2DBAT to the separated circular motions. The rotation curve reflecting the total kinematics of the LMC, dark and baryonic matters is then be combined with the mass models of baryons, mainly stellar and gaseous components in order to examine the dark matter distribution. Here, we present the analysis of the extracted HI gas maps, rotation curve, and J, H and K-band surface photometry of the LMC.

### [포 GC-04] HI gas kinematics of galaxy pairs in the Hydra cluster from ASKAP pilot observations

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We examine the HI gas kinematics and distribution of galaxy pairs in group or cluster environment from high-resolution Australian Square Kilometre Array Pathfinder (ASKAP) WALLABY pilot observations. We use 22 well-resolved galaxies in the Hydra cluster of which 4 galaxies are visually identified as pairs and others are isolated ones. We perform profile decomposition of HI velocity profiles of the galaxies using a new tool, BAYGAUD which enables us to separate a line-of-sight velocity profile into an optimal number of Gaussian components based on Bayesian MCMC techniques. All the HI velocity profiles of the galaxies are decomposed into kinematically cold or warm gas components with their velocity dispersion, 4~8 km/s or > 8 km/s, respectively. We derive the mass fraction of the kinematically cold gas with respect to the total HI gas mass, f = log10(M_cold / M_HI), of the galaxies and correlate them with their dynamical mass. The cold gas reservoir of the paired galaxies in the Hydra cluster is found to be relatively higher than that of the isolated ones which show a negative correlation with the dynamical mass in general.

### [포 GC-05] Galaxy overdensity around sub-mm sources from SPT-SZ survey

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We study the overdensity of near-infrared sources around 508 sub-mm sources classified as dusty galaxies in the SPT-SZ survey catalog observed in 95 GHz (3.15 $mm$), 150 GHz (2 $mm$) and 250 GHz (1.2 $mm$) bands. We used the VISTA hemisphere survey data release 6 (VHS DR6) catalog covering the J, H, Ks bands. The mean number of galaxies within a radius of 60 arcsec (corresponding to about 500 kpc at $z = 2$) from 500 randomly selected positions is 14.4, while the galaxy number distribution is approximated as a Gaussian with a standard deviation of 7.9. From the 2500 deg2 of SPT-SZ survey + VHS DR6 data, there were 27 sub-mm sources that have galaxy overdensity higher than 4σ. We present color-magnitude diagram around 27 selected sub-mm sources with enhanced galaxy surface densities, in order to investigate the presence of structure around sub-mm sources.

### [포 GC-06] GAS KINEMATICS AND PHOTOIONIZATION IN TYPE 1 AGNs WITH STRONG OUTFLOWS

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We present spatially resolved outflows and photoionization for a pilot sample of 11 type 1 AGNs (z<0.3) based on the Gemini Multi-Object Spectrograph Integral Field Unit data. These AGNs were selected since we found strong outflow signatures in SDSS spectra. We focus on [OIII] and Hα emission lines to probe outflow kinematics by measuring line flux, velocity, and velocity dispersion at each pixel. We investigate characteristics of gas kinematics of type 1 AGNs and compare them with those of type 2 AGNs in our previous studies. Furthermore, by drawing BPT map, photoionization states will be also discussed. Based on the results, we discuss various implications on the impacts of outflows on star formation in host galaxies.

### [포 GC-07] Gas kinematics and star formation in NGC 6822

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