magnetic field morphology traced by polarization segments is interpreted as to help gas flow along the filamentary structrue. Our observations shows that filaments in Mon R2 have spiral structure and the magnetic field lines are parallel to the filaments. We interpret that the spiral structure can be formed by a rotation hub-filament system with gas flowing along the filaments to the hub. We found several dust clumps at the central part of the hub region of the Mon R2. They seems to be formed at locations where spiral field lines meet each other. These results show one observational example that a magnetic field play a role in gas flow.

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[포 GC-01] Studies of AGN Variability from SNU AGN Monitoring Project (SAMP)

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We present optical variability of nearby luminous active galactic nucleus (AGN). We use the multi-epoch data of 46 AGNs obtained from 2015 to 2019 through SNU AGN Monitoring Project (SAMP), which was carried out for the reverberation mapping of luminous AGNs. We estimated variability amplitudes and time scales using the various types of analytic function, such as structure function and damped random work. We present the comparisons between physical properties of AGNs and optical variability in order to unveil the origin of the variability of AGNs

[포 GC-02] Stellar photometric Properties in the outskirt of NGC 5236

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In the hierarchical framework, galaxies grow through mergers and accretion. Those mechanisms leave faint features, such as stellar streams, shells and smooth stellar halos in the outskirts of galaxies. In order to search for those features in the nearby galaxies, we are conducting a KMTNet Nearby Galaxy Survey using the Korea Microlensing Telescope Network. We present a deep and wide-field imaging of NGC 5236, a barred spiral galaxy. In one-dimensional surface brightness profiles, we reach 28, 29 mag/arcsec2 in the R- and B-band, respectively. We find that the outer disk of NGC 5236 can be well described with a single exponential profile up to 17 kpc (~3.8 Reff) indicating that the excess light due to the stellar halo is not clearly detected. B-R color gradually increases towards the outskirts of the galaxy. It may reveal that stellar properties in the outskirts are marginally distinctive from those in the central part.

[포 GC-03] Mass models of the Large Magellanic Cloud: HI gas kinematics

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We perform disk-halo decomposition of the Large Magellanic Cloud (LMC) using a novel HI velocity field extraction method, aimed at better deriving its HI kinematics and thus the dark matter density profile. For this, we use two newly developed galaxy kinematic analysis tools, BAYGAUD and 2DBAT which have been used for the kinematic analysis of resolved galaxies from Australian Square Kilometre Array (ASKAP) observations like WALLABY which is an all-sky HI galaxy survey in southern sky. By applying BAYGAUD to the combined HI data cube of the LMC taken with the Australia Telescope Compact Array (ATCA) and Parkes radio telescopes, we decompose all the line-of-sight velocity profiles into an optimal number of Gaussian components based on Bayesian MCMC techniques. From this, we disentangle turbulent non-circular gas motions from the overall rotation of the galaxy. We then derive the rotation curve of the LMC by applying