포 GC-12] Testing for Dust Stripping of Virgo Cluster Galaxies According to HI Gas Stripping Stage

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We Investigate dust stripping of Virgo cluster galaxies that are known to suffer HI gas stripping. The gas stripping phenomena of these galaxies may result from either ram pressure induced by the hot intracluster medium or gravitational tidal interactions between galaxies. While much efforts have been made to directly detect gas removed from cluster galaxies, the spatial distributions of dust, which should also be affected, are hardly known. Several previous studies have tried to directly detect the morphology of gas or dust using radio or infrared observations, but such approaches are hard to widely apply because of the limit of observational resolution and sensitivity. In this study, we try a different approach using optical data: measuring the background galaxy reddening by the dust stripped from the Virgo cluster members. Based on optical color excess maps of the background galaxies, we compare the ambient dust distribution with the HI morphology of the Virgo galaxies. We discuss how efficiently dust stripping can be detected with this method and how the stripped dust is associated with the removed gas according to HI gas stripping stage over the sample.

[포 GC-13] Star Formation and Gas Accretion in Nearby Galaxies

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We Investigate dust stripping of Virgo cluster galaxies that are known to suffer HI gas stripping. The gas stripping phenomena of these galaxies may result from either ram pressure induced by the hot intracluster medium or gravitational tidal interactions between galaxies. While much efforts have been made to directly detect gas removed from cluster galaxies, the spatial distributions of dust, which should also be affected, are hardly known. Several previous studies have tried to directly detect the morphology of gas or dust using radio or infrared observations, but such approaches are hard to widely apply because of the limit of observational resolution and sensitivity. In this study, we try a different approach using optical data: measuring the background galaxy reddening by the dust stripped from the Virgo cluster members. Based on optical color excess maps of the background galaxies, we compare the ambient dust distribution with the HI morphology of the Virgo galaxies. We discuss how efficiently dust stripping can be detected with this method and how the stripped dust is associated with the removed gas according to HI gas stripping stage over the sample.