

edge-on spiral galaxies

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We compare vertical profiles of the extraplanar H α emission to those of the UV emission for 38 nearby edge-on late-type galaxies. It is found that detection of the “diffuse” extraplanar dust (eDust), traced by the vertically extended, scattered UV starlight, always coincides with the presence of the extraplanar H α emission. A strong correlation between the scale heights of the extraplanar H α and UV emissions is also found: the scale height at H α is found to be ~ 0.74 of the scale height at FUV. Our results may indicate the multiphase nature of the diffuse ionized gas and dust in the galactic halos. The existence of eDust in galaxies where the extraplanar H α emission is detected suggests that a larger portion of the extraplanar H α emission than that predicted in previous studies may be caused by H α photons that originate from H II regions in the galactic plane and are subsequently scattered by the eDust. This possibility raise an advantage in studying the extraplanar diffuse ionized gas. We also find that the scale heights of the extraplanar emissions normalized to the galaxy size correlate well with the star formation rate surface density of the galaxies. The properties of eDust in our galaxies is on a continuation line of that found through previous observations of the extraplanar polycyclic aromatic hydrocarbons emission in more active galaxies known to have galactic winds.

[포 GC-03] SAMI Galaxy Survey Data Release 2: Absorption-line Physics

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We present the second data release from the SAMI Galaxy Survey. The data release contains reduced spectral cubes for 1559 galaxies, about

50% of the full survey, having a redshift range $0.004 < z < 0.113$ and a large stellar mass range $7.5 < \log(M_{\star}/M_{\odot}) < 11.6$. This release also includes stellar kinematic and stellar population value-added products derived from absorption line measurements, and all emission line value-added products from Data Release One. The data are provided online through Australian Astronomical Optics' Data Central. Our poster presents stellar/gas kinematics on the metallicity-mass plane and highlight several galaxies from the SAMI Galaxy Survey that have interesting stellar and gas kinematics. For more information about data release 2, please see:

<https://sami-survey.org/abdr>.

[포 GC-04] Searching for Dwarf Galaxies in NGC 1291 obtained with KMTNet

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We present newly discovered dwarf galaxy candidates in deep and wide-field images of NGC 1291 obtained with KMTNet. Through a visual inspection, we find ~ 13 candidates, for which central surface brightness ranges from $\mu_{0,R} \sim 22.5$ to 26.5 mag arcsec⁻¹. Adopting the distance to NGC 1291, the candidate dwarfs are brighter than $M_R = -12.5$ mag and their effective radii range from 350 pc to 1.4 kpc. Structural and photometric properties of dwarf candidates near NGC 1291 appears to be consistent with those of ordinary dwarf galaxies in nearby galaxies. We conduct the imaging simulation in order to find an optimal way to detect dwarf galaxies in KMTNet images and to test the completeness of our detection algorithm. We plan to apply this method to deep KMTNet images of other nearby galaxies obtained through KMTNet Nearby Galaxy Survey (KNGS).

[포 GC-05] AT2018cow : Photometric Analysis of Fast-evolving, Luminous and Bluish Transient

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